“Chipola College was a great start for me. I would recommend this school to anyone. I’m really going to miss Chipola!”

2007 Graduating Student Survey

“Chipola gave me an example of teaching for learning, not for tradition; determination for self, not others; and a community united, not divided.”

Holli Crawford
Special/Elementary Education Major
Transfer Student to the University of West Florida, Chipola Campus

“I would like to thank you for providing the Bachelor’s degree. I couldn’t go to college because of my work and family without this program. I’m 37 years old, married to a wonderful special education teacher, have four kids, and have done many various jobs. The older I get, the more I see that a good solid high school education is the best way to improve an individual, the community, and the world.”

David Shuler
2006 Graduate, Chipola Baccalaureate Program

“The community college program has been a tremendous asset to the citizens of Florida. Many students would not have been able to achieve a college education without it. This is probably more true at Chipola than anywhere else.”

Amos McMullian, CEO, Flowers Baking Co.
1996 Outstanding Alumnus
Florida’s Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida’s Statewide Course Numbering System. This numbering system is used by all public postsecondary institutions in Florida and 33 participating non-public institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions.

Each participating institution controls the title, credit, and content of its own courses and recommends the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type of institution and discipline field or specialization.

The course prefix and each digit in the course number have a meaning in the Statewide Course Numbering System (SCNS). The list of course prefixes and numbers, along with their generic titles, is referred to as the “SCNS taxonomy.” Descriptions of the content of courses are referred to as “course equivalency profiles.”

General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between participating institutions that offer the course, with a few exceptions. (Exceptions are listed below.)

For example, a survey course in social problems is offered by 35 different postsecondary institutions. Each institution uses “SYG_010” to identify its social problems course. The level code is the first digit and represents the year in which students normally take the course at a specific institution. In the SCNS taxonomy, “SYG” means “Sociology, General,” the century digit “0” represents “Entry-level General Sociology,” the decade digit “1” represents “Survey Course,” and the unit digit “0” represents “Social Problems.”

In science and other areas, a “C” or “L” after the course number denotes a combined lecture and laboratory course that meets in the same place at the same time. The “L” represents a laboratory course or the laboratory part of a course, having the same prefix and course number without a laboratory indicator, which meets at a different time or place.

Transfer of any successfully completed course from one institution to another is guaranteed in cases where the course to be transferred is equivalent to one offered by the receiving institution. Equivalencies are established by the same prefix and last three digits and comparable faculty credentials at both institutions. For example, SYG 1010 is offered at a community college. The same course is offered at a state university as SYG 2010. A student who has successfully completed SYG 1010 at the community college is guaranteed to receive transfer credit for SYG 2010 at the state university if the student transfers. The student cannot be required to take SYG 2010 again since SYG 1010 is equivalent to SYG 2010. Transfer credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements on the same basis as credit awarded to the native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed that have not been designated as equivalent.

The Course Prefix

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area, or sub-category of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix to identify the course.

Authority for Acceptance of Equivalent Courses

Section 1007.24(7), Florida Statutes, states:

Any student who transfers among postsecondary institutions that are fully accredited by a regional or national accrediting agency recognized by the United States Department of Education and that participate in the statewide course numbering system shall be awarded credit by the receiving institution for courses satisfactorily completed by the student at the previous institutions. Credit shall be awarded if the courses are judged by the appropriate statewide course numbering system faculty committees representing school districts, public postsecondary educational institutions, and participating nonpublic postsecondary educational institutions to

### Example of Course Identifier

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Level Code (first digit)</th>
<th>Century Digit (second digit)</th>
<th>Decade Digit (third digit)</th>
<th>Unit Digit (fourth digit)</th>
<th>Lab Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYG</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sociology, General</td>
<td>Freshman level at this institution</td>
<td>Entry-Level General Sociology</td>
<td>Survey Course</td>
<td>Social Problems</td>
<td>No laboratory component in this course</td>
</tr>
</tbody>
</table>
be academically equivalent to courses offered at the receiving institution, including equivalency of faculty credentials, regardless of the public or nonpublic control of the previous institution. The Department of Education shall ensure that credits to be accepted by a receiving institution are generated in courses for which the faculty possess credentials that are comparable to those required by the accrediting association of the receiving institution. The award of credit may be limited to courses that are entered in the statewide course numbering system. Credits awarded pursuant to this subsection shall satisfy institutional requirements on the same basis as credits awarded to native students.

Exceptions to the General Rule for Equivalency
The following courses are exceptions to the general rule for course equivalencies and may not transfer. Transferability is at the discretion of the receiving institution:
A. Courses in the 900-999 series (e.g., ART 2905)
B. Internships, practica, clinical experiences, and study abroad courses
C. Performance or studio courses in Art, Dance, Theater, and Music
D. Skills courses in Criminal Justice
E. Graduate courses
F. Courses not offered by the receiving institution
G. For courses at non-regionally accredited institutions, courses offered prior to the transfer date of the course.

College preparatory and vocational preparatory courses may not be used to meet degree requirements and are not transferable.

Questions about the Statewide Course Numbering System and appeals regarding course credit transfer decisions should be directed to the Dean of Enrollment Services located in Room 142 of the Student Services’ Building or the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling telephone number (850) 245-0427.

Transferability Code
Courses are designated throughout this section according to their transferability to the State University System.
A—College transfer course which counts toward the Associate in Arts degree and transfer to the SUS.
O—Occupational course which counts only toward the Associate in Science degree andwill not transfer or apply toward the Associate in Arts degree.
P—Preparatory course which will not count toward a degree or will not transfer or apply toward the Associate in Arts degree.
V—Applied Technology/ vocational course which will not count toward a degree or transfer.

Course descriptions are listed in alphabetical order by prefix.
To determine a prefix see the Directory of Courses by Prefixes listed by major disciplines.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Course Prefixes</th>
<th>Discipline</th>
<th>Course Prefixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>ACG, APA, TAX</td>
<td>Honors</td>
<td>IDH</td>
</tr>
<tr>
<td>Art</td>
<td>ARH, ART, GRA</td>
<td>Human Development</td>
<td>DEP</td>
</tr>
<tr>
<td>Astronomy</td>
<td>AST</td>
<td>Humanities</td>
<td>HUM</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>BCH, BOT, BSC, MCB, PCB, BUL, FIN, GEB, ISM, MAN, MAR, OST, QMB</td>
<td>Journalism</td>
<td>JOU, MMC</td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td>Math Education</td>
<td>MAE</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHM</td>
<td>Mathematics</td>
<td>MAC, MAE, MAP, MAS, MAT, MGF, MHF, MTB, MTG, STA</td>
</tr>
<tr>
<td>Child Care</td>
<td>CHD</td>
<td>Music</td>
<td>MUE, MUH, MUL, MUN, MUS, MUT, MV_</td>
</tr>
<tr>
<td>Computer Electronics</td>
<td>EEV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computing</td>
<td>CGS, CIS, COP, GRA</td>
<td>Nursing</td>
<td>NUR</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>CCJ, CJC, CID, CJE, CJL, CJT</td>
<td>Office Technology</td>
<td>OST</td>
</tr>
<tr>
<td>Culinary Management</td>
<td>FOS, FSS, HFT, HMV</td>
<td>Physical Education</td>
<td>PEL, PEM, PEO, PET</td>
</tr>
<tr>
<td>Economics</td>
<td>ECO</td>
<td>Physical Science</td>
<td>ESC, GLY, PSC</td>
</tr>
<tr>
<td>Education</td>
<td>EDF, EED, EEX, EDG, EDM, EGI, ELD, EME, RED, TSL</td>
<td>Physics</td>
<td>PHY</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>EMS</td>
<td>Political Science</td>
<td>POS</td>
</tr>
<tr>
<td>Engineering Graphics</td>
<td>EGS</td>
<td>Psychology</td>
<td>C LP, DEP, INP, PSY</td>
</tr>
<tr>
<td>Electronic Engineering Tech</td>
<td>CET, EET</td>
<td>Religion</td>
<td>REL</td>
</tr>
<tr>
<td>English</td>
<td>AML, ENC, ENL, REA</td>
<td>Science Education</td>
<td>SCE</td>
</tr>
<tr>
<td>Fire Science</td>
<td>FFP</td>
<td>Sociology</td>
<td>SYG</td>
</tr>
<tr>
<td>French</td>
<td>FRE</td>
<td>Spanish</td>
<td>SPN, SPT</td>
</tr>
<tr>
<td>Geography</td>
<td>GEA</td>
<td>Speech</td>
<td>ORI, SPC</td>
</tr>
<tr>
<td>Health</td>
<td>HSC</td>
<td>Student Development</td>
<td>SLS</td>
</tr>
<tr>
<td>History</td>
<td>AMH, ASH, HIS, WOH</td>
<td>Telecommunications</td>
<td>EET</td>
</tr>
<tr>
<td>Home Economics</td>
<td>HUN</td>
<td>Theater</td>
<td>THE, TPA, TPP</td>
</tr>
</tbody>
</table>

To determine a prefix see the Directory of Courses by Prefixes listed by major disciplines.
Course Descriptions

ACG 2002. Accounting on the Microcomputer. This course is intended for students desiring a working knowledge of computerized accounting using microcomputer software. The five major systems commonly found in computerized accounting environments are covered – general ledger, depreciation, accounts receivable, accounts payable, and payroll. Prerequisite: APA 1251 or ACG 2021 or permission of the instructor. 3 semester hours credit. [A]

ACG 2021. Introduction to Financial Accounting. An introductory course in the principles and practices of financial accounting emphasizing the measurement and reporting of income. The basic accounting model, measuring and reporting assets, liabilities and stockholders’ equity, special reports and analyses of accounting information also are covered. 3 semester hours credit. [A]

ACG 2071. Introduction to Managerial Accounting. This is an introductory course in managerial accounting which emphasizes the use of accounting data with respect to planning operations, controlling activities and the decision making responsibilities of managers. Prerequisites: A grade of “C” or better in ACG 2021 or consent of department. 3 semester hours credit. [A]

ACG 3024. Accounting for Non-fiancial Majors. This course addresses the use of accounting information by non-financial managers. Emphasis is placed on the interpretation of accounting information and the language of financial accounting to effectively participate in activities such as planning, investment, control, and managerial decision making. Credit will not be granted for both ACG 2021 and ACG 3024. Prerequisite: Admission to the BAS Business Management program, or consent of the department. 3 semester hours credit. [A]

ACG 3103. Financial Accounting and Reporting I. Review of the basic accounting cycle, financial statement preparation, and the framework of accounting theory. An in-depth study of the accounting for current assets, fixed assets, including depreciation, and intangible assets. This course is designed for the accounting major and the general student of business interested in the underlying principles for recording and reporting of financial information for general purpose financial statements. The course presents the theoretical setting for accounting practices and procedures. When alternative positions can be taken on matters of theory and practice, such alternatives and the positions of leading authorities are discussed. In addition to pointing out the conflicts that exist within the traditional structure of accounting, the course strives to provide the student with an analytical basis for making his/her own evaluation of controversial areas. Prerequisite: ACG 2021. 3 semester hours credit. [A]

ACG 3113. Financial Accounting and Reporting II. A continuation of ACG 3103 with an emphasis on liabilities and stockholders’ equity issues. Also includes investments, revenue recognition, and accounting changes. There is emphasis on both conceptual and practical issues. The course presents the theoretical setting for accounting practices and procedures. When alternative positions can be taken on matters of theory and practice, such alternatives and the positions of leading authorities are discussed. In addition to pointing out the conflicts that exist within the traditional structure of accounting, the course strives to provide the student with an analytical basis for making his/her own evaluation of controversial areas. Prerequisite: ACG 3103. 3 semester hours credit. [A]

ACG 3341. Cost Accounting I. Review and reinforcement of the financial accounting cycle. Decision making and the integration of decisions into the organization’s structure (including the control structure), strategies and objectives. Applications include issues in decentralized organizations, cost behavior, budgeting, cost estimates, product costing, and performance motivation and assessment. Prerequisites: ACG 2021, MAC 2233 and QMB 3200. 3 semester hours credit. [A]

ACG 4123. Financial Accounting and Reporting III. This course is the final sequence in a three-course program of Intermediate Financial Accounting. The primary emphasis is on the theory and problems underlying the measurement of income, financial position, cash flows for business enterprises and international aspects of the accounting function. Prerequisites: ACG 3103 and ACG 3113. 3 semester hours credit. [A]

ACG 4351. Cost Accounting II. Cost accounting principles and managerial accounting practices – Continuation of ACG 3341. Coverage of budgeting process, cost-volume-profit analysis, generation and use of accounting information in managerial decision making. Prerequisite: ACG 3341. 3 semester hours credit. [A]

ACG 4401. Accounting Management Information Systems. An introduction to manual and computerized accounting information systems. Transaction cycles, internal controls, and flowcharting are emphasized. Prerequisite: CGS 1100. 3 semester hours credit. [A]

ACG 4632. Auditing Theory and Application I. Auditing I concerns external financial auditing, in which independent auditors will come from a CPA firm to audit a client company's financial statements. We will concentrate on the process of gathering and evaluating evidence to determine whether the client’s financial statements are fairly presented in accordance with GAAP. We will also see how audit results are reported to readers of the client’s financial statements. Prerequisites: ACG 3113 and ACG 4401. 3 semester hours credit. [A]

ACG 4900. Accounting Capstone Project. This course focuses on the integration of accounting knowledge, skills, and abilities learned in the program through a capstone project. 3 semester hours credit. [A]

AMH 2010. American History to 1865. A general survey of the development of the United States from the period of discovery and exploration through the Civil War. 3 semester hours credit. [A]

AMH 2020. American History Since 1865. A survey course on the development of the United States from the Reconstruction period to the present. AMH 2010 is not a prerequisite, but is recommended. 3 semester hours credit. [A]

AMH 2091. African-American History I. An introductory course designed to acquaint students with, and stimulate interest in, the culture and history of the African-American. Emphasis is on the origins, struggles, fears, aspirations, and achievements of African-Americans. No prerequisite, but either AMH 2010-2020 or SYG 1000-1010 is recommended. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

AMH 2092. African-American History II. African-American History II is an introductory course designed to acquaint students with, and stimulate interest in, the culture and history of African-Americans from the Reconstruction period to the present. Emphases are on the struggles, fears, aspirations and achievements of the people. No prerequisite, but either AMH 2010-2020 or SYG 1000-1010 is recommended. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

AML 2010. Survey of American Literature I. This course is a survey of American literature and literary philosophies from the Colonial Period through the Civil War. AML 2010 fulfills 6,000 words of the Gordon Rule writing requirement. Prerequisites: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit. [A]
AML 2020. Survey of American Literature II. This course is a survey of American literature and literary philosophies from the Civil War to the present. AML 2020 fulfills 6,000 words of the Gordon Rule writing requirement. Prerequisites: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit. [A]

APA 1251. Introduction to Accounting. This course provides an introduction to the field of accounting. It provides a basic knowledge of elementary accounting terminology, procedures and records. It is intended for students who desire an overview of the field of accounting. No prerequisite. 3 semester hours credit. [A]

ARH 1000. The Purpose of Art. An investigation into the origin and development of the visual arts as an integral expressive mode of man, individually and collectively. Particular emphasis is placed upon historical eras, past and present cultures, the impact of international influences on major art movements of past cultures, and selected representative art forms of various world cultures. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

ART 1100C. Crafts I. A course offering experience in the creative use of a variety of materials. 3 semester hours credit. [A]

ART 1201C. Introduction to Two-Dimensional Design. The elements and principles of design as applied to the two-dimensional plane. Various media will be used in two-dimensional design projects. Six hours laboratory per week. 3 semester hours credit. [A]

ART 1203C. Introduction to Three-Dimensional Design. The elements and principles of design as applied to the three dimensions. Various media will be used in three-dimensional design projects. Six hours laboratory per week. 3 semester hours credit. [A]

ART 1300C. Introductory Drawing. An introductory drawing course designed to provide basic drawing skills. Emphasis on perspective, media, technique, and style. Six hours lecture and studio per week. 3 semester hours credit. [A]

ART 1301C. Introductory Drawing. A continuation of ART 1300C with emphasis placed upon spatial description through perspective and other means with a greater exploration of the drawing processes through mixed technique. Prerequisite: ART 1300C. Six hours lecture and studio per week. 3 semester hours credit. [A]

ART 1750C. Introduction to Ceramics. The firing and glazing of clay pieces built by hand or formed on the potter’s wheel, with consideration given to the role of ceramics in the history of mankind and the modern world. Four hours studio per week. 3 semester hours credit. [A]

ART 1751C. Introduction to Ceramics. A continuation of ART 1750C, but with more opportunity for the student to perfect the techniques found most interesting, and to work on individual projects of personal choice. Prerequisite: ART 1750C or consent of instructor. Four hours studio per week. 3 semester hours credit. [A]

ART 2500C. Color and Pictorial Composition. Training in the problems of spatial organization through line, planes, color, light, motion, and volume. Oil or acrylic is the principal medium. Prerequisite: consent of the instructor. Six hours studio per week. 3 semester hours credit. [A]

ART 2501C. Color and Pictorial Composition. Advanced study of the problems of pictorial composition, with greater emphasis upon individual creativity and invention. Prerequisite: ART 2500C. Six hours studio per week. 3 semester hours credit. [A]

BCH 3023. Introduction to Organic and Biochemistry. A survey of organic chemistry and modern biochemistry with special emphasis on those concepts which are of use to science educators. Prerequisite: A grade of C or better in CHM 1046. 3 semester hours credit. [A]

BSC 1005. Introduction to Biological Sciences. This is a basic general education course to give the student an understanding of the major biological concepts of anatomy, reproduction, development, genetics, ecology and evolution in plant, animal and human life. This course cannot be used to satisfy degree requirements for students who already have credit in BSC 2010 and/or BSC 2011. Prerequisite: Acceptable placement scores in reading or a grade of “C” or higher in REA 0004. 3 semester hours credit. [A]

BSC 1052. Conservation Biology. This course will concentrate on the conservation and management of our natural resources. Special emphasis will be placed on aquatic, forest and wildlife management. Topics will also include the biological impacts of population growth, pollution and government regulations. The course will highlight past and present conservation movements and the need for a sustainable society. Students will be required to participate in a research project and a service project. To include field experience. Prerequisite: High School Biology, BSC 1005, or consent of department. 3 semester hours credit. [A]

BSC 2010. Integrated Principles of Biology I. An introductory study of the mechanisms directing the development and maintenance of life on earth. Particular attention is given to cell biology, metabolism, reproduction, biotechnology, genetics and evolution as the major unifying forces in the study of life through the ages. 3 semester hours credit. [A]

BSC 2010L. Integrated Principles of Biology I Lab. A laboratory course that acquaints the student with selected biological principles including cell biology, metabolism, genetics, physiology and evolution. Corequisite: BSC 2010. Two hours laboratory per week. 1 semester hour credit. [A]

BSC 2011. Integrated Principles of Biology II. An introduction to structure and function at the cellular and organismal level; modern concepts of physiology with emphasis on man; and principles of ecology. 3 semester hours credit. [A]

BSC 2011L. Integrated Principles of Biology II Lab. A laboratory course intended to be taken concurrently with BSC 2011. Laboratory experiences correlate with the lecture topics in the structure and function of plants and animals and ecology. Activities include dissection of the fetal pig, nonseed and seed plants, and may include field trips. Corequisite: BSC 2011. Two hours laboratory per week. 1 semester hour credit. [A]

BSC 2093. Anatomy & Physiology I. An introduction to the study of the functions of the human body. Scope: basic organization and structure
with histology, integumentary system, skeletal system, muscular system, and nervous system. Prerequisite: BSC 1005, BSC 2010, or equivalent; a pretest can be taken in the Chipola Testing Center to determine preparation for this course. Three hours lecture. 3 semester hours credit. [A]

BSC 2093L. Anatomy & Physiology I Lab. A laboratory course that follows the scope of topics in BSC 2093 with dissection and experiments. Two hours of laboratory per week. Corequisite or Prerequisite: BSC 2093. 1 semester hour credit. [A]

BSC 2094. Anatomy & Physiology II. An introduction to the study of the functions of the human body. Scope: special senses; endocrine, circulatory, respiratory, digestive, urinary, and reproductive systems; and metabolic regulation. Prerequisite: BSC2093 or BSC 2010 and BSC 2011 or consent of department. Three hours lecture. 3 semester hours credit. [A]

BSC 2094L. Anatomy & Physiology II Lab. A laboratory course that follows the scope of topics in BSC 2094 with dissection and experiments. Two hours of laboratory per week. Corequisite or Prerequisite: BSC 2094. 1 semester hour credit. [A]

BSC 4905. Supervised Research in Biology. This course is designed to allow students to participate in a supervised study or research participation in a specific science-related area in Biology. Students must have instructor approval of the topic before enrolling in the course. This course is only open to students who are enrolled in the science education program or who are trying to meet teacher certificate requirements. Prerequisites: BSC 2010/2011 with the corresponding laboratories. 1-3 semester hours credit. [A]

BUL 2131. Legal Environment of Business. A survey course of the legal environment of business. It provides an overview of the major areas of the law that shape the environment in which businesses operate. Areas covered include an introduction to law and the legal system, contracts, sales of goods and commercial paper under the UCC, property, agency and employment, business organizations, bankruptcy, and consumer protection. 3 semester hours credit. [A]

BUL 3310. Advanced Legal Environment of Business. An introduction to the legal setting in which business operates. Emphasis on business ethics. Legal topics include the nature of law and the legal process, administrative law, business and the constitution, statutory and common law, regulatory law, and agency/unemployment law. 3 semester hours credit. [A]

BUL 3330. Law for Accountancy. Basic concepts of law as applied to the accounting profession, including contracts, agency, partnerships and corporations, property, wills and trusts, securities regulation, consumer protection, and antitrust. 3 semester hours credit. [A]

C

CCJ 1020. Introduction to Criminal Justice. A study of the history, philosophy, ethics, development, and objectives of the criminal justice systems. The organization and administration of local state, and federal criminal justice agencies are emphasized. Professional career opportunities are surveyed. 3 semester hours credit. [A]

CCJ 1500. Juvenile Delinquency. A history of the juvenile court system in the United States is reviewed. Delinquency and the family are analyzed. Delinquency control, including the police, courts, legislation and support agencies are discussed. 3 semester hours credit. [A]

CET 1111. Logic Circuits. A study of Boolean algebra which covers binary arithmetic, decimal-to-binary conversion, logic gates, logic simplification and combinational logic. 1 semester hour credit. [A]

CET 1177. Introduction to Microcomputer Maintenance and Repair. This course introduces computer hardware components and system software needed to set up, install, configure, upgrade, and maintain a microcomputer system. 3 semester hours credit. [O]

CET 1486. Introduction to LAN Management. An introduction to software used in operating a local area network. Hands-on experience with one or more software packages will be provided. Prerequisite: CIS 1000 or CGS 1060 and acceptable college placement test scores or consent of department. Corequisite: CET 1600 or consent of department. 3 semester hours credit. [O]

CET 1513. Microcomputer Operating Systems. A survey of operating systems for microcomputers, including basic operating system functions such as disk and file management, customizing system configuration, and optimizing system performance. Prerequisite: CGS 1060 or consent of department. 3 semester hours credit. [O]

CET 1600. Introduction to Networking and Communications. An introduction to the hardware needed to set up and operate a local area network, including a discussion of configurations, physical specifications, and requirements and limitations of network components and workstations. Prerequisite: CGS 1000 or CGS 1060 and acceptable college placement test scores or consent of department. Corequisite: CET 1486 or consent of department. 3 semester hours credit. [O]

CET 1631. Network Cabling. This course is an introduction to network cabling using various types of copper and fiber optic cables. The focus of the course covers basic cabling theory, tool usage, troubleshooting and repair of copper and fiber optic cables. 1 semester hour credit [A]

CET 1811. Microsoft Systems Administration. This course provides students with the knowledge and skills necessary to install, configure, customize and troubleshoot Microsoft Windows client software. Prerequisite: CET 1513 or consent of department. Pre- or Corequisite: CET 1486 or consent of department. 3 semester hours credit. [O]

CET 1941. Internship in Computer Engineering Technology. Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to the Computer Engineering Technology field of study. A minimum of 45 clock hours on the job is required for each semester hour of credit earned. 1-3 semester hours credit. May be repeated for a maximum of 3 semester hours credit. [O]

CET 2114C. Digital Circuits. A study of digital circuits in the form of pulse and switching circuits, binary and octal numbers, Boolean Algebra, multivibrators, counters and registers, input-output devices, conversions, adders, and control circuits and systems. Prerequisite: EET 2119C. Six semester hours lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

CET 2152C. Microcomputer Systems. A study of microprocessors as a part of a complete microcomputer. Included are assembly languages, programming techniques, hardware test and measurement techniques, diagnostic programming to repair training computers, microprocessor system and utilization of appropriate test equipment. Prerequisite: CET 2114C. Six hours lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

CET 2173C. Digital Systems-Fault Analysis. A study of fault analysis and troubleshooting techniques as applied to various types of digital systems comprised of both discrete and integrated circuits. Involves practical hands-on application to troubleshooting, using diagnostic programming to repair training computers, microprocessor systems and utilization of appropriate test equipment. Prerequisite: CET 2152C. Four hours lecture/laboratory per week. 3 semester hours credit. [A]

CET 2590. Introduction to UNIX/Linux System Administration. An introduction to the UNIX/Linux network operating system. Topics include installation and configuration of both client and server, GUI and command
line interface, file management, system utilities, remote connectivity, and scripting. Hands-on laboratory exercises are included. Prerequisite: CET 1513 and CET 2722 or consent of department. 3 semester hours credit. [O]

CET 2605. Introduction to Network Routing and Switching. An introduction to network routing and switching. Topics include TCP/IP routing fundamentals; router configuration and troubleshooting; switching concepts and switch configuration; WAN connectivity, VLANs, and VPNs. Hands-on laboratory exercises are included. Prerequisite: CET 1600 or consent of department. 3 semester hours credit. [O]

CET 2660. Introduction to Network Security. This course covers an introduction to network security, concepts, terminology and a basic understanding of available network security methods and programs. Topics include legal issues and policies, managing risks, identifying types of attacks, information security best practices, E-Commerce needs and intrusion detection platform-specific implementations. Prerequisite: CET 1486 or consent of department. 3 semester hours credit. [O]

CET 2722. Microsoft Advanced Systems Administration. This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows server software to create file, print, and terminal servers. Prerequisite: CET 1486 or consent of department. Pre- or corequisite: CET 1811 or consent of department. 3 semester hours credit. [O]

CET 2724. Administering Network Infrastructure. This course is designed to provide the student with the knowledge and skills necessary to install, manage, monitor, configure and troubleshoot DNS, DHCP, Remote Access, network protocols, IP routing in a Windows network infrastructure. Pre- or corequisite: CET 2722 or consent of department. 3 semester hours credit. [O]

CET 2949. Co-op in Computer Engineering Technology. Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to the Computer Engineering Technology field of study. A minimum of 60 clock hours on the job is required for each semester hour of credit earned. 1-3 semester hours credit. May be repeated for a maximum of 3 semester hours credit. [O]

CGS 1060. Introduction to Microcomputer Use. An introduction to the use of microcomputers. Includes terminology and an introduction to the operation of typical microcomputer hardware and software. No prerequisite. No previous computer experience required but keyboarding or typing skill recommended. 3 semester hours credit. [A]

CGS 1100. Microcomputer Applications for Business and Economics. The course provides a survey of current microcomputer applications software, including general terminology, features and operating procedures for specific tasks. The student will acquire practical skills for using microcomputers in support of business and personal tasks. Prerequisite: CGS 1060 or an acceptable score on the CGS 1100 Screening Exam. 3 semester hours credit. [A]

CGS 1500. Word Processing. An in-depth course in word-processing software and functions. Topics include creating, editing, and formatting documents; report creation including outline, table of contents, footnote/ endnote, and index; merging documents; form letters and mail merge; and creating tables, charts, forms, newsletters and Web pages. Prerequisites: CGS 1060 or consent of department. 3 semester hours credit. [A]

CGS 1510. Introduction to Spreadsheet. A course using spreadsheet software for microcomputers for business and personal numerical problem-solving. Provides an introduction to the basic operations and capabilities of spreadsheet software through hands-on exercises. Prerequisite: CGS 1060 or consent of department. 2 semester hours credit. [A]

CGS 1525. Introduction to Presentation Software. An introduction to the use of presentation software on microcomputers. Covers the process of planning a presentation, presentation design principles, and the use of software to create effective visuals to support business presentations. Prerequisite: CGS 1060 or consent of department. 2 semester hours credit. [A]

CGS 1540. Introduction to Database Management. This course covers the concepts and procedures involved in using microcomputers for database management. Provides an overview of database management processes, including database design and normalization, and an introduction to the basic operations and capabilities of database management software for microcomputers through hands-on exercises. Prerequisite CGS 1060 or consent of department. 3 semester hours credit. [A]

CGS 1545. Database Programming. An advanced course in database management. Topics include relational database design and normalization, the process of custom application development, techniques for customizing the user environment, and the use of microcomputer database software to develop custom business applications. Prerequisite: CGS 1540 or consent of department. 3 semester hours credit. [A]

CGS 1557. Introduction to Web Authoring and Design. This course covers the procedures involved in designing and creating Web pages and Web sites. Includes hands-on laboratory assignments using current Web development software and/or current Web languages. Prerequisite: CGS 1060 or consent of department. Contact the course instructor for details. 3 semester hours credit. [A]

CGS 1580. Introduction to Desktop Publishing. An introduction to the production of camera-ready masters for photocopiers or offset presses using microcomputer equipment and desktop publishing software. Prerequisite: CGS 1060 or consent of department. 2 semester hours credit. [A]

CGS 1876. Introduction to Desktop Multimedia. This course covers the procedures involved in capturing and editing audio and video, creating animated graphics, and incorporating graphics, animations, audio and video into Web pages. Includes hands-on assignments using current multimedia software and Web tools. Prerequisite: CGS 1060 or consent of department. 2 semester hours credit. [A]

CGS 2930-2931. Topics in Computer Software. A seminar covering a software package of current interest. Open to all students. Prerequisite: CGS 1060 or consent of department. 1 semester hour credit. [A]

CHD 1220. Child Growth & Development I. This course is a study of the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment and principles and theories of development. 3 semester hours credit. [A]

CHD 1430. Observing and Recording Child Behavior. This course is designed to increase objectivity and proficiency in observing, recording, and interpreting children's behavior and in increasing awareness of normative patterns of behavior of children from birth through 5 years of age. Includes observation of infants, toddlers, and a case study of a child from this age group. 3 semester hours credit. [A]

CHD 1941. Early Childhood Internship. This course provides on-the-job training toward the Child Development Associate Credential, Occupational Certificate, and Associate in Science Degree. The student will be assigned a qualified supervisor appointed by the respective agency for which he/she works. The course may be repeated four times. Prerequisites: CHD 1430 and CHD 2432. 3 semester hours credit. [A]

CHD 2322. Programs for Young Children. This course is a study of the principles and practices of programs for young children. It includes current research in early childhood education, role of the teacher, and selection and
use of equipment and materials for groups of young children. Prerequisite: CHD 1220 or consent of department. 3 semester hours credit. [A]

**CHD 2432. Curriculum for Young Children.** This course is a study of the techniques of using language arts, science, art, social studies, math, and physical activities with young children with emphasis on interdisciplinary learning. Prerequisite: CHD 1220 or consent of the department. 3 semester hours credit. [A]

**CHD 2800. Child Care/Education Administrative Overview.** This course is designed to meet the educational requirements for the Foundation Level Child Care and Education Administrator Credential as defined by the State of Florida. The curriculum provides for administrative skills in the areas of personnel selection and management, ethics, finances, legal issues and early childhood education. Prerequisite: CHD 1220 or consent of the department. 3 semester hours credit. [A]

**CHM 1030. General, Organic and Biochemistry for Health and Related Science I.** This course consists of selected topics, specifically designed for a health-related major, with practical application of the chemical concepts of matter, atoms, measurement, bonding, reactions, pH, etc. The organic portion will introduce carbon chemistry and its compounds and their relationship to health-related fields. Three hours lecture per week. Prerequisite: Eligibility for MAC 1105. 3 semester hours credit. [A]

**CHM 1030L. General, Organic and Biochemistry Lab.** This laboratory course is designed to provide basic laboratory experiences correlated with CHM 1030. Emphasis of these labs is specifically designed for a health-related major with practical application of the chemical concepts of matter, atoms, measurement, bonding, reactions, pH, etc. The organic portion will introduce carbon chemistry and its compounds and their relationship to health related fields. Prerequisite or corequisite: CHM 1030. Three hours laboratory per week. 1 semester hour credit. [A]

**CHM 1045. General Chemistry I.** The courses CHM 1045-1046 are designed to fulfill requirements in general chemistry for the first year in science, premedical, and engineering curricula. Includes units and measurements, chemical calculations, thermochemistry, gases, liquids, solids, atomic structure, and bonding. Prerequisite: CHM 1030 (with a grade of C or better) or one credit in high school chemistry and eligibility for MAC 1140 or a more advanced course. CHM 1045L should be taken concurrently. 3 semester hours credit. [A]

**CHM 1045L. General Chemistry Laboratory I.** An introduction to experimental techniques in chemistry, designed to demonstrate basic chemical principles. Prerequisite or corequisite: CHM 1045. Three hours laboratory per week. 1 semester hour credit. [A]

**CHM 1046. General Chemistry II.** This course is a continuation of CHM 1045, which includes solutions, equilibrium, kinetics, acids and bases, redox reactions, electrochemistry, and nuclear chemistry. Prerequisite: A grade of C or better in CHM 1045; CHM 1046L should be taken concurrently. 3 semester hours credit. [A]

**CHM 1046L. General Chemistry Laboratory II.** This course is a continuation of experimental techniques in chemistry designed to demonstrate basic chemical principles. Prerequisite or corequisite: CHM 1046. Three hours laboratory per week. 1 semester hour credit. [A]

**CHM 2210. Organic Chemistry I.** This course is an introduction to the nomenclature, structure, and reactions of organic compounds. Prerequisite: CHM 1046 or equivalent with a grade of C or better. Corequisite: CHM 2210L. 4 semester hours credit. [A]

**CHM 2210L. Organic Lab I.** An organic laboratory to be taken concurrently with CHM 2210. Three hours laboratory per week. 1 semester hour credit. [A]

**CHM 2211. Organic Chemistry II.** This course is a continuation on the nomenclature, structure, and reactions of organic compounds. Prerequisite: CHM 2210 Corequisite: CHM 2211L. 3 semester hours credit. [A]

**CHM 2211L. Organic Lab II.** An organic laboratory to be taken concurrently with CHM 2211. Three hours laboratory per week. 1 semester hour credit. [A]

**CHM 4905. Supervised Research in Chemistry.** This course is designed to allow students to participate in a supervised study or research participation in a specific science-related area in Chemistry. Students must have instructor approval of the topic before enrolling in the course. This course is only open to students who are enrolled in the science education program or who are trying to meet teacher certificate requirements. Prerequisites: CHM 1045/1046 with the corresponding laboratories. 1-3 semester hours credit. [A]

**CIS 1000. Introduction to Computing Systems.** This introductory course includes the terminology, procedures, and equipment used in computing systems and in developing software applications. It includes such topics as internal operations of a microprocessor, current memory and storage technologies, data representation, binary arithmetic, character codes, systems development cycle, software design and development, and careers in computing. Prerequisites: Eligible to enroll in MAC 1105 or higher mathematics course, or consent of department. 3 semester hours. [A]

**CIS 1941. Internship in Computer Science.** Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to the Computer Science/Information Technology/Network Administration field of study. A minimum of 45 clock hours on the job is required for each semester hour of credit earned. 1-3 semester hours credit. May be repeated for a maximum of 3 semester hours credit. [A]

**CIS 2900. Applied Programming Specialty.** A course in using a particular programming language to create programs to solve a particular problem. Students write a contract for the particular programming activities to be completed during the course. Prerequisite: 6 semester hours credit in courses with COP prefix or consent of department. 1-3 semester hours credit. [A]

**CIS 2930-2931. Topics in Computer Science.** A seminar covering a topic of current interest in computer science for computer science majors. Prerequisite: CIS 1000 or consent of department. 1 - 2 semester hours credit. [A]

**CIS 2949. Cooperative Education in Computer Science.** Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to the Computer Science/Information Technology/Network Administration field of study. A minimum of 60 clock hours on the job is required for each semester hour of credit earned. 1-3 semester hours credit. May be repeated for a maximum of 3 semester hours credit. [A]

**CJB 2481. School Resource Officer Training.** A course designed to teach the knowledge, skills and attitudes that will enable a police officer to become a successful School Resource Officer. 2 semester hours credit. [O]

**CJC 1000. Introductions to Corrections.** An examination of the total correctional processes from law enforcement through the administration of justice, probation, prisons, and correctional institutions, and parole history and philosophy, career oriented. 3 semester hours credit. [A]

**CJC 2162. Probation, Pardons, and Parole.** A course which examines the use of probation, parole, and pardons as alternatives to incarceration. Prerequisite: CCJ 1020. 3 semester hours credit. [A]

**CJD 1161. Managing and Communicating.** This course is designed to identify managing and communicating skills for officer safety when dealing
with offenders who have mental illness, substance abuse and co-occurring disorders. Obtaining such skills may increase the safety and security of a well-run facility. 2 semester hours. [O]

CJD 1164. Inmate Manipulation. This course is designed to instruct corrections officers in the physical and verbal strategies dealing with inmate manipulation in a professional manner. 2 semester hours. [O]

CJD 2250. Interviews and Interrogations. An advanced course designed to cover the techniques, methods, principles, and issues of interviews and interrogations. 2 semester hours credit. [O]

CJD 2310. Line Supervision. A course designed to provide students with the knowledge and skills needed to function effectively as supervisors. Major topic areas include interpersonal communications, principles of organization and management, human relations, planning and development, policy formulation and budgeting. 3 semester hours credit. [O]

CJD 2320. Middle Management. A course designed for the law enforcement or correctional officer in a management or supervisory position. The course strengthens basic skills and develops leadership skills which are necessary for successful performance in the criminal justice field. 2 semester hours credit.[O]

CJD 2331. Planning the Effective Use of Financial Resources. This course was designed to acquaint the criminal justice officer with general financial concepts and terms, financial systems, budgets, and the effective uses of financial information within a criminal justice agency. An eight-hour practicum has been provided in this course to allow the students to actually develop and justify a working budget. 2 semester hours credit. [O]

CJD 2332. Building and Maintaining a Sound Behavior Climate. A course designed to acquaint the criminal justice officer with behavioral concepts, management techniques, motivational techniques, and the role of communication in criminal justice administration. 2 semester hours credit. [O]

CJD 2468. Youthful Offender Program. A course designed to provide the offender with increased knowledge and experience related to youthful offenders. General concepts, staff-inmate relationships, treatment of discipline strategies and youthful offender supervisory skills will be presented. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2470. Emergency Preparedness Training. A course designed to introduce correctional officers to the concept and key components of emergency situations; effective leadership to prevent such occurrences; and internal factors both inside and outside correctional institutions which affect emergency situations. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2471. Discipline and Special Confinement Techniques. A course designed to aid the correctional officer in effectively and properly performing the task requirements inherent in a confinement environment. The student will perform many of these tasks in practical exercises to demonstrate proficiency. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2476. Fire Fighting. A course designed to provide officers with first-stage firefighting capabilities and thereby reduce the dangers of death and injury in correctional settings. Emphasis will be placed on rescue techniques, the use of breathing equipment, evacuation of prisoners. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2602. Narcotic Identification and Investigation. A course which follows the curricula developed by the U. S. Drug Enforcement Administration for teaching criminal justice officers essential concepts and techniques in the area of drug and drug-related crimes. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2604. Injury and Death Investigations. A course giving the patrol officer and investigator with limited experience in injury and death investigation a general insight into investigative, legal and evidentiary aspects of sex crimes. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2626. Hostage Negotiations. This course is designed to qualif law enforcement and correctional officers and support personnel in the area of hostage negotiations; to include: introduction to the problem, types of hostage situations, formulation of policy, hostage negotiations principles, communications principles, intelligence gathering, abnormal behavior and participant performance exercise. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2663. Writing and Reviewing Reports. A course providing a focused review and practice of the basic elements necessary for effective writing in any situation or any type of report. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2667. Drug Abuse Awareness and Education. A course providing the informed criminal justice officer with the methodologies necessary to educate members of the community. This is achieved through various modes of presentation on current and critical issues relevant to drug abuse. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2681. Case Preparation and Court Presentation. A study of the fundamentals of criminal case preparation and court presentation for the law enforcement and/or correctional officer, to include case files, pretrial discovery, depositions, plea bargaining, court testimony, moot court, post adjudication responsibilities, case studies and a practical exercise. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2691. Stress Awareness and Resolution. A course designed to enhance the law enforcement, correctional and correctional probation officer’s ability to deal with stressful situations that are inherent in the criminal justice profession. A general awareness of the causes and types of stress and techniques for managing stress should lead to more effective job performance. This course emphasizes application of stress management techniques related to all areas of the officer’s life. FDLE-CJSTC Advanced Course. For Criminal Justice Personnel only. 2 semester hours credit. [O]
CJD 2693. Crisis Intervention. A course providing the law enforcement and correctional officer with the training needed to recognize and handle common crises. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2697. Domestic Intervention. This course is designed to provide the officer with an awareness of domestic intervention symptoms and techniques, including information and case studies on specific domestic and social problems. 2 semester hours credit. [O]

CJE 1404. Human and Community Relations. This course is designed to help officers understand their own feelings in efforts to create the ability to effectively deal with the feelings of others. Law enforcement image and functions as well as conflict-causing barriers which exist between police and the community will be explored. 2 semester hours. [O]

CJE 1543. Radar Speed Measurement. This course is designed for the Law Enforcement officer in a patrol officer’s position to improve the effectiveness of speed enforcement through the proper use of police traffic “RADAR” speed measurement. 2 semester hours. [O]

CJE 2308. Developing & Maintaining a Sound Organization. A course designed to acquaint the criminal justice officer with the general concepts and principles of organization and organizational structures. 2 semester hours. [O]

CJE 2500. Police Operations. A discussion of police problems and responsibilities, including the distribution of personnel and materials, supervision of forces, operating procedures, communications and records, highway safety and traffic control, disasters and disturbances, and the relationship between the police and the public. 2 semester hours. [O]

CJE 2500. Police Operations. A discussion of police problems and responsibilities, including the distribution of personnel and materials, supervision of forces, operating procedures, communications and records, highway safety and traffic control, disasters and disturbances, and the relationship between the police and the public. 2 semester hours. [O]

CJK 2460. School Resource Officer. A course designed to acquaint the criminal justice officer with the general concepts and principles of organization and organizational structures. 2 semester hours. [O]

CJD 2100. Crisis Intervention. A course providing the law enforcement and correctional officer with the training needed to recognize and handle common crises. FDLE - CJSTC Advanced Course. For Criminal Justice Personnel Only. 2 semester hours credit. [O]

CJD 2103. Criminal Law Theory. This course is designed for the law enforcement and correctional officers to refresh and update his/her basic skills and knowledge in Criminal Law as well as to expand said skills and knowledge into more advanced and specialized areas of Criminal Law. 2 semester hours credit. [O]

CJL 2062. Constitutional Law for Criminal Justice. A study of the federal and the various state constitutions. An in-depth analysis of those constitutional amendments having a bearing on contemporary criminal justice issues. 3 semester hours credit. [A]

CJL 2080. Criminal Law. A course in the theory, purpose and history of criminal law. General criminal procedures, including arrest and trial, appeal, punishment and release, search and seizure and the rights and duties of law officers. 3 semester hours credit. [A]

CJL 2100. Criminal Law. A course in the theory, purpose and history of criminal law. General criminal procedures, including arrest and trial, appeal, punishment and release, search and seizure and the rights and duties of law officers. 3 semester hours credit. [A]

CJL 2103. Criminal Law Theory. This course is designed for the law enforcement and correctional officers to refresh and update his/her basic skills and knowledge in Criminal Law as well as to expand said skills and knowledge into more advanced and specialized areas of Criminal Law. 2 semester hours credit. [O]

CJL 2130. Criminal Evidence. An analysis of courtroom procedures, presentation of evidence and judicial decisions. Rules of evidence and the roles of judge, prosecutor, defense and jury will be discussed. 3 semester hours credit. [A]

CJT 2100. Criminal Investigations. A course to provide education theory in the fundamentals of investigation and the techniques of collection, preservation and transportation of evidence. 3 semester hours credit. [A]

CJT 2800. Computer Applications in Criminal Justice. This course will provide criminal justice officers, with limited computer and technology experience, information regarding the benefits of computers and technology when managing the operations within the criminal justice systems. 2 semester hours credit. [O]

CLP 2140. Abnormal Psychology. A course which concentrates on the description, causes and treatment of behavioral disorders as seen from the viewpoint of the major theoretical models of abnormal behavior. Prerequisite: PSY 2012. 3 semester hours credit. [A]

COP2000. Introduction to Computer Programming. An introduction to computer programming, with an emphasis on the problem-solving process, problem analysis, design decisions, and creative algorithm development. Topics will include organization and structure of computer programs; interface design techniques; algorithm design and development; a survey of programming paradigms; syntax and semantics of specific statements in one or more representative computer languages. Prerequisite: Must be eligible to enroll in MAC 1105 or higher mathematics course. The prerequisite may be waived by consent of department for students with previous appropriate coursework or work experience. Contact the course instructor for details. 3 semester hours credit. [A]

COP 2224. C++ Programming. A survey of the C++ programming language, with special attention to language features that support an object-oriented approach to programming. Topics include a review of basic programming control structures, input/output operations, and mathematical and logical operations; data types and basic data structures including arrays, records, files, classes, and pointers; functions; parameters; language extensibility using libraries. Prerequisite: COP 2000. The prerequisite may be waived by consent of department for students with previous appropriate coursework or work experience. Contact the course instructor for details. 3 semester hours credit. [A]

COP 2535. Introduction to Data Structures and Algorithms. A third course in computer programming. Topics will include standard data structures, such as lists, queues, stacks, trees, graphs; associated algorithms; and an introduction to algorithm analysis techniques. A comparison of pointer-based implementations and array-based implementations will be made. Prerequisite: COP 2224. Prerequisite may be waived by consent of department for students with previous appropriate coursework or work experience. Contact the course instructor for details. 3 semester hours credit. [A]

COP 2800. Java Programming. This course provides an introduction to the Java programming language. Topics include basic operations, controls, data, objects, graphics, applets, method abstraction, class abstraction, and event handling. Prerequisite: COP 2000 or consent of department. 3 semester hours credit. [A]

DEP 2004. Human Growth and Development. A course in which biophysical, cognitive and psychosocial development throughout the life span (from conception to death) will be considered, as well as problems specific to each stage. This course is required for pre-nursing students. The course carries division elective credit only. Prerequisite: PSY 2012. Completion of DEP 2102 is strongly recommended as preparation for this course. 3 semester hours credit. [A]

DEP 2102. Child Psychology. A course with application to an objective study of the preadolescent child. Preadolescent physical, psychological, and social development are studied. Special problems of child training in the family and of social adjustment at school are discussed. Prerequisite: PSY 2012. 3 semester hours credit. [A]
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ECO 2013. Macroeconomics. An introduction to economics and the economy; national income, employment, and fiscal policy; money, banking, and monetary policy; problems and controversies in macroeconomics. 3 semester hours credit. [A]

ECO 2023. Microeconomics. Microeconomic theories of product and resource markets, government and current economic problems, international economics and the world economy. 3 semester hours credit. [A]

EDF 1005. Introduction to Education. A course designed as an introduction to American education. It includes a study of the fundamental principles, historical views, curriculum, pupil population, educative processes, teaching as a profession, and 35 hours of field experience. 3 semester hours credit. [A]

EDF 3214. Human Development and Learning. This course is designed to cover myriad learning theories as they apply to student development, learning styles, learning ability as well as disabilities. Students will be afforded the opportunity to explore various ideologies relative to intelligence and intellectual assessment. Additionally, students will be required to arrange visits totaling at least 15 hours to area schools to observe teaching and learning styles, the interactions between student and teacher, and intervention techniques. Prerequisite: PSY 2012. 3 semester hours credit. [A]

EDF 4430. Measurement & Evaluation in the Classroom. This course involves the study of principles of traditional and alternative assessment strategies. It helps the student obtain skills relevant to the development and use of classroom assessments. Students must attain a basic understanding of the principles of measurement, formative and summative assessment strategies, test construction, performance assessments; and reading and interpreting data from state achievement tests. The course will help students understand the content measured by state tests and use the data to improve student achievement. Prerequisite: STA 2122, MGF 1106, or acceptable score on department exam. 3 semester hours credit. [A]

EDG 2701. Teaching Diverse Populations. A course that provides the student with the opportunity to explore personal values and attitudes toward diverse populations. Designed for the prospective educator, the theoretical component will examine the issues of teaching diverse learners. Attention will be given to teaching about ethnicity in a pluralistic society. Examination of educational materials will enhance the student’s understanding of multiculturalism. 3 semester hours credit. [A]

EDG 3343. Instructional Strategies. This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, lesson planning, and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. 3 semesters hours credit. [A]

EDG 4410. Classroom Management & Communication. This course covers basic skills and knowledge for creating a learning environment that encourages positive social interaction and effective communication among members of the learning community. The course emphasizes ethics, attitudes, language patterns, values, and behaviors, and includes methods and strategies for consulting with other school professionals and parents. Additionally, students will be required to arrange visits totaling at least 10 hours to area schools to observe various classroom management strategies in action. Prerequisite or Corequisite EDF 3214, or consent of the department. 3 semester hours credit. [A]

EET 1015C. Direct Current Circuits. A fundamental course including series, parallel and complex circuit analysis, Ohms Law, meters, conductors, insulators, resistors, batteries, and magnetism. The use and understanding of test equipment for circuit analysis is stressed. Six hours lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

EET 1025C. Alternating Current Circuits. A study of A.C. fundamentals, inductive circuits, capacitive circuits, complex numbers, resonance, and filters. Theoretical circuit analysis and circuit testing by the use of meters and oscilloscopes are stressed. Prerequisite: EET 1015C. Six hours lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

EET 1084. Introduction to Electronics. This course is designated for a telecommunication student. It provides an overview of electronics to acquaint the student with the principles upon which modern electronic devices operate. The course includes an introduction to the basic concepts of electricity and magnetism, electronic circuits and digital electronics. 3 semester hours credit. [A]

EET 1371. Telecommunications Installation Technician. This course prepares students for employment in the telecommunications installation technician field. Students receive installation training, splicing and activation of broad band and telephone installation. First Aid, CPR and Pole climbing is included. This is a seven week course, five days per week with a certificate in this area. Combination lecture/lab. 8 semester hours credit. [A]

EET 1607C. Surface Mount Technology/Through Hole Assembly and Repair. A study of the techniques involved in surface-mount technology (SMT) and through-hole printed circuit board assembly and repair. The practical application of equipment and tools is stressed. Six hours lecture/lab per week. $6 lab fee. 4 semester hours credit. [A]

EET 2104C. Electronic Devices. A study of semiconductor devices and their application in electronic circuits. Included is the study of the structure of matter, diodes, transistors, biasing, FET’s, PNPN’S, and other devices. Prerequisite: EET 1025C. Six hours lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

EET 2119C. Analog Circuits. A study of half-wave power supplies and vacuum tube, transistor and FET cascaded amplifiers, including coupling methods, frequency considerations, stabilization and feedback. Prerequisite: EET 2104C. Six hour lecture/laboratory per week. $6 lab fee. 4 semester hours credit. [A]

EET 2322C. Fundamentals of Analog Communications. A study of the fundamentals of communication, including AM and FM receivers and transmitters comprised of both discrete and integrated circuits. Involves a practical hands-on application of troubleshooting techniques to analyze and isolate faults. Six hours lecture/lab per week. Prerequisite: Consent of instructor. $6 lab fee. 4 semester hours credit. [A]

EET 2335C. Digital Communications. This course is designated for a telecommunication student. It emphasizes the equipment, systems and software involved in the sending and receiving of data over modern communications. 4 semester hours credit [A]

EET 2751C. Telephone Switching Theory. This course is designated for a telecommunication student. It covers the fundamentals in digital switching systems. It is designed to prepare the student for advanced courses in state-of-the-art telecommunications. 3 semester hours credit. [A]

EGS 2100C. Engineering Graphics. A basic introductory course covering the use of drafting instruments, lettering, technical sketching, geometric construction, orthographic projections, auxiliary and sectional views, isometric and oblique drawing, and working drawings. Five hours lecture/laboratory per week. Prerequisite: MAC 1105 or consent of the department. 3 semester hours credit. [A]

EME 2040. Introduction to Educational Technology. Technology for Teachers will provide participants with knowledge of and hands-on experience with integrating technology into classroom instructional activities.
Special focus will be placed on the incorporation of computer-based productivity tools for instruction and instructional support tasks. 3 semester hours credit. [A]

**EME 3410. Integrating Technology in the Classroom.** This course is designed for pre-service and practicing middle school teachers. It includes the use of innovative computer software and graphing calculators for students to experience learning with technology at the middle and secondary school levels. The use and integration of software, electronic spreadsheets, data analysis, and instructional software will be studied from a problem solving perspective. Students will also create or use programs on a graphing calculator. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and is required for certification. A programmable graphing calculator will be required for this course. Prerequisite: EME 2040 or consent of the department. 3 semester hours credit. [A]

**EMS 1159C. Emergency Medical Technician.** A basic course designed to provide the student with the knowledge and basic skills necessary to provide effective emergency care of the sick and injured. Theoretical instruction and selected clinical experiences are provided. 11 semester hours credit. [O]

**EMS 2620. Paramedic I.** The introduction of advanced life support skills of definitive airway management and intravenous therapy. Also includes sections on foundations, airway, patient assessment, and trauma. Lab included. 12 semester hours credit. [O]

**EMS 2621. Paramedic II.** A continuation of EMS 2620 with emphasis on cardiology and advanced cardiac life support. 12 semester hours credit. [O]

**EMS 2622. Paramedic III.** A continuation of EMS 2621 with emphasis on medicine, special patients assessment-based management and operations. Lab included. 6 semester hours credit. [O]

**EMS 2660. Paramedic IV.** Culmination of paramedic program in which previous education and training are reviewed and applied to simulated situations. Completion of course leads to eligibility for paramedic licensure examination. Lab included. 12 semester hour. [O]

**ENC 0003. Applied English.** This course helps develop written language skills including basic sentence structure, paragraph organization, usage, punctuation, capitalization and grammatical concepts. This four-hour non-credit course is designed for students who do not possess entry skills for college prep writing as indicated by ACT or CPT scores: students scoring from 20-46 on the CPT, 0 to 8 on the Enhanced ACT or below 9 on the TABE. Students who make a D in this course will be allowed to advance to ENC 0004. 4 semester hours non-college credit. [P]

**ENC 0004. College Preparatory Writing I.** This course is designed to remediate severe problems in writing skills. Students scoring between 9-16 on the Enhanced ACT or score between 47-82 on the CPT must take this course. Students must make a grade of "C" or higher in this course and pass an exit exam before registering for ENC 1101. 4 semester hours non-college credit. [P]

**ENC 1101. Communications Skills I.** This course in English composition is designed to prepare a student to write successfully throughout the four-year college career. Theme assignments deal with narrative, descriptive, expository, and argumentative writing. Brief oral presentations are required. A documented essay is required. ENC 1101 fulfills 8,000 words of the Gordon Rule writing requirement. Prerequisite: Acceptable placement scores in writing (or a grade of "C" or higher in ENC 0004) and reading (or a grade of "C" or higher in REA 0004). A grade of "C" or higher must be earned to enroll in ENC 1102 or to use this course as part of the general education requirement in English. 4 semester hours credit. [A]

**ENC 1102. Communications Skills II.** This course in English composition is the second half of the sequence begun with ENC 1101. This second semester is concerned primarily with themes about literature, based on reading of short stories, plays, and poetry. Brief oral presentations are required. ENC 1102 fulfills 8,000 words of the Gordon Rule writing requirement. Prerequisite: A grade of "C" or higher in ENC 1101 and an acceptable placement score in reading or REA 1205. A grade of "C" or higher must be earned to advance to a higher level English or other Gordon Rule course or to use this course as part of the general education requirement in English. 4 semester hours credit. [A]

**ENC 1133. Research Writing.** This course is designed to increase proficiency in effective methods of library research and in writing the documented essay. ENC 1133 fulfills 2,000 words of the Gordon Rule writing requirement. Prerequisite: Grades of "C" or higher in ENC 1101-1102. 1 semester hour credit. [A]

**ENC 1153. Writing for Technical Students.** This course prepares students to communicate information in the work place. It will prepare the student to compose and organize all types of reports, prepare technical documents, and write various types of letters using various computer applications. Good sentence structure and mechanics will be emphasized. This course is for certificate or specified A.S. degree programs. It does not fulfill the Gordon Rule requirement. Prerequisite: CGS 1060. 3 semester hours credit. [A]

**ENC 2110. Reading and Writing CLAST Review.** This course is designed for students who must take the College Level Academic Skills Test (CLAST). The reading skills emphasized are literal and critical comprehension. Writing skills reviewed are word choice, sentence structure, grammar, spelling, punctuation, and the process of writing an essay. Prerequisites: ENC 1101 and 1102. The course is mandatory for all students who register for the CLAST with an overall grade point average below 3.0. Institutional credit is offered, but this course does not apply toward satisfying general education requirements in communications. 1 semester hour credit. [A]

**ENC 2110A. Reading and Writing CLAST Retake I.** This course is designed for students who must retake the College Level Academic Skills Test (CLAST), which includes three English subtests: reading, writing and essay. The student will study the skills needed to pass the subtest(s) failed in the first attempt. Institutional credit is offered, but this course does not apply toward satisfying general education requirements in communications. Prerequisites: Gordon Rule classes and ENC 2110. 1 semester hour credit. [A]

**ENC 2110B. Reading and Writing CLAST Retake II.** This course is designed for students who must retake the College Level Academic Skills Test (CLAST), which includes three English subtests: reading, writing and essay. The student will study the skills needed to pass the subtest(s) failed in the second attempt. Institutional credit is offered, but this course does not apply toward satisfying general education requirements in communications. Prerequisites: Gordon Rule classes and ENC 2110 and 2110A. 1 semester hour credit. [A]

**ENC 2110C. Reading and Writing CLAST Retake III.** This course is designed for students who must retake the College Level Academic Skills Test (CLAST), which includes three English subtests: reading, writing and essay. The student will study the skills needed to pass the subtest(s) failed in the third attempt. Institutional credit is offered, but this course does not apply toward satisfying general education requirements in communications. Prerequisites: Gordon Rule classes and ENC 2110, ENC 2110A and ENC 2110B. 1 semester hour credit. [A]

**ENC 2210. Technical Writing.** This course is designed to prepare technicians, professionals and administrators to communicate information concerning their specialized skills. It will prepare the student to compose
This course is a survey of ENL 2012. Survey of English Literature I. from 1 to 3 hours depending upon the number of hours tutoring: 1 credit, the extensive tutoring experiences. The number of hours of credit varies seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. The number of hours of credit varies from 1 to 3 hours depending upon the number of hours tutoring: 1 credit, 25 hours; 2 credits, 38 hours; and 3 credits, 50 hours. [A]

ENC 2905. Communications Through Tutoring. The goal of this course is to teach the general communication skills needed for successfully tutoring in an academic setting, to teach general methods of tutoring and to teach the tutoring techniques needed in specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. The number of hours of credit varies from 1 to 3 hours depending upon the number of hours tutoring: 1 credit, 25 hours; 2 credits, 38 hours; and 3 credits, 50 hours. [A]

ENC 2012. Survey of English Literature I. This course is a survey of English literature and literary philosophies from the Old English through the Neoclassical periods. ENL 2012 fulfills 6,000 words of the Gordon Rule writing requirement. Prerequisites: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit [A]

ENC 2022. Survey of English Literature II. This course is a survey of English literature and literary philosophies from the Romantic period to the present. ENL 2022 fulfills 6,000 words of the Gordon Rule writing requirement. Prerequisites: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit [A]

ESC 1000. Introduction to Earth Science. A general education course involving an introductory study of geology, oceanography, and meteorology. Demonstrations and practical applications are emphasized. Cannot be taken to satisfy the general education requirement if GLY 1010 has already been taken. 3 semester hours credit. [A]

FFP 1301. Fire Stream Hydraulics. A study of pertinent properties of water, distribution of pressures in dynamic and static systems, friction loss in hoses and pipes and factors which influence it. Approximation methods for quick calculation are given, as well as the more technical computations. Effort is directed toward giving an understanding of how good fire streams are developed. 3 semester hours credit. [O]

FFP 1302. Fire Apparatus and Equipment. This course covers the national, state and local emergency vehicle driving laws. Emphasis is placed on safe driving techniques and proper use of equipment. 3 semester hours credit. [O]

FFP 1505. Fire Inspection Practices. A course on structure and organization of fire prevention, organizations, conducting inspections, interpreting and applying code regulations. A study of procedures and techniques of fire prevention, including surveying and mapping, recognition and elimination of fire hazards and fire risk analysis as applied to municipal and industrial occupancies. 3 semester hours credit. [O]

FFP 1510. Principles of Fire Prevention and Fire Related Laws, Codes and Ordinances. A study including the recognition and categorization of fire hazards. It emphasizes methods of developing effective fire prevention programs for large and small communities, industries, and institutions. The legal basis for fire protection in effect throughout Florida and the application of state, county and municipal legislation as well as other sources of authoritative guidance will be studied. 3 semester hours credit. [O]

FFP 1521. Blue Print Reading and Plans Examination. A course using code standard and inspection techniques learned previously, to review building plans to find errors and omissions, make corrections according to code, and identify where each item is located in the code. 3 semester hours credit. [O]

FFP 1540. Fire Protection Systems and Devices. A study of fixed and portable systems for detecting, reporting and extinguishing fires. Comparison is made between the value of detection and the value of automatic extinguishing systems. Study is made of the factors which influence the choice of one of several systems for a given occupancy and the value of each type system. Restoration after use and routine maintenance are stressed. 3 semester hours credit. [O]

FFP 1610. Fire Cause and Arson Detection. A unit emphasizing the investigation of fires for determination of the source of ignition and first fuel, point of origin, direction and rate of spread and whether the cause was accidental or illegal. Florida arson laws are studied along with procedures for ensuring the admissibility of any evidence found at the scene of the fires, including methods of questioning the witnesses, interviewing, interrogation, and case preparation, with stress on recognition of cause and evidence. 3 semester hours credit. [O]

FFP 1741. Fire Science Course Design. This course is designed to enhance instructor techniques in Curriculum Development. The student will develop objectives, prepare an effective lesson plan and present an active training session. 3 semester hours credit. [O]

FFP 2120. Building Construction for the Fire Service. This course introduces the student to building codes in relation to fire protection. Standards to eliminate fire problems prior to construction are emphasized. The relationship between the building inspection and fire protection agencies, plus fire extinguishing techniques in all types of building construction, are discussed. 3 semester hours credit. [O]

FFP 2700. Fire Department Administration, Management and Supervision. A study of administrative, managerial and supervisory principles as they apply to the fire service. This course is intended for those seeking to participate in upper level organizational activity such as budgeting, cost controls, goal setting, manpower acquisition and distribution, and for those seeking to supervise fire company personnel with emphasis upon leadership traits, training, planning, and company officer responsibilities. 3 semester hours credit. [O]

FFP 2706. Public Information Officer. This course is a study of what public relations is and how a fire department can utilize positive public relations to benefit the organization and the public. The student will demonstrate techniques to bridge public relations with the community. This course describes the functions of a public information officer along with the responsibilities the position holds. 3 semester hours credit. [O]

FFP 2720. Company Officer. This course covers the broad concepts of supervision and leadership, enabling students to analyze the kinds of effective leadership-followship needed in the fire services. Roles and attitudes needed in high stress conditions are emphasized. Case studies and individual goal setting are important components of the course. 3 semester hours credit. [O]

FFP 2740. Fire Science Instructor Techniques. A course on principles, procedures, and techniques of teaching, with emphasis on methods of instruction, developing training outlines, use of visual aids, and testing procedures of fire science instructors. 3 semester hours credit. [O]

FFP 2770. Ethical and Legal Issues for Fire Service. This course is a study of the entire spectrum of legal issues facing today’s fire service leaders. Topics include: Labor relations, human rights and diversity; conflicts of interest and frameworks for ethical decision making. 3 semester hours credit. [O]

FFP 2810. Firefighting Strategy and Tactics I. A study of multiple company operations, logistics, strategy, use of mutual aid forces, and conflagration control. Intended for high-ranking officers who may be in command of major fires and other emergencies involving close coordination and maximum use of large amounts of manpower and equipment.
Typical tactical situations and case histories will be given. 3 semester hours credit. [O]

**FSS 2214C. Advanced Food Preparation.** This course will provide the student with a thorough knowledge of fundamental cooking skills as related to meat cookery including beef, pork, veal and game as well as poultry and fowl, seafood including fin-fish and shellfish, and breakfast cookery. 3 semester hours credit. [O]

**FSS 2240C. Food Specialties: World Cuisine.** This course will provide the student with a basic knowledge of fundamental cooking skills as related to cuisines throughout the world. Emphasis will be placed on product identification and use for different regions of the world along with relation to culture and local customs. 3 semester hours credit. [O]

**FSS 2380. Culinary Management Practicum I.** This course will review and support previously learned skills as well as introduce new ones. Emphasis will be placed on quality food preparation in an operational food service facility. Students will be expected to operate efficiently and effectively in all kitchen stations. 2 semester hours credit. [O]

**FSS 2381. Culinary Management Practicum II.** This course will review and support previously learned skills as well as introduce new ones. Emphasis will be placed on management principals in both the front and back of the house environments. Students will gain valuable management experience by hands on management in an operational food service facility. 2 semester hours credit. [O]

**FSS 2382L. Practical Exam.** This course will serve as a capstone course integrating all competencies attained. Students will be encouraged to elaborate on previously learned theories to produced food items on a more “up-scale” basis with attention focused on menu planning, cooking techniques, plate presentation, dish originality, costs and marking. 2 semester hours credit. [O]

**G**

**GEA 2001. World Geography I.** A study of the relationship between human activities and natural environment. A regional-cultural approach is used and effort is made to correlate the course content with the other social sciences. Credit will be granted without taking 2002, but the sequence is recommended. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

**GEA 2002. World Geography II.** The second half of the course sequence 2001-2002. GEA 2001 is not a prerequisite, but the sequence is recommended. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

**GEB 1011. Introduction to Business.** A survey course designed to acquaint the student with the terminology, organization, and function of the American business system. Topics covered include business in a global environment, starting and growing your business, management, marketing, managing technology and information, managing financial resources, business law and risk management. 3 semester hours credit. [A]

**GEB 1941. Internship in Business.** Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to a Business-related field of study. A minimum of 45 clock hours is required for each semester hour of credit earned. Prerequisites: A minimum of 15 semester hours of credit earned toward a degree or certificate in Accounting, Economics, or Business Administration and Management; completion of an internship application; interview with the coordinator of the internship program, and the availability of a training slot. 1-3 semester hours credit. May be repeated up to a total of 3 hours credit. [A]
GEB 2214. Business Communications. This course develops effective oral and written communications skills in a business environment. It includes written correspondence, interviewing, public relations and business presentations. Prerequisite: ENC 1101. 3 semester hours credit. [A]

GEB 2949. Cooperative Education in Business. Supervised, practical work experience in an appropriate business, industry, government agency, or institution which relates to the Business field of study. A minimum of 60 clock hours is required for each semester hour of credit earned. Prerequisites: A minimum of 35 semester hours of credit toward a degree in Business Administration, Accounting, or Economics; completion of a cooperative education application; interview with the coordinator of the cooperative education program; and the availability of a training slot. 1-3 semester hours credit. May be repeated up to a total of 3 hours credit. [A]

GEB 3213. Business Writing. This course emphasizes the basics of business writing while reviewing the various kinds of written business correspondence. Students are expected to integrate business decision making and analytical thinking skills into the content. Students must be able to determine solutions to problem-based exercises. Prerequisite: ENC 1102. 3 semester hours credit. [A]

GEB 3434. Ethical Issues for Business Leaders. This course uses a case study approach to focus on the significant ethical and legal issues facing today’s business leaders. The theoretical and philosophical background will be presented along with current real-life examples of ethics in the workplace. 3 semester hours credit. [A]

GEB 4891. Strategic Management and Decision Making. This course emphasizes strategic planning and strategy implementation in an organization. Students learn how to perform internal and external audits, identify problems, formulate goals and objectives, develop action plans, and evaluate the effectiveness of the outcome of the plan. Case studies are used to promote decision-making abilities. 3 semester hours credit. [A]

GLY 1010. Introduction to Physical Geology. An introductory geology course which includes a comprehensive study of the earth's physical processes and properties, with emphasis on understanding the scientific theories behind the geological principles. The course covers the origin, structure, and composition of the earth; the physical processes acting upon the earth; and the development of the continents and ocean basins through time. Cannot be taken by students who have taken GLY 1001. 3 semester hours credit. [A]

GRA 1100C. Beginning Computer Graphics. An introduction to Photoshop 5.0 through guided instruction and practical use. Concepts taught in this course will include: scanning of images, manipulation of those images, combining text with graphics effectively and creating original pieces. Enrollment is recommended for art majors or art related majors. Class will consist of three one hour classroom sessions and a required minimum of 3 hours lab time per week. (A lab fee will be charged.) 3 semester hours credit. [A]

GRA 2151C. Computer Based Design I. This course explores the computer's capabilities as a tool for artists and graphic designers. Students will use a variety of layout and image-processing programs, digital photography and digital scanning in assignments that stress creativity and technical proficiency. This course provides students with practical experience in the planning, design, editing and production processes of special, non-newspaper publications. Students will develop skills in the shaping of major college publications, including a college yearbook. 2 semester hours credit. [A]

GRA 2152C. Computer Based Design II. A continuation of GRA 2151-2152C sequence. This course explores the computer’s capabilities as a tool for artists and graphic designers. Students will use a variety of layout and image-processing programs, digital photography and digital scanning in assignments that stress creativity and technical proficiency. This course provides students with practical experience in the planning, design, editing and production processes of special, non-newspaper publications. Students will develop skills in the shaping of major college publications, including a college yearbook. 2 semester hours credit. [A]

GRA 2153C. Advanced Computer Based Design I. A continuation of the GRA 2151C - 2152C sequence using advanced software and programs. Directed at, but not limited to, artists and graphics designers. Prerequisite: GRA 2151C or 2152C or consent of the department. 2 semester hours credit. [A]

GRA 2154C. Advanced Computer Based Design II. A continuation of the GRA 2151C-2152C sequence using advanced software and programs. Directed at, but not limited to, artists and graphics designers. Prerequisite: GRA 2151C or 2152C or consent of the department. 2 semester hours credit. [A]

H

HFT 1210C. Food Service Supervision. This course introduces the student to the importance of human resources functions in an organization and the responsibilities of management. The course will offer management techniques that will aid students in solving the problems that they are likely to encounter in the workplace. 3 semester hours credit. [O]

HFT 1860. Beverage Management. This course will provide the student with a working knowledge of beverage management for the food service industry. Students will develop an understanding of beer, wine, and liquor production methods along with inventory control and basic bartending skills. 3 semester hours credit. [O]

HFT 2264C. Banquet and Convention Management. This course will familiarize the students with the necessary theories to perform both on and off-site events. Emphasis will be placed on banquet and ala carte style service, specialty foods, beverage service, and legal issues. 3 semester hours credit. [O]

HFT 2840C. Dining Room Operations. Types of dining room and beverage service techniques found in the hospitality industry. Lab Fee. 3 semester hours credit. [O]

HIS 1930-1931-2932-2933. Current Affairs. A study of events of the world today, based on coverage in current periodicals, radio and television. Emphasis is placed on the development of informal judgments about public affairs by the student. Open to all students for a maximum of four semesters. A student may pursue only one Current Affairs course during a given semester unless special consent is given by the department. 1 semester hour credit. [A]

HIS 2955. Studies Abroad in Civilization. A course consisting of seminars and travel. Pretravel seminars establish a foundation for critically examining the various interest points in relation to significant historical, philosophical, and cultural events and sights of the trip. Opportunities are given to apply general knowledge and individual interests to various points of interest in designated countries and cities. Prerequisite: Consent of the college. 3 semester hours credit. [A]

HSC 1100. Personal and Community Health Problems. A course designed to prepare the student for solving personal and community health problems through an understanding of health rules and habits. Emphasis is given to understanding and implementing the principles of maintaining and improving individual and community health for effective daily living. 3 semester hours credit. [A]

HSC 1531. Medical Terminology. This course is designed to provide a basis for understanding and utilizing basic principles of medical word
building. The course is designed to prepare students to analyze words structurally, to spell and pronounce medical terms accurately and to understand certain word elements related to anatomy, physiology and selected disease processes. 3 semester hours credit. [A]

**HSC 2400. Standard First Aid.** The course provides knowledge about what to do in case of a medical emergency before a medical team arrives. Students will learn principles of care and protection based on life saving measures in the treatment of traumatic injuries, epidemic diseases, spread of disease and injury to others. Also included are preventing hazardous or crippling complications of injuries, alleviating suffering by comforting the victim, and preventing emotional complications. $5 Lab Fee. 3 semester hours credit. [A]

**HUM 2210. The Humanities.** This course increases the student’s understanding and appreciation of western culture through the study of art, literature, music, and philosophy. HUM 2210 is a survey of our ancient, medieval and renaissance cultural heritages. It is not open to students who have earned credit in HUM 2216. Prerequisite: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit. [A]

**HUM 2216. The Humanities with Writing.** This course increases the student’s understanding and appreciation of western culture through the study of art, literature, music, and philosophy. HUM 2216 is a survey of our ancient, medieval and renaissance cultural heritages. This course fulfills 8,000 words of the Gordon Rule writing requirement. This course is not open to students who have earned credit in HUM 2210. Prerequisite: Grades of “C” or higher in ENC 1101-1102. 4 semester hours credit. [A]

**HUM 2230. The Humanities.** This course increases the student’s understanding and appreciation of western culture through the study of art, literature, music, and philosophy. HUM 2230 is a survey of our baroque, revolutionary and modern cultural heritages. This course is not open to students who have earned credit in HUM 2233. Prerequisite: Grades of “C” or higher in ENC 1101-1102. 3 semester hours credit. [A]

**HUM 2233. The Humanities with Writing.** This course increases the student’s understanding and appreciation of western culture through the study of art, literature, music, and philosophy. HUM 2233 is a survey of our baroque, revolutionary and modern cultural heritages. This course fulfills 8,000 words of the Gordon Rule writing requirement. This course is not open to students who have earned credit in HUM 2230. Prerequisite: Grades of “C” or higher in ENC 1101-1102. 4 semester hours credit. [A]

**HUM 2740. European Study in the Humanities.** This course consists of seminars and travel. Pre-travel seminars establish a foundation for critically examining art, architecture, literature and music in relation to significant historical, philosophical and religious currents in European culture. Prerequisite: Consent of the college. 3 semester hours credit. [A]

**HUN 1201. Elements of Nutrition.** A basic course which discusses the social and natural environmental factors which influence personal nutrition. Major topics included are digestion, absorption and metabolism of carbohydrates, fats and protein; the known functions of the major vitamins and minerals; and nutritional needs throughout the life cycle. 3 semester hours credit. [A]

**IDH 1931-1932-2931-2932. Honors Seminar.** The honors seminar is a forum for students enrolled in the honors program. Books, research and leadership issues will be discussed in a seminar setting. Corequisite: Enrollment in one honors course. 1 semester hour credit. [A]

**INP 2390. Introduction to Industrial Psychology.** This course is designed to help students understand human relations, getting along with other people, and succeeding in the world of work. 3 semester hours credit. [A]

**ISM 4011. Introduction to Management Information Systems.** This course provides an introduction to the use of information technology in the business environment. The language, concepts, structures, and processes involved in the management of information systems will be discussed. The course will have an applications component where software will be used to support managerial decision making. Prerequisite: CGS 1100. 3 semester hours credit. [A]

**JOU 1400. College Newspaper I.** A course for freshmen, designed to familiarize them with news gathering, news writing, and practical skills involved in newspaper work in general. Students will assist the advanced class in the production of the college newspaper. No prerequisite, but ENC 1101 or 1102 is a corequisite. One hour of lecture and discussion and one hour of laboratory per week. 1 semester hour credit. [A]

**JOU 1401. College Newspaper II.** A continuation of the JOU 1400-1401 sequence. A course for freshmen, designed to familiarize them with news gathering, news writing, and practical skills involved in newspaper work in general. Students will assist the advanced class in the production of the college newspaper. No prerequisite, but ENC 1101 or 1102 is a corequisite. One hour of lecture and discussion and one hour of laboratory per week. 1 semester hour credit. [A]

**JOU 2402. College Newspaper III.** A continuation of the JOU 1400-1401 sequence. Students enrolled bear primary responsibility for the production of The Papoose (student newspaper). Prerequisite: JOU 1400 or 1401. One hour lecture and three hours of workshop per week. 2 semester hours credit. [A]

**JOU 2403. College Newspaper IV.** A continuation of the JOU 1400-1401 sequence. Students enrolled bear primary responsibility for the production of The Papoose (student newspaper). Prerequisite: JOU 1400 or 1401. One hour lecture and three hours of workshop per week. 2 semester hours credit. [A]

**MAC 1105. College Algebra.** This course is primarily a conceptual study of functions and graphs, their applications, and of systems of equations and inequalities. Linear, quadratic, rational, absolute value, radical, exponential and logarithmic functions will be investigated. A graphing calculator is required for this course. Prerequisites: Successful completion of the equivalent of one year of Algebra I and one year Algebra II and an acceptable score on a state approved mathematics placement test or a “C” or higher in MAT 1033. A “C” grade or higher must be earned in this course to satisfy part of the general education requirements in mathematics and to advance to a higher mathematics course. 3 semester hours credit. [A]

**MAC 1114. Plane Trigonometry.** This course deals with the solution of triangles, trigonometric relations, and functions of an angle, logarithms, and complex numbers. Prerequisite: MAC 1105 or MAC 1140, or consent of the department. MAC 1140 may be taken concurrently with MAC 1114. A “C” grade or higher must be earned in this course to satisfy part of the general education requirements in mathematics and to advance to a higher mathematics course. 3 semester hours credit. [A]

**MAC 1140. Precalculus Algebra.** This course is for students who will take MAC 1311, Calculus & Analytic Geometry I or MAC 2233 Calculus for Non-Science Majors. Topics for this course include review of algebraic techniques or operations, radicals, exponents, complex numbers, absolute
value, linear and quadratic equations and inequalities, exponential and logarithmic functions, simultaneous equations and inequalities, roots of polynomials, matrices, determinants, applications, mathematical proof techniques, mathematical induction, binomial theorem, sequences and series. Prerequisite: Successful completion of the equivalent of one year of Algebra I and one year of Algebra II and an acceptable score on a mathematics placement test or a "C" grade or higher in MAC 1105 or consent of the department. A "C" grade or higher must be earned to advance to a higher level mathematics course or to satisfy part of the education requirements in mathematics. 3 semester hours credit. [A]

MAC 1311. Calculus and Analytic Geometry I. This is a course including analytic geometry of the line and circle, limits, continuity, derivatives and integrals of the algebraic and transcendental functions, applications of integrals to finding area and volume, exponential growth and decay, Riemann sums and the Riemann integral, trapezoidal and Simpson’s Rule. Prerequisite: A "C" or higher in MAC 1114 and MAC 1140 or consent of the department. A “C” grade or higher must be earned to advance to a higher level mathematics course or to satisfy part of the general education requirements in mathematics. 3 semester hours credit. [A]

MAC 2233. Calculus for Non-Science Majors. This is a brief calculus course designed primarily for business administration majors and other non-science majors. This course includes: limits, basic techniques of differentiation and integration, word problems with applications to business and economics. A graphing calculator is required. Prerequisite: A “C” grade or higher in MAC 1140 or department consent. A “C” grade or higher must be earned to satisfy part of the general education requirements in mathematics or to advance to a higher mathematics course. 3 semester hours credit. [A]

MAC 2312. Calculus and Analytic Geometry II. This is a course which includes techniques of integration, applications of the integral, polar coordinates, sequences and series, Taylor Series, conic sections, vectors, lines, and planes, and vector-valued functions. Prerequisite: A “C” grade or higher in MAC 2311. A “C” grade or higher must be earned to advance to a higher level mathematics course or to satisfy part of the general education requirements in mathematics. 4 semester hours credit. [A]

MAC 2313. Calculus with Analytic Geometry III. This course includes: the study of lines, planes and surfaces in space, functions of several variables, limits and continuity, partial derivatives of functions of several variables, extreme of functions of two variables, iterated integrals using polar, cylindrical and spherical coordinates, differentiation, integration and applications of vector-valued functions and vector fields: calculations of line integrals and flux integrals, the use of Green’ s Theorem, Divergence theorem and Stoke’s Theorem. Prerequisite: A “C” or higher in MAC 2312. A “C” grade or higher must be earned to advance to a higher level mathematics course. 4 semester hours credit. [A]

MAD 2104. Discrete Mathematics. This course is designed for students who need an elective in mathematics. Topics include various sets, functions and relations, combinatorics, propositional logic, graphs and trees, and applications with a proof-orientated approach. 3 credit semester hours. Prerequisite: MAC 1105 with a “C” or higher grade. 3 semester hours credit. [A]

MAE 3320. Teaching Methods in Middle School Mathematics. This course is designed for students who are majoring in mathematics education and who will be obtaining teacher certification in grades 5-9 or 6-12. In this course students learn principles of effective curriculum design and assessment and apply these principles by designing and developing interactive mathematics curriculum projects for middle school students. This course is offered concurrently with MAE 3940, a one credit hour practicum in which students present their projects in middle school classroom environments. This course addresses specific Sunshine State Standards subject matter competencies and pedagogy pertinent to the discipline and required for certification. Corequisite: MAE 3940. 10 hours of teaching are required. (3 semesters hours credit) [A]

MAE 3651. Learning Mathematics with Technology. This course is designed for pre-service and practicing middle and high school math teachers. It includes the use of innovative computer software and graphing calculators for students to experience learning mathematics with technology at the middle and secondary school levels. The use and integration of dynamic geometry software, computer algebra, electronic spreadsheets, data analysis, and instructional software will be studied from a problem solving perspective. Students will also create programs on a graphing calculator. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and is required for certification. A programmable graphing calculator will be required for this course. Prerequisite: EME 2040 and Prerequisite or Corequisite: EME 3410 or consent of the department. 1 semester-hour credit. [A]

MAE 3816. Elements of Geometry. This course presents the axioms, basic concepts, proofs and constructions of Euclidean geometry involving line segments, angles, triangles, polygons, circles, parallel lines and similarity. Constructions are made using both compass and straightedge and interactive geometry software. The course also presents basic concepts of non-Euclidean geometries including hyperbolic and spherical. Prerequisite: MAC 1311. 3 semester hours credit [A]

MAE 3940. Teaching Middle School Mathematics Practicum. This course is designed for students who are majoring in mathematics education and who will be obtaining teacher certification in grades 5-9 or 6-12. This practicum accompanies MAE 3320 and provides students with opportunities to present their interactive curriculum projects to middle school students in local area school districts. Students spend a minimum of 30 school-based hours in the middle school classroom. Project presentations will be coordinated with in-service middle school teachers and their curriculum schedules and needs. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification. Corequisite or Prerequisite: EME 3214 and MAE 3320. 1 semester hour credit. [A]

MAE 4330. Teaching Methods in Secondary School Mathematics. This course is designed for students who are majoring in mathematics education and is offered concurrently with the practicum in teaching secondary mathematics. It addresses the required instructional methods, techniques, strategies, resources, and assessment considerations for effective teaching of secondary mathematics including the pedagogy of early algebra, geometry, trigonometry and calculus using problems solving, cooperative learning and appropriate technology. This course addresses specific Sunshine State Standards, subject matter competencies and pedagogy pertinent to the discipline and required for certification. Corequisite: MAE 4941. 10 hours of teaching are required. 3 semester hours credit. [A]

MAE 4815. Elements of Algebra. This course offers an investigative approach to number theory in which students develop their capacity to formulate conjectures and explore their ideas and inquires through the use of a computer algebra system. Conjectures are developed based in part on computer-generated data and formal proofs are then presented. There is an emphasis in understanding the nature of integer numbers, congruence classes, and their operations and applications. Prerequisites: MAC 1311. 3 semester hours credit. [A]

MAE 4941. Teaching Secondary School Mathematics Practicum. This course is designed for students who are majoring in mathematics education and who will be obtaining teacher certification in grades 3-9 or 6-12. This practicum accompanies MAE 4330 and provides students with opportunities to present their interactive curriculum projects to secondary school students in local area school districts. Students spend a minimum of 30 school-based hours in the secondary school classroom. Project presenta-
State Standards, subject matter competencies, and pedagogy pertinent to MAE 4943. Seminar in Mathematics Education. This course is designed to provide students with instructional strategies, planning techniques, evaluation procedures and class management skills. Prerequisites: all program requirements complete. Corequisite: MAE 4945. 3 semester hours credit. [A]

MAE 4945. Student Teaching in Mathematics. This course requires a teacher candidate to demonstrate pre-professional competencies during a 16 week, full-time internship in a public school approved by the department. Contact hours: a minimum of 35 hours per week for 15 weeks. 10 semester hours credit. Prerequisites: Completion of all program requirements. Corequisite: MAE 4943. 10 semester hours credit. [A]

MAN 3025. Principles of Management. A foundation course of study in management. Process and content of management are analyzed. The course emphasizes classical, human relations, human resources, and behavioral management. The content includes: planning, organizing, leading, control, employment cycle, organizing, organization design and motivation. 3 semester hours credit. [A]

MAN 3240. Organizational Behavior. This course is a study of individual and group behavior in organizations. Students will develop an understanding of how organizations can be managed more effectively. Course content includes motivation, group dynamics, conflict resolution, goal setting and rewards, job design, work stress, power/politics, and organizational change and development. Prerequisite: Admission to the BAS Business Management program, or consent of the department. 3 semester hours credit. [A]

MAN 3353. Management Theory and Practice. This course examines management theory, relevant applications and cases, self-management, teamwork, global awareness, and communication for the development of management competencies. Prerequisite: Admission to the BAS Business Management program, or consent of the department. 3 semester hours credit. [A]

MAN 3600. Introduction to International Business. This course starts with an introduction to international business and globalization. It proceeds through a variety of topics concerning international strategy, human resource management, organizational behavior, and how these areas interrelate. Prerequisites: ECO 2013 and ECO 2023. 3 semester hours credit. [A]

MAN 4120. Leadership Challenges and Supervision. Discussion and application of leadership theories include skill formation to develop leadership abilities. Team building skills are emphasized to enhance leadership effectiveness. Students learn the importance of visioning in their organizations. 3 semester hours credit. [A]

MAN 4162. Customer Relations for Managers. This course examines relationship building for all customers of an organization. The impact of culture and diversity on business relationships, successful negotiation strategies, and promotion of the organization through media relations are discussed. The ideas and practices this course focuses on include: understanding and identifying customers wants and needs, customer orientation, product or service differentiation and value-creating processes to attract, satisfy and retain customers through relationship management. 3 semester hours credit. [A]

MAN 4301. Human Resource Management. This course is a study of the functions of human resource management including recruitment, selection, benefits and compensation, performance evaluation, development of employees, and formulation of human resource procedures. The strategic role of human resources and current issues will be discussed. Prerequisite: MAN 3025. 3 semester hours credit. [A]

MAN 4504. Operational Decision Making. This course focuses on operational decision-making management techniques to improve the processes and productivity in organizations. Discussion of quality and outcomes, efficiency, forecasting, work-flow processes, inventory control, design of goods and services, waiting lines, and critical path. Managing a project from beginning to end, including how to identify needs, and define, assign, and track items, is addressed. 3 semester hours credit. [A]

MAN 4802. Introduction to Small Business Management. Introduces the student to the world of small business and family business management. Explores the managerial processes related to these areas and differentiates them from those found in corporations and large organizations. Provides the student with an opportunity to analyze the mind of the small business manager, brainstorm potential business options, and consider various contemporary issues facing the small business manager. Project groups will be utilized and oral and written reports will be required. Prerequisites: ACG 2071, ECO 2023, MAN 3025 and MAR 3023. 3 semester hours credit. [A]

MAN 4900. Management Capstone Project. This course focuses on the integration of knowledge, skills, and abilities learned in the program through a capstone project. 3 semester hours credit. [A]

MAP 2302. Differential Equations. MAP 2302 is an introductory course in ordinary differential equations. Topics covered are linear first-ordered equations and their applications; methods for solving non-linear differential equations, second order equations, Wronskians, power series solutions, methods of undetermined coefficients, Laplace transforms; and Fourier series solutions. Prerequisite or corequisite: MAC 2313. 3 semester hours credit. [A]

MAR 3023. Basic Marketing Concepts. This course should provide an introductory overview of the comprehensive field of marketing. The concepts, terminology, methodology, and structures explored in this course should provide a basis on which to build further expertise in the student’s particular field of study. Specific competencies developed in other disciplines are drawn together in this course as students critically analyze and view the comprehensive field of marketing. 3 semester hours credit. [A]

MAS 3105. Linear Algebra. This course provides a thorough treatment of linear algebra using a matrix-oriented approach. Major topics include: matrices, systems of linear equations, linear transformations, determinants, eigenvectors and eigenvalues, vector spaces and subspaces, inner product spaces, and orthogonality. 4 semester hours credit. [A]

MAS 4203. Number Theory. This course offers an investigative approach to number theory in which students develop their capacity to formulate conjectures and explore their ideas and inquiries through the use of a computer algebra system. Conjectures are developed based in part on computer-generated data and formal proofs are then constructed. There is an emphasis on gaining an understanding of the nature of mathematical thinking and learning. 3 semester hours credit. [A]

MAS 4301. Introduction to Abstract Algebra. This course introduces the basic concepts of abstract algebra, including the topics of mappings, relations, number systems, groups, rings, fields, and integral domains. There is an emphasis on the use of sets as a basis for defining and working with groups, rings, fields, and integral domains. Pre- or Corequisites: MAS 2403 or MAS 3105. 3 credit semester hours credit. [A]

MAT 0002. Developmental Mathematics. This course is designed as a self-paced course for the student who needs to strengthen skills and understanding of the concepts of arithmetic and elementary algebra. Topics include fractions, decimals, percents, ratio and proportion, integers, solving
simple equations, and exponents. This course is not open to anyone who has previously completed any other college mathematics course. A grade of “C” or higher must be earned in the course to advance to the next higher mathematics course which is MAT 0024. This course does not meet general education requirements in mathematics. 4 noncredit semester hours. [P]

MAT 0024. College Prep Algebra. This is an elementary algebra course designed for the student who has little or no secondary school background in algebra and needs preparation for MAT 1033, Intermediate Algebra. Topics included: operations on and properties of real numbers; algebraic expressions; factoring; exponents and radicals. A grade of “C” or higher must be earned in the course or consent of department is needed to advance to the next higher mathematics course which is MAT 1033. Prerequisite: A “C” or higher in MAT 0002 or an acceptable score on a state approved mathematics placement test. This course does not meet general education requirements in mathematics. 4 noncredit semester hours. [P]

MAT 1033. Intermediate Algebra. This course includes the study of real numbers, linear and quadratic equations, linear inequalities, systems of linear equations, exponents, polynomials, factoring, rational expressions and related equations, radicals, quadratic formula, complex numbers, absolute value, graphing, and applications. This is not a Gordon Rule course and does not satisfy part of the general education requirements in mathematics. Prerequisite: An acceptable score on a state approved mathematics placement test and successful completion of the equivalent of one year of Algebra I, or a “C” or higher in MAT 0024. A “C” grade or higher must be made in this course to advance to a higher level mathematics course. 3 semester hours elective credit. [A]

MAT 2905. Mathematics Through Tutoring. The goals of this course are to teach the general mathematics skills needed for successfully tutoring in an academic setting; general methods of tutoring; and the tutoring techniques needed in specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. The number of hours of credit varies from 1 to 3 hours depending upon the number of hours tutoring; 1 credit, 24 hours; 2 credits, 48 hours; and 3 credits, 72 hours. [A]

MAT 4905. Supervised Research in Mathematics. This course is designed to cover special topics not obtainable in the regular course offerings. Prerequisites: MAC 2313 and instructor’s approval. 1 - 3 semester hour credits. May be repeated for credit. Maximum of 12 credits. [A]

MCB 2010. Microbiology. This course includes the fundamentals of microbiology which include: structure, nutrition, growth, genetics, control mechanisms; and an introduction to immunology, virology, and bacterial pathogens. Prerequisite: NUR 1020 or CHM 1030 or consent of department. Corequisite: MCB 2010L 3 hours lecture per week. 3 semester hours credit. [A]

MCB 2010L. Microbiology Lab. An introduction to experimental techniques in microbiology. The exercises include cultivation and various staining techniques, isolation, identification, biochemical activities, antibiotic sensitivity test and basic immunology. Prerequisite: NUR 1020 or CHM 1030 or consent of department. Two hours laboratory per week. MCB 2010 should be taken concurrently. 1 semester hour credit. [A]

MGF 1106. Mathematics for Liberal Arts I. This course is designed to enable students to meet part of the general education requirement in mathematics and receive instruction in a broad range of skills beyond algebra. Topics include: sets, counting principles, the metric system, geometry, probability, statistics, permutations and combinations. Prerequisite: Eligibility for MAC 1105. A “C” grade or higher must be earned in this course to satisfy part of the general education requirements in mathematics and to advance to a higher mathematics course. 3 semester hours credit. [A]

MGF 1107. Mathematics for Liberal Arts II. This course is intended for students who will major in areas that do not require further mathematics. It will also enable students to meet part of the general education requirement in mathematics and receive instruction in a broad range of skills beyond algebra. Topics include: systems of numeration, number theory and the real number system, mathematical systems, exponential functions, consumer mathematics, graph theory, and voting and apportionment. Prerequisite: Eligibility for MAC 1105. A C grade of higher must be earned in this course to satisfy part of the general education requirement in mathematics. 3 semester hours credit. [A]

MGF 2118A. Mathematics CLAST Retake I. This course is for students who must retake the math section of the College Level Academic Skills Test (CLAST). The student will study the skills needed to pass the concepts failed in the first attempt. This course cannot be used to meet the mathematics general education requirement. Prerequisite: A grade of “C” or higher in MGF 2118. 1 semester hour credit. [A]

MGF 2118B. Mathematics CLAST Retake II. This course is for students who must retake the math section of the College Level Academic Skills Test (CLAST). The student will study the skills needed to pass the concepts failed in the second attempt. This course cannot be used to meet the mathematics general education requirement. Prerequisite: A grade of “C” or higher in MGF 2118A. 1 semester hour credit. [A]

MGF 2118C. Mathematics CLAST Retake III. This course is for students who must retake the math section of the College Level Academic Skills Test (CLAST). The student will study the skills needed to pass the concepts failed in the third attempt. This course cannot be used to meet the mathematics general education requirements. Prerequisite: A grade of “C” or higher in MGF 2118B. 1 credit. [A]

MHF 4404. History of Mathematics. This course is designed as a cap-stone course for those students who are majoring in secondary mathematics education. This course consists of readings in the history and philosophy of mathematics and in current issues involving mathematics and society. Contributions from mathematicians such as Archimedes, Descartes, Fermat Newton, Leibnitz, Euler and Gauss are discussed. Emphasis is given to how mathematics relates across disciplines as well as mathematical connections within the discipline; fundamental ideas of high school mathematics are examined from an advanced standpoint. This is a writing-intensive course in which each student develops a portfolio of course accomplishments. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and is required for certification. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

MMC 1000. Survey of Mass Communication. A survey of the technology, methods, and functions of mass communications media: newspapers, magazines, books, radio, television, and film—with emphasis on evaluation of the impact of mass media on society. 3 semester hours credit. [A]

MTB 1327. Mathematics for Electronics I. A study of the basic concepts of math and algebra. Topics covered: decimals, fractions, scientific nota-
tions, roots, powers of ten, introduction to trigonometry and geometry, the use of Kirchhoff’s law, Thévenin and Norton’s theorems, and Ohm’s law in circuit analysis. 3 semester hours credit. [O]

MTB 1328. Mathematics for Electronics II. A study of the basic concepts of trigonometry, vector analysis and logarithms. Topics covered: AC circuit analysis, trigonometry, efficiencies, impedance matching, inductive and capacitive reactance, Pythagorean theorem resonant circuits, power factors, complex number, logarithmic and mathematical tables. Prerequisite: MTB 1327. 3 semester hours credit. [O]

MTG 3212. Modern Geometries. This course presents the axioms, basic concepts, proofs and constructions of Euclidean geometry involving line segments, angles, triangles, polygons, circles, parallel lines and similarity. Constructions are made using both compass and straightedge and interactive geometry software. The course also presents basic concepts of non-Euclidean geometries including hyperbolic and spherical. Written proofs are required for topics introduced in this course. Prerequisite: MAC 2312. 3 semester hours credit. [O]

MUE 1121. Keyboard Harmony I. A pre-theory course for the non-music major, or for the elementary education major. Included are the studies of reading clefs, rhythm, notation, scales, and doing simple keyboard and sight-singing exercises. The emphasis is on developing music reading skills. 3 semester hours credit. [A]

MUT 1101. Fundamentals of Music. A pre-theory course for the non-music major, or for the elementary education major. Included are the studies of reading clefs, rhythm, notation, scales, and doing simple keyboard and sight-singing exercises. The emphasis is on developing music reading skills. 3 semester hours credit. [A]

MUT 1111. Music Theory I. A study of the fundamentals of music, including clefs, accidentals, enharmonics, and scales. Students will study chordal construction, figured bass, Roman numerals, pop chord symbols, cadences and non-chord tones. Included are written assignments and class drills. 3 semester hours credit. [A]

MUT 1112. Music Theory II. An intense study of diatonic chord progressions and voice leading, including seventh chords and non-chord tones. Included are written assignments and class drills. Prerequisite: MUT 1111. 3 semester hours credit. [A]

MUT 1221-1222-2226-2227. Sight Singing I, II, III, IV. A study of sight-singing and ear-training techniques. Prerequisite: Consent of department or earlier course in the sequence. 1 semester hour credit each course. [A]

MUT 1231. Keyboard Harmony II. A continuation of skills development at the piano keyboard to include more advanced patterns, playing four-part harmonizations at sight, cadence patterns in all major keys and student improvisation. 1 semester hour credit. [A]

MUT 2116. Music Theory III. A study of modulations and chromatic chords will be followed by variation techniques and binary and ternary forms. Written assignments and class drills will involve original composition in 18th–19th Century small scale, characteristic piano styles. Prerequisite: MUT 1112 or consent of department. 3 semester hours credit. [A]

MUT 2117. Music Theory IV. A study of large scale forms, fugue and late Romantic and Twentieth Century harmonic practices. Written assignments and class drills required. Prerequisite: MUT 2116. 3 semester hours credit. [A]

MV-(B,K,P,S,V,W) 1011-1016. Applied Music Prep. A course of private instruction for students preparing for the freshman level of performance. Credit earned in the MV- (B,K,P,S,V,W) 1011-1016 series will not apply toward the requirement of the principal instrument. Credit will be granted twice for each course. 2 semester hours credit per course. Course may be repeated for a maximum credit of 4 semester hours. [P]

Applied Music. A course in applied music instruction is offered in voice, piano, and band instruments for non-music majors. Private instruction for the music major is offered in his or her secondary and primary instrument or voice. The level of skills development will be ascertained at the end of each course by jury examination. Credit will depend upon successful completion of course requirements, and each student will be required to participate in at least three recitals per semester or session. Private instruction in the secondary instrument or voice consists of one half hour lesson per week, with 1 semester hour credit per semester. Credit will be granted twice for each course. Catalog numbers and descriptive titles are as follows. [A]

Private instruction for non-music majors requires that they also be enrolled in at least one other course on campus. This does not apply to dual enrollment or early admissions students. Credit will be granted twice for each course.
MVB 1211-2221. App. Music - Trumpet  
MVB 1212-2222. App. Music - French Horn  
MVB 1213-2223. App. Music - Trombone  
MVB 1214-2224. App. Music - Bar. Horn  
MVB 1215-2225. App. Music - Tuba  
MVK 1211-2221. App. Music - Piano  
MVK 1213-2223. App. Music - Organ  
MVP 1211-2221. App. Music - Percussion  
MVS 1211. App. Music - Violin  
MVS 1216-2226. App. Music - Guitar  
MVP 1211. App. Music - Percussion  
MVB 1215-2225. App. Music - Tuba  
MVB 1214-2224. App. Music - Bar. Horn  
MVB 1213-2223. App. Music - Trombone  
MVB 1211-2221. App. Music - Trumpet

MVW 1111. Class Piano. A course designed for students who desire general keyboard proficiency. Primary emphasis is on development of music reading and playing for personal satisfaction. 1 semester hour credit. Course may be repeated for maximum credit of 2 semester hours. [A]

MVW 1211. Class Piano II. A continuation of MVK 1111, designed for the non-piano major. Emphasis on coordination, major and minor scales and pieces, and increasingly difficult rhythms. Prerequisite: MVK 1111 or consent of department. Credit will be granted twice for each course. 1 semester hour credit. Course may be repeated for maximum credit of 2 semester hours. [A]

MVS 1116. Class Guitar. A performance course in guitar for the beginning student. Instruction will include simple chords, rhythms, and a variety of accompaniment styles. Two class meetings per week. 1 semester hour credit. Course may be repeated for maximum credit of 2 semester hours. [A]

MVS 2126. Advanced Class Guitar. A continuation of MVS 1116 for the more advanced guitar student that will prepare the student to master the guitar as solo and/or ensemble performers. Prerequisite MVS 1116 or consent of department. 1 semester hour credit. Course may be repeated for maximum credit of 2 semester hours. [A]

MVV 1111. Class Voice. A course in the fundamentals of voice production, elementary level, designed for the non-voice major. 1 semester hour credit. Course may be repeated for maximum credit of 2 semester hours. [A]

NUR1010. Professional Seminar I. This course is designed as an introduction to the healthcare career of nursing. Information will be provided to give the student nurse an overall view of the nursing profession. Included in the information will be such issues as the historical events that influenced nursing. The legal, ethical, political and on-the-job issues that today’s nurse must be aware of are presented. Workplace communication, time management, and self-care strategies are among the career advancement tools provided. Information related to effective resume’ writing, interview tips, and employee benefits is also provided. 1 semester hour credit. [A]

NUR1020C. Fundamentals. This course is designed to provide students with a basic understanding of certain key concepts and principles fundamental to the practice of nursing. Emphasis on the wellness-illness continuum will lay the foundation for future study. The student is introduced to the nursing process as a systematic method of problem solving in which effective communication and interpersonal relationships are central components. Basic needs relative to hygiene, activity, rest and sleep, comfort, safety, nutrition, and fluid and electrolytes, urinary and bowel elimination, and oxygenation are necessary to meet the needs of the moderately ill, hospitalized patient. The content includes socio-economic, ethnocultural, spiritual needs, community health concepts, nutrition, and HIV/AIDS education. Instruction includes the development of critical thinking skills. The student will be introduced to medication administration. The clinical application of drugs is also emphasized to ensure rational and optimal patient care. Serious attention is given to the skills that are essential to safe nursing practice. Supervised practice and planned hospital experience will provide the student opportunities to assist patients to an optimal level of wellness. Theoretical instruction and clinical experience in geriatric nursing are incorporated throughout the course. This course will also present HIPPA regulations and the implications related to the provision of healthcare. 6 semester hours credit. [A]

NUR1020L. Fundamentals Lab. This lab course is designed to provide students with a basic understanding of certain key concepts and principles fundamental to the practice of nursing, along with the ethical and legal responsibilities of the nurse as a health care provider. Emphasis on the wellness-illness continuum will lay the foundation for future study. The student is introduced to the nursing process as a systematic method of problem solving in which effective communication and interpersonal relationships are central components. Basic needs relative to hygiene; activity; rest and sleep; comfort; safety; nutrition; and fluid and electrolytes; urinary and bowel elimination; and oxygenation are necessary to meet the needs of the moderately ill, hospitalized patient. The content includes consideration of growth and development, socio-economic, ethnocultural, spiritual needs, community health concepts, nutrition, professional role and function, health counseling, current issues in nursing, end of life care, HIV, and domestic violence. Instruction includes the development of critical thinking skills. The student will be introduced to drug standards and legislation, the major classification of drugs and the general actions of selected drugs. The clinical application of drugs is also emphasized to rational and optimal patient care. Serious attention is given to the mathematical knowledge and skills, which are essential to safe nursing practice. Supervised practice and planned hospital experience will provide the student opportunities.
to assist patients to an optimal level of wellness. Theoretical instruction and clinical experience in geriatric nursing are incorporated throughout the course. [A]

NUR1141. Pharmacology I. This course introduces the study of drugs, drug standards, and legislation and is designed to provide the nursing students with a basic background of drug classifications, actions, dosages, and side effects. This course includes basic drugs and reviews the mathematical computations that are necessary for safe administration in the clinical setting. Drug therapy will be integrated throughout the curriculum. Students will demonstrate safe techniques of medication administration in the skills laboratory prior to administering medications in the clinical area. 1 semester hour credit. [A]

NUR1211C. Basic Medical Surgical. This introductory course is designed to provide students with the opportunity to acquire the knowledge and skills to provide safe and effective care for clients with simple medical and/or surgical problems. This course builds upon foundation material from previous courses. The nursing process provides a framework for the students to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care settings. Observational time may be scheduled to enhance learning experiences and will be scheduled in addition to clinical days. There will also be outside assignments such as virtual experiences on the computer that will be included in the clinical experience. A physical assessment review will occur during the first full week of class with a clinical check-off that must be evaluated as satisfactory, as well as outside clinical assignments. 7 semester hours credit. [A]

NUR1211L. Basic Medical Surgical Lab. This introductory lab course is designed to provide students with the opportunity to acquire the knowledge and skills to provide safe and effective care for clients with simple medical and/or surgical problems. This course builds upon foundation material from previous courses. The nursing process provides a framework for the students to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care settings. Observational time may be scheduled to enhance learning experiences. [A]

NUR1280C. Geriatrics. This unit of study is designed to help the student understand the health-related needs that result from the normal aging process. The focus is on factors that promote a healthy aging process. Discussions will include the demographics and characteristics of the aging population. Special concerns on the elderly such as polypharmacy, safety/falls, depression, and environments of care will be discussed. End of Life Care is included in the course content. 1 semester hour credit. [A]

NUR1280L. Geriatrics Lab. This lab unit of study is designed to help the student understand the health-related needs that result from the normal aging process. The unit will also discuss assistance for the older adult with age-related diseases. [A]

NUR1312C. Basic Pediatrics. This course is designed to present the nursing student with basic knowledge and skills related to care of a client from birth through childhood and adolescence. The course will present an introduction to the nursing role in supporting the health of ill children and their families. The nursing process provides a framework for planning care for clients on the wellness-illness continuum with inclusion of human growth and development, cultural diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time may be scheduled to enhance learning experiences. 2 semester hours credit [A]

NUR1312L. Basic Pediatrics Lab. This lab course is designed to present the nursing student with basic knowledge and skills related to care of a client from birth through childhood and adolescence. The course will present and introduction to the nursing role in supporting the health of ill children and their families. The nursing process provides a framework for planning care for clients on the wellness-illness continuum with inclusion of human growth and development, cultural diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time may be scheduled to enhance learning experiences. [A]

NUR1422C. Basic Obstetrics. This course is designed to present the nursing student with basic knowledge and skills related to care of a client from conception, concentrating on the stages of normal pregnancy, labor and delivery through postpartum. The course will present an introduction of high risk factors in these areas. The nursing process provides a framework for planning care for clients on the wellness-illness continuum with inclusion of human growth and development, culture diversity, pharmacology, and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, and current issues in nursing. Concepts related to pre, intra, and postpartum care are discussed. Clinical experiences are provided in both clinic and acute care settings. Observational time may be scheduled to enhance learning experiences. 2 semester hours credit. [A]

NUR1422L. Basic Obstetrics Lab. This lab course is designed to present the nursing student with basic knowledge and skills related to care of a client from conception, concentrating on the stages of normal pregnancy, labor and delivery through postpartum. The course will present and introduction of high risk factors in these areas. The nursing process provides a framework for planning care for clients on the wellness-illness continuum with inclusion of human growth and development, culture diversity, pharmacology, and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, and current issues in nursing. Concepts related to pre, intra, and postoperative care are discussed. Clinical experiences are provided in both clinic and acute care settings. Observational time may be scheduled to enhance learning experiences. [A]

NUR2142. Pharmacology II. This course builds on the acquired knowledge of basic pharmacology and is designed to enhance comprehension and integrate application of knowledge into safe and effective medication administration. Emphasis is provided in areas such as: specific pharmacologic effects and category, cellular or mechanism of action, therapeutic response, major side effects and adverse effects, patient assessment needed prior to medication administration, patient education, and other special nursing implications. The course content is developed to increase the learners' degree of understanding related to medications and to decrease the errors associated with the administration of medications. The learners have previously demonstrated competency in preparing and administering medications via all routes. The administration of medication is integrated throughout the curriculum with the study of disorders of specific body systems. 2 semester hours credit. [A]

NUR2212C. Advanced Concepts Medical Surgical. This course is designed to provide information to assist the student in acquiring the knowledge and skills to provide safe and effective care for clients with complex medical and/or surgical problems. This course builds upon material from basic medical surgical concepts. The nursing process will be a guide for the student to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care settings and specialty care areas. Observational time may be scheduled to enhance learning experiences. 6 semester hours credit. [A]

NUR2212L. Advanced Concepts Medical Surgical Lab. This lab course is designed to provide information to assist the student in acquiring the knowledge and skills to provide safe and effective care for clients with
complex medical and/or surgical problems. This course builds upon material from basic medical surgical concepts. The nursing process will be a guide for the student to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care settings and specialty care areas. Observational time may be scheduled to enhance learning experiences. [A]

**NUR2291C. Medical Surgical Critical Concepts.** This course is designed to provide information to assist the student in acquiring the knowledge and skills to provide safe and effective care for clients with critical medical and/or surgical problem. This course builds upon material from basic and advanced medical concepts. The nursing process will be a guide for the student to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care setting and specialty care areas. Observational time may be scheduled to enhance learning experiences. 7 semester hours credit. [A]

**NUR2291L. Medical Surgical Critical Concepts Lab.** This course is designed to provide information to assist the student in acquiring the knowledge and skills to provide safe and effective care for clients with critical medical and/or surgical problem. This course builds upon material from basic and advanced medical concepts. The nursery process will be a guide for the student to utilize critical thinking skills to promote or restore the health of clients within a holistic framework. Clinical experience is provided in acute care setting and specialty care areas. Observational time may be scheduled to enhance learning experiences. [A]

**NUR 2350C. Advanced Concepts Pediatrics.** This course is designed to present the nursing student with advanced concepts of knowledge and skills related to care of a client from birth through childhood and adolescence. The nursing process is utilized in caring for the high-risk pediatric client on the wellness-illness continuum with inclusion of human growth and development, culture diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, health teaching and counseling, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time will also be scheduled to enhance learning experiences. Internship/preceptorship is a clinical component of this course. Students are required to obtain a minimum of 52 hours during the internship period as designated by the instructor. 2 semester hours credit. [A]

**NUR2350L. Advanced Concepts Pediatrics Lab.** This lab course is designed to present the nursing student with advanced concepts of knowledge and skills related to care of a client from birth through childhood and adolescence. The nursing process is utilized in caring for the high-risk pediatric client on the wellness-illness continuum with inclusion of human growth and development, culture diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, health teaching and counseling, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time will also be scheduled to enhance learning experiences. Internship/preceptorship is a clinical component of this course. Students are required to obtain a minimum of 52 hours during the internship period as designated by the instructor. 2 semester hours credit. [A]

**NUR2450L. Advanced Concepts Obstetrics Lab.** This lab course is designed to present the nursing student with advanced concepts of knowledge and skills related care of a client from conception, labor and delivery, and through postpartum. The nursing process is utilized in caring for the high-risk obstetric client on the wellness-illness continuum with inclusion of human growth and development, culture diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, health teaching and counseling, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time may be scheduled to enhance learning experiences. 2 semester hours credit. [A]

**NUR2450C. Advanced Concepts Obstetrics.** This course is designed to present the nursing student with advanced concepts of knowledge and skills related to care of a client from conception, labor and delivery, and through postpartum. The nursing process is utilized in caring for the high-risk obstetric client on the wellness-illness continuum with inclusion of human growth and development, culture diversity, community health concepts, pharmacology and administration of medications, nutrition, legal aspects of practice, interpersonal relationships, health teaching and counseling, and current issues in nursing. Clinical experience is provided in both clinic and acute care settings. Observational time will be scheduled to enhance learning experiences. Concepts related to pre, intra, and post-operative care are discussed. Internship/preceptorship is a clinical component of this course. Students are required to obtain a minimum of 52 hours during the internship period as designated by the instructor. 2 semester hours credit. [A]

**NUR 2522C. Mental Health.** This course provides the student with the opportunity to acquire knowledge and skills needed to care for patients with maladaptive coping disorders. Therapeutic nurse/patient interaction skills are stressed. Clinical experiences are selected to help students increase their understanding of the interdisciplinary health team and the nurse’s role as a member of the team. Clinical practice is provided in a psychiatric setting. 3 semester hours credit. [A]

**NUR 2522L. Mental Health Lab.** This course provides the student with the opportunity to acquire knowledge and skills needed to care for patients with maladaptive coping disorders. Therapeutic nurse/patient interaction skills are stressed. Clinical experiences are selected to help students increase their understanding of the interdisciplinary health team and the nurse’s role as a member of the team. Clinical practice is provided in a psychiatric setting. [A]

**NUR 2810. Professional Seminar II.** This course is designed to assist the student in the transition from the role of student to that of graduate nurse enabling effective practice at entry level. It is also designed to assist the graduate nurse to anticipate the challenges of a rapidly changing work environment. Information will be provided on such issues as dealing effectively with social and economic factors that impact the profession, the role of professional organizations and licensure requirements. Tools for developing leadership-management roles, delegating appropriately, and thinking critically and creatively will be presented. 1 semester hour credit. [A]

**O**

**ORI 2000. Oral Interpretation.** This course is designed to develop the ability to analyze the meaning of specific works in major literary genres and deliver oral interpretations of these works. 3 semester hours credit. [A]

**OST 1941. Internship in Office Administration.** Supervised, practical unpaid work experience in an appropriate business, industry, government agency, or institution which relates to an Office Administration field of study. A minimum of 60 clock hours is required for each semester hour of credit earned. Prerequisites: A minimum of 15 semester hours of credit earned toward a certificate or degree in Office Administration; completion of an internship application and/or approval of the course instructor; and availability of a training slot. 1-3 semester hours credit. May be repeated up to a total of 3 semester hours credit. [A]

**OST 2949. Cooperative Education in Office Administration.** Supervised, practical paid work experience in an appropriate business, industry, government agency, or institution which relates to an Office Administration field of study. A minimum of 60 clock hours is required for each semester hour of credit earned. Prerequisites: A minimum of 35 semester hours of credit earned toward a degree in Office Administration; completion of a cooperative education application and/or approval of the course instruc-
PCB 3023. Cell and Molecular Biology. This course is a study of cell structure and function with emphasis on the properties of intracellular organelles and their molecular constituents. Photosynthesis is also included. Prerequisites: Chemistry and Biology courses. 3 semester hours credit. [A]

PCB 3063. Genetics. PCB 3063 is an introductory study of the principles of inheritance and the molecular genetics of prokaryotes and eukaryotes including gene regulation. This course addresses specific Sunshine State Standards, subject matter competencies and pedagogy pertinent to the discipline and required for teacher certification. Prerequisites: BSC 2010, CHM 1045, CHM 1046. 3 semester hours credit. [A]

PCB 4043C and PCB 4043L. Ecology with Lab. PCB 4043 is an introduction to living systems at the population and community/ecosystem levels. It includes energy flow and nutrient cycling in ecosystems; community organization, development and classification; population structure and dynamics. Labs include field work, lab analysis and use of interactive software. This course addresses specific Sunshine State Standards, subject matter competencies and pedagogy pertinent to the discipline and required for teacher certification. Prerequisites: BSC 2010/2010L, BSC 2011/2011L, and CHM 1046/1046L. 3 semester hours credit. [A]

PEL 1111. Bowling I. A coeducational course that includes a brief history of the sport followed by instruction and practice in fundamental techniques. Two hours laboratory per week. 1 semester hour credit.

PEL 1112. Bowling II. A continuation of PEL 1111. Two hours laboratory per week. Prerequisite: PEL 1111 or consent of department. 1 semester hour credit.

PEL 1121. Golf. A coeducational course that includes a brief history of the sport, followed by instruction and practice in the fundamental techniques. Two hours laboratory per week. 1 semester hour credit.

PEL 1214. Advanced Softball. This course is a high intensity, drill oriented program designed to increase skill ability and endurance levels of individuals interested in softball. The continuous development of physical skills is of major importance in this course and it is strongly recommended that students participate in an exercise program outside of class hours. Medical approval may be required before participating in this course. This course may be repeated up to a total of 4 semester hours credit. 1 semester hour credit.

PEL 2211. Theories of Softball. This course teaches individuals to coach softball. Coaching techniques, strategies, and procedures are emphasized. Three hours of laboratory experience each week are included in the course work. 2 semester hours credit. [A]

PEM 1104. Strength and Training. This course is designed to teach the techniques for building physical strength and conditioning, including how to plan a personal strength and training program. Topics include the benefits of physical strength and exercise, a general knowledge of the physical development of the body and basic fundamentals of nutrition. 2 semester hours credit. [A]

PEM 1146. Jogging. A coeducational course with planned programs in jogging to meet the individual needs of the participant. Two hours laboratory per week. 1 semester hour credit.

PEO 2003. Sports Officiating. Lecture and discussion of rules along with practice in techniques of officiating various sports through labora-
tory experience. Students must be available for off-campus officiating after school hours. Three hours lecture-laboratory per week. 2 semester hours credit. [A]

PEO 2216. Theory and Practice of Baseball. Lecture and discussion of all phases of baseball techniques, strategy and coaching procedures with some laboratory experience. Three hours laboratory per week. 2 semester hours credit. [A]

PEO 2624. Theory and Practice of Basketball. A lecture and discussion of all phases of basketball coaching techniques including styles of offense and defense and methods of teaching these skills. Three hours lecture-laboratory per week. 2 semester hours credit. [A]

PET 1000. Introduction to Physical Education. This course surveys the principles, history and ethics of quality physical education programs. Topics include current issues and trends and career development in physical education. 3 semester hours credit. [A]

PET 2622. Care and Prevention. This is an introductory course in the care and prevention of athletic injuries. It is designed to teach the beginning student athletic trainer standard simplified methods of injury treatment. This course can also serve as a refresher course and reference guide. 3 semester hours credit. [A]

PHY 1053C. General Physics I. The first course in a two-semester sequence intended primarily for students majoring in biology, pre-medicine, pre-dentistry, pre-pharmacy, pre-optometry, pre-agriculture, pre-forestry, or medical technology. Includes the study of forces, linear motion, circular motion, energy, hydrostatics, heat, thermal expansion and thermodynamics, with laboratory applications of these topics. Corequisite or prerequisite: MAC 1114 or one year of high school trigonometry with grade of C or better. Three hours lecture and two hours laboratory per week. 4 semester hours credit. [A]

PHY 1054C. General Physics II. A continuation of PHY 1053. Topics covered are static electricity, magnetism, direct current circuits, alternating current circuits, sound, light, and nuclear physics, with laboratory applications of these topics. Prerequisite: MAC 1114 or consent of department and PHY 1053C. Three hours lecture and two hours laboratory per week. 4 semester hours credit. [A]

PHY 2048C. General Physics I with Calculus. The first course in a two-semester sequence intended primarily for students majoring in physics, mathematics, chemistry or engineering. Course includes the study of forces, statics, linear motion, circular motion, momentum, energy, gravity, relativity, oscillatory motion, ideal gases, thermal properties of matter and thermodynamics, with laboratory applications of these topics. Corequisite
or prerequisite: MAC 2312. Four hours lecture and two hour laboratory per week. 5 semester hours credit. [A]

PHY 2049C. General Physics II with Calculus. A continuation of PHY 2048. Topics covered are electrostatics, direct current circuits, alternating current circuits, magnetism, electromagnetic waves, sound, light, atomic physics, and nuclear physics, with laboratory applications of these topics. Prerequisite or Corequisite: MAC 2313. Prerequisite: PHY 2048C. Four hours lecture and two hours laboratory per week. 5 semester hours credit. [A]

PHY 4905. Supervised Research in Physics. This course is designed to allow students to participate in a supervised study or research participation in a specific science-related area in Physics. Students must have instructor approval of the topic before enrolling in the course. This course is only open to students who are enrolled in the science education program or who are trying to meet teacher certificate requirements. Prerequisites: PHY 1053/1054 with the corresponding laboratories. 1-3 semester hours credit. [A]

POS 2041. American Federal Government. A study of our Federal Government, designed to give the student an understanding of its organization, principles and the way it works. The relationship of the individual to government is emphasized. POS 2112 is recommended for subsequent study. 3 semester hours credit. [A]

POS 2112. State and Local Government. A study of the organization, the functions, and the operations of state and local governments in the United States. Particular attention is given to state, county, and city government in Florida. This course is designed to be as practical as possible and includes actual participation of county and city officials. POS 2041 is not a prerequisite, but is recommended. 3 semester hours credit. [A]

PSC 1121. Introduction to Physical Science. A general education course involving an elementary study of the physical laws that govern the universe, and characteristics of matter, including the changes it undergoes. Demonstrations and practical applications are emphasized. This course is not intended for science majors. Credits will not be granted to students who have previously received credit for Chemistry 1045 or above or any physics course. Prerequisite: Eligibility for MAC 1105. 3 semester hours credit. [A]

PSC 1121L. Physical Science Laboratory. A laboratory course designed to provide hands on laboratory experiences which will supplement topics covered in PSC1121. These exercises will emphasize lab safety, use of the metric system, accuracy in measurement and experiments dealing with motion, electricity and chemistry. Corequisite: PSC 1121. 1 semester hour credit. [A]

PSY 2012. General Psychology. A course designed to give the student an adequate foundation in the field of psychology, to provide an understanding of human behavior and to enable the student to adapt himself to his physical and social environment. This is the prerequisite course for all advanced courses in psychology. It is recommended that this course be pursued only after completion of one semester of college study. A grade of “C” or higher is required to enter the ASDN program at Chipola. 3 semester hours credit. [A]

QMB 3200. Quantitative Methods for Business Decisions. This course deals with business decision making. Effective decision making is vital to every basic function of a business firm and to its overall success. Business decision making is viewed as a process which involves the identification and formulation of a business problem, development of alternatives for solving the problem, and selection of the best alternative and specific course of action. Prerequisite: STA 2023 or STA 2122 3 semester hours credit. [A]

REA 0003. Applied Reading. This course is designed to improve reading speed, vocabulary, comprehension and study skills. Activities and materials are individualized to meet specific needs of students as determined through diagnostic instruments. This four-hour noncredit course is designed for students who do not possess entry skills for college prep reading as indicated by a CPT score below 38, an Enhanced ACT Social Studies Reading Score of 0-10 or below 9 on the TABE. Students may repeat this course as needed to meet entry requirements for college prep reading. Students who make a “D” in this course will be allowed to advance to REA 0004. 4 semester hours non-college credit. [P]

REA 0004. College Preparatory Reading. This course is designed to improve general study skills: reading, listening, note-taking, and question-answering. It is required of all students who score between 11-18 on the Enhanced ACT Social Studies Reading test or score between 39-82 on the CPT. Students must make a grade of “C” or higher in this course and pass an exit exam before registering for ENC 1101. 4 semester hours non-college credit. [P]

REA 1205. Advanced Reading. This course is designed to improve students’ critical reading and thinking strategies required for college courses. This course is required of all students who have completed REA 0004 with a grade of “C” or better, or who have a reading score of 19 or below on the Enhanced ACT Social Studies Reading test or a score of 95 or below on the CPT. ENC 0004 or 1101 may be a corequisite. 2 semester hours credit. [A]

RED 3309. Learning to Read. This course is designed to increase understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. The course explores and develops many related activities to foster a balanced, positive, constructive attitude towards literacy in young children. Course includes a minimum of 10 hours of observation/teaching reading in educational setting(s). 2 semester hours credit. [A]

RED 3360. Teaching Reading in Middle/Secondary Schools . This course is designed to promote the effective teaching of literacy skills across the curriculum. The major emphasis of this course is placed on current theories, methods, and materials used in content area literacy instruction. Lecture, discussion, simulated teaching and field work constitute different course activities. 3 semester hours credit. [A]

RED 4511. Reading to Learn. This course is a beginning reading course that combines the study of theory and practice in the teaching of developmental reading/literacy in the elementary intermediate grades. The major emphasis of the course is placed on current theories, methods, and materials used in reading/literacy instruction. Lecture, discussion, simulated teaching, and field work constitute different course activities. Prerequisite: RED 3309. 2 semester hours credit. [A]

REL 2300. World Religions. An introduction to the study of major religions of the world and the historical framework and philosophies within which they developed. Attention will be given to their origins, nature, classic beliefs, and practices. Among the religions to be considered are Hinduism, Buddhism, East Asian religions, Judaism, Christianity, and Islam. Prerequisite: Acceptable placement scores in reading or a grade
of “C” or higher in REA 0004. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

S

SCE 2905. Science Through Tutoring. The goals of this course are to teach the general science skills needed for successfully tutoring in an academic setting; general methods of tutoring; and the tutoring techniques needed in specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. The number of hours of credit varies from 1 to 3 hours depending upon the number of hours tutoring; 1 credit, 24 hours; 2 credits, 48 hours; and 3 credits, 72 hours. Prerequisite: Eligibility for BSC 2010, CHM 1045 or PHY 1054. [A]

SCE 3320. Teaching Middle School Science. This course is designed for students who are majoring in science education and who will be obtaining teacher certification in grades 5-9 or 6-12. In this course students learn principles of effective curriculum design and assessment and apply these principles by designing and developing interactive science curriculum projects for middle school students. This course is offered concurrently with SCE 3940, a one credit hour practicum in which students present their projects in middle school classroom environments. This course addresses specific Sunshine State Standards subject matter competencies and pedagogy pertinent to the discipline and required for certification. 10 hours of teaching are required. Corequisite: SCE 3940. 3 semester hours credit. [A]

SCE 3940. Teaching Middle School Science Practicum. This course is designed for students who are majoring in science education and who will be obtaining teacher certification in grades 5-9 or 6-12. This practicum accompanies SCE 3320 and provides students with opportunities to present their interactive curriculum projects to middle school students in local area school districts. Students spend a minimum of 30 school-based hours in the middle school classroom. Project presentations will be coordinated with in-service middle school teachers and their curriculum schedules and needs. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification. 10 hours of teaching are required. Corequisite: SCE 3940. 3 semester hours credit. [A]

SCE 4330. Teaching Methods in Secondary Science. This course is designed for students who are majoring in science education and is offered concurrently with the practicum in teaching secondary science. It addresses the required instructional methods, techniques, strategies, resources, and assessment considerations for effective teaching of secondary science including the pedagogy of biology, genetics, ecology, botany, anatomy and physiology; using problem solving, cooperative learning and appropriate technology. This course addresses specific Sunshine State Standards, subject matter competencies and pedagogy pertinent to the discipline and required for certification. Corequisite: SCE 4941. 10 hours of teaching are required. 3 semester hours credit. [A]

SCE 4905. Supervised Research in Science. This course is designed to allow students to participate in a supervised study or research participation in a specific science-related area in Biology, Chemistry or Physics. Students must have instructor approval of the topic before enrolling in the course. This course is only open to students who are enrolled in the science education program or who are trying to meet teacher certificate requirements. Prerequisites: At least two of the following sequences: PHY 1053/1054, BSC 2010/2011 or CHM 1045/1046 with the corresponding laboratories. 1 - 3 semester hour credits. May be repeated for credit. Maximum of 12 credits. [A]

SCE 4941. Teaching Secondary School Science Practicum. This course is designed for students who are majoring in science education and who will be obtaining teacher certification in grades 5-9 or 6-12. This practicum accompanies SCE 4330 and provides students with opportunities to present their interactive curriculum projects to secondary school students in local area school districts. Students spend a minimum of 30 school-based hours in the secondary school classroom. Project presentations will be coordinated with in-service secondary school teachers and their curriculum schedules and needs. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for certification. Corequisites or Prerequisites: EDF 3214 and SCE 4330. 1 semester hour credit. [A]

SCE 4943. Seminar in Science Education. This course is designed to provide students with instructional strategies, planning techniques, evaluation procedures and class management skills. Prerequisites: All other program requirements complete. Corequisite: SCE 4945. 3 semester hours credit. [A]

SCE 4945. Student Teaching in Science. This course requires a teacher candidate to demonstrate pre-professional competencies during a 16 week, full-time internship in a public school approved by the department. Contact hours: a minimum of 35 hours per week for 15 weeks. Prerequisites: Completion of all program requirements. Corequisite: SCE 4943. 10 semester hours credit. [A]

SLS 1101. Orientation. This course provides the entering student with information necessary for successful adjustment to college life, work and activities. Attention is given to study habits, vocational choice and the development of a well-rounded philosophy of life. This course is mandatory for students who have completed fewer than 12 semester hours and for all high school graduates who were dually enrolled. 1 semester hour credit. [A]

SLS 1106. First Year Learning Experience. This course is designed to provide students a collaborative forum for transitioning into college and to persisting to graduation. Skills demonstrated in this course are organizing and coordinating current responsibilities with school, establishing reasonable goals, developing career choices, making ethical decisions, time management, identifying learning styles, improving study skills and responsible citizenship. Corequisite: SLS 1101 or IDH 1931. 1 semester hour credit. [A]

SLS 1261-1262, 2263-2264. SGA Leadership Development I, II, III, IV. A course designed for student leaders to participate in the SGA organization and development of the student activities program. The course includes the dynamics of student organizational behavior, personal and group goal setting, conflict resolution, and development of leadership skills. Required for all Student Government Association Officers. 1 semester hour credit. [A]

SLS 1265-1266, 2267-2268. Ambassador Leadership Development I, II, III, IV. A course designed for student leaders to participate in the Student Ambassador program. The course includes the dynamics of student organizational behavior, personal and group goal setting, conflict resolution, and development of leadership skills. Required for all Student Ambassadors. 1 semester hour credit. [A]

SLS 1401. Career and Life Planning. A course designed for both freshman and sophomore students (especially undeclared majors) to help them plan realistic career and life goals through the development of self evaluation, career awareness and career decision-making skills. Students engage in a series of exercises which stimulate thinking about and planning for the future, much of which is done in small groups. The current job market is explored through the use of the Career Laboratory. 2 semester hours credit. [A]

SLS 1501. College Success Skills. A course designed for first semester freshmen students. It serves as an introduction to Chipola College and as-
exists the beginning student in coping with the people and programs available to help them get the most out of their college experience. Lab portion of the class is tailored to meet the individual needs of the student. 2 semester hours credit. [A]

SOW 2020. Introduction to Social Work. This course is a survey of the Social Worker profession from its historical roots to the present. Emphasis is placed upon introducing students to the field, practice standards, issues in social welfare, and the social work process and practice settings. Specific emphasis will be placed upon the role of social workers in enhancing the human condition. Students will be afforded the opportunity to learn about the role that professional social workers play in attaining equality of opportunities and social justice. Emphasis will also be placed upon the empowerment of humans to attain societal goals. Core societal problems such as incomes inequality, racism, sexism and inequality of opportunity will also be addressed. Students will also be exposed to generalist practice modalities that are designed to effect positive change in the individual and society. 3 semester hours credit. [A]

SPC 2600. Effective Public Speaking. This course covers the preparation and presentation of speeches for business, social and professional occasions. Speech principles and problems will be dealt with in regard to the development and use of the speaking voice. Prerequisite: ENC 1101 or instructor’s approval. 3 semester hours credit. [A]

SYG 1000. Introductory Sociology. A general study of institutional development, social determinants, social process, and cultural growth. The aim of the course is to help the student understand how our present society evolved, how it functions, and how it is developing. Considerable time is devoted to the study of the social problems of today and to the application of the sociological principles involved. The course is designed to serve as an introduction to other courses in the field. 3 semester hours credit. [A]

SYG 1010. Contemporary Sociology. This course is intended to provide the student with an insight into some of the major social issues and problems confronting American society. The course will have the flexibility to shift the focus on issues and problem areas as they move in and out of the social arena. It will provide students with a multi-cultural, unisex course capable of dealing with any social problem subject area deemed appropriate for study. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

SPC 2016. Speech Communication for Educators. This course is designed to help future teachers become more effective communicators, particularly through the medium of public speaking, with emphasis on the demands specific to the education profession. Also, the demands of conveying such information to secondary students will be emphasized. Open to Chipola Secondary Education applicants only. Requires approval of the Director of the Chipola Teacher Education Department. 1 semester hour credit. Prerequisites: ENC 1101 and ENC 1102 with grades of “C” or higher. Prerequisite or corequisite: EME 2040. [A]

SPC 2050. Principles of Speech. This course is an intensive study of the speech process, designed primarily for English, speech, elementary education and special education majors. Emphasis is on enabling the students to evaluate their own speech; to understand phonetic, physiological, and psychological factors involved in speech; and to establish procedures to follow for personal speech improvement. A study of the International Phonetic Alphabet is included. 3 semester hours credit. [A]

SPC 2600. Effective Public Speaking. This course covers the preparation and presentation of speeches for business, social and professional occasions. Speech principles and problems will be dealt with in regard to the development and use of the speaking voice. Prerequisite: ENC 1101 or instructor’s approval. 3 semester hours credit. [A]

SYG 1000. Introductory Sociology. A general study of institutional development, social determinants, social process, and cultural growth. The aim of the course is to help the student understand how our present society evolved, how it functions, and how it is developing. Considerable time is devoted to the study of the social problems of today and to the application of the sociological principles involved. The course is designed to serve as an introduction to other courses in the field. 3 semester hours credit. [A]

SYG 1010. Contemporary Sociology. This course is intended to provide the student with an insight into some of the major social issues and problems confronting American society. The course will have the flexibility to shift the focus on issues and problem areas as they move in and out of the social arena. It will provide students with a multi-cultural, unisex course capable of dealing with any social problem subject area deemed appropriate for study. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

T

TAX 2000. Income Tax Accounting. Introduction to Individual Income Tax Accounting. Covers fundamental federal income tax regulations applicable to individuals, including preparation of forms, documentation requirements, computation of tax, tax planning, and use of computerized tax preparation programs. No prerequisite. 3 semester hours credit. [A]

TAX 3001. Federal Tax Accounting. A survey of federal income taxation with primary emphasis on the taxation of individuals and corporations. 3 semester hours credit. [A]
THE 1020. *Introduction to Theatre.* This course examines the evolution of several facets of theatre, including acting, directing, playwriting, the physical stage, performance conditions, and dramatic literature. The emphasis is on demonstrating the collaborative, eclectic nature of theatre, and on providing students with a sophisticated understanding of how live performances have evolved to meet the demands of each society through the ages. This class meets the Humanities requirement. 3 semesters hours credit. [A]

THE 1051. *Theatre for Special Audiences.* A course for participation in the organization, construction, rehearsal, and performance of a show for children. Credit for this course will be received only by members of the ensemble who have been selected by audition. 3 semester hours credit. [A]

THE 1925-1926-1927. *Rehearsal/Performance Lab.* A course for participation in theatrical productions. Credit may be received for acting, choreography, dancing, singing, or stage management in plays or musicals. Prerequisite: Courses should be taken in sequence. 1 semester hours credit each course. [A]

THE 2721. *Children’s Theatre.* A course for participation in the organization, construction, rehearsal, and performance of a show for children. Credit for this course will be received only by members of the ensemble who have been selected by audition. 3 semester hours credit. [A]

THE 2925-2926-2927. *Rehearsal/Performance Lab.* A course for advanced participation in theatrical productions. Credit may be received for acting, choreography, dancing, singing, or stage management in plays or musicals. Prerequisite: Courses should be taken in sequence. 2 semester hours credit each course. [A]

TPA 1290. *Technical Theatre Lab.* A course for participation in the technical facets of a theatre production. Credit may be received for work in the areas of lighting, set construction, costuming, publicity, and makeup. 1 semester hour credit. [A]

TPA 1291-1292. *Technical Theatre Lab.* A course for participation in the technical facets of a theatre production. Credit may be received for work in the areas of lighting, set construction, costuming, publicity, and makeup. Prerequisite: TPA 1290. 1 semester hour credit. [A]

TPA 2200. *Stagecraft.* A lecture/seminar/laboratory course designed to help acquaint the student with general play production procedures. The course will familiarize the student with the overall workings of a theatrical organization and facets of technical theatre through textbook, video, and assigned crew work related to the semester’s production. 3 semester hours credit. [A]

TPA 2293. *Technical Theatre Lab.* A course for participation in the technical facets of a theatre production. Credit may be received for work in the areas of lighting, set construction, costuming, publicity, and makeup. 1 semester hour credit. [A]

TPA 2296. *Technical Theatre Lab.* A course for advanced participation in the technical facets of a theatre production. Credit may be received for significant, independent projects in technical theatre. Prerequisite: TPA 1291; courses should be taken in sequence. 2 semester hours credit each course. [A]

TPA 2297. *Technical Theatre Lab.* A course for advanced participation in the technical facets of a theatre production. Credit may be received for significant, independent projects in technical theatre. Prerequisite: Consent of department. 3 semester hours credit. [A]

TPP 1100. *Stage Acting.* An introduction to the requirements of acting in plays. The focus will be placed equally upon script analysis and upon developing the technical skills necessary to perform comfortably on a stage. There will be regular lectures and discussions, as well as performance assignments on pantomime, improvisation and acting technique. The final grade will not be based upon talent. 3 semester hours credit. [A]

**TPP 2210. Touring Theatre.** A course for participation in the organization, construction, rehearsal, and performance of a touring production. Credit for this course will be received only by members of the ensemble who have been selected by audition. 3 semester hours credit. [A]

**TSL 3520 Language and Cultural Understanding.** The course is designed to provide students with information and skills concerning the education of students who have limited English proficiency (LEP). The course addresses recognizing the need for training in order to work with LEP students and focuses on cross cultural understanding and methods of teaching speakers of other languages. It also focuses on working with the families of the LEP students. Ten hours field experience. Prerequisite: EDF 3214. 3 semester hours. [A]

**WOH 2012. World History I.** This course is a comprehensive global perspective of world history. It is the study of all geographical areas and civilizations. It identifies and explores the links among civilizations that produce a multicultural world history while paying particular attention to unique identities and contributions. It examines briefly the various political and economic systems, religions, philosophies and renowned leaders of the world civilizations and societies. The perspective is multicultural and multifaceted to effect a more integrated understanding of global development. This course spans the origins of civilizations through the Enlightenment. This course has been designated as an international/diversity course. 3 semester hours credit. [A]

**WOH 2022. World History II.** This course is a comprehensive global perspective of world history. It is the study of all geographical areas and civilizations. It identifies and explores the links among civilizations that produce a multicultural world history while paying particular attention to their identities and unique contributions. It examines briefly the various political and economic systems, religions, philosophies and renowned leaders of the world civilizations and societies. The perspective is multicultural and multifaceted to effect a more integrated understanding of global development. This course spans the eras from the Enlightenment to the present. This course has been designated as an international/diversity course. 3 semester hours credit. [A]