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ACG - Accounting**ACG 2001, Principles of Financial Accounting I Principles of Financial Accounting I****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). An introduction to financial accounting. The complete accounting cycle will be studied as it relates to a service business and a merchandising business. Additional topics include financial reporting and analysis, internal control, and short-term liquid assets including inventories.

ACG 2001H, Honors Principles Of Financial Accounting I Honors Principles Of Financial Accounting I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). An introduction to financial accounting. The complete accounting cycle will be studied as it relates to a service business and a merchandising business. Additional topics include financial reporting and analysis, internal control, and short-term liquid assets including inventories.

ACG 2011, Principles of Financial Accounting II Principles of Financial Accounting II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Minimum grade of "C" in ACG2001 or consent of instructor. A continuation of Principles of Financial Accounting I. Topics will include a study of short-term liquid assets, long-term assets, and current long-term liabilities and stockholder's equity. Additional topics will include the statement of cash flows and financial statement analysis.

ACG 2011H, Honors Principles of Financial Accounting II Honors Principles of Financial Accounting II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Minimum grade of "C" in ACG2001 or consent of instructor. A continuation of Principles of Financial Accounting I. Topics will include a study of short-term liquid assets, long-term assets, and current long-term liabilities. Additional topics will include the statement of cash flows and financial statement analysis.

ACG 2071, Introduction to Managerial Accounting Introduction to Managerial Accounting**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Minimum grade of "C" in ACG2001. Accounting for planning, organization, and cost control.

ACG 2071H, Honors Introduction To Managerial Accounting Honors Introduction To Managerial Accounting**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Minimum grade of "C" in ACG2001. Accounting for planning, organization, and cost control.

ACG 2450, Introduction to Accounting Software Introduction to Accounting Software**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: Minimum grade of "C" in ACG2001. The accounting applications of electronic data processing, including the preparation, interpretation and use of computer information in financial decision-making. This course is transferable, but may not be substituted.

ACG 2930, Special Topics in Accounting Special Topics in Accounting**3 hrs., 3 crs.,**

Course centering around topics of current interest or of special interest to students or instructors. Topics may vary from semester to semester. Course will provide the opportunity for students to demonstrate their mastery of the material learned from the program. It should be taken during the student's last semester.

AMH - American History**AMH 2010, United States History I United States History I****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will examine United States history from before European contact to 1877. Topics will include but are not limited to indigenous peoples, the European background, the Colonial Period, the American Revolution, the Articles of Confederation, the Constitution, issues within the new republic, sectionalism, Manifest Destiny, slavery, the American Civil War, and Reconstruction.

AMH 2010H, Honors United States History I Honors United States History I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will examine United States history from before European contact to 1877. Topics will include but are not limited to indigenous peoples, the European background, the Colonial Period, the American Revolution, the Articles of Confederation, the Constitution, issues within the new republic, sectionalism, Manifest Destiny, slavery, the American Civil War, and Reconstruction.

AMH 2020, United States History II United States History II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will trace the history characters of the United States from the end of the Reconstruction Era to the contemporary era. Topics will include but are not limited to the rise of industrialization, the United States' emergence as an actor on the world stage, constitutional amendments and their impact, the Progressive Era, World War I, the Great Depression and New Deal, World War II, Civil Rights Era, the Cold War, and the United States since 1989.

AMH 2020H, Honors United States History II Honors United States History II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will trace the history characters of the United States from the end of the Reconstruction Era to the contemporary era. Topics will include but are not limited to the rise of industrialization, the United States' emergence as an actor on the world stage, constitutional amendments and their impact, the Progressive Era, World War I, the Great Depression and New Deal, World War II, issues of civil and minority rights, the Cold War, and the United States since 1989.

AMH 2949, COOP/Work Experience/History COOP/Work Experience/History**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

AML - American Literature**AML 2010, American Literature through the Civil War American Literature through the Civil War****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with minimum grade of "C." (Meets Literature Humanities requirement). Major writers, literary movements, forms, and themes of American literature from the Colonial Era to the end of the Civil War. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

AML 2010H, Honors American Literature Through The Civil War Honors American Literature Through The Civil War**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, literary movements, forms, and themes of American literature from the Colonial Era to the end of the Civil War. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

AML 2020, American Literature: Reconstruction to Present American Literature: Reconstruction to Present**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement). Major writers, literary movements, forms, and themes of American literature from the Civil War to the present. Readings will include selections from the Western canon. This course is a Gordon Rule writing course in which students will produce extensive writing and which requires completion with a minimum grade of "C."

AML 2020H, Honors American Literature: Reconstruction To Present Honors American Literature: Reconstruction To Present**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement). Major writers, literary movements, forms, and themes of American literature from the Civil War to the present. This course is a Gordon Rule writing course in which students will produce extensive writing and which requires completion with a minimum grade of "C."

AML 2600, African-American Literature African-American Literature**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." Major writers, literary movements, forms and themes and cultural significance of African-American literature.

AML 2600H, African-American Literature African-American Literature**3 hrs., 3 crs.,**

Prerequisite: ENC1102 with a minimum grade of ?C.? Major writers, literary movements, forms and themes of cultural significance of African-American literature. This course is a Gordon Rule writing course in which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ASL - American Sign Language**ASL 1140, American Sign Language I American Sign Language I****4 hrs., 4 crs.,**

(Offered fall). This course is designed for students with little to no knowledge of American Sign Language and lays the foundation for learning American Sign Language. It will introduce students to the history of American Sign Language and sign language systems, grammatical principles of American Sign Language, and various aspects of the Deaf culture and the Deaf community. Emphasis will be on signed vocabulary for the development of both expressive and receptive conversational skills.

ASL 1150, American Sign Language II American Sign Language II**4 hrs., 4 crs.,**

(Offered spring). Prerequisite: *ASL1140. American Sign Language II builds upon the foundational skills provided in the pre-requisite course American Sign Language I (ASL1140). This course is designed for students who have successfully completed the prerequisite course (ASL 1140). Students will acquire intermediate signed vocabulary and linguistic principles of American Sign Language to include, but limited to: verb inflections/modifications, use of classifiers, and features of storytelling in American Sign Language. Students will expand their knowledge of the Deaf culture, the Deaf community, and their history, and be introduced to Deaf art. This course will put emphasis on the ability to utilize American Sign Language receptively and expressively for conversational purposes. Students should check individual university program requirements for transferability.

ASL 2160, American Sign Language III American Sign Language III**4 hrs., 4 crs.,**

(Offered fall). Prerequisite: *ASL1150. American Sign Language III is an intermediate-level course designed to further develop students' proficiency in expressive and receptive American Sign Language (ASL) skills. Building upon the foundational knowledge acquired in ASL I/ASL1140 and ASL II/ASL1150, this course focuses on enhancing linguistic and communicative skills through interactive and immersive learning experiences.

ANT - Anthropology**ANT 2000, Introduction to Anthropology Introduction to Anthropology****3 hrs., 3 crs.,**

(Offered fall and spring). In this course, students will learn the foundations of anthropology as the study of human variation in its biological, social, and cultural dimensions. Students will learn about anthropological concepts, principles, and methodologies to understand and explore past and present human behavior. They will apply the anthropological approach to analyze issues pertaining to past and contemporary cultures and develop intellectual skills and habits to understand behavioral, social, and cultural issues from multiple disciplinary perspectives.

ANT 2000H, Honors Introduction to Anthropology Honors Introduction to Anthropology**3 hrs., 3 crs.,**

(Offered fall and spring). In this course, students will learn the foundations of anthropology as the study of human variation in its biological, social, and cultural dimensions. Students will learn about anthropological concepts, principles, and methodologies to understand and explore past and present human behavior. They will apply the anthropological approach to analyze issues pertaining to past and contemporary cultures and develop intellectual skills and habits to understand behavioral, social, and cultural issues from multiple disciplinary perspectives.

ANT 2100, Introduction to Archaeology Introduction to Archaeology**3 hrs., 3 crs.,**

(Offered fall and spring). Introduction to the concepts, theories, and methods archaeologists use to study human culture from the world's earliest settlements to contemporary societies. Major topics include: field methods and site survey, artifact analysis, paleobotany, zooarchaeology, bioarchaeology, historical archaeology, cultural resource management, forensic archaeology, and the emergence of ancient civilizations.

ANT 2100H, Honors Introduction to Archaeology Honors Introduction to Archaeology**3 hrs., 3 crs.,**

(Offered fall and spring). Introduction to the concepts, theories, and methods archaeologists use to study human culture from the world's earliest settlements to contemporary societies. Major topics include: field methods and site survey, artifact analysis, paleobotany, zooarchaeology, bioarchaeology, historical archaeology, cultural resource management, forensic archaeology, and the emergence of ancient civilizations.

ANT 2149, Lost Tribes and Sunken Continents Lost Tribes and Sunken Continents**3 hrs., 3 crs.,**

(Offered fall). This course examines claims concerning ancient art, civilizations, monuments, and mysterious archaeological sites. Topics include Stonehenge, Easter Island, Atlantis, the Nazca Lines, various pyramids, the Maya civilization, and other archaeological "mysteries." Emphasis will be placed on understanding how and why pseudoscientific beliefs proliferate and on understanding the real archaeological histories of ancient peoples.

ANT 2410, Cultural Anthropology Cultural Anthropology**3 hrs., 3 crs.,**

(Offered fall). Introduction to the concepts, theories, and methods anthropologists use to study human cultures throughout the world. Major topics include language, subsistence, economics, family, kinship, sex, gender, political organization, religion, technology, art, modernization, global changes, and the role of applied anthropology in addressing contemporary world problems.

ANT 2410H, Honors Cultural Anthropology Honors Cultural Anthropology**3 hrs., 3 crs.,**

(Offered fall). Introduction to the concepts, theories, and methods anthropologists use to study human cultures throughout the world. Major topics include language, subsistence, economics, family, kinship, sex, gender, political organization, religion, technology, art, modernization, global changes, and the role of applied anthropology in addressing contemporary world problems.

ANT 2949, COOP/Work Experience/Anthropology COOP/Work Experience/Anthropology**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

APA - Applied Accounting**APA 2949, COOP/Work Experience/Accounting COOP/Work Experience/Accounting****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ARC - Architecture**ARC 1301C, Architectural Design 1 Architectural Design 1****8 hrs., 4 crs.,**

(Offered fall). Corequisites: ARH2060, EGN1110C with a minimum grade of "C." First course in the design studio sequence, this introductory course introduces the student without prior experience, to the design of space defined as the analysis, formation and articulation of habitable volumes. This course emphasizes the basic concepts of space, its inhabitation, and the process of its design. A sequence of analytical and generative exercises will develop the fundamentals of space cognition and will expose the students to the interplay between contextual strategies and simple programmatic requirements.

ARC 1302C, Architectural Design 2 Architectural Design 2**8 hrs., 4 crs.,**

(Offered spring). Prerequisite: ARC1301C with a minimum grade of "C." Continuation of ARC1301, Architecture Design 1. Development of spatial language, analytical abilities, communication skills and synthetic design process, with emphasis on all areas of spatial design--landscape, building and interior--are introduced as the material for refining and developing conventions of architectural representation and communication. Students learn to engage in strategies, formal conditions and ideas discovered through analysis. Students design an intervention in contexts generated through the application and transformation of the order revealed by analysis.

ARC 1302H, Honors Design 1.2 Honors Design 1.2**8 hrs., 4 crs.,**

(Offered spring). Prerequisite: *ARC1301C. Continuation of ARC1301C, Architectural Design 1.1. Development of spatial language, analytical abilities, communication skills and synthetic design process, with emphasis on all areas of spatial design--landscape, building and interior--are introduced as the material for refining and developing conventions of architectural representation and communication. Students learn to engage in strategies, formal conditions and ideas discovered through analysis. Students design an intervention in contexts generated through the application and transformation of the order revealed by analysis.

ARC 2100C, Immersive Media for Design (Capstone) Immersive Media for Design (Capstone)**6 hrs., 3 crs.,**

(Offered spring). Combining elements of virtual reality, augmented reality, stereoscopic 3D, and advanced media techniques, the Immersive Media for Design course will teach students to design and create virtual and photo-real media projects that can be viewed on head-mounted displays for an immersive experience of their designs solutions.

ARC 2180, Introduction to Digital Architecture Introduction to Digital Architecture**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: ARC1301C. This course uses the integration of digital media and microcomputer software with the architectural design process. There is emphasis on logic of problem formulation and design interface. The course covers introduction to computing collage and imaging, modeling and animation and communicative.

ARC 2303C, Architectural Design 3 Architectural Design 3**9 hrs., 5 crs.,**

(Offered fall). Prerequisite: *ARC1302C. Introduces fundamental ideas and techniques directed to the development and understanding of the design process and an architectural vocabulary. Study involves consideration of architectural theory, history, climate and cultural factors, structures, and materials that influence form. This course focus is the design process from shape creation to spatial relationships, so that the student can develop design skills in a preliminary design phase, and a personal technique and language from two dimensional designs to three dimensional forms.

ARC 2304C, Architectural Design 4 Architectural Design 4**9 hrs., 5 crs.,**

(Offered spring). Prerequisite: ARC2303C. Introduces fundamental ideas and techniques directed to the development and understanding of the design process and an architectural vocabulary. Study involves consideration of architectural theory, history, climate and cultural factors, structures, and materials that influence form. This course focus is to develop the ability to use basic architectural principles in the design of buildings, interior spaces, and sites. Particular attention will be paid to graphic representations and architectural drawings as means to support the design process.

ARC 2312C, Introduction to Building Assembly Modeling Introduction to Building Assembly Modeling**8 hrs., 4 crs.,**

(Offered fall). Prerequisites: ETD2395, MAC1105, ARC1301C. Corequisite: BCN1230. Introduction to the principles of building assembly modeling. Students will learn to explore a building as an assembly of architectural objects and subassemblies using virtual design and construction software. In addition, students will learn part modeling, assembly modeling, generative drafting, and general representational and modeling techniques.

ARC 2949, COOP/Work Experience/Architecture COOP/Work Experience/Architecture**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ART - Art**ART 1100C, Crafts Design I Crafts Design I****6 hrs., 3 crs.,**

(Offered as needed). Development of basic techniques using a wide range of materials, such as metals, fibers, fiber dye, enamels, and stained glass. Emphasis is placed on creative use of the techniques.

ART 1101C, Crafts Design II Crafts Design II**6 hrs., 3 crs.,**

(Offered as needed). Prerequisite: ART1100C. Enhanced development of the materials explored in ART1100C. Emphasis is placed on the creative use of the techniques.

ART 1201C, Design I Design I**6 hrs., 3 crs.,**

\$81.00 lab fee. (Offered fall). Design I is a studio course that introduces the student to the fundamental elements of design and aesthetics. Through a series of projects, ranging from simple design exercises to more complex and involved assignments students will develop an understanding of elements and principles of design. Emphasis will also be placed on the conceptual aspects of design. The student will learn strategies that will allow him to take an idea driven approach to the process of design and art making.

ART 1203C, Design II Design II**6 hrs., 3 crs.,**

\$69.00 lab fee (Offered spring). Prerequisite: ART1201C or consent of instructor. Design II is a studio course that introduces the student to the fundamental elements of design as found in three-dimensional composition. Through a series of projects, ranging from simple design exercises to more complex and involved assignments students will develop an understanding of elements and principles of 3D design. Students will employ a variety of media to investigate the visual dynamics of form, mass, volume, space, shape, color, light, texture, composition, and structure.

ART 1300C, Drawing I Drawing I**6 hrs., 3 crs.,**

\$76.00 lab fee. (Offered fall and spring). Basic problems in freehand drawing designed to develop skill and understanding of visual communication through the use of line.

ART 1301C, Drawing II Drawing II**6 hrs., 3 crs.,**

\$76.00 lab fee. (Offered fall and spring). Prerequisite: ART1300C or consent of instructor. A continuation of basic problems in freehand drawing designed to develop skill and understanding. This course is designed to challenge the student with more advanced drawing projects which foster creativity, disciplined skill, and experimental approaches.

ART 1500C, Painting I Painting I**6 hrs., 3 crs.,**

\$54.00 lab fee. (Offered fall and spring). Introduction to and involvement with painting media. Emphasis is placed on developing compositions which foster an understanding of some of the materials, skills, and directions possible in painting. Basic techniques and historical relationships will be related to in a format which also attempts to foster painting as a medium of expression.

ART 1501C, Painting II Painting II**6 hrs., 3 crs.,**

\$88.00 lab fee. (Offered fall and spring). Prerequisite: ART1500C or consent of instructor. Continuation of painting skill development, emphasizing composition and theme involvement.

ART 1750C, Ceramics I Ceramics I**6 hrs., 3 crs.,**

\$80.00 lab fee. (Offered fall and spring). Basic concepts of ceramic design. Experience in process of forming, decorating, glazing, and firing pottery.

ART 1750H, Honors Ceramics I Honors Ceramics I**6 hrs., 3 crs.,**

\$80.00 lab fee (Offered fall and spring). Basic concepts of ceramic design. Experience in process of forming, decorating, glazing, and firing pottery.

ART 1751C, Ceramics II Ceramics II**6 hrs., 3 crs.,**

\$80.00 lab fee. (Offered fall and spring). Prerequisite: ART1750C. A continuation of skill development in ceramic production. Emphasis in a wheel throwing, hand building, preparation, and firing of pottery and kiln loading. Individual projects are developed.

ART 2771C, Applied Ceramics Applied Ceramics**6 hrs., 3 crs.,**

\$83.00 lab fee. (Offered as needed). Prerequisite: ART1751C or consent of instructor. The purpose of this class is to prepare students for self-directed studio work. Students will investigate choices in materials to express a personal concept, and work developing technical skills. This class is intended to build on basic information from prior ceramics classes.

ART 2949, COOP/Work Experience/Art COOP/Work Experience/Art**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ART 2955, Portfolio and Resume Development Portfolio and Resume Development**3 hrs., 3 crs.,**

(Offered spring). This course is designed to facilitate a smooth transition from a two-year school to a university. The course will assist students in assembling a portfolio of work, writing an artist statement, and composing a resume. Also discussed is how to fill out applications for college admissions. This information can be used in relating to college admissions offices, prospective employers, or juried competitions.

ARH - Art History**ARH 2000, Understanding Visual Arts Understanding Visual Arts****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). (Meets Fine Arts Humanities requirement). In this course, students will develop an appreciation of and the ability to think critically about culture and be provided with the tools to understand, analyze, and discuss works of visual art and material culture.

ARH 2000H, Honors Understanding Visual Arts Honors Understanding Visual Arts**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). (Meets Fine Arts Humanities requirement). In this course, students will develop an appreciation of and the ability to think critically about culture and be provided with the tools to understand, analyze, and discuss works of visual art and material culture.

ARH 2050, Art History Criticism I Art History Criticism I**3 hrs., 3 crs.,**

(Offered fall). (Meets Fine Arts Humanities requirement.) Art History Criticism I is a survey course covering the development of Western art and architecture from antiquity to the early Renaissance. This course examines major forms of visual art such as painting, sculpture, and architecture which will include selections from the Western canon.

ARH 2051, Art History Criticism II Art History Criticism II**3 hrs., 3 crs.,**

(Offered spring). (Meets Fine Arts Humanities requirement). Art History Criticism II is a survey course covering the development of Western art and architecture from the early Renaissance to the early 20th century. This course examines major forms of visual art such as painting, sculpture, and architecture which will include selections from the Western canon.

ARH 2060, History of Architecture History of Architecture**3 hrs., 3 crs.,**

(Offered fall and spring). (Meets Fine Arts Humanities requirement). This course provides an introduction to the history of architecture from ancient times to modern days. It explores the relationships between historical developments in architecture and wider changes in the social, technological, and aesthetics realms. The study of architecture will serve as a window into broader aspects of cultural history and will include selections from the Western canon.

ARH 2060H, Honors History of Architecture Honors History of Architecture**3 hrs., 3 crs.,**

(Offered fall and spring). (Meets Fine Arts Humanities requirement). This course provides an introduction to the history of architecture from ancient times to modern days. It explores the relationships between historical developments in architecture and wider changes in the social, technological and aesthetics realms. The study of architecture will serve as a window into broader aspects of cultural history. Simultaneously, the course will examine architecture as a unique medium, with its own visual codes, spatial forms and material structures. In this sense, the history of architecture will be seen in terms of the internal dynamics and ongoing issues of what it means to design and build in any context. The students will be expected to develop visual literacy in the forms and trends of architecture over the various periods. Emphasis will be placed on learning to look at buildings and architectural representations in a deeper way. The history of architecture will be read both from the outside, as a consequence of certain social, economic and ideological forces, and from inside, as a problem of the evolution of the construction materials, technology and science.

AST - Astronomy**AST 1002, Descriptive Astronomy Descriptive Astronomy****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides a comprehensive look at modern astronomy, emphasizing the use of the scientific method and the application of physical laws to understand the universe including earth and its environment. Throughout this course, students will develop the ability to discern scientific knowledge from non-scientific information by using critical thinking.

AST 1002H, Honors Descriptive Astronomy Honors Descriptive Astronomy**3 hrs., 3 crs.,**

(Offered fall and spring). This course provides a comprehensive look at modern astronomy, emphasizing the use of the scientific method and the application of physical laws to understand the universe including earth and its environment. Throughout this course, students will develop the ability to discern scientific knowledge from non-scientific information by using critical thinking.

ASC - Aviation Science: General**ASC 2560, Unmanned Vehicles and Systems Unmanned Vehicles and Systems****1 hr., 1 cr.,**

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and application of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

ASC 2560C, Unmanned Vehicle Systems Operations I Unmanned Vehicle Systems Operations I**5 hrs., 3 crs.,**

This course provides theoretical, simulator, and flight training to students that will enable them to operate Unmanned Aircraft Systems (UAS) safely in the United States National Airspace System (NAS) under 14 CFR Part 107 rules. Additionally, the course will provide students with historical insights on the development and application of Unmanned Vehicle System (UVS) technologies in civil and defense sectors.

ASC 2560L, Unmanned Vehicles and Systems Lab Unmanned Vehicles and Systems Lab**4 hrs., 2 crs.,**

This lab course provides students with practical application of unmanned aerial vehicles (UAVs) and systems. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

ASC 2561, Unmanned Vehicles and Systems Operations Unmanned Vehicles and Systems Operations**1 hr., 1 cr.,**

This course serves as follow-on to the introductory Unmanned Aerial Systems (UAS) course. It builds on the student's understanding of UAS history, technology, and regulations and builds on those to provide a basis for operating small UAS platforms (<55 pounds). Students will gain additional exposure to a variety of UAS operations, including aerial imaging, and search and rescue operations. Additional flight operations will be conducted in a controlled environment to provide exposure to real-world situations, with the intent of preparing the student for the FAA's (to be published) UAS Operator Certificate.

ASC 2561C, Unmanned Vehicle Systems Operations II Unmanned Vehicle Systems Operations II**5 hrs., 3 crs.,**

Prerequisite: *ASC2560C. Building upon knowledge gained in ASC2560C, this course provides theoretical, simulator, and flight training to students that will enable them to operate Unmanned Aircraft Systems (UAS) safely in the United States National Airspace System (NAS) under conditions that typically would require a waiver or authorization beyond the limitations provided in 14 CFR Part 107 rules. Additionally, students will learn to operate maritime and terrestrial-based Unmanned Vehicle Systems (UVS).

ASC 2561L, Unmanned Vehicles and Systems Operations Lab Unmanned Vehicles and Systems Operations Lab
4 hrs., 2 crs.,

This lab course serves as a continuation to the introductory Unmanned Aerial Systems (UAS) course. It builds on the student's understanding of UAS technology, and regulations and builds on those to provide a basis for operating small UAS platforms (<55 pounds). Students will gain additional exposure to a variety of UAS operations, including aerial imaging, and search and rescue operations. Additional flight operations will be conducted in a controlled environment to provide exposure to real-world situations, with the intent of preparing the student for the FAA's UAS Operator Certificate (to be published).

ASC 2564, Unmanned Vehicle Systems Security Unmanned Vehicle Systems Security**3 hrs., 3 crs.,**

(Offered spring). This course focuses on the concepts of UAS security and protection. Through a combination of instructor led discussion, assigned readings, and projects students will examine the concepts of security engineering, vulnerability, and malicious attack. Students will formulate opinions and strategies for protecting systems and assets from danger while understanding the implications of ignoring security concerns.

ASC 2949, COOP Unmanned Systems Practicum COOP Unmanned Systems Practicum**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ATT - Aviation Technology:Theory**ATT 1100, Private Pilot Ground School Private Pilot Ground School****3 hrs., 3 crs.,**

(Offered fall). Corequisite: ATT1101. This course introduces basic subjects pertaining to pilot knowledge including: basic aircraft systems, aircraft operation and performance, aerodynamic principles, human factors, and aeronautical decision making. When this course is taken concurrently with ATT1101, it will prepare students for the FAA (Federal Aviation Administration) private pilot knowledge examination and allow them to take the FAA exam (IAP047) upon completion of the course. This course meets the requirements of FAR Part 141 for a ground school for the FAA private pilot certificate.

ATT 1101, Private Pilot Applications Private Pilot Applications**3 hrs., 3 crs.,**

(Offered fall). Corequisite: ATT1100. This course, together with ATT1100, provides the basic knowledge needed by students in the professional piloting technology program. The two courses must be taken concurrently by students majoring in the professional piloting technology program. The areas of study include: aircraft preflight, the planning and preparations prior to flight, airport operations, airspace, federal aviation regulations, flight information publications, air navigation, cross country navigation, radio navigation, and flight safety. When this course is taken simultaneously with ATT1100, it will prepare students for the FAA (Federal Aviation Administration) private pilot knowledge examination and allow them to take the ATT exam (IAP047) upon completion of the course.

ATT 1101C, Private Pilot Operations Private Pilot Operations**6 hrs., 5 crs.,**

(Offered fall). This course introduces basic subjects pertaining to pilot knowledge. The areas of study include: basic aircraft systems, aircraft operation and performance, aerodynamic principles, human factors, aeronautical decision making, aircraft preflight, the planning and preparations prior to flight, airport operations, airspace, federal aviation regulations, flight information publications, air navigation, cross country navigation, radio navigation, and flight safety. The course of study also includes simulator instruction provided in an FAA approved Basic Aviation Training Device (BATD).

BSC - Biological Sciences**BSC 1005, General Biological Science General Biological Science****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Satisfactory completion of ENC0022 or appropriate placement score is recommended. Cannot be used to satisfy degree requirements by students who already have credit in BSC2010 or BSC2011. This course applies the scientific method to critically examine and explain the natural world including but not limited to cells, organisms, genetics, evolution, ecology, and behavior.

BSC 1005H, Honors General Biological Science Honors General Biological Science**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Satisfactory completion of ENC0022 or appropriate placement score is recommended. Cannot be used to satisfy degree requirements by students who already have credit in BSC2010 or BSC2011. This course applies the scientific method to critically examine and explain the natural world including but not limited to cells, organisms, genetics, evolution, ecology, and behavior.

BSC 1005L, General Biological Science Laboratory General Biological Science Laboratory**2 hrs., 1 cr.,**

\$54.00 lab fee (Offered fall and spring). The General Biological Science Laboratory (BSC1005L) course offers laboratory experiences that include chemistry of life, genetics and molecular biology, inheritance patterns, evolution theory, diversity of life on earth, ecological principles, and conservation biology. Activities include contemporary laboratory investigations, organismal observations and dissections, and ecological investigations.

BSC 1020, Human Biology Human Biology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Satisfactory completion of ENC0022 or appropriate placement score is recommended. Cannot be used to satisfy degree requirements by students who already have credit in BSC2010 or BSC2011. A basic general education course designed to give the student an understanding of the cellular basis of life, genetics and inheritance, and how the different systems in the body function.

BSC 1020L, Human Biology Lab Human Biology Lab**2 hrs., 1 cr.,**

\$27.00 lab fee. (Offered fall and spring). Recommended for students with the requirement of a science laboratory in their program track. Laboratory activities include the use of the microscope, cell and tissue study, chemical aspects of cell and tissue study, chemical aspects of cells and digestion, the study of human organ systems with the dissection of the fetal pig, and genetics.

BSC 2010, Biology for Science Majors I Biology for Science Majors I**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisites: CHM1025 or equivalent with a minimum grade of "C." Corequisite: BSC2010L. College-level placement in English and reading recommended prior to taking this course. In this course students will apply the scientific method to critically examine and explain the natural world. This course will cover molecular biology, cellular biology, genetics, metabolism, and replication.

BSC 2010H, Honors Biology For Science Majors I Honors Biology For Science Majors I**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisites: CHM1025 or equivalent with a minimum grade of "C." Corequisite: BSC2010L. College-level placement in English and reading recommended prior to taking this course. In this course students will apply the scientific method to critically examine and explain the natural world. This course will cover molecular biology, cellular biology, genetics, metabolism, and replication.

BSC 2010L, Biology for Science Majors Laboratory I Biology for Science Majors Laboratory I**3 hrs., 1 cr.,**

\$63.00 lab fee. (Offered fall and spring). Corequisite: BSC2010. A laboratory course to be taken concurrently with BSC2010. Laboratory experiences will relate to the chemical and physical aspects of life, cellular processes, photosynthesis and cellular respiration, mitosis and meiosis, and genetics.

BSC 2011, Biology for Science Majors II Biology for Science Majors II**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: BSC2010. Corequisite: BSC2011L. The second sequence course for students majoring in the life sciences. Concentration is on diversity of life. Topics covered include plant and animal tissues, principles of ecology, population genetics, and evolution.

BSC 2011H, Honors Biology For Science Majors II Honors Biology For Science Majors II**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: BSC2010. Corequisite: BSC2011L. The second sequence course for students majoring in the life sciences. Concentration is on diversity of life. Topics covered include plant and animal tissues, principles of ecology, population genetics, and evolution.

BSC 2011L, Biology For Science Majors Laboratory II Biology For Science Majors Laboratory II**3 hrs., 1 cr.,**

\$58.00 lab fee. (Offered spring). Corequisite: BSC2011. A laboratory course to be taken concurrently with BSC2011. Laboratory experiences will include structure and function of plants and animals, ecological principles, and evolution. Activities include field trips, experiments in physiology, and dissections.

BSC 2085, Human Anatomy and Physiology I Human Anatomy and Physiology I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Corequisite: BSC2085L or consent of Natural Sciences division chair. This course is the first part of a two-semester sequence in which students examine human anatomy and physiology through a systems approach based on the interaction between form and function, from the microscopic components of cells and tissues to the organismal level. Emphasis is placed on histology and the integumentary, skeletal, muscular, and nervous systems. This course is not intended for biology majors. Satisfactory completion of BSC1020 or high school biology during the last 5 years is strongly recommended.

BSC 2085L, Human Anatomy and Physiology I Laboratory Human Anatomy and Physiology I Laboratory**2 hrs., 1 cr.,**

\$29.00 lab fee. (Offered fall, spring, and summer). Corequisite: BSC2085. Laboratory experiences related to lecture material, including microscope usage, membrane physiology, cell structure and survey of tissues. Using appropriate dissection and histology slides of the skeletal, muscular, and nervous system. The somatic and special senses are included with the nervous system.

BSC 2086, Human Anatomy and Physiology II Human Anatomy and Physiology II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: BSC2085 with a minimum grade of "C." Corequisite: BSC2086L. This course is the second part of a two-semester sequence human anatomy and physiology for health science majors and offered as second of two semester course. This course is not intended for biology majors.

BSC 2086H, Honors Anatomy and Physiology II Honors Anatomy and Physiology II**3 hrs., 3 crs.,**

Prerequisite: BSC2085 with a minimum grade of "C." Corequisite: BSC2086L. A study of the lymphatic system, fluid balance, the nervous system and special senses, the digestive system, the urinary system, the endocrine system, and the reproductive system. Structure and function taught concurrently. This course is not intended for biology majors.

BSC 2086L, Human Anatomy and Physiology II Laboratory Human Anatomy and Physiology II Laboratory**2 hrs., 1 cr.,**

\$52.00 lab fee. (Offered fall, spring, and summer). Prerequisite: BSC2085L with a minimum grade of "C." Corequisite: BSC2086. A study of the cardiovascular system, respiratory system, lymphatic system, fluid and electrolyte balance, the digestive system, urinary system, the endocrine and reproductive system. Appropriate tissue slides and dissections are observed.

BSC 2311, Introduction to Marine Biology Introduction to Marine Biology**3 hrs., 3 crs.,**

(Offered fall). Satisfactory completion of high school biology and chemistry during the last five years is strongly recommended. An introduction to the features of the world ocean and the major groups of living marine organisms that inhabit it. Physical, chemical, and biological interrelationships are emphasized. This course is not intended for biology majors, nor will it serve as a requirement for marine biology majors.

BSC 2311H, Honors Marine Biology Honors Marine Biology**3 hrs., 3 crs.,**

(Offered fall). Satisfactory completion of high school biology and chemistry during the last five years is strongly recommended. An introduction to the features of the world ocean and the major groups of living marine organisms that inhabit it. Physical, chemical, and biological interrelationships are emphasized. This course is not intended for biology majors, nor will it serve as a requirement for marine biology majors.

BSC 2949, COOP/Work Experience/Biology COOP/Work Experience/Biology**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

BOT - Botany**BOT 2800, Plants and Society Plants and Society****3 hrs., 3 crs.,**

(Offered fall and spring). Introductory course investigating basic botany principles with a strong emphasis on the economic aspects and social impact of plants. Emphasis on scientific terminology, plant identification, food production, and medicinal plants.

BOT 2800H, Honors Plants and Society Honors Plants and Society**3 hrs., 3 crs.,**

(Offered fall and spring). Introductory course investigating basic botany principles with a strong emphasis on the economics aspects and social impact of plants. Emphasis on scientific terminology, plant identification, food production, and medicinal plants.

BCT - Building Construct Trades**BCT 2715, Construction Management Construction Management****3 hrs., 3 crs.,**

(Offered spring). A survey of the problems encountered in building construction involving personnel; contracts; federal, state, and local laws involving taxes, unemployment compensation, safety, liens, property deeds, easements, and licensing.

BCT 2770, Construction Estimating Construction Estimating**3 hrs., 3 crs.,**

(Offered fall). The basic principles and current practices employed in estimating building costs. The student learns to prepare material lists and to take off quantities of materials and labor hours from working drawings and specifications. Project cost estimates are prepared.

BCN - Building Construction**BCN 1230, Materials and Methods Materials and Methods****3 hrs., 3 crs.,**

(Offered fall). A study of materials and methods used in commercial or private dwelling construction. Includes the use of wood, steel, and concrete in all phases of construction and a study of the fabrication of component units and their assembly at the construction site.

BCN 2405, Statics and Strength of Materials Statics and Strength of Materials**3 hrs., 3 crs.,**

(Offered spring). This course introduces students to basic concepts of statics and strength of basic materials, such as wood, concrete, and steel. The course covers the concepts of bodies at rest, shear, bending moments deflection, and moments of inertia. Students will master mathematical formulas for analyzing forces and reactions and will develop critical thinking skills necessary to understand structural behavior of building systems. Basic beam and column design will be used to illustrate the learned concepts.

BCN 2949, COOP/Work Experience/Buiding Construction COOP/Work Experience/Buiding Construction**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

BUL - Business Law**BUL 2241, Business Law Business Law****3 hrs., 3 crs.,**

(Offered fall and spring). A survey course of the legal setting in which business operates. Emphasis on public and regulatory law and on social, political, and ethical aspects of legal issues in business. Areas covered include administrative law, antitrust law, contracts, torts, employment law, and related topics. (Check with your adviser about university transfer requirement.)

BUL 3564, Legal Aspects of Managing Technology Legal Aspects of Managing Technology**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Admission to Technology Management BAS Program or permission of the department chair. Corequisite: MAN3303 or permission of department chair. Students in this course will study specialized legal issues involving electronic commerce. Topical areas include intellectual property rights, trade secrets, online contracting, unfair competition, privacy and enforcement of rights.

CHM - Chemistry**CHM 1025, Introduction to General Chemistry Introduction to General Chemistry****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or completion of MAT1033 or MAC1105 with a minimum grade of "C." An introduction to the elementary principles of modern chemistry. This course is designed for students whose preparation in secondary school chemistry and mathematics is such that they require a prerequisite course for general chemistry. (This course does not meet the chemistry requirement for science majors.)

CHM 1032, General, Organic, Biochemistry General, Organic, Biochemistry**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: Math placement test or minimum grade of "C" in a college-level math course. This course covers fundamental topics in general and organic chemistry and selected topics in biochemistry.

CHM 1040, Fundamentals of Chemistry Fundamentals of Chemistry**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Satisfactory mathematics placement on the College-Level Placement Test or completion of MAT1033 or MAC1105 with a minimum grade of "C." This course covers the fundamentals of chemistry with emphasis on descriptive chemistry. It includes topics in equations, stoichiometry, the Periodic Table, gas laws, nuclear chemistry, acids-bases, pH, and selected topics in carbon chemistry. (This course does not meet the chemistry requirement for science majors.)

CHM 1045, General Chemistry General Chemistry**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisites: CHM1025 with a minimum grade of "C" or satisfactory completion of CHM1025 exemption exam and MAC1105. Corequisites: CHM1045L and MAC1140. This course is designed for students pursuing careers in the sciences or who need a more rigorous presentation of chemical concepts than is offered in an introductory course. Students will engage in problem solving and critical thinking while applying chemical concepts. Topics will include the principles of chemistry including atomic theory, electronic and molecular structure, measurement, stoichiometry, bonding, periodicity, thermochemistry, nomenclature, solutions, and the properties of gases.

CHM 1045H, Honors General Chemistry Honors General Chemistry**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisites: CHM1040 with a minimum grade of "C" or satisfactory completion of CHM1040 completion exam and MAC1105. Corequisites: CHM 1045L and MAC1140. Topics covered are chemical calculations, inorganic nomenclature, chemical reactions, thermochemistry, gases, atomic structure, configurations, periodicity, oxidation-reduction, and chemical bonding, including MO and VSEPR theory.

CHM 1045L, General Chemistry Laboratory General Chemistry Laboratory**3 hrs., 1 cr.,**

\$52.00 lab fee. (Offered fall and spring). Corequisite: CHM1045. This course explores chemical and physical properties of substances, types of chemical reactions, energy changes, chemical separations, and quantitative analysis procedures. Designed to accompany the lecture, this laboratory enhances the student's understanding of the lecture topics and teaches basic chemical laboratory techniques.

CHM 1046, General Chemistry and Qualitative Analysis General Chemistry and Qualitative Analysis**3 hrs., 3 crs.,**

(Offered spring and summer). Prerequisites: MAC1140 with a minimum grade of "C" and CHM1045 or the equivalent. Corequisite: CHM1046L. Topics include solids, liquids, gases, colligative properties, kinetics, gaseous equilibria, nuclear chemistry, weak electrolyte equilibria, solubility equilibria, entropy, free energy, and electrochemistry.

CHM 1046H, Honors General Chemistry And Qualitative Analysis Honors General Chemistry And Qualitative Analysis**3 hrs., 3 crs.,**

(Offered spring and summer). Prerequisites: MAC1140 with a minimum grade of ?C? and CHM1045 or the equivalent. Corequisite: CHM1046L. Topics include solids, liquids, gases, colligative properties, kinetics, gaseous equilibria, nuclear chemistry, weak electrolyte equilibria, solubility equilibria, entropy, free energy, and electrochemistry.

CHM 1046L, General Chemistry And Qualitative Analysis Lab General Chemistry And Qualitative Analysis Lab**3 hrs., 1 cr.,**

\$41.00 lab fee. (Offered spring and summer). Corequisite: CHM1046. This course emphasizes quantitative analysis techniques to expand the student's knowledge of oxidation-reduction, colligative properties, reaction rates, electrochemistry, chemical equilibrium and electrolytes. Designed to accompany the lecture, this laboratory enhances the student's understanding of the lecture topics and teaches basic chemical laboratory techniques.

CHM 2210, Organic Chemistry I Organic Chemistry I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: CHM1046, CHM1046L. Corequisite: CHM2210L. A course in reactions, preparations, nomenclature, stereochemistry, conjugation, resonance, nucleophilic aliphatic substitutions, and elimination in alkanes, alkenes, alkynes, alkyl halides, alcohols, ethers, and cyclics, with an extensive introduction to organic synthesis.

CHM 2210L, Organic Chemistry I Laboratory Organic Chemistry I Laboratory**3 hrs., 1 cr.,**

\$132.00 lab fee. (Offered fall). Corequisite: CHM2210. An accompanying course to Organic Chemistry I. Designed to accompany the lecture. This laboratory enhances the student's understanding of lecture topics and teaches basic organic laboratory techniques.

CHM 2211, Organic Chemistry II Organic Chemistry II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CHM2210. Corequisite: CHM2211L. A course covering the reactions, preparations, nomenclature, stereochemistry, conjugation, and resonance in aromatic and carbonyl compounds, amines, heterocyclics, phenols, and their derivatives, including organic synthesis and a comprehensive in-depth study of organic spectroscopy.

CHM 2211L, Organic Chemistry II Laboratory Organic Chemistry II Laboratory**3 hrs., 1 cr.,**

\$91.00 lab fee. (Offered spring). Corequisite: CHM2211. An accompanying course to Organic Chemistry II. Designed to accompany the lecture. This laboratory enhances the student's understanding of lecture topics and teaches basic organic laboratory techniques.

CHM 2949, COOP/Work Experience/Chemistry COOP/Work Experience/Chemistry**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

CGN - Civil Environmental Eng**CGN 2328C, Technical Drawing and Visualization Technical Drawing and Visualization****5 hrs., 3 crs.,**

Prerequisite: EGN2123 or ETD1320C or approval of the instructor. Two- and three-dimensional graphical methods of visualizing and communicating features of projects for construction involving parcel boundaries, topography, drainage, site modeling, site development, structures, buildings and objects using both traditional and computer-aided drafting and design techniques.

CLP - Clinical Psychology**CLP 1001, Psychology of Adjustment Psychology of Adjustment****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course centers on understanding and improving psychological adjustment and quality of life issues. Major topics include stress and coping, gender, interpersonal relationships, personality, and psychological disorders and treatment. Additional topics include social influence and pressure, relationships with others, career preparation, work, and adjusting through the stages of life. The desired outcome is for students to actively take charge of their own lives while adjusting effectively to an ever-changing world.

CLP 1001H, Honors Psychology of Adjustment Honors Psychology of Adjustment**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course centers on understanding and improving psychological adjustment and quality of life issues. Major topics include stress and coping, gender, interpersonal relationships, personality, and psychological disorders and treatment. Additional topics include social influence and pressure, relationships with others, career preparation, work, and adjusting through the stages of life. The desired outcome is for students to actively take charge of their own lives while adjusting effectively to an ever-changing world.

CLP 2140, Foundations of Abnormal Psychology Foundations of Abnormal Psychology**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: PSY2012. In this course students will concentrate on the comprehensive explanation of psychopathology, including the role of the current DSM in considering symptomatic patterns, causation, and treatment approaches of psychological disorders. Moreover, students will identify and categorize several types of psychological disturbances and adaptive behaviors as well as the various diagnoses and criteria, terminology, and therapeutic approaches associated with each.

CPO - Comparative Politics**CPO 2002, Comparative Government Comparative Government****3 hrs., 3 crs.,**

(Offered fall and spring). This course examines major forms of government using a study of various political systems. Special focus will be given to how these governments compare to the American method of government.

CPO 2002H, Honors Comparative Government Honors Comparative Government**3 hrs., 3 crs.,**

(Offered fall and spring). This course examines major forms of government using a study of various political systems. Special focus will be given to how these governments compare to the American method of government.

CIS - Computer & Info Systems**CIS 2321, Systems Analysis and Design Systems Analysis and Design****3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Any programming language. An introduction to the preparation of a system solution to a data processing problem which includes documentation of inputs, outputs, data flow, and a general description of runs and logic; consideration of a gross schedule of events required from project approval through detailed design programming, testing, and the new system phase-in. Actual case studies will be emphasized.

CIS 2352, Ethical Hacking I Ethical Hacking I**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: *CTS1111, CTS1120, CTS1650. This hands-on course teaches students how to hack into information systems using ethical standards. Students will learn system and network penetration testing and techniques used to exploit vulnerabilities, conduct social engineering activities, and intercept and interrupt network communications as well as countermeasures and mitigation steps for defending those systems and data.

CIS 2359, Ethical Hacking II Ethical Hacking II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CIS2352 with a minimum grade of "C", instructor validation required. Continuation of CIS2352, Ethical Hacking I with an emphasis on advanced techniques.

CIS 2381, Computer Forensics and Incident Response Computer Forensics and Incident Response**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CTS1120. The student will design and develop strategies for inspecting potentially corrupted servers, networks and workstations as part of a Cybersecurity Incident Response Team. In this hands-on course the student will practice detecting possible intrusions, inspecting log files, tracking violators. Students will practice computer forensic exercises using detection tools and tracking methodologies.

CIS 2949, COOP/Work Experience/Software Database COOP/Work Experience/Software Database**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

CIS 3083, Cloud Computing Foundations Cloud Computing Foundations**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CTS1650. This course covers essential cloud computing principles, concepts, and architectures. In this course students will study cloud computing deployment and service models. Students will learn how to evaluate the business case for cloud computing and will be able to describe the risks associated with cloud computing. The course will also provide students with the opportunity to implement various cloud objects including servers and storage objects.

CIS 3122, Cybersecurity Analyst Cybersecurity Analyst**3 hrs., 3 crs.,**

(Offered summer). Prerequisite: CTS1120. Applies behavioral analytics to networks to improve the overall state of security by combating malware and advanced persistent threats (apts) and provides an enhanced threat visibility across a broad attack surface. Prepares the student for the TestOut security analyst pro exam and the CompTIA CYSA+ certification.

CIS 4200, Penetration Testing and Vulnerability Analysis Penetration Testing and Vulnerability Analysis**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: CTS1120, CTS1651, CTS2193. The content of this course is designed to expose the student to groundbreaking methodologies in conducting thorough information security analysis, as well as advanced penetration testing techniques. Armed with the knowledge, along with hands-on experience, students will be able to perform the intensive assessments required to effectively identify and mitigate risks to the security of the organization's infrastructure.

CIS 4433, Secure System Integration and Architecture for IT (SecDevOps) Secure System Integration and Architecture for IT (SecDevOps)**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: COP2250, CTS2193. This course introduces the role of secure systems architecture in systems integration, performance, and effectiveness. Students learn the principles and concepts of "devops" (development operations) interplay between IT applications roll-out and related organizational processes. The students are also introduced to Application Security Engineer.

CAP - Computer Applications**CAP 4774, Data Warehousing Data Warehousing****3 hrs., 3 crs.,**

(Offered fall). Prerequisites: ISM4214 or COP2701 with a minimum grade of "C." Prerequisite or corequisite: MAN3303. This course provides an introduction to data warehousing concepts, requirements gathering, design and implementation. Students learn about operational database integration, extraction, transformation, loading of data to historical database system such as operational data store and data warehouse. Students are provided with techniques for the analysis, design, denormalization, implementation, utilization, and documentation in the development of data warehouse systems. Structure query language for database and data warehouse will be studied and used to retrieve data and manipulate the information from the implemented databases. Students are required to complete and present a project to class in the data warehousing area.

CET - Computer Engineering Tech**CET 1112C, Digital and Computer Circuits Digital and Computer Circuits****4 hrs., 3 crs.,**

(Offered spring). Prerequisite MAC1105, EET1084C with a minimum grade of "C." Integrated lecture and laboratory experiences to facilitate the study of digital integrated circuits, number systems, and Boolean algebra simplification and introduction to computer architecture. Included is the study of gates, counters, adders, registers, multivibrators, and arithmetic logic units. National Instruments MultiSim will be used to design circuits and protoboards with test equipment will be used to build and test circuits.

CGS - Computer General Studies**CGS 1000,****3 hrs., 3 crs.,**

A study of the terminology and principles of mechanized and electronic data processing systems used in business and government.

CGS 1060, Computer Fundamentals and Applications Computer Fundamentals and Applications**3 hrs., 3 crs.,**

This course covers the fundamentals of microcomputer concepts including hardware, software, Internet, technologies, and applications used in today's microcomputer environments. Students will gain practical, hands-on experience using Windows operating system, word processing, electronic spreadsheet, database management, presentation, and other applications used in today's business and computing industry.

CGS 1103, Project Management Concepts and Processes Project Management Concepts and Processes**3 hrs., 3 crs.,**

(Offered fall and spring). This course will allow the student to understand how to plan, organize, create presentation material, and manage projects using various software tools. Students will software applications to plan a project; track tasks and organize the overall project; analyze cost, time, and resource effectiveness; and explore options for customizing project design material and effective implementation using software tools.

CGS 1570, Microcomputer Applications Microcomputer Applications**3 hrs., 3 crs.,**

(Offered spring and summer). An introduction to the operation and use of personal computers and the use of the software packages, including Windows, word processing, electronic spreadsheet, Internet access, electronic presentation software, and a database.

CGS 2069, Social Media Marketing Social Media Marketing**3 hrs., 3 crs.,**

(Offered spring and summer). This course will present the development of an Internet business strategy with a particular emphasis on the marketing functions of social media, advertising, promotion, distribution, and project management. Current and experimental applications will be taught on the classroom computers.

CGS 2518, Spreadsheets For Business Environments Spreadsheets For Business Environments**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CGS1570. This course provides an in-depth study of spreadsheets utilizing a problem-solving approach. Spreadsheet-based solutions are explored for common business tasks and problems. The course presents a thorough coverage of spreadsheet functions and tools along with a deep understanding of their purpose in a business environment. This course is ideal for students with professional interests related to business and economics and also for students wishing to obtain a deeper understanding of spreadsheets in general.

CGS 3092, Legal and Ethical Issues in Information Technology Legal and Ethical Issues in Information Technology**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Must be admitted to Technology Management or Digital Media BAS program. This course explores the social, legal, philosophical, ethical, political, constitutional, and economic implications of computing and the controversies they raise. Students will develop an understanding of these societal issues both as members of the business and industrial community and as professionals in computer-related fields.

CNT - Computer Networks**CNT 1510, Wireless Networking Wireless Networking****3 hrs., 3 crs.,**

Prerequisites: CTS1560, CTS1131. This course presents an overview of common wireless technologies such as 802.11a, 802.11b, 802.11g, cellular, PSC, infrared, and bluetooth, including theories, concepts of their operation, installation, and basic troubleshooting. Basic computing and common wireless telephony technologies such as analog, AMPS, CDMA, TDMA, GSM, 2G, 3G, PCS, and ESMR are discussed as well as new trends as they develop. Wireless local area networks and integration with wired networks are also included.

CNT 2949, COOP/Work Experience/Computer Networks COOP/Work Experience/Computer Networks**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

COP - Computer Programming**COP 1000, Introduction to Programming Logic** **Introduction to Programming Logic****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides programming logic that emphasizes the use of flow charts, pseudo-code, and functional structure charts to develop well-formed algorithms. Both are structured and object-oriented design methodologies will be examined.

COP 2224, Introduction To C++ Programming **Introduction To C++ Programming****3 hrs., 3 crs.,**

(Offered fall). Prerequisite: *COP1000. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of C++ programming with an emphasis on primitive data types, control structures, looping structures, methods, and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming.

COP 2250, Introduction to Java Programming **Introduction to Java Programming****3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *COP1000. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of Java programming with an emphasis on primitive data types, control structures, looping structures, methods and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming.

COP 2250H, Honors Introduction to Java Programming **Honors Introduction to Java Programming****3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *COP1000 and COP2700 or permission of instructor. This course helps students to develop problem-solving skills using programming languages. Students are introduced to fundamentals of Java programming with an emphasis on primitive data types, control structures, looping structures, methods and arrays. The student will also gain a basic understanding of the style of programming called object oriented programming. This course will investigate objects by using classes and methods. External database sources will be used for both WinForm and WebForm based programs.

COP 2251, Java Programming II **Java Programming II****3 hrs., 3 crs.,**

(Offered fall). Prerequisite: COP2250 and COP2700. This course will teach students to write advanced Java programs. Topics include Swing Graphical User Interface (GUI) applications, advanced layout managers, Swing applets, threads, regular expressions, collections, Java networking, Remote Method Invocation (RMI), JavaBeans, Java Database Connectivity (JDBC), and Java security. Students will write complete applications and small Java applets.

COP 2657, Introduction to Smartphone Programming **Introduction to Smartphone Programming****3 hrs., 3 crs.,**

Prerequisite: *COP2250. This course provides a comprehensive project experience in the development of mobile applications on several popular software platforms including IOS (formerly iPhone OS), Google android, rim blackberry and Microsoft Windows Mobile 7. Students receive intensive tutorial introductions to each platform, covering hardware capabilities and limitations, the development environment, and the communications infrastructure available on campus to support networking and testing.

COP 2700, Data Structure (SQL) **Data Structure (SQL)****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides students with a solid foundation in SQL, which provides a means for accessing and manipulating databases. Students will be familiarized with the structure of databases and introduced to the relational database model. Students will learn the fundamentals of the SQL language, including how to: create and design tables; carry out queries; add and delete data from a database; create views, and handle security.

COP 2701, Database Design and Management Database Design and Management**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: COP1000, COP2700. This course is designed to familiarize individuals with modern database technologies. Students will complete a series of database application projects using enterprise database software. Topics include advanced database design, entity-relationship modeling, the structured query language (SQL) including database DML and DDL functions, database query optimization, triggers, and elementary stored procedures.

COP 2840, Internet Programming Internet Programming**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: DIG2100, COP1000. This course builds expertise in Internet programming using JavaScript and Vbscript languages. Client-side and server-side scripting are included. Scripts will be used with HTML to add interactive capabilities to web sites.

COP 2940, Integrative Programming/Technologies Capstone Integrative Programming/Technologies**Capstone****3 hrs., 3 crs.,**

(Offered spring). Prerequisites: *COP2250, *DIG2100, *COP2700 or permission of instructor. This capstone course provides the opportunity for students to demonstrate their mastery of the skills earned in the Software and Databased Developer (SDD-AS) program. The students will apply their knowledge to programmatically solve a real-world problem. This course should be taken during the student's last semester of the SOD-AS program. The course provides the student an opportunity to design, develop, test, and deploy an end-to-end application.

COP 3834, Developing Websites Using PHP/MySQL Developing Websites Using PHP/MySQL**3 hrs., 3 crs.,**

(Offered summer). Prerequisites: *COP1000, *DIG2100, *COP2700 or permission of instructor. This course will teach students necessary skills to effectively implement dynamic web sites using PHP hypertext preprocessor (PHP) and MySQL, connecting to a MySQL database, writing basic structured query language (SQL) commands, and developing applications with PHP/MySQL.

COP 3855, Advanced Web Animation (JQUERY) Advanced Web Animation (JQUERY)**3 hrs., 3 crs.,**

Prerequisites: *COP2840. This course provides more practical and professional tools for working with Cascading Style Sheets (CSS) and JavaScript using the jQuery and the jQuery UI (User Interface) libraries.

COP 4640, Operating Systems Environments Operating Systems Environments**3 hrs., 3 crs.,**

Prerequisites: *CGS1570, *CTS1650, COP1000, *MAN3303. Introduction to Operating Systems from an applied point of view. Topics include operating systems configuration, characteristics, and evaluations. Laboratory exercises require students to develop and maintain a multi-user operating system, develop custom system utilities, and evaluate different operating systems configurations.

COP 4864, Client Side Programming Client Side Programming**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: COP2840, must be admitted to one of the BAS programs. A course in principles of client-side technologies that form the complement of server-side applications. This course provides a solid foundation for the concepts of client-side programming and an introduction to client-side frameworks.

CEN - Computer Software Eng**CEN 2212, Introduction to Programming the Internet of Things (IoT) Introduction to Programming the Internet of Things (IoT)****3 hrs., 3 crs.,**

(Offered spring). Prerequisites: COP1000, COP2700. This course teaches the principles of programming Internet of Things devices using a computer language. The student will learn fundamental programming concepts and systematic design techniques. At the end of the course, the student will be able to write programs that control development boards, with sensors, connected to the Internet.

CTS - Computer Technology/Skills**CTS 1111, Linux+ Linux+****3 hrs., 3 crs.,**

(Offered fall and spring). This course instructs students on the effective installation, configuration, maintenance, and securing workstations and servers that use the Linux operating system. Course objectives align with the CompTIA Linux+ certification.

CTS 1120, Computer & Network Security (Security +) Computer & Network Security (Security +)**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: *CTS1650 or instructor permission. This course introduces students to the terminology and concepts associated with network and systems security. Topics addressed include operating system security viruses, worms and malicious software; authentication, encryption and account-based security; wireless security; web, remote access /VPN; perimeter defenses; and security management. This course prepares students to pass the CompTIA Security+ exam.

CTS 1131, A+ Hardware A+ Hardware**3 hrs., 3 crs.,**

(Offered fall). This course provides students with the hands-on experience and knowledge to properly install, configure, upgrade, troubleshoot, and repair microcomputer systems. Students learn common safety, preventative maintenance, and effective problem-solving strategies. This course prepares students for the CompTIA A+ exam.

CTS 1133, Desktop Operating Systems (A+ Software) Desktop Operating Systems (A+ Software)**3 hrs., 3 crs.,**

(Offered fall). This course provides students with skills related to system-level operating system software. The course provides training in the installation, configuration, maintenance, and troubleshooting of Microsoft Windows, Linux, and Unix-based O/S. This course prepares students to pass the CompTIA A+ exam.

CTS 1134, Networking Essentials (Network +) Networking Essentials (Network +)**3 hrs., 3 crs.,**

Prerequisite: CTS1650. This course instructs students in basic network concepts, terminology, and techniques including data communications and network services, OSI and TCP/IP Models, topologies, protocols, network implementation and support. This course prepares students to pass the CompTIA Network+ exam.

CTS 1154, Technical Support Technical Support**3 hrs., 3 crs.,**

This course provides students with a broad-based knowledge of service desk technologies, tools and techniques that will prepare students to implement and support enterprise support operations within an organization.

CTS 1390, Installing and Configuring Windows Server Installing and Configuring Windows Server**3 hrs., 3 crs.,**

(Offered spring). This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server environment. While there is some cross-over in skill sets and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as active directory domain services, networking services, and initial hyper-v configuration.

CTS 1391, Administering Windows Server Administering Windows Server**3 hrs., 3 crs.,**

Prerequisite: *CTS1390. The course is the second course in a series of three courses, which provide the skills and knowledge necessary to implement a core Windows Server infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server environment. While there is some cross-over in skill sets and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server infrastructure, such as user and group management, network access and data security.

CTS 1392, Configuring Advanced Windows Server Configuring Advanced Windows Server**3 hrs., 3 crs.,**

Prerequisite: *CTS1390, *CTS1931. This is the third course in a series of three courses, which provides the skills and knowledge necessary to implement a core Windows Server infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance, and rights management.

CTS 1650, Network Fundamentals Network Fundamentals**3 hrs., 3 crs.,**

(Offered fall and spring). This course introduces students to learn and apply the basics of computer networking using common network devices. The course covers the OSI model, industry standards, network topologies, IP addressing/subnetting, and network design. This is the first of a series of courses to prepare students for industry certification including the Cisco CCNA.

CTS 1651, Router Technology/Router Protocols and Concepts Router Technology/Router Protocols and Concepts**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *CTS1650. This course is designed to prepare students to apply and understand the basics of networking hardware. The course covers beginning router configurations, routed and routing protocols, and an introduction to LAN switching. This is the second in a four part series to prepare students for the Cisco certified networking associate examination.

CTS 2193, Cloud Essentials Cloud Essentials**3 hrs., 3 crs.,**

Prepares the student to demonstrate knowledge of what cloud computing means from a business and technical perspective, as well as what is involved in moving to and governing the cloud.

CTS 2314, Network Defense and Countermeasures Network Defense and Countermeasures**3 hrs., 3 crs.,**

Prerequisite: *CTS1120 or permission of instructor. In this course, students take an in-depth look at network defense concepts and techniques. Students examine theoretical concepts that make the world of networking unique. This course also adopts a practical hands-on approach when examining network defense techniques. Along with examining different network defense strategies, this course will explore the advancement of network implementation, as well as timeless problem solving strategies. The course also covers such essential practices as developing a security policy and then implementing that policy by performing network address translation, packet filtering, and installing proxy servers, firewalls, and virtual private networks.

CTS 2315, Intrusion Detection and Firewalls Intrusion Detection and Firewalls**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *CTS1120. In this course, students take an in-depth look at intrusion detection standards and techniques. This course is designed for the student and network administrator who need to learn the basics of network firewall security. It covers installation techniques, discusses how to make an intelligent choice of firewall technology, and presents firewall troubleshooting. It features hands-on experience and case projects that allow the student to practice skills as they are learned.

CTS 2370, Virtual Infrastructure: Installation and Configuration Virtual Infrastructure: Installation and Configuration**3 hrs., 3 crs.,**

Prerequisites: CTS1111 and CTS1390. This course provides students with a background in virtualization technology which serves as a precursor to cloud-based and distributive computing. The course includes an overview of virtualization technology with lectures dedicated to current virtualization products: VMware Workstation, VMware Server, Microsoft Virtual PC, Microsoft Virtual Server, and Hyper-V. Additional lectures focus on using virtualization software in networked server environments and include building virtual networks, implementing high-availability clusters, enhancing performance and security, and using VMware VSphere and Microsoft Virtual Machine Manager to centralize management of multiple virtual servers. Many hands-on activities are included, which allow the student to work with virtual computing concepts, using real-world situations to build the skills necessary for a successful understanding of virtualization.

CTS 2652, Advanced Router Technology (CISCO-CCNA) Advanced Router Technology (CISCO-CCNA)**3 hrs., 3 crs.,**

(Offered fall). This course is designed to prepare a student to apply and understand the advanced principles and applications of networking hardware. The course covers advanced router configurations, LAN switching, network management, and advanced network design. This course will help prepare students for the Cisco Certified Networking Associate (CCNA) examination.

CTS 2653, Cisco Project-based Learning/Accessing the WAN Cisco Project-based Learning/Accessing the WAN**3 hrs., 3 crs.,**

Prerequisite: CTS1651. This course teaches the principles, applications, and implementation of networking hardware. This course covers advanced network design and advanced network management projects. This is the fourth of a four-part series to prepare students for the Cisco Certified Networking Associate Examination.

CTS 2940, Cybersecurity Capstone Cybersecurity Capstone**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *CGS1103, *CTS2315, *CIS2352, *CIS2381, or permission of instructor. The capstone project is designed to be inclusive of any possible expression of research and scholarly output in cybersecurity, ranging from the practical development of systems and software related to cybersecurity to the theoretical analysis or interpretive contribution to a research topic. In all cases, the capstone Project should demonstrate the student's summative expression of what the student has learned in the Cybersecurity AS (CYSE-AS) program and should be evidenced in the form of a significant project document.

CTS 2941, Network Services Technology Capstone Network Services Technology Capstone**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *CTS1650, *CTS1134, *CTS1651, *CTS2652, and *CTS2653, or permission of instructor. This capstone course gives students the opportunity to demonstrate their mastery of the knowledge and skills that they have earned in the Network Systems Technology (CYBR-AS) degree program. The students will apply their knowledge and skills to solve/design/implement real-world networking problems and solutions. This course should be taken during the student's last semester of the CYBR-AS program. This course provides the student with the opportunity to design/implement and potentially deploy a network system solution.

CRW - Creative Writing**CRW 2001, Creative Writing I Creative Writing I****3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101 with a minimum grade of "C." Techniques of and practice in writing the short story, essay, poem, drama, or novel.

CRW 2001H, Creative Writing I Creative Writing I**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101 with a minimum grade of "C." Techniques of and practice in writing the short story, essay, poem, drama, or novel.

CRW 2002, Creative Writing II Creative Writing II**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: CRW2001. Techniques of and practice in writing the short story, essay, poem, drama, or novel.

CRW 2002H, Creative Writing II Creative Writing II**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: CRW2001. Techniques of and practice in writing the short story, essay, poem, drama, or novel.

CRW 2710, Introduction to Screenwriting/Scriptwriting Introduction to Screenwriting/Scriptwriting**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101 with a grade of ?C? or higher. The study of the written forms of the screenplay and the script (stage play) and their relationship to the adapted forms in the visual media and on stage, and the practice of writing screenplays and stage plays. The dual nature of this course requires that students learn the principles of writing for visual media and writing for the stage but allows the student to focus the major written works composed during the semester in his preferred area.

CJC - Criminal Just Corrections**CJC 1000, Introduction to Corrections Introduction to Corrections****3 hrs., 3 crs.,**

This course will focus on the theory and practice of correctional institutions and their functions, the prison as a total institution, characteristics of various types of correctional methods, analysis of the prison community, adjustment to prison life, impact of institutionalization, corrections in the community, and historical development.

CJC 2162, Probation and Parole Probation and Parole**3 hrs., 3 crs.,**

This course focuses on the patterns and problems in sentencing offenders; the social investigation, treatment and counseling of offenders, including behavior modification; the release and processing of offenders, and efforts to reintegrate offenders into society.

CJD - Criminal Just Development**CJD 0939, Correctional Officer Capstone Correctional Officer Capstone****.5 hrs., .5 crs.,**

Comprehensive review of subjects taught in Correctional Officer Basic Standards. This is a limited access course and requires admission to the Law Enforcement Training Program or Correctional Officer Training Program.

CJD 2672, School Resource Officer School Resource Officer**3 hrs., 3 crs.,**

Instruction in juvenile law, counseling skills, development of a referral network, identification and ways to handle exceptional students and classroom instruction techniques. Participants will be exposed to current trends in school resource officer programs, law-related education ethics, and dealing with adolescent suicide.

CJL - Criminal Just Law/Process**CJL 2062, Rules of Evidence for Police Rules of Evidence for Police****3 hrs., 3 crs.,**

This course covers the rules of evidence and their exclusions and exceptions; procedures for the introduction of evidence and the examination of witnesses; and the doctrine on offer and motions to suppress evidence. Concentration is on areas important to criminal justice practitioners in the investigation of crimes and prosecution of persons accused of crimes.

CJL 2100, Criminal Law Criminal Law**3 hrs., 3 crs.,**

A study of substantive criminal law from the Model Penal Code, explaining the specific elements of major crimes, principles of criminal law, principles of criminal liability, defenses to criminal liability, uncompleted crimes, and parties to crimes.

CJL 2130, Evidence Evidence**3 hrs., 3 crs.,**

This course provides an analysis and examination of the Federal Rules of Evidence (FRE). The FRE govern the admissibility of evidence at trial. Course material will cover examination of witnesses and trial procedures, testimonial evidence, documentary evidence, circumstantial evidence, opinion evidence, the best evidence rule, hearsay evidence and exceptions, presumptions, and judicial notice.

CJK - Criminal Justice Bsc Train**CJK 0001, Introduction to Law Enforcement Introduction to Law Enforcement****.66 hrs., .3 crs.,**

\$5.00 lab fee Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to understand the values and ethics required for criminal justice officers, understand the consequences of sexual harassment, describe the criminal justice system, and describe the structure of criminal justice agencies. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0002, Introduction to Law Enforcement Introduction to Law Enforcement**.8 hrs., .4 crs.,**

\$5.00 lab fee. Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an overview of the law enforcement basic recruit training program and the requirements to become a sworn officer. It describes basic criminal justice ethics and command structure. The course also provides a basic introduction to the criminal justice system. This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0009, Law Enforcement Capstone Course Law Enforcement Capstone Course**.8 hrs., .8 crs.,**

Prerequisites: This is a limited access course which requires admission to and completion of the Law Enforcement Training Program (LEBRT or EOT). This course is designed to provide substantive course review of the criminal justice standards and training basic law enforcement curriculum. Diligent use of review materials in this course will serve as excellent preparation for the FDLE Law Enforcement Officer State Certification Exam (SOCE).

CJK 0012, Legal Legal**4.13 hrs., 2.1 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should understand the Fourth Amendment related to search and seizure, know what constitutes a lawful arrest, understand the Fifth and Sixth Amendments related to the interrogation of suspects, determine when a crime has been committed and the elements necessary to make an arrest for that crime, understand the legal rules and concepts of evidence, be able to articulate the legal justification for the use of force, understand civil and criminal liability related to an officer's performance of duties, understand an officer's duties and options in civil (noncriminal) incidents, and be familiar with the legal considerations when dealing with juveniles. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0013, Interactions in a Diverse Community Interactions in a Diverse Community**2.66 hrs., 1.3 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to identify the elements of, and barriers to, effective communication. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0014, Interviewing and Report Writing Interviewing and Report Writing**3.73 hrs., 1.9 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to prepare and conduct basic interviews, gather information, take notes, identify signs of deception, obtain statements; identify types of reports, forms, and logs, including crimes, incidents, use of force, disciplinary, traffic crashes; organize information chronologically and categorically; write reports, apply appropriate grammar and mechanics, apply agency procedures, evaluate report prior to submission, and draft probable cause affidavits. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0016, Communication Communication**1.6 hrs., .8 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course focuses on aspects of professional communication officers should use on the job. It explains challenges to effective communication and concepts such as procedural justice, empathy, and professionalism. This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0018, Legal Legal**4.266 hrs., 2.1 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. The course provides foundational knowledge of the law and how officers apply the law to specific situations. The course describes the basics of enforcing laws without infringing on individual rights. This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0019, Interviewing and Report Writing Interviewing and Report Writing**3.733 hrs., 1.9 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an introduction to lawful and effective interviews as part of the investigative process as well as the fundamentals of note-taking and report writing. This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0020C, Law Enforcement CMS Vehicle Operations Law Enforcement CMS Vehicle Operations**3 hrs., 1.5 crs.,**

\$14.00 lab fee. This course is part of the Criminal Justice Standards and Training Commission Law Enforcement Basic Recruit CMS Certification Program. This course is designed to prepare prospective officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This is a limited access course requiring admission to the Criminal Justice Training Academy Law Enforcement Training Program.

CJK 0021, Serving Your Community Serving Your Community**2.266 hrs., 1.1 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an introduction to some of the diverse communities officers serve and provides an overview of how to respond with professionalism while keeping everyone on the scene safe. This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0031C, CMS First Aid for Criminal Justice Officers CMS First Aid for Criminal Justice Officers**3 hrs., 1.3 crs.,**

\$17.00 lab fee. This course is part of the Criminal Justice Standards and Training Commission's CMS Basic Recruit Certification Program. It is designed to prepare prospective officers to apply first aid knowledge and techniques to medical emergency situations. This course involves classroom lecture and hands-on practical demonstration. This is a limited access course requiring admission to the Criminal Justice Training Academy Law Enforcement Program or Correctional Officer Program.

CJK 0040C, Law Enforcement CMS Criminal Justice Firearms Law Enforcement CMS Criminal Justice Firearms**5.33 hrs., 2.7 crs.,**

\$324.00 lab fee. This course is part of the Criminal Justice Standards and Training Commission's CMS Basic Recruit Certification Program. At the end of this course, students should be able to demonstrate safe weapon handling, weapons cleaning and maintenance, handgun drawing and holstering, weapon loading and unloading, basic shooting principles, proficiency on the CJSTC basic firearms courses of firing with a handgun during daylight and nighttime, and a shotgun during daylight. This is a limited access course and requires admission to the Law Enforcement Training Program or Correctional Officer Training Program.

CJK 0051C, CMS Criminal Justice Defensive Tactics CMS Criminal Justice Defensive Tactics**5.33 hrs., 2.7 crs.,**

\$16.00 lab fee. This course is part of the Criminal Justice Standards and Training Commission Basic Recruit Certification Program. This course is designed to better prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics. At the end of this course, students should be able to make an accurate threat assessment of a situation, use force appropriate to the subject resistance and situational factors, demonstrate a prevailing attitude and the willingness and ability to fight when necessary, use integrated force options, escalate, de-escalate, or disengage in a situation as appropriate, perform defensive tactics techniques with proficiency. This is a limited access course and requires admission to the Law Enforcement Training Program or Correctional Officer Training Program.

CJK 0063, Fundamentals of Patrol Fundamentals of Patrol**2.666 hrs., 1.3 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an overview of the law enforcement techniques and tactics that officers use while on patrol. This course is an introduction to the use of communications equipment, community-oriented policing, and officer safety and survival skills. It also explains how to respond to non-criminal calls and conduct structure and area searches and provides resources that officers use while on patrol. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0064, Fundamentals of Patrol Fundamentals of Patrol**2.33 hrs., 1.1 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to use radio equipment properly, identify the uses of mobile computer devices, and understand the uses of FCIC/NCIC/NLETS and other electronic database resources; understand community-oriented policing and how it is implemented as a problem-solving model, and identify the SARA problem-solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, and maintain mental and physical fitness; and prepare to patrol, know what a BOLO is and how to create and cancel a BOLO, respond to a call, approach a suspect, set up a perimeter, conduct a building search, make an arrest, transport a prisoner, and process the prisoner at a detention facility. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0065, Calls for Service Calls for Service**2.4 hrs., 1.2 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to respond to calls for service, including well-being and security checks, building alarms, environmental hazards, transportation requests, animal complaints, death notifications, and special event security; respond to disturbances, including crowd control, civil disturbances, civil standbys, and disorderly or irate people; respond to court orders, including arrests and civil processes, and assist with the execution of search warrants; respond to calls concerning vehicle fires, unattended, abandoned, or disabled vehicles, and roadway obstructions or damage; enforce parking violations, impound a vehicle, direct vehicle traffic, and direct pedestrian traffic; respond to people in crisis, including suicide incidents, threats from mental impairments, and situations involving alcohol or substance abuse. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0072, Crimes Against Persons Crimes Against Persons**3.2 hrs., 1.6 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an introduction to the basics of conducting investigations and describes a variety of crimes involving people such as assault and battery, domestic violence, child abuse, sexual offenses, and human trafficking. It provides the foundational knowledge for initial response and investigation of these crimes. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0073, Crimes Involving Property and Society Crimes Involving Property and Society**.8 hrs., .4 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an introduction to a variety of crimes involving property and society, such as retail theft, fraud, and animal cruelty. It provides the foundational knowledge for initial response and investigation of these crimes. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0077, Criminal Investigations Criminal Investigations**3.3 hrs., 1.7 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to conduct an initial investigation of crimes against persons, society, property, and economic crimes. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0078, Crime Scene to Courtroom Crime Scene to Courtroom**2.3 hrs., 1.1 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to process a crime scene, conduct a follow-up investigation, and provide testimony in different types of court proceedings. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0079, Crime Scene Follow-Up Investigations Crime Scene Follow-Up Investigations**2.66 hrs., 1.1 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course is an introduction to methods for securing, protecting, and preserving a crime scene to avoid contaminating any evidence. The course also explains the importance of collecting, documenting, and maintaining the physical evidence. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0084, DUI Traffic Stops DUI Traffic Stops**1.6 hrs., .8 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to understand the problem of and solutions for DUI, identify the DUI laws and related legal issues, identify the signs of alcohol or drug impairment, conduct a DUI traffic stop, follow the three-phase process of a DUI contact, demonstrate proficiency in conducting the Standardized Field Sobriety Tests, make an arrest decision based on specific clues, accurately complete the required documentation for a DUI arrest, and provide clear and convincing evidence of DUI in court testimony. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0087, Traffic Stops Traffic Stops**2 hrs., 1 cr.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to safely pull over a vehicle; identify and articulate the stop/violation; obtain necessary information from the driver/passenger; safely complete the stop; safely effect an arrest; and accurately complete the required documentation for a traffic stop. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0088, Traffic Crash Investigations Traffic Crash Investigations**2.13 hrs., 1.1 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to define and explain the terms and legal considerations associated with crash investigations, respond to a crash scene safely, assess a crash scene properly, secure a safe work environment at a crash scene, provide emergency medical assistance to injured people at a crash scene if necessary, obtain pertinent information about a crash to determine how and why it occurred, identify crimes revealed during a crash investigation if any, return a crash scene to normal as quickly as possible, complete driver exchange of information properly, take appropriate enforcement action, and document a crash correctly in appropriate crash report form. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0092, Critical Incidents Critical Incidents**2.93 hrs., 1.5 crs.,**

Prerequisite: Admission to the Law Enforcement Officer or Criminal Justice Technology program. By the end of the course students should be able to complete and pass Unit 1, IS-100.LEb, Introduction to the Incident Command System and Unit 2, IS-700.a, National Incident Management (NIMS), An Introduction ; understand local emergency response plans, law enforcement duty-to-act requirements, and the role of law enforcement officers as first responders; know how to respond to an active shooter incident; plan for response to a natural disaster; identify weapons of mass destruction (WMD) and properly respond to a WMD incident, including IEDs and VBIEDs; be aware of hazardous material class, name or identification number, identify actions to take to isolate a hazmat incident and choose protective actions to take in accordance with the Emergency Response Guidebook (ERG); recognize the indicators of and paraphernalia used in the manufacture of methamphetamine; describe the indicators of chemical suicide; properly respond to a bomb threat, and assess the scene. This is a limited access course. It requires admission to the Law Enforcement Officer or Criminal Justice Technology program.

CJK 0093, Critical Incidents Critical Incidents**2.93 hrs., 1.5 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an overview of law enforcement techniques and tactics used when confronting large-scale or critical incidents, including natural disasters, active shooters, exposure to hazardous materials, and explosive devices (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0096, Criminal Justice Officer Physical Fitness Training Criminal Justice Officer Physical Fitness**Training****4 hrs., 2 crs.,**

Prerequisite: Admission to Law Enforcement Training Program and permission of the Law Enforcement Program Coordinator. This course is part of the Criminal Justice Standards and Training Commission Law Enforcement Basic Recruit certification program. By the end of this course students should be able to improve their scores on the final fitness evaluation; and adopt a foundation for lifelong fitness. This is a limited access course. It requires admission to the Law Enforcement Training Program.

CJK 0111, Interviewing and Report Writing in Corrections Interviewing and Report Writing in Corrections**.5 hrs., .5 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides practical communication skills when interviewing individuals and recording the information using proper grammar. It reviews necessary skills to write, edit and proofread reports and reporting procedures. This is a limited access course and requires admission to the Law Enforcement Training Program or Correctional Officer Training Program.

CJK 0301, Introduction to Corrections Introduction to Corrections**1 hr., 1 cr.,**

\$5.00 lab fee. Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides an overview of the correctional officer training program and the requirements for becoming a certified officer. This course will also help to provide a legal basis from which students may begin to function as correctional officers and gives instruction on basic criminal justice values, ethics and ways to demonstrate professionalism when interacting with others. Students will also learn the command structure within a criminal justice agency. This is a limited access course and requires admission to the law enforcement training program or correctional officer training program.

CJK 0306, Communications for Correctional Officers Communications for Correctional Officers**1 hr., 1 cr.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides practical communications skills that will assist new correctional officers in managing and supervising inmates, giving directions, answering questions, and interacting with others in a professional and safe manner. This is a limited access course and requires admission to the law enforcement program.

CJK 0310, Officer Safety Officer Safety**.5 hrs., .5 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides an overview of safety and security concerns, identification, manipulation and deception, contraband, and searches correctional officers deal with on a daily basis. This is a limited access course and requires admission to the law enforcement program.

CJK 0315, Facility and Equipment Facility and Equipment**.3 hrs., .3 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. Correctional officers are responsible for equipment and materials used to keep correctional facilities clean, safe and secure. It is important for a correctional officer to have a basic knowledge of standard equipment used, including weapons, hazardous materials, and sensitive supplies. Officers must be very familiar with common problems found when managing equipment; this course will help them complete their duty to support the safe and efficient operation of equipment, and to provide a safe environment for inmates, staff and visitors. This is a limited access course and requires admission to the law enforcement program.

CJK 0321, Intake and Release Intake and Release**.5 hrs., .5 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course will introduce students to the intake, classification, and release processes used by county and state correctional facilities. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0324, Supervising in a Correctional Facility Supervising in a Correctional Facility**1.3 hrs., 1.3 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides an in depth look at the primary activity of the correctional officer. The main role is the provision of care, custody, and control of inmates. In developing the supervisory and observational skills, practicing officer safety, and following policy and procedure, the officer will ensure the safe operation of a correctional facility. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0326, Supervising Special Populations Supervising Special Populations**.9 hrs., .9 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides students with the necessary insight needed while supervising correctional populations housed in county and state correctional facilities. These special population groups have individual characteristics. The most common of these groups will be discussed in this course. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0327, Shift Management and Safety Shift Management and Safety**.7 hrs., .7 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course offers an overview of the safety and security challenges faced by correctional officers, including the identification and management of manipulation, deception, contraband, and the execution of searches performed on a daily basis. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0336, Incidents and Emergencies in Correctional Facilities Incidents and Emergencies in Correctional Facilities**.7 hrs., .7 crs.,**

20 contact hrs., 0.7 vocational crs. Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course will provide correctional officers with the knowledge, training and reasonable judgment to ensure the safety and security of all persons at the facility during an emergency. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0340, Officer Wellness and Physical Abilities Officer Wellness and Physical Abilities**1 hr., 1 cr.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course will offer an introduction into the officer wellness and physical abilities standards set forth by the criminal justice standards and training commission. This is a limited access course and requires admission to the law enforcement program.

CJK 0355, Legal for Correctional Officers Legal for Correctional Officers**.8 hrs., .8 crs.,**

Prerequisite: Admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety. This course provides an overview of the legal system including federal, state, and local laws as it pertains to the care, custody, and supervision of inmates. This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the Chair of Public Safety.

CJK 0393, Crossover Program Updates Crossover Program Updates**.53 hrs., .3 crs.,**

This course is part of the Criminal Justice Standards and Training Commission Law Enforcement Basic Recruit Certification Program. This course is the Correctional Crossover Program Updates Section of the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission Crossover Training Program for Correctional and Correctional Probation Officers to Law Enforcement. By the end of this course students should understand updated content from the applicable basic recruit training program as provided by the instructor.

CJK 0400, Traffic Incidents Traffic Incidents**.8 hrs., .4 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course is an introduction to the basics of traffic incidents other than traffic stops and includes lessons on legal terms and the fundamentals of directing traffic, addressing parking violations and conducting vehicle searches. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0401, Traffic Stops Traffic Stops**1.6 hrs., .8 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course is an introduction to the fundamentals of conducting traffic stops with professionalism while maintaining the safety of all involved. The course covers the basics of unknown and high-risk traffic stops. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission to the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0402, Traffic Crash Investigations Traffic Crash Investigations**2 hrs., 1 cr.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an overview of conducting traffic crash investigations using a systematic approach. The course describes how to respond to, assess, and protect the scene as well as documentation and returning the scene to normal conditions. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0403, DUI Traffic Stops DUI Traffic Stops**1.6 hrs., .8 crs.,**

Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides an overview of detecting impaired driving, administering field sobriety tests, making arrests, and recording the evidence of a DUI offense. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0421, Conducted Electrical Weapon/Dart-Firing Stun Gun Conducted Electrical Weapon/Dart-Firing Stun Gun**.266 hrs., .1 crs.,**

\$41.00 lab fee. Prerequisite: Admission to the Basic Recruit Training or Criminal Justice Technology program or special permission of the chair of Public Safety. This course provides foundational knowledge of the operation of conducted electrical weapons (CEW), particularly dart-firing stun guns, as well as the effect on the human body. (Student must complete course with 80% or higher to pass.) This is a limited access course and requires admission the Criminal Justice Training Academy or special permission of the chair of Public Safety.

CJK 0422, Dart Firing Stun Gun Dart Firing Stun Gun**.53 hrs., .3 crs.,**

\$32.00 lab fee. Prerequisite: Admission to Law Enforcement Training Program and permission of the Law Enforcement Program Coordinator. This course is part of the Criminal Justice Standards and Training Commission Law Enforcement Basic Recruit certification program. By the end of this course students be able to identify the use of a dart-firing stun gun (DFSG) in accordance with F.S. ?943.1717; identify and articulate CJSTC DFSG considerations and their impact on officers in Florida; identify and articulate the possible effects that a DFSG has on the human body; properly and safely operate a DFSG; articulate (verbally and in reports) the justification for tactical options chosen while participating in DFSG simulated scenarios including the use of verbal skills to de-escalate a situation, and avoid the use of a DFSG. This is a limited access course. It requires admission to the Law Enforcement Training Program.

CCJ - Criminology/Criminal Just**CCJ 1010, Introduction to Criminology Introduction to Criminology****3 hrs., 3 crs.,**

This course examines crime and criminals with a particular emphasis on what actions society can or should take regarding crime and criminals. Explains why and how crime occurs and how this knowledge can guide governmental and legislative policy development. Factors that contribute to crime, the social reactions to crime, and the policies presently in place to combat crime will be examined. The focus will be on crime theories and perspectives.

CCJ 1020, Introduction to Criminal Justice Introduction to Criminal Justice**3 hrs., 3 crs.,**

This course provides students with a basic understanding of how the American criminal justice system functions. The American criminal justice system includes law enforcement agencies (police, sheriff, state law enforcement agents, FBI, CIA, DEA, ATF), the courts, and the corrections agencies (prisons and jails.)

CCJ 1191, Human Behavior in Criminal Justice Human Behavior in Criminal Justice**3 hrs., 3 crs.,**

A consideration of human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner.

CCJ 2197, Hostage Negotiation Hostage Negotiation**3 hrs., 3 crs.,**

Goals and rationale for criminal justice training in hostage and barricade subject intervention. Comparisons will be made among the different approaches to these situations, such as assault sniper fire and containing and negotiating. The complexity of the criminal justice role and the stress involved will be discussed.

CCJ 2720, Introduction to Research Methods in Criminology Introduction to Research Methods in Criminology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This introductory course will examine research strategies, data collection, and data analysis in the investigation of questions which arise in criminology and criminal justice. Particular focus will be placed on understanding the role, theory, and functions of the research process for criminal justice professionals.

CCJ 2949, COOP/Work Experience/Criminal Justice COOP/Work Experience/Criminal Justice**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

DAA - Dance**DAA 1500, Beginning Jazz Dance Beginning Jazz Dance****2 hrs., 1 cr.,**

(Offered spring). A study of the basic movements of jazz dance, including basic dance routines in the modern jazz and musical theatre styles.

DAA 1520, Beginning Tap Dance Beginning Tap Dance**2 hrs., 1 cr.,**

(Offered spring). Practical study of the fundamentals of tap dance as an art form, including technique, terminology, rhythm, styles, and history. May be repeated two times for credit.

DAA 2540, Dance Techniques for the Theatre Dance Techniques for the Theatre**2 hrs., 1 cr.,**

(Offered fall). A practical study of the fundamental dance forms used in the theatre. The course is structured for the pre-theatre major but is open to all students. Basic ballet, jazz, and tap techniques and vocabularies are taught with an emphasis on dance technique, performance, and auditioning techniques.

DEA - Dental Assisting**DEA 0020C, Pre-Clinical Procedures Pre-Clinical Procedures****6 hrs., 6 crs.,**

\$40.00 lab fee. (Offered fall). Prerequisite: Acceptance into the Dental Assisting Program. Corequisite: DEA0800L. This comprehensive course is designed to introduce the student to chair side dental assisting in preparation for the treatment of dental patients. Areas of concentration include infection control and sterilization procedures, obtaining and recording medical/dental histories and vital signs, patient management, performing and assisting with clinical examinations and charting, assisting with local anesthesia, and operative procedures utilizing manikins and/or student partners.

DEA 0132, Dental Nutrition Dental Nutrition**1 hr., 1 cr.,**

(Offered spring). Prerequisite: Acceptance into the Dental Assisting Program. This course is designed to integrate nutrition into the diagnosis, care, and treatment of dental patients demonstrating the relationship between dental disease(s), diet, and oral health. Dietary assessment methods in relation to dental health will be emphasized.

DEA 0133, Introduction to Microbiology Introduction to Microbiology**1 hr., 1 cr.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting Program. This course is an introduction to the role of microorganisms associated with health and disease. Microbes of concern to the dental practitioner/ auxiliary will be addressed in relation to infection control procedures and management of biohazardous waste.

DEA 0134, Introductory Pharmacology/Dental Office Emergencies Introductory Pharmacology/Dental Office Emergencies**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting Program. The pharmacology section of this course is designed to familiarize the student with basic concepts and considerations regarding pharmacology and pharmaceutical preparations used in dentistry. The dental office emergencies content addresses the relationship of the patient's medical history and total health status to comprehensive dental care. Emphasis is placed on the prevention of medical emergencies through a comprehensive assessment of all patients before and during dental treatment.

DEA 0800L, Clinical Practice I Clinical Practice I**3 hrs., 1.5 crs.,**

\$73.00 lab fee. (Offered fall). Prerequisite: Acceptance into the Dental Assisting Program. Corequisite: DEA0020C. This course introduces the student to basic clinical assisting skills as theorized in DEA0020C. Students will be required to participate and observe clinical and administrative activities in the campus dental clinic involving live patients. Concentration of study will include reception and dismissal of patients , patient management, establishing and maintaining records, obtaining and recording medical/dental histories and vital signs, charting, planning appointments, assisting with or performing various dental procedures, and utilizing practice management systems.

DEA 0801, Clinical Practice II Clinical Practice II**3 hrs., 2 crs.,**

(Offered spring). Prerequisite: Completion of DEA0020C and DEA0800L with a grade of ?C? or better. Corequisite: DEA0801L. Included in this course is a series of lectures designed to provide an overview of each dental specialty practice. Content will be related to the external student rotation sites as assigned in DEA0801L.

DEA 0801L, Clinical Practice II Lab Clinical Practice II Lab**13 hrs., 6 crs.,**

\$40.00 lab fee. (Offered spring). Prerequisite: Completion of DEA0020C and DEA0800L with a grade of ?C? or better. Corequisite: DEA0801. Clinical experiences designed to provide the student with additional dental assisting skills is offered in this course. The student will progress to an intermediate skill level while applying knowledge of dental assisting in the campus dental clinic environment. In addition, students will be assigned rotation requirements at various external sites intended to provide familiarity with each dental specialty.

DEA 0850L, Clinical Practice III Clinical Practice III**6.5 hrs., 6.5 crs.,**

(Offered summer). Prerequisites: Completion of DEA0801 and DEA0801L with a grade of ?C? or better. Clinical Practice III is designed as an internship in a private practice of dentistry. Arrangements are made with each dentist taking part in the program to enable the student to obtain experience in all aspects of dental office procedures. Each student will be assigned to two offices for a period of three weeks in each office. The purpose of the internship is to advance the student's experience in private practice settings. Opportunities will be provided for appointment scheduling and confirmation, recall systems, telephone procedures, reception and dismissal of patients, bookkeeping, charting, records, operative procedures, care of dental equipment, and laboratory procedures.

DEH - Dental Hygiene**DEH 1002, Fundamentals of Dental Hygiene Fundamentals of Dental Hygiene****3 hrs., 3 crs.,**

(Offered fall). Prerequisite: ENC1101, HUN1201, BSC2085, BSC2085L with a grade of ?C? or better and acceptance into the Dental Hygiene Program Corequisite: DEH1002L. This introductory course provides foundational knowledge relevant to the dental hygiene process of care. The philosophy of dental hygiene practice, fundamental theories, principles, and procedures utilized to perform basic dental hygiene techniques is emphasized. Content will enable the student to apply procedural knowledge in the clinical environment in DEH1002L.

DEH 1002L, Dental Hygiene Pre-Clinical Procedures Dental Hygiene Pre-Clinical Procedures**9 hrs., 3 crs.,**

\$1,303.00 lab fee. (Offered fall). Prerequisite: ENC1101, HUN1201, BSC2085, BSC2085L with a grade of ?C? or better and acceptance into the Dental Hygiene Program. Corequisite: DEH1002. This course emphasizes the basic techniques of preventive clinical practice involved in the dental hygiene process of care. The student will apply relative procedural knowledge gained in DEH1002 to gain mastery of beginning techniques with patient care. Supervised pre-clinical sessions utilizing manikins or student partners will be provided in the campus dental clinic.

DEH 1130, Oral Histology and Embryology Oral Histology and Embryology**2 hrs., 2 crs.,**

(Offered spring). Prerequisites: Completion of DEH1002, DEH1002L, DES1010, DES1000, DES1100C, DES1200, DES1200L with a grade of "C" or better. This course is a comprehensive presentation of the embryonic, fetal, and postnatal development of the tissues and structures of the head and oral cavity and their relationship to the field of dentistry. The study of embryonic development and microscopic anatomy of the face and oral cavity, including the teeth, supporting structures, salivary glands, the temporomandibular joint, and other surrounding structures is included.

DEH 1400, Oral Pathology Oral Pathology**2 hrs., 2 crs.,**

(Offered spring). Prerequisites: Completion of DEH1002, DEH1002L or DEA0020C, DEA0800L, DES1320, DEA0134, DEA0133 and DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of ?C? or better or permission of the Dental Programs Coordinator. This course involves the study of general and oral pathological diseases with emphasis on those related to the oral cavity. Students will apply pathological principles to the clinical practice of dental hygiene and dental assisting. Recognition of normal and abnormal conditions of the oral cavity and surrounding tissues will be cultivated through case presentations and slide series.

DEH 1800, Dental Hygiene I Dental Hygiene I**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: Completion of DEH1002, DEH1002L with a minimum grade of ?C? or better. Corequisite: DEH1800L. This course further examines principles and theories as related to the dental hygiene process of care. The specific components of assessment, diagnosis, treatment planning, and implementation will be emphasized.

DEH 1800L, Dental Hygiene Clinical I Dental Hygiene Clinical I**16 hrs., 4 crs.,**

\$748.00 lab fee. (Offered spring). Prerequisite: Completion of DEH1002 and DEH1002L with a grade of ?C? or better. Corequisite: DEH1800. An introduction to the clinical management of dental/medical emergencies will be provided in this course as the student begins to refine and apply learned pre-clinical skills and procedures to the dental hygiene process of care. The application of integrated multidisciplinary learning into clinical practice will be cultivated through supervised practice in the campus dental clinic. Clinical competencies involving assessment, diagnosis, treatment planning, implementation, evaluation, and documentation of procedures at the entry level will be required.

DEH 1802, Dental Hygiene II Dental Hygiene II**1 hr., 1 cr.,**

(Offered summer). Prerequisites: Completion of DEH1800, DEH1800L, DES1832, DES1832L, DEH1130, DEH1400, DES1201, DES1201L, DEH2300 with a grade of ?C? or better. Corequisite: DEH1802L. This course permits progression in the dental hygiene process of care with an emphasis on the introduction of advanced techniques including powered instrumentation, air polishing, instrument sharpening, advanced instrumentation, pain control, and nonsurgical periodontal treatment planning. Common or local anesthesia injection techniques and related background information are addressed in this course.

DEH 1802L, Dental Hygiene Clinical II Dental Hygiene Clinical II**8 hrs., 2 crs.,**

\$497.00 lab fee. (Offered summer). This course permits progression in the dental hygiene process of care including patient clinical/laboratory instruction with an emphasis on periodontal instrumentation. The refinement of essential skills in advanced techniques of mechanical debridement, root planing, and nonsurgical periodontal treatment will be emphasized. Common oral local anesthesia injection techniques and related background information are addressed in this course.

DEH 2300, Pharmacology for the Dental Hygienist Pharmacology for the Dental Hygienist**2 hrs., 2 crs.,**

(Offered spring). Prerequisites: DEH1002, DEH1002L, DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of ?C? or better. A study of pharmacology with emphasis on drugs related to the dental hygiene process of care, including mechanisms of action, pharmacokinetics, indications, principles of drug administration, and major adverse effects. Pharmacotherapy of cardiovascular, CNS, respiratory, gastrointestinal and endocrine conditions, antimicrobial, antifungal, antiviral, antineoplastic/immunosuppressant drugs, and drugs for anesthesia will be of primary focus.

DEH 2602, Periodontology Periodontology**2 hrs., 2 crs.,**

(Offered summer). Prerequisites: Completion of DEH1800, DEH1800L, DES1832, DES1832L, DEH1130, DEH1400, DES1201, DES1201L, and DEH2300 with a grade of ?C? or better. The anatomy and physiology of the periodontium in relation to the clinical manifestations and histopathology of gingival and periodontal diseases will be included in this course. Comprehensive study of the etiology, assessment, classification, therapeutic objectives, clinical management and prevention, maintenance interval and/or referral determination for periodontal patients will be emphasized. Relationships between systemic health and periodontal health and disease as related to the dental hygiene process of care will be examined.

DEH 2702, Community Dental Health Community Dental Health**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Completion of DEH1802C and DEH2602 with a grade of ?C? or better. The evaluation and development of community based oral health programs focusing on assessment, planning, implementation and evaluation will be the primary objective for this course. Basic principles of epidemiology and biostatistics will be included, as well as educational aspects, policy development and health care delivery systems.

DEH 2702L, Community Dental Health Lab Community Dental Health Lab**3 hrs., 1 cr.,**

\$8.00 lab fee. (Offered spring). Prerequisite: Completion of DEH2702, DEH2804, and DEH2804L with a grade of ?C? or better. The student will assess, plan, implement, and evaluate community dental health programs using the evaluation and development criteria acquired in DEH2702. Evaluation of scientific literature and development of a dental research project will also be expected. Formative and summative evaluations of the project will be presented in research paper and presentation format.

DEH 2804, Dental Hygiene III Dental Hygiene III**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Completion of DEH1802C and DEH2602 with a grade of ?C? or better. Corequisite: DEH2804L. This course emphasizes treatment modifications and patient management as related to the dental hygiene process of care. Students will integrate scientific research into evidence based treatment planning and implementation of care for special needs patients. The role of the dental hygienist as oral health educators and disease prevention specialists is included.

DEH 2804L, Dental Hygiene Clinical III Dental Hygiene Clinical III**16 hrs., 4 crs.,**

\$347.00 lab fee. (Offered fall). Prerequisite: Completion of DEH1802C and DEH2602 with a grade of ?C? or better. Corequisite: DEH2804. This course is designed to advance the dental hygiene student from a basic skill level to an intermediate skill level in the process of dental hygiene care by integrating multidisciplinary learning into clinical practice. Instruction and clinical experience guide students in using critical thinking techniques to develop treatment plans for performing clinical skills on patients with varying degrees of periodontal disease.

DEH 2806, Dental Hygiene IV Dental Hygiene IV**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: Completion of DEH2804, DEH2804L, and DEH2702 with a grade of ?C? or better. Corequisite: DEH2806L. This course reinforces exit-level knowledge and skills essential in the dental hygiene process of care in accordance to Florida State Dental Practice Statutes. Professional ethics, rules and regulations for dental practice, various management practices including team building skills and quality assurance, and future trends in dental hygiene care will be explored. Students will be introduced to employment seeking skills and learn to develop a professional resume.

DEH 2806L, Dental Hygiene Clinic IV Dental Hygiene Clinic IV**16 hrs., 4 crs.,**

\$240.00 lab fee. (Offered spring). Prerequisites: Completion of DEH2804, DEH2804L, and DEH2702 with a grade of ?C? or better. Corequisite: DEH2806. This course allows for clinical proficiency and expertise in the exit-level tasks essential for the dental hygiene process of care in accordance with the Florida State Dental Practice Act. Clinical experiences include treatment of the periodontally involved patient, patients with physical and mental disabilities, and the medically compromised patient. Mastery of advanced clinical skills and efficient time utilization reinforces the student's confident, competence, and ability for self assessment.

DEH 2900, Dental Programs Independent Study Dental Programs Independent Study**9 hrs., 3 crs.,**

\$276.00 lab fee. (Offered as needed). Prerequisite: Successful completion of an ADA accredited Dental Hygiene Program and/or permission of Dental Programs Coordinator. This course is designed to enable dental students the opportunity to improve clinical skills/competencies or to remediate dental students who have completed program courses but desire review in preparation for credentialing examinations. Content will be designed to meet the specific needs of the student.

DES - Dental Support**DES 0501, Dental Practice Management Dental Practice Management****1 hr., 1 cr.,**

(Offered spring). Prerequisite: Acceptance into the Dental Assisting Program. This course introduces the student to the foundations of dental practice management including effective interoffice and patient communication. Financial planning, inventory control, practice management software systems, patient scheduling/record organization and HIPAA compliance are of primary focus. The legal and ethical aspects of dental practice will be examined in accordance with the State Dental Practice Act. Employment planning and professional career opportunities will be addressed.

DES 0844, Dental Health Education Dental Health Education**1 hr., 1 cr.,**

(Offered spring). Prerequisite: Acceptance into the Dental Assisting Program. This course introduces the student to the philosophy and principles of dental health education. Current disease prevention utilizing proper techniques and consumer products for biofilm control will be emphasized. The student will gain practical experience by developing and providing dental health presentations during National Dental Health Month.

DES 1000, Dental Anatomy Dental Anatomy**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting or Dental Hygiene Program. This course provides an in-depth study of the morphology and function of primary and permanent teeth, including all of the structures involved in the mechanism of mastication, primary and permanent tooth eruption, schedules and anatomical forms, function of primary and permanent dentition, vocabulary used to describe teeth and other structures in the oral cavity, and the principles of occlusion.

DES 1010, Head and Neck Anatomy Head and Neck Anatomy**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting or Dental Hygiene Program. This course includes a detailed study of the skeletal, muscular, circulatory, and nervous systems of the head and neck. Special emphasis is placed on structures associated with the oral cavity. Teeth are studied in relationship to the structures that support them.

DES 1100C, Dental Materials Dental Materials**4 hrs., 3 crs.,**

\$215.00 lab fee. (Offered fall). Prerequisite: Acceptance into the Dental Assisting or Dental Hygiene Program. This course examines the properties, manipulation, and care of materials used in the prevention and treatment of oral disease. Students will gain clinical practice manipulating the physical, mechanical, chemical, and biological characteristics of materials in relation to the oral environment.

DES 1200, Dental Radiology I Dental Radiology I**2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting or Dental Hygiene Program. Corequisite: DES1200L. This course provides theoretical knowledge to include the history, development, properties, uses and physical behavior of x-radiation, radiation hygiene, biological effects of radiation, and patient/operator safety regulations. Fundamental knowledge in relation to exposing, processing and mounting intraoral radiographic images, identification of normal radiographic anatomical landmarks, and computer imaging technology in dental radiography is included.

DES 1200L, Dental Radiology Lab I Dental Radiology Lab I**3 hrs., 1 cr.,**

\$189.00 lab fee. (Offered fall). Prerequisite: Acceptance into the Dental Assisting or Dental Hygiene Program. Corequisite: DES1200. Concurrent with DES1200, students gain practical experience with radiographic procedures, darkroom procedures, film storage, and the hazards and precautions involved in dental radiography. Students will be permitted to expose traditional and digital intraoral images in order to achieve competency in producing diagnostic quality images.

DES 1201, Dental Radiology II Dental Radiology II**1 hr., 1 cr.,**

(Offered spring). Prerequisite: Completion of DEH1002, DEH1002L or DEA0020C, DEA0800L, DES1320, DEA0134, DEA0133 and DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of "C" or better. Corequisite: DES1201L. A continuation of DES1200, this course focuses on identification and interpretation of normal and abnormal dental pathology, accessory techniques and tomographic imaging systems.

DES 1201L, Dental Radiology II Lab Dental Radiology II Lab**3 hrs., 1 cr.,**

\$61.00 lab fee. (Offered spring). Prerequisite: Completion of DEH1002, DEH1002L or DEA0020C, DEA0800L, DES1320, DEA0134, DEA0133 and DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of "C" or better. Corequisite: DES1201. Concurrent with DES1201, this course permits students to continue practice exposing traditional and digital intraoral and extraoral images on manikins and patients in order to refine dental radiographic technique and interpretation skills.

DES 1320, Basic Communications and Human Relations Basic Communications and Human Relations**1 hr., 1 cr.,**

(Offered fall). Prerequisite: Acceptance into the Dental Assisting Program. This course emphasizes effective oral and written communication skills with patients as well as co-workers and the importance of interpersonal relations in the dental office. Designed to stimulate group discussions and individual growth, professionalism and ethics as related to dental assisting.

DES 1404, Introductory Anatomy and Physiology Introductory Anatomy and Physiology**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: Acceptance into the Dental Assisting Program. A study of the development of the human body along with a survey of the structure, growth, and function of the body organ system is included in this course.

DES 1832, Expanded Functions Expanded Functions**1 hr., 1 cr.,**

(Offered spring). Prerequisites: Completion of DEH1002, DEH1002L or DEA0020C, DEA0800L, DES1320, DEA0134, DEA0133 and DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of ?C? or better or possess a current CDA or RDH credential or demonstrate employment in a dental practice for two consecutive years (provide a letter of verification from employer). Enrollment based on availability; priority granted to currently enrolled DA/DH program students. Corequisite: DES1832L. This course is designed to provide didactic instruction regarding the expanded functions legally allowable in the State of Florida. Upon successful completion of DES1832L and DES1832 (grade of "C" or better), students are issued a certificate listing the expanded functions that are accomplished at an acceptable level.

DES 1832L, Expanded Functions Lab Expanded Functions Lab**3 hrs., 1 cr.,**

\$26.00 lab fee. (Offered spring). Prerequisites: Completion of DEH1002, DEH1002L or DEA0020C, DEA0800L, DES1320, DEA0134, DEA0133 and DES1100C, DES1200, DES1200L, DES1010, DES1000 with a grade of ?C? or better or possess a current CDA or RDH credential or demonstrate employment in a dental practice for two consecutive years (provide a letter of verification from employer). Enrollment based on availability; priority granted to currently enrolled DA/DH program students. Corequisite: DES1832. This advanced clinical course requires a high level of clinical experience, hands-on dexterity, knowledge of intraoral anatomy, knowledge of equipment and handpieces, and the ability to work independently and make sound clinical decisions. Expanded functions that are legally allowable in the State of Florida will be demonstrated in an established sequence of tasks. Students will be given opportunities to practice on manikins and live patients in order to develop an acceptable skill level that will increase clinical competency and proficiency in each task. Upon successful completion of DES1832L and DES1832 (grade of "C" or better), students are issued a certificate listing the expanded functions that are accomplished at an acceptable level.

DEP - Developmental Psychology**DEP 2001, Infant and Child Psychology Infant and Child Psychology****3 hrs., 3 crs.,**

(Offered fall and spring). This course focuses on the growth and development of motor functions, language, intelligence, self-awareness, and personality from the prenatal period through early childhood. Students will investigate the historical and modern concepts of attitudes towards infants and children, in addition to studying the growth of infants into childhood with emphasis on the cognitive, biological, and socioemotional systems gained through learning and maturation. Child growth and development is studied in the context of family, gender, culture, language, ability, socioeconomic, diversity and society.

DEP 2004, Developmental Psychology Developmental Psychology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is a chronological study of the total human being that observes the various aspects of development taking place at different times in the person's life.

DEP 2004H, Honors Developmental Psychology Honors Developmental Psychology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is a chronological study of the total human being that observes the various aspects of development taking place at different times in the person's life.

DIG - Digital Media Technology**DIG 1135, Digital Design Concepts Digital Design Concepts****3 hrs., 3 crs.,**

(Offered fall). This course examines the role of design in the Digital Media Industry. Topics include 4D Composition, Lighting, Color Theory, Formats, Resolution, Usability Issues and File formats. Students will learn to critically assess the processes, outcomes and effects of design engagement.

DIG 1710, Introduction to Game Development**3 hrs., 3 crs.,**

Participants in this course will have an opportunity to explore the skills and techniques associated with the electronic/digital game development process, including content creation strategies and production techniques. This course is intended for individuals interested in the game.

DIG 2000, Introduction to Digital Media**3 hrs., 3 crs.,**

Participants in this course will have an opportunity to explore the avenues of contemporary digital design, highlighting the importance of process, innovation, and communication. Students will become familiar with design projects, ranging from traditional print, sophisticated websites, interactive digital media, and motion graphics. Students will be required to focus on developing and refining the design concept and the execution strategies specific to digital media.

DIG 2040, Survey of Game Development**3 hrs., 3 crs.,**

Prerequisite: DIG2302. Participants in this course will have an opportunity to explore the skills and techniques associated with game development fundamentals. Experiences include a survey of game development, game design, creating game art objects, game scripting, and game documentation.

DIG 2093, Digital Marketing**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: MAR2011. The internet is a dynamic marketplace if there ever was one and companies are increasingly shifting marketing efforts to digital technologies. This class will give students a theoretical understanding of the internet marketplace that is necessary to adapt to its many changes, while also equipping students with the skills needed to perform vital daily functions. It is important for students to understand some of these digital strategies and familiarize themselves with some of the technologies underlying them. By the end of the course, students should be able to walk into any company with an online presence and improve its digital marketing performance.

DIG 2100, Web Design I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The student will learn the basics of using browsers to view websites, creating a web site and will progress through the processes of analysis, design, development, and implementation of complete web sites using HTML and CSS language with text editors. This course includes web programming with HTML with emphasis on CSS on layout and structure of web sites, hyperlinks, multimedia, forms, tables, testing, maintenance and uploading web sites to servers applying good web design and web site usability.

DIG 2100H, Honors Web Design I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The student will learn the basics of using browsers to view websites, creating a web site and will progress through the processes of analysis, design, development, and implementation of complete web sites using HTML and CSS language with text editors. This course includes web programming with HTML with emphasis on CSS on layout and structure of web sites, hyperlinks, multimedia, forms, tables, testing, maintenance and uploading web sites to servers applying good web design and web site usability.

DIG 2101, Web Design II**3 hrs., 3 crs.,**

Prerequisite: DIG2100. This project based course will allow students to explore advanced concepts in web design dealing specifically with the issues involved in creating interactive websites. This course emphasizes the use of semantic structure and hand coding to create standards-compliant pages using advanced HTML5 and CSS3 for position and formatting to create responsive design that works on a range of devices from mobile to large screens. Emphasis on identifying the target audience, exploring the diverse aspects of page and user interface design and producing web sites according to accessibility standards, cultural appearance and legal issues.

DIG 2151, Writing for Media Writing for Media**3 hrs., 3 crs.,**

(Offered fall). Prerequisite or Corequisite: ENC1101 or ENC1101C. This course is designed to introduce students to various forms of writing for media. Students will learn practical techniques for producing strong writing in current trends for media. Topics to be covered include different methods of presentation, developing creative concepts and writing for multiple formats.

DIG 2200, Digital Video Fundamentals Digital Video Fundamentals**3 hrs., 3 crs.,**

(Offered spring). Students will be introduced to the concepts, principles, tools, and techniques of producing, assembling, and mixing digital video and audio. They will learn to understand story, creativity, planning, and organizational skills as a part of the production process. Learn the basic principles of single camera video production and demonstrate the ability to carry out the entire production process from inception to final product. Hands-on activities will help to build a foundation in video production as well as the techniques involved in transforming ideas into an effective presentation on screen.

DIG 2205, Digital Post Production Digital Post Production**3 hrs., 3 crs.,**

(Offered spring). This course includes a detailed exploration of video capture, editing, professional workflow, and post-production tasks. Students explore non-linear video and audio editing techniques for digital video and movie making. Students learn innovative techniques to create and edit videos and movies based on storyboards, camera work, sound, animations, photographs, drawings, text, and other materials. Fundamentals of visual storytelling--including continuity, pacing, and dramatic structure--are emphasized. Experience planning, shooting, and editing video projects will be provided through hands-on exercises, projects, and assignments.

DIG 2251, Sound for Digital Media Sound for Digital Media**3 hrs., 3 crs.,**

(Offered fall). This course will introduce students to the concepts of recording and mixing music and other audio using computer-based Digital Audio Workstations (DAWs). Topics covered include digital audio theory, DAW signal flow and system requirements, stereo mixing techniques, and use of software-based audio effects processors such as equalizers, compressors, reverbs, and amp simulators. Students will explore current technologies and practices used for field recording, use of DAWs, and digital audio editing.

DIG 2257, Radio Production Sound Recording Radio Production Sound Recording**3 hrs., 3 crs.,**

(Offered spring). This is a course in the science and art of production sound for the purposes of broadcasting via terrestrial and digital media. Students are taught how to use microphones, field mixers, control boards, digital automation systems and audio editing platforms for the purpose of broadcasting and/or recording dialogue, sound effects, and music via radio broadcast signal, digital stream and/or podcast. Practical application of audio production and its relationship to other aspects of media production are emphasized throughout the coursework. Fundamentals of sound editing and mixing for commercials and promotional audio as well as the principles of on-air broadcast are introduced. All program material produced for this class must be able to be aired on a FCC regulated radio station. Students will be assigned a weekly one hour slot on WKGC.

DIG 2290, Studio Production and Direction Studio Production and Direction**3 hrs., 3 crs.,****DIG 2300, 2D Animation 2D Animation****3 hrs., 3 crs.,**

Participants in this course will have an opportunity to explore the skills and techniques associated 2D animation. This is an introductory course in creating two-dimensional digital animation. The software Adobe After Effects, or an equivalent substitution such as Flash, FlashMX, or Fireworks will be used. Students will explore the historical and cultural precursors to digital animation, making links between early cinema, experimental film, and our contemporary electronic milieu.

DIG 2302, 3D Modeling and Animation 3D Modeling and Animation**3 hrs., 3 crs.,**

Participants in this course will have an opportunity to explore the skills and techniques associated 3D modeling and Animation. This is an introductory course in creating three-dimensional digital animation. The software 3D Studio-Max, or an appropriate substitution will be used. Students will explore the concepts of light, shadow, foreshortening, nurbs, polygons, textures, keyframes, and rendering processes as they relate to digital animation and 3D modeling.

DIG 2303, 3D Modeling and Animation II 3D Modeling and Animation II**3 hrs., 3 crs.,**

Prerequisite: DIG2302. Participants in this course will have an opportunity to explore the skills and techniques associated 3D modeling and Animation. The software 3D Studio-Max, or an appropriate substitution will be used. Students will explore the concepts of light, shadow, foreshadowing, polygons, textures, keyframes, and rendering processes as they relate to digital animation and 3D modeling.

DIG 2311, Web Animation Web Animation**3 hrs., 3 crs.,**

This course develops familiarity and skill in applying animation to the Internet. Students move from the level of the creation of web projects with HTML and Web Editors through the addition of motion graphics to those projects. This course will address the animation cycle including traditional animation techniques, production planning, concept pitching, storyboarding, and the production pipeline.

DIG 2410, Basic Scripting Basic Scripting**3 hrs., 3 crs.,**

(Offered spring). This course introduces the student to the basic concepts of writing for visual media. Topics to be covered include understanding different visual presentations, the stages of script development, developing creative concepts, differences between fictional and non-fictional narratives, writing for multiple formats, and writing for nonlinear programs for digital media.

DIG 2430, Digital Story Development Digital Story Development**3 hrs., 3 crs.,**

(Offered fall and spring). This course focuses on storytelling skills for time-based media. These include storyboarding conventions and techniques, the visual and auditory language of time-based media, design development, concept development, animatics, and story development. Storytelling is explored first with a traditional, "continuity style" approach, and subsequently with more experimental approaches. The principles and issues presented are relevant for animation, live action, film, and video. The course focuses on understanding and manipulating the graphic language of film, video, and animation to tell a story in coherent and compelling visual terms. Emphasis is placed on the process of refinement and iterations in the development of the story. Students participate in weekly class critiques and discussion of both their own work and of professional films.

DIG 2431, Digital Storytelling Digital Storytelling**3 hrs., 3 crs.,**

(Offered spring). The purpose of this class is to give students experience with digital storytelling and the processes used to create digital stories. Students will be familiar with rubrics used to evaluate digital stories. They will create purpose-driven narratives, to be delivered through different mediums utilizing industry-standard software.

DIG 2580, Digital Medial Portfolio Digital Medial Portfolio**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisites: *DIG2100, *GRA2156. Corequisites: DIG2251, DIG2200. Participants in this course will have an opportunity to explore the skills and techniques associated with digital media portfolio creation. Students will explore current tactics and practices used to display best works and showcase projects completed throughout their digital media program. Students will perform self-reflective exercises to determine working and learning styles, research industry positions, learn basic job hunting skills, and learn how to develop and present their work. Students will research Web sites, analyze intended audiences, construct a resume, write a digital artist's statement, and create a prototype digital portfolio for self-promotion. This is a capstone course intended to be taken the last semester of study.

DIG 2822, Electronic Journalism Electronic Journalism**3 hrs., 3 crs.,**

(Offered spring). This class will introduce students to the techniques of journalism in digital media and offer students conceptual and practical tools to work with. By the end of the course, students should have a clear understanding of the ways journalists have adopted digital media technologies and a sense of how they may use those media. They will also develop a broad understanding of the ways in which recent social and economic developments have changed both the way that journalists reach the public audience.

DIG 2930, Special Topics in Digital Media Special Topics in Digital Media**1 hr., 1 cr.,**

(Offered as needed). For students who are interested in advanced topics in digital media technology. May include lab and/or field work as part of the curriculum, depending on the topic. Will provide practical application and development of portfolio, job hunting, research, and general understanding of the digital media industry as it related to the selected topic. Course may be repeated two times for credit.

DIG 2949, COOP/Work Experience/Digital Media COOP/Work Experience/Digital Media**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

DIG 3343, Broadcast Graphics I Broadcast Graphics I**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: GRA2156. This course provides an overview of the working aspects of the motion graphics in the broadcast industry, which includes the categories of commercial, broadcast, main title, and music video. Topics include production needs, equipment, and computer graphics and how they are used in a variety of broadcast content. Projects will cover basic motion graphics principles, design and composition, timing and drama, storyboarding and planning, sound and music development and synchronization.

DIG 3451, Visual Storytelling Visual Storytelling**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: DIG2410, DIG2200. This course reinforces the principles of visual storytelling and visual development, continuing on the nature and traditions of visual storytelling, and focusing on the creative development of narrative ideas to be implemented visually. This course will cover techniques and mechanics of visual development with emphasis on strong visual designs which communicate effectively. Students will be introduced to two distinct, but overlapping approaches to continued development of students' knowledge and skills on the topics of visual storytelling and visual development. Students will perform significant hands-on assignments that practically apply the concepts under the mentoring of an experienced eye.

DIG 3512, Digital Optimization and Analytics Digital Optimization and Analytics**3 hrs., 3 crs.,**

(Offered fall). This course examines the strategic use of search engine optimization in marketing in order to build profitable customer relationships. Topics in the course will include consumer search behavior, search engines and algorithms, website user-experience, on- and off-page SEO, and strategies for conducting SEO campaigns for traditional and niche search engines. The course is designed to teach the fundamentals of SEO as well as provide practice with analysis and skills associated with doing SEO for a business or organization.

DIG 3525, Digital Production Studio I Digital Production Studio I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: DIG2200. This course is focused on developing creative skills that are applicable to visual design and digital production. Students will learn some techniques to help them more fully access their creativity. They will also learn how to express themselves clearly in writing and how to work together as a team to see projects to completion. This course will introduce the student to basic techniques of idea generation, visualization, creative production, time management, and scheduling skills.

DIG 3526, Digital Production Studio II Digital Production Studio II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: DIG3525. This course prepares the student for professional production within the corporate/informational realm, with particular attention toward a documentary-style narrative structure. Students will work as a production team in developing a finished professional product for use in their portfolio. Students will experience hands-on instruction in advanced camera work, lighting, and audio; students will also work extensively with Adobe editing software, with an introduction to Adobe After Effects for basic compositing and effects work.

DIG 3543, Media Planning Media Planning**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: CGS2069. This is a skill-based course designed to teach students the concepts and practices fundamental to place advertising messages in traditional and online media. Students will learn the advantages and disadvantages of placing ads in television, radio, newspapers, magazines, internet, outdoor, and mobile media. Students read and assess research from major media research firms. Students also complete a series of media math assignments to reinforce the concepts and calculations discussed in class.

DIG 3553, Interactive Media Design Interactive Media Design**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: DIG2430. This course is an interdisciplinary approach to design and construction of advanced interactive media, applying theory, aesthetic, and scientific principles of user interaction. The course covers advanced techniques associated with interactive media production, including design, digital storytelling, usability theory, and current best practices. The course also focuses on gaining familiarity with contemporary styles and trends in professional interactive/motion graphics. An emphasis will be placed on connecting the fundamental principles of animation with the After Effects workflow, to develop advanced motion graphics skills. Students will work to develop a better understanding of how to develop a distinct visual style in both personal work and in work for clients.

DIG 3588, Digital Capstone Digital Capstone**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisites: DIG3543, DIG3716, DIG4570. The focus of this course is to professionalize students planning to work in digital technology or a related field. Thus, attention is given to providing students with a hands on experience with directing and participating in a large digital media project; teaching students how to engage in a critique of digital work; and helping students prepare requisite materials, such as a proposal, portfolio, resume, and writing sample, needed for their professional career. This course offers students a kind of literacy of digital media aimed at enhancing their success in the field. The course also addresses the notion of capstone by considering overall academic accomplishments in light of specific personal and career goals. This course is to be taken during the last semester of the students program of study.

DIG 3716, Interface Design Interface Design**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: DIG2100. This course is a study in interface design. Interface design is a major component in the design of interactive software and website development. Students will design and develop fully functioning websites while studying and applying proper function, usability, and layout and design aesthetics. A base understanding of web programming language is needed due to a major component of the class is the creation and understanding of website function that directly relates to the interface design. Design using markup languages and style sheets to produce visually pleasing and usable interactive interfaces.

DIG 3811, User Centered Design User Centered Design**3 hrs., 3 crs.,**

(Offered fall). This course will familiarize students with the fundamental of digital media design principles specifically as they relate to the human-computer-human interface, usability, and effectiveness. Students will be introduced to industry standard practices in usability and task analyses as a part of the overall design process. They will explore the user-centered design paradigm from a broad perspective, emphasizing how user research and prototype assessment can be integrated into different phases of the design process. Students learn to think like a user-centered designer and carry out activities that are key to user-centered design.

DIG 4153, Writing for Digital Media Writing for Digital Media**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: DIG2151. This course will emphasize the methodologies and fundamentals of writing for a digital medium and instruct students in the emerging philosophies and values of digital content production along with the application of the methods and fundamentals in the areas of language theory, document design, markup language and the editing process. Students will analyze and discuss the origins of digital journalism and evaluate its impact on today's constantly changing flow of consumer driven information.

DIG 4433, Visual Development Visual Development**3 hrs., 3 crs.,**

(Offered summer). Prerequisites: GRA2156, DIG2100 with a minimum grade of "C." This course covers principles of visual storytelling and visual development, including the nature and tradition of visual storytelling. This course will focus on storytelling, sketching, and communication of design ideas within a design team and to potential users. Assignments will focus on hands-on learning through individual assignments, application of design skills in group mini-projects, and peer critique.

DIG 4530, Media for E-Commerce Media for E-Commerce**3 hrs., 3 crs.,**

Prerequisites: COP3842, CGS2069, DIG2101. This course examines the concepts, technology, and applications of electronic commerce, or e-commerce. Since users can engage in e-commerce from a fixed device (e.g., PC) or from a mobile device (e.g., mobile phone) we will examine both traditional fixed e-commerce and mobile e-commerce or m-commerce. The course begins by setting the context for e-commerce within the domain of information systems. The course then examines how digital media can support of electronic commerce on the internet: the applications of server-side internet programming languages and media theory to e-commerce, internet security, and online portals. Emphasis on the artistic and creative components supporting the business aspects of electronic commerce.

DIG 4564, Content Management Systems Content Management Systems**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: DIG2100. This course will introduce concepts for the design and development of industry standard applications using content management systems. Students will use content management systems and development techniques to produce websites that retrieve and store information, manage large amounts of content, and make coding more efficient along with beginning to intermediate level coding using common web development languages.

DIG 4570, Digital Multimedia Production Techniques Digital Multimedia Production Techniques**3 hrs., 3 crs.,**

Prerequisite: DIG2822. This course explores the avenues of contemporary digital production. Students will learn each of the new media, along with its history and connection to the worlds of art and design. Students will be prepared to work for digital news enterprises by understanding how digital technology has changed the field of news media. This course is designed to instruct students in practical skill sets like Web site construction and design, but also to instruct students in the emerging philosophies and values of digital content production. In addition to working on the production of digital projects, students will analyze and discuss the origins of digital journalism and evaluate its impact on today's constantly changing flow of information.

DIG 4591, Multimedia Production and Design Group Multimedia Production and Design Group**3 hrs., 3 crs.,**

Prerequisite: DIG2100. This course examines the application and implementation of business, design and programming skills students have acquired. Student will learn WordPress development techniques to produce websites that retrieve and store information, manage large amounts of content, recognize returning users and make coding more efficient. Students will examine legal and ethical issues concerning the development and distribution of multimedia products. Students will work in production groups to examine business problems, determine the source problem, ascertain a working solution and implement a functional model complete with proposals, design, technical and quality assurance documentation. Design solutions appropriate to a targeted market will be emphasized. This course provides hands-on experience with WordPress, MySQL, and PHP.

DSC - Domestic Security**DSC 2250, Unmanned Vehicles Fundamentals for Disaster Management Unmanned Vehicles Fundamentals for Disaster Management****3 hrs., 3 crs.,**

Prerequisite: *ASC2560. This course will prepare students to participate in unmanned vehicle system operations within a disaster management context through the integration of emergency management theoretical frameworks and technical skill applications with an emphasis on preparedness, mitigation, and response mission-areas.

DSC 3064, Emergency Communications Emergency Communications**3 hrs., 3 crs.,**

This course emphasizes to students the multi-faceted communications necessary between local, state, federal agencies, and the media to minimize and prepare for hazards, disasters, and terrorist activity. Issues of public policy/administration, law, criminal justice and the social/behavioral impacts of communication protocols and methodologies will be considered throughout the course. It introduces students to the fundamental concepts, principles, and practices of communications relations in a risk environment as well as effective leadership in an emergency management setting.

DSC 3783, Legal Issues and Emergency Preparedness Legal Issues and Emergency Preparedness**3 hrs., 3 crs.,**

Prerequisite: DSC3064. This course describes the functional demands that emergency service managers should be aware of in crafting effective emergency plans, policies, and programs. It addresses the emergency planning process, how public policy choices impact emergency planning, and the legal consequences/precautions managers must watch for in a disaster event. This course explores formal emergency management programs discussing the political and policy environment that regulates them.

DSC 4013, Capstone Project in Public Safety Capstone Project in Public Safety**3 hrs., 3 crs.,**

Prerequisites: DSC3064, DSC3783, PAD3936, PAD3391, DSC4755. Comprehensive and synthesizing project to apply the knowledge and skills learned in the program courses. Projects must have theoretical and applied components. The capstone project is taken in the student's final semester.

DSC 4755, Domestic Security Domestic Security**3 hrs., 3 crs.,**

Prerequisite: DSC3064. This course introduces students to national and regional relations and security. As a field of study, regional relations focuses on political, military, economic, and cultural interaction of state/non-state players handling national security issues. Therefore, we begin by exploring key concepts, issues and processes of national/ regional relations to provide the general knowledge and analytical tools necessary to understand, evaluate and respond to a complex array of problems in the emergency services world.

ESC - Earth & Space Sci Survey**ESC 2000, Earth and Space Science Survey Earth and Space Science Survey****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Using the scientific method, critical thinking skills, data analysis, this course will examine the fundamental processes of the earth system, composed of an atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and exosphere, through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize earth's connections with humanity.

ECO - Economics**ECO 2013, Principles of Economics, Macro Principles of Economics, Macro****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will learn the foundations of macroeconomics as the branch of economics concerned with how decision-making, in an environment of scarcity, maps onto the aggregate economy. Students will examine theories and evidence related the following core set of topics: national income determination, money, monetary and fiscal policy, macroeconomic conditions, international trade and the balance of payments, and economic growth and development. The course deals with the basic tools of analytical macroeconomics applied to the vital problems of our dynamic economy, national income, business fluctuations, unemployment and inflation, the problems of economic growth, government fiscal and monetary policy, money and banking, gold and foreign trade, and the challenge of alternative economic systems.

ECO 2013H, Honors Eco Macro Honors Eco Macro**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The course addresses the basic tools of supply and demand, national-income accounting, and the measurement of macroeconomic performance, the macroeconomic problems of unemployment and inflation, the business cycle and the macroeconomic phenomena of self-adjustment and instability and its implications, the economic multiplier effect and its influence on macroeconomic performance, the federal budget and the role of fiscal policy in influencing macroeconomic outcomes, money and banking and the role of monetary policy in influencing macroeconomic outcomes, the foundations of economic growth, and the constraints to successful macroeconomic policy and outcomes.

ECO 2023, Principles of Economics, Micro Principles of Economics, Micro**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course addresses the basic economic tools of supply and demand, consumer demand and behavior as measured using the concepts of utility and elasticity, the costs of firm production and their relationship to output, market structures and the production and profit-maximizing decisions of firms within the four primary market models, how government regulation influences market outcomes, the operation and role of key factor markets including the labor and financial markets, the tax system and the distributional issues associated with equity versus efficiency, and the fundamentals of international trade and finance and their influence on economic outcomes.

ECO 2023H, Honors Eco Micro Honors Eco Micro**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course addresses the basic economic tools of supply and demand, consumer demand and behavior as measured using the concepts of utility and elasticity, the costs of firm production and their relationship to output, market structures and the production and profit-maximizing decisions of firms within the four primary market models, how government regulation influences market outcomes, the operation and role of key factor markets including the labor and financial markets, the tax system and the distributional issues associated with equity versus efficiency, and the fundamentals of international trade and finance and their influence on economic outcomes.

ECO 2949, COOP/Work Experience/Economics COOP/Work Experience/Economics**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

EEX - Educ: Exceptional Child**EEX 2010, Introduction to Exceptional Learners Introduction to Exceptional Learners****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). EEX2010 is a foundation course exploring the primary categories of exceptional students and the techniques, strategies, and best practices employed in the classroom. Emphasis will be on etiology, terminology, classification, prevalence, the history and philosophy of exceptional learner education, educational strategies and approaches, legal and medical implications, and the educational, personal, and social growth of exceptional learners. The overall goal is to introduce the techniques in identifying and understanding the needs of exceptional learners.

EME - Education Tech & Media**EME 2040, Technology for Teachers Technology for Teachers****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Application of instructional design principles for the use of technology to enhance the quality of teaching and learning in the classroom. The course includes hands-on experience with educational media, emerging technologies, and hardware, software, and peripherals for the personal computer as well as data-driven decision-making processes. Identification of appropriate software for classroom applications, classroom procedures for integrating technologies with emphasis on legal and ethical use, and effective instructional strategies for teachers and students in regard to research, analysis, and demonstration of technology. Students will be provided an overview of the Florida Educator Accomplished Practices, Sunshine State Standards, the Professional Educator Competencies and the National Educational Technology Standards.

EME 2040H, Honors Technology For Teachers Honors Technology For Teachers**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Application of instructional design principles for the use of technology to enhance the quality of teaching and learning in the classroom. The course includes hands-on experience with educational media, emerging technologies, and hardware, software, and peripherals for the personal computer as well as data-driven decision-making processes. Identification of appropriate software for classroom applications, classroom procedures for integrating technologies with emphasis on legal and ethical use, and effective instructional strategies for teachers and students in regard to research, analysis, and demonstration of technology. Students will be provided an overview of the Florida Educator Accomplished Practices, Sunshine State Standards, the Professional Educator Competencies and the National Educational Technology Standards.

EDF - Education/Foundation**EDF 1004, Educational Field Experience Educational Field Experience****3 hrs., 3 crs.,**

(Offered fall). This experiential learning course focuses on the art and craft of professional teaching through substantial classroom observations of professional educators in a public-school setting. Students will plan, implement, and evaluate learning activities, supervise student behavior, and teach on a scheduled basis under the guided observation of a classroom teacher and GCSC faculty. Additional assignments will be determined by GCSC faculty and the supervising teacher to suit the needs and the skills of the student. This course requires the submission of a comprehensive Observation Journal and weekly seminar-style meetings with the assigned GCSC faculty. Students must document (and have certified by the classroom teacher) a minimum of 100 hours of classroom observations-hours that cannot be counted toward any other course's observation requirement.

EDF 1005, Introduction to Education Introduction to Education**3 hrs., 3 crs.,**

(Offered fall and spring). This is a survey course including historical, sociological and philosophical foundations of education, governance and finance of education, educational policies, legal, moral, and ethical issues and the professionalism of teaching. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. Students are required to complete a minimum of 15 hours of field-based experience with children and youth in public schools and not via virtual modes of film or Internet. Fingerprinting and background checks will be required of every student through their respective school district BEFORE any observations are undertaken at the public schools. GCSC has articulation agreements only with Bay, Gulf, and Franklin school systems for EDF1005 observations.

EDF 1005H, Introduction To Education-Honors Introduction To Education-Honors**3 hrs., 3 crs.,**

(Offered fall and spring). This is a survey course including historical, sociological and philosophical foundations of education, governance and finance of education, educational policies, legal, moral, and ethical issues and the professionalism of teaching. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. Students are required to complete a minimum of 15 hours of field-based experience with children and youth in schools or similar settings and not via virtual modes of film or Internet. Fingerprinting and background checks will be required of every student through their respective school district BEFORE any observations are undertaken at the public schools. GCSC has articulation agreements only with Bay, Gulf, and Franklin school systems for EDF1005 observations.

EDF 1006, Educational Field Experience II Educational Field Experience II**3 hrs., 3 crs.,**

(Offered spring). Corequisite: EEX2010, Designed as a corequisite with EEX2010, "Introduction to Exceptional Learners," students in EDF1006 will observe and extensively document how professional educators employ techniques and best practices for teaching exceptional learners. Students will plan, implement, and evaluate learning activities and teach on a scheduled basis under the guidance of a classroom teacher and GCSC faculty. Additional assignments will be determined by GCSC faculty and the supervising teacher to suit the needs and the skills of the student. This course requires the submission of a comprehensive Observation Journal and weekly seminar-style meetings with the assigned GCSC faculty. Students must document (and have certified by the classroom teacher) a minimum of 100 hours of classroom observations--hours that cannot be counted toward any other course's observation requirement. Permission of instructor is required for enrollment.

EDF 2085, Introduction to Teaching Diverse Populations Introduction to Teaching Diverse Populations**3 hrs., 3 crs.,**

(Offered fall and spring). Designed for the prospective educator, this course provides the opportunity to explore issues of diversity, including an understanding of the influence of exceptionalities, culture, family, gender, sexual orientation, socioeconomic status, religion, language of origin, ethnicity, and age upon the educational experience. Students will explore personal attitudes toward diversity and exceptionalities. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. A minimum of 15 hours of field-based experience working with diverse populations of children and youth in public schools is required. The field experience should not be via virtual modes of film or Internet. Fingerprinting and background checks will be required of every student through their respective school district BEFORE any observations are undertaken at the public schools. GCSC has articulation agreements only with Bay, Gulf, and Franklin school systems for EDF2085 observations.

EDF 2085H, Honors Introduction to Diversity for Educators Honors Introduction to Diversity for Educators**3 hrs., 3 crs.,**

(Offered fall and spring). Designed for the prospective educator, this course provides the opportunity to explore issues of diversity, including an understanding of the influence of exceptionalities, culture, family, gender, sexual orientation, socioeconomic status, religion, language of origin, ethnicity, and age upon the educational experience. Students will explore personal attitudes toward diversity and exceptionalities. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. A minimum of 15 hours of field-based experience working with diverse populations of children and youth in schools or similar settings is required. The field experience should not be via virtual modes of film or Internet. Fingerprinting and background checks will be required of every student through their respective school district BEFORE any observations are undertaken at the public schools. GCSC has articulation agreements only with Bay, Gulf, and Franklin school systems for EDF2085 observations.

EDG - Education/General**EDG 2949, COOP/Work Experience/Education COOP/Work Experience/Education****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

EEC - Education: Early Childhood**EEC 1001, Introduction to Early Childhood Education Introduction to Early Childhood Education****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course covers the history, types, and guidelines for pre-school educational programs that are center based family home childcare, nursery, or after-school programs. Major topics include growth and development in young children, challenges facing caregivers and parents, behavior management strategies, rules governing childcare, indicators of abuse and neglect, environmental considerations, and childcare and diversity. The course fulfills a portion of the 120 hours of training required for the Florida Child Care Professional Credential (FCCPC).

EEC 1272, Teaching Exceptional Children in Inclusive Settings Teaching Exceptional Children in Inclusive Settings**3 hrs., 3 crs.,**

(Offered fall). Prerequisite/Corequisite: EEC1101. This course focuses on teaching young children with exceptionalities in early care and educational settings and will present a model for effective inclusion centering on theories of play development. Course content also includes the organization of the environment, provision of emergent literacy opportunities, management of challenging behaviors, and the development of partnerships among parents, professionals, and community agencies.

EEC 1319, Portfolio Development and Supervised Work Experience Portfolio Development and Supervised Work Experience**3 hrs., 3 crs.,****EEC 1732, Infants, Toddlers, and Caregivers Infants, Toddlers, and Caregivers****3 hrs., 3 crs.,**

(Offered spring). Prerequisite/Corequisite: EEC1001. This course is designed to provide students with learning opportunities addressing foundational stages and sequence of infant-toddler development, introduce students to the definition and use of developmentally appropriate practices in home and classroom environments, correlate individual infant and toddler care plans to the development of the whole child, and embed curriculum implementation within care routines. Emphasis is placed on the implementation of respective caregiving, responsive attachment, and environmental teaching strategies that promote quality programming in infant and toddler care settings. Observations and practicum assignments in early learning/child development programs are required.

EEC 2223, Art, Music, and Movement for Young Children Art, Music, and Movement for Young Children**3 hrs., 3 crs.,**

(Offered spring). Prerequisite/Corequisite: EEC1001. EEC 2223, Art, Music, and Movement for Young Children, is a web-hybrid course. This course is designed to provide students with learning opportunities related to the theory and practice of art and music appreciation and movement theory and practices, as a foundation for the development of the whole child, birth to eight years of age. Educational and brain research is presented with art, music, and movement theory to support the student in fostering environments and teaching strategies that assist in developing the whole child. The basics of art and music appreciation and movement education provide teachers and practitioners with an overlay of theoretical concepts transformed into practical classroom techniques. Teaching artifacts and student observation in diverse child related settings are required for this course.

EEC 2240, Social Studies and Creative Expression for Young Children Social Studies and Creative Expression for Young Children**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite/Corequisite: EEC1001. This methods class provides students with the knowledge of developmentally appropriate social studies and creative expression concepts for children birth through age eight and techniques for incorporating them throughout the curriculum. Topics include culture, time, people, places, individual and global identity, sense of community, dramatic play, music, art, and creative movement. Current educational research and brain research is presented as the foundation for understanding the role of the early childhood educator in implementing curriculum as a broad technique for supporting the development of the whole child. The course also includes assessment of typical and atypical development in order to design appropriate accommodations to meet the needs of all children enrolled in the early childhood program.

EEC 2523, Leadership and Management of Child Care Programs Leadership and Management of Child Care Programs**3 hrs., 3 crs.,**

(Offered spring). Prerequisite/Corequisite: EEC1001. This course is designed to provide students with targeted strategies to develop a broad perspective and knowledge base for problem solving, planning, implementing, and evaluating health, safety, and nutritional processes necessary within a quality early education and care setting. Successful completion of this course also meets the educational requirement for the Foundational Level Child Care and Education Administrator Credential, as defined by the State of Florida.

EEC 2602, Guiding the Young Child Guiding the Young Child**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite/Corequisite: EEC1001. This course is designed to provide students with learning opportunities related to the principles of observing, recording, and interpreting child behavior within the early childhood environment. Emphasis is placed on the role of observation and of the observer in developing strategies that support the healthy development and coping techniques of the young child. Typical and atypical patterns of behavior are identified, as well as genetic and environmental factors that influence child behavior. Child related observations and teaching artifacts required for this course.

EEC 2713, Facilitating Social Development Facilitating Social Development**3 hrs., 3 crs.,**

(Offered spring). Prerequisite/Corequisite: EEC1001. This course is designed to provide students with learning opportunities in the development, selection, and implementation of developmentally appropriate activities that support the development of the whole child with a targeted emphasis on social-emotional development. A child-centered philosophy utilizing positive guidance skills is presented with opportunities for practice and implementation. Elements of the course include outcome-based activity design, activity evaluation, and development of classroom routines, transitions, and small group learning to promote social-emotional development. Areas of study include theme-based activity planning and child-interest based planning. This course supports the Florida Child Care Professional Credential and the national Child Development Associate Credential. Course includes a practicum, which requires students have access to some type of early childhood learning environment to complete practicum assignments and observations.

EEC 2734, Health, Safety, and Nutrition for Young Children Health, Safety, and Nutrition for Young Children**3 hrs., 3 crs.,**

(Offered fall). Prerequisite/Corequisite: EEC1001. This course is designed to provide the student with learning opportunities that include the role of nutrition, healthy, and safe practices as it relates to providing early education and care for the young child. Emphasis is given to understanding the role of consistently incorporating healthy practices within the child's day. Instruction related to the documentation and appropriate implementation of processes that resolve childhood emergencies is also included in this course.

EDE - Education:Elementary**EDE 2300, Introduction to Teaching Methods II Introduction to Teaching Methods II****3 hrs., 3 crs.,**

Prerequisite: EDF1005. (Offered spring). This course focuses on the essential teaching methods needed by K-6 educators in alignment with FLDOE competencies and national, state, and district standards. Course content emphasizes research-based best practices and a comprehensive overview of teaching elementary-level (K-6) math and science development, instruction, and assessment.

EDE 2310, Introduction to Teaching Methods I Introduction to Teaching Methods I**3 hrs., 3 crs.,**

Prerequisite: EDF1005. (Offered fall). This course focuses on essential teaching methods for K-6 educators in alignment with FLDOE competencies and national, state, and district standards. Course content emphasizes research-based best practices and a comprehensive overview of teaching ELA (English Language Arts) and social science content literacy development, instruction, and assessment.

EET - Electronic Engin Tech**EET 1035C, AC/DC Circuits AC/DC Circuits****4 hrs., 3 crs.,**

\$42.00 lab fee. (Offered spring). Prerequisite: EET1084C, ETI2001C. This integrated lecture/lab course continues the study of AC and DC circuits beyond Introductory Electronics. Topics include current, voltage, resistance, and power in series, parallel, and combination DC circuits. Capacitance, inductance, resonance, and power will be covered in AC circuits. Network theorems, filters, networks, and transformers will also be covered. The lab portion develops skills in fabricating circuits, reading schematic diagrams, measuring circuit parameters, and troubleshooting circuit faults. Student will use basic testing equipment such as the digital multimeter, function generator, and power sources. Computer simulation software is used to predict voltages and currents in various circuits and to verify results through hands-on experimentation.

EET 1084C, Introduction to Electronics Introduction to Electronics**4 hrs., 3 crs.,**

\$55.00 lab fee (Offered fall and spring). Introduction to the principles of electricity, magnetism, and basic laws. Includes fundamentals of analog and digital electronic components and circuits, including applications. Laboratory exercises will consist of experiments with basic circuits and test equipment, as well as an introduction to mobile robotics.

EET 1140C, Electronic Devices and Circuits Electronic Devices and Circuits**4 hrs., 3 crs.,**

\$31.00 lab fee (Offered fall). Prerequisite: EET1035C. Integrated lecture and laboratory experiences in the study of semiconductor devices and their application in electronic circuits. Included is the study of the structure of matter, diodes, transistors, biasing, FETs, PNPNs, single stage amplifiers, and other devices. Study of power supplies, oscillators, and amplifiers using discrete components and operational amplifiers are included. Design of these circuits, frequency response, stabilization, and feedback will be considered.

EET 2214C, LabVIEW Instrumentation LabVIEW Instrumentation**5 hrs., 3 crs.,**

This course teaches programming concepts, techniques, features, virtual instrumentation, and functions used to create test and measurement, data acquisition, instrument control, datalogging, measurement analysis, and report generation applications. Experience is also gained in writing algorithms in the form of flow charts and block diagrams.

EET 2355C, Digital Communications Digital Communications**5 hrs., 3 crs.,**

Prerequisite: EET1140C, CET1112C. Lecture/laboratory experiences in the study of electronic communications, including digital RF transmissions and analysis, microwave, fiber-optic, and laser communications. Study of coding, transmission, and decoding of pulse transmission systems, error detection, and troubleshooting techniques.

EET 2931, Special Projects in Electronics Special Projects in Electronics**3 hrs., 3 crs.,**

Course centering around topics of current interest or of special interest to students or instructors. Students have the opportunity to research, design, and prototype new projects. Topics or focus may vary from semester to semester. The course can be repeated up to two times.

EET 2949, COOP/Work Experience/Electronics COOP/Work Experience/Electronics**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

EMS - Emergency Medical Services**EMS 1119, Emergency Medical Technician Emergency Medical Technician****5 hrs., 5 crs.,**

Corequisite: EMS1401. The initial study of emergency medical services designed to enable the student to become proficient in the emergency care of the sick and injured. Completion of course leads to eligibility for licensure examination as an Emergency Medical Technician-Basic (EMT-B).

EMS 1310, Emergency Medical Services Management Emergency Medical Services Management**1 hr., 1 cr.,**

Designed for persons who supervise emergency medical services personnel. Emphasis is placed on goal setting, organizational structure, budgeting, communications, performance evaluation, and stress management.

EMS 1335, Emergency Vehicle Operator I Emergency Vehicle Operator I**1 hr., 1 cr.,**

\$20.00 lab fee Designed to meet Florida Health Department requirements that all emergency vehicle operators employed by EMS providers must have completed an ambulance driving program. The course combines lecture with a driving laboratory. (Students who are not active duty military must show proof of a valid Florida Driver's License.)

EMS 1337, Defensive Tactics For Healthcare Providers Defensive Tactics For Healthcare Providers**1 hr., 1 cr.,**

This course is designed to provide healthcare personnel with basic knowledge of signs of aggressive/violent behavior and tactics to properly respond using verbal and or physical skills to control aggressive behavior in the course of providing emergency care.

EMS 1401, Emergency Medical Technician Lab Emergency Medical Technician Lab**12.73 hrs., 5 crs.,**

\$82.00 lab fee Corequisite: EMS1119. An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician in the laboratory, simulated, medical facility and pre-hospital field environment. There is emphasis on assessment based learning and complies with national EMT curriculum.

EMS 1555, EMS Trauma Management EMS Trauma Management**1 hr., 1 cr.,**

\$18.00 lab fee Prerequisite: EMT certificate or permission of the instructor. This course is designed for the EMS student, teaching the fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the National Basic Trauma Life Support Committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, and internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management, and transport with discussion on mechanism of injury and kinematics of trauma.

EMS 1761, Assistant Teaching in Emergency Medical Services Assistant Teaching in Emergency Medical Services**3 hrs., 3 crs.,**

Prerequisites: EMT license and permission of the instructor. Emphasis is placed on lesson plan development, classroom management, awareness of EMS regulatory agency requirements for course content, and effective methods of instruction in cognitive material and psychomotor skills. The student participates in cognitive and psychomotor instruction under the supervision of EMS faculty.

EMS 2010, Essentials of Structure and Function Essentials of Structure and Function**3 hrs., 3 crs.,**

Designed for the EMS student, this course presents basic information on the structure and function of the human body. Applies principles of anatomy and physiology to demonstrate interaction of body systems as they maintain homeostasis. Emphasis will be placed on the nervous system, cardiovascular, and respiratory systems.

EMS 2231, Paramedic I Paramedic I**9 hrs., 9 crs.,**

Corequisite: EMS2435. First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts & clinical skills learned at the EMT level with advanced life support concepts & skills. Emphasis on patient assessment, pulmonary anatomy & physiology, advanced airway management, pathophysiology & clinical management of shock, medical emergencies & cardiac related emergencies. Course is consistent with the most current Paramedic curriculum guidelines.

EMS 2232, Paramedic II Paramedic II**8 hrs., 8 crs.,**

Prerequisites: BSC1020, EMS2231, EMS2435, RET1934. Corequisite: EMS2436. Second course in the sequence necessary for Paramedic program completion. Integrates & reinforces concepts & clinical skills learned in Paramedic I. Emphasis on pharmacology, behavioral, trauma, obstetrics, pediatrics, EMS operations, and special challenges (critical care, mass casualty), and reinforcement of cardiology and medical emergencies. Consistent with the most current Paramedic curriculum.

EMS 2233, Paramedic III Paramedic III**2 hrs., 2 crs.,**

Prerequisite: EMS2232, EMS2436, EMS2553, EMS2934. This course is a culmination of the Paramedic program in which previous education and training are reviewed and applied to complete a comprehensive educational learning experience. Case reviews, laboratory practice and simulated experiences are reviewed through the lens of an entry-level Paramedic provider. The course ends with a comprehensive written and practical examination. Successful completion leads to eligibility to sit for the National Registry Paramedic examination.

EMS 2340C, Basic Vehicle Rescue and Extrication Basic Vehicle Rescue and Extrication**1 hr., 1 cr.,**

Designed for the EMT student, teaching the fundamentals of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injuries is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools. (Students who are not active duty military must show proof of a valid Florida Driver's License.)

EMS 2425, Paramedic Internship Paramedic Internship**18.13 hrs., 6 crs.,**

Prerequisites: EMS2232, EMS2436, EMS2553, EMS2934. Corequisite: EMS2233. This is a capstone clinical practice course consisting of ten (10) 24-hour shifts aboard an advanced life support ambulance. The Paramedic student functions under the clinical supervision of a selected Paramedic preceptor as the acting charge Paramedic for the entirety of clinical internship. In addition the students participate in 15 sentinel clinical scenarios in a high-fidelity simulation lab setting and laboratory skills review.

EMS 2435, Paramedic I Lab Paramedic I Lab**17.6 hrs., 7 crs.,**

\$106.00 lab fee Corequisite: EMS2231. Integrated experience including laboratory learning and practice, simulated patient experiences, and clinical experience in area medical facilities and pre-hospital emergency medical services.

EMS 2436, Paramedic II Lab Paramedic II Lab**17.6 hrs., 7 crs.,**

\$70.00 lab fee Corequisite: EMS2232. Integrated experience including laboratory practice of advanced cardiac life support skills, clinical experience in area hospitals and field experience with the ambulance service.

EMS 2439, Advanced Clinical Internship Advanced Clinical Internship**5 hrs., 5 crs.,**

Prerequisites: Florida EMT license and permission of instructor. Supervised rotations in a variety of clinical settings designed to develop increased clinical proficiency, decision-making skills, and knowledge of pathophysiology of illness and injury.

EMS 2526, Twelve-Lead Electrocardiogram Twelve-Lead Electrocardiogram**1 hr., 1 cr.,**

Prerequisite: EMT certificate or permission of the instructor. This course is designed for the EMS student, teaching the fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis is placed on scenario-based and case-based learning that reinforces the concept that 12 lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

EMS 2552, Advanced Cardiac Life Support Advanced Cardiac Life Support**1 hr., 1 cr.,**

\$10.00 lab fee Advanced Cardiovascular Life Support (ACLS). This course builds on the foundation of lifesaving BLS skills, emphasizing the importance of preventing cardiac arrest, early and continuous high-quality CPR, and high-performing teams resulting in the obtainment of the Advance Cardiovascular Life Support (ACLS) certification. Science and education from the most current American Heart Association Guidelines for CPR and Emergency Cardiovascular Care will be utilized.

EMS 2553, Pediatric Advanced Life Support Pediatric Advanced Life Support**1 hr., 1 cr.,**

\$13.00 lab fee Prerequisite: EMT certificate or permission of the instructor. This course is designed for the EMS student, teaching the fundamentals of recognizing infants and children that are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock, or cardiopulmonary arrest.

EMS 2558, Stroke Management Stroke Management**1 hr., 1 cr.,**

Prerequisite: EMT certificate or permission of instructor. This course is designed for the EMS student, teaching the recognition of the early signs and management of stroke and other related neurovascular emergencies. Other content includes stroke prevention, risk factors and medical interventions. This course incorporates lecture with scenario-based and case-based learning that reinforces the current concepts of stroke care.

EMS 2934, Advanced Medical Life Support Advanced Medical Life Support**1 hr., 1 cr.,**

\$15.00 lab fee Prerequisite: EMT certificate or permission of instructor. This course is designed for the EMS student, providing the EMS student with a better understanding of the pathophysiology of disease processes. This course incorporates lecture with scenario-based and case-based learning that reinforces current concepts of emergency care for shock, chest pain, altered mental status and respiratory emergencies.

EMS 2949, COOP/Work Experience/Emergency Medical Services COOP/Work Experience/Emergency Medical Services**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ETI - Engin Tech/Industrial**ETI 1411, Manufacturing Processes I Manufacturing Processes I****3 hrs., 3 crs.,**

A study of methods and materials used in industrial production of nonchip producing processes, including casting, forging, welding, stamping, shearing, brake, powder, metallurgy, electrical discharge machining, high energy rate forming.

ETI 1420, Manufacturing Processes Manufacturing Processes**3 hrs., 3 crs.,**

\$84.00 lab fee (Offered spring). A study of methods, materials, and machines used in industrial production processes, including but not limited to machining, casting, forging, welding, sheetmetal, and additive manufacturing.

ETI 1420H, Honors Manufacturing Processes Honors Manufacturing Processes**3 hrs., 3 crs.,**

(Offered spring). A study of methods, materials, and machines used in industrial production processes, including but not limited to machining, casting, forging, welding, sheetmetal, and additive manufacturing.

ETI 1701, Industrial Safety Industrial Safety**3 hrs., 3 crs.,**

(Offered fall). This course focuses on the theories and principles of occupational safety and health in a practical and useful real world job related setting. The major topics include the Occupational Safety and Health Administration (OSHA) compliance, safety standards, code enforcement, ergonomic hazards, mechanical hazards, falling, lifting, electrical hazards, fire hazards, industrial hygiene, radiation, noise, emergencies, and environmental safety.

ETI 1949, Manufacturing Internship Manufacturing Internship**3.33 hrs., 1 cr.,**

(Offered fall and spring). This course is a structured and supervised internship for students in the Engineering Technology program of study. On-the-job experience will be integrated with scheduled class meetings to review and compare work experiences with respect to workplace skills and technical expectations.

ETI 2001C, Applied Mechanics Applied Mechanics**4 hrs., 3 crs.,**

(Offered fall). This course takes a hands-on approach to the identification, use, care of tools, equipment, blueprint reading, geometric dimensioning, and tolerances used in all aspects of operations and manufacturing.

ETI 2110, Introduction to Quality Assurance Introduction to Quality Assurance**3 hrs., 3 crs.,**

(Offered spring). This course defines the role of quality in an industrial environment. Topics include the use of quality management techniques and quality philosophies, process development, techniques used for evaluation, approaches used on continuous operations, methods used to control quality, and the International Organization for Standardization (ISO) series of standards. The method of analyzing data through statistical process control (SPC) charts is also covered.

ETI 2110H, Honors Introduction to Quality Assurance Honors Introduction to Quality Assurance**3 hrs., 3 crs.,**

(Offered spring). This course defines the role of quality in an industrial environment. Topics include the use of quality management techniques and quality philosophies, process development, techniques used for evaluation, approaches used on continuous operations, methods used to control quality, and the International Organization for Standardization (ISO) series of standards. The method of analyzing data through statistical process control (SPC) charts is also covered.

ETI 2460C, Composites Fundamentals Composites Fundamentals**4 hrs., 3 crs.,**

\$177.00 lab fee. (Offered fall). This course introduces the student to the theory/ materials/ and basic manufacturing processes of composites. This course focuses on basic composite theory/ including fiber reinforcements/matrix systems/ fabrication techniques/ and safety.

ETI 2464C, Advanced Composites Advanced Composites**4 hrs., 3 crs.,**

\$189.00 lab fee. This course introduces the student to common core materials used in composites manufacturing and to the inspection and repair of composites structures. This course focuses on basic inspection and repair theory, including damage detections and repair instructions.

ETI 2622, Concepts of Lean Six Sigma Manufacturing Concepts of Lean Six Sigma Manufacturing**3 hrs., 3 crs.,**

This course is an overview of lean Six Sigma initiatives. Students will learn the value of using data to identify and eliminate process problems. Various projects will require students to redefine roles and procedures within a group in order to continuously generate the results wanted. This course is not a certification course, but a summary of the components of a Lean Six Sigma program.

ETM - Engin Tech/Mechanical**ETM 2949, COOP/Work Experience/Mechanical COOP/Work Experience/Mechanical****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ETD - Engineering Tech/Drafting**ETD 1320C, Introduction to CAD Introduction to CAD****4 hrs., 3 crs.,**

(Offered fall). Introduction to interactive graphics, description of CAD systems, advantages, applications, and operational skills with emphasis on developing a database.

ETD 2364C, Introduction to Solidworks Introduction to Solidworks**4 hrs., 3 crs.,**

(Offered spring). This course is an introduction to the new designing techniques and capabilities of solid modeling using the SolidWorks software. Topics include the integration of advance parametric solid modeling drawing tools into SolidWorks.

ETD 2368C, Advanced Solidworks Advanced Solidworks**4 hrs., 3 crs.,**

(Offered fall). Prerequisite: ETD2364C. This course presents the advanced use of new designing techniques and capabilities of solid modeling using the SolidWorks software, including the integration of the advanced parametric modeling and drawing tools for SolidWorks. The course topics to be covered include advanced 3D sketching, advanced work planes, advanced assembly construction, bottom up and top down, part configuration, Solid Works Tool Box applications, concept of mold design, and creation of sheet metal parts and assemblies.

ETD 2371C, Introduction to 3D Printing Introduction to 3D Printing**4 hrs., 3 crs.,**

\$58.00 lab fee. (Offered fall). Prerequisite: *ETD1320C. This course provides an introduction to the world of 3D printing and scanning. Using knowledge of CADD software to create and export STL files, students will bring their digital work to life. Each student will become familiar with the interface and preparation of multiple three-dimensional printers. The class will also learn and present on how various industries are using this technology.

ETD 2372C, Advanced Rapid Prototyping Advanced Rapid Prototyping**4 hrs., 3 crs.,**

74.00 lab fee. (Offered spring). Prerequisite: ETD2371C. This course builds upon ETD2371C with more advanced project applications. Students will explore simulation and design analysis of rapid prototyping and learn the relationships of physical prototyping to the design industry by examining case studies. When available, field trips to local manufacturing facilities will expose the students to current industry practices and the latest technologies. Several problem-solving projects will test their creativity, design abilities and 3D printing skills. The class environment will foster a design community providing feedback and critique from classmates. Students will receive a refresher on different physical and digital interfaces using a variety of 3D printers and scanners.

ETD 2383C, Intermediate CAD/CAE/CAM Intermediate CAD/CAE/CAM**4 hrs., 3 crs.,**

(Offered spring). Prerequisite: *ETD1320C. This course is a continuation of ETD1320C, Introduction to CAD. Advanced design concepts along with the application of generative design, rendering, animation and simulation with an introduction to CAM, computer aided manufacturing. The student will learn to create 2D models for laser engraving/cutting, waterjet and CNC plasma cutting.

ETD 2384C, Advanced CAD/CAE/CAM Advanced CAD/CAE/CAM**4 hrs., 3 crs.,**

(Offered fall). Prerequisite: *ETD1320C, *ETD2383C. This course is a continuation of ETD2383C, Intermediate CAD/CAE/CAM. The student will learn to develop models for outputting G code for use with CNC controlled machines.

ETD 2949, COOP/Work Experience/Drafting COOP/Work Experience/Drafting**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ETG - Engineering Tech/General**ETG 2502, Statics Statics****3 hrs., 3 crs.,**

Prerequisite: MAC1114. Basic principles of statics; resolution and composition of forces; equilibrium of forces; simple machines; trusses and frames; screws and threads; friction; centroids and center of gravity; moment of inertia, and radius of gyration. Includes scale model analysis and testing of bridge and truss-type structures.

ETG 2530, Strength of Materials Strength of Materials**3 hrs., 3 crs.,**

Prerequisite: ETG2502. Stress and deformation; riveted and welded joints; thin-walled pressure vessels; torsion; shear and moment of beams; columns. Includes scale model analysis and testing of tower and column-type structures.

ETG 2949, COOP/Work Experience/Engineering COOP/Work Experience/Engineering**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ETP - Engineering Tech:Power**ETP 1410C, Solar Energy Solar Energy****4 hrs., 3 crs.,**

Prerequisite: *EET1084C. This course provides students with the basic principles of photovoltaic and solar heating systems design and installation. The course will discuss evolving policies, technologies, and career areas. Students will analyze a site or location and evaluate it for solar applications and be able to describe passive heating and cooling building designs; design a solar water heating system, a solar cooking device, and a solar energy efficiency mode; diagram a solar thermal electric system, analyze solar manufacturing issues including equipment evaluation and types of collectors and filters; create a cost analysis for a solar powered project; and complete a solar energy project.

ETP 1500, Alternative Energy Inventory And Analysis Alternative Energy Inventory And Analysis**3 hrs., 3 crs.,**

This course provides students with basic principles of: conversion of energy into electricity; the requirements and conditions of power electronics converters; economics and tradition of green electricity. The course will discuss evolving alternative energy policies, technologies, and career areas. Alternative Energy and Analysis provides a global vision of available and potential energy sources, discusses their particular advantages and drawbacks and helps prepare current and future generations to use energy differently and exploit new energy sources.

ETP 1500L, Alternative Energy Inventory And Analysis Lab Alternative Energy Inventory And Analysis Lab**3 hrs., 3 crs.,**

This course provides students with the basic principles of: building science and residential energy; the procedures used to assess the performance of new and existing buildings. The lab provides specific instructions on identifying the most effective energy conservation procedures.

ETP 1501, Introduction To Energy, Environment, Society Introduction To Energy, Environment, Society**3 hrs., 3 crs.,**

This course provides students with the basic principles and history of traditional and alternative energy sources; current industry and government status of geothermal, wind, solar, biomass, fuel cells and other traditional energy sources. The course will discuss evolving alternative energy policies, technologies, and career areas.

ETP 1510, Biofuels & Biomass Biofuels & Biomass**3 hrs., 3 crs.,**

Prerequisite: ETP1500. This course provides students with the basic principles of biofuels and biomass systems design and installation. Students in this course will identify biofuels and biomass fuel sources (organic matter); describe biofuels and biomass technologies, applications and efficiency; analyze biofuels and biomass manufacturing, distribution and integration issues; evaluate biogas and its sources and site location; design a biofuels and biomass system and its related components; and identify various microturbines and their components.

ETP 1520, Geothermal Energy Geothermal Energy**3 hrs., 3 crs.,**

Prerequisite: ETP1500. This course provides students with the basic principles of geothermal systems design and installation. The course will discuss evolving policies, technologies, and career areas. Students will analyze a site or location and evaluate it for geothermal applications and be able to describe passive heating and cooling building designs; design a geothermal system, geothermal efficiency model; analyze geothermal manufacturing issues including equipment evaluation; create a cost analysis for a geothermal project; and complete a geothermal project.

ETP 1550, Alternative Fuels And Electric Vehicle Technologies Alternative Fuels And Electric Vehicle Technologies**3 hrs., 3 crs.,**

Prerequisite: *EET1084C. An overview of alternative fuels technology related to automobiles and the infrastructure that supports them. Technologies addressed in the course will include compressed natural gas, liquid petroleum gas, methanol, ethanol, electric, fuel cell, and hybrid electric. The description, application, and characteristics of alternative fuels will be covered. The course presents the history, legislation, regulations, safety, environmental impact, vehicle design, manufacturing, processing, and storage of the major alternative fuel technologies available today and those anticipated in the near future.

ETP 2322, Distributed Electrical Power Generation and Storage Distributed Electrical Power Generation and Storage**3 hrs., 3 crs.,**

A study of the electrical distribution grid and emerging Smart Grid technologies including: grid architecture, functionality, equipment, smart meters, data capabilities, and energy storage technologies. Topics such as: interconnection of various electrical power sources to the grid, the flow of power, outage monitoring and handling, and security are covered.

ETS - Engineering Tech:Specialty**ETS 1112C, Industrial Electronics Industrial Electronics****6 hrs., 4 crs.,**

Prerequisite: EET1035C. The objective of this course is to provide an exposure to many types of industrial electronics. This course will include the study of mechanical, electromechanical, and solid-state devices, thyristors, open- and closed-loop control systems, sensors and transducers, actuators, motors, telemetry, robotics, programmable controllers, and other areas.

ETS 1603, Introduction to Robotics Introduction to Robotics**3 hrs., 3 crs.,**

(Offered fall). This course introduces the student to robotics and defines the uses in the computer integrated manufacturing industry. Various topics cover robotic classifications, applications, socioeconomic impact, work-cell design, and the different software packages for programming different manufacturers robots, plus I/O and sensor interfacing with class projects centered on a CIM work-cell. This course provides experiences in programming an industrial robot for applications ranging from assembly applications involving the interfacing and control for clamping, parts feeding, index table control, conveyor integration, and fault detection. A host computer will be integrated into the factory lab for just in time and flexible manufacturing for students manufacturing a product. Students gain operating and troubleshooting experience, plus application engineering and systems integration experience on dedicated machinery and assembly robots.

ETS 2511C, Motor and Motion Control Motor and Motion Control**4 hrs., 3 crs.,**

(Offered fall). Prerequisite: ETS2542C. This course provides experiences with electro-mechanical devices such as relays, timers, counters, proximity sensors, photo sensors, and solid state relays for control applications. Motors and motor control circuits using motor starters and variable frequency drives (VFDs) controlled by programmable logic controllers (PLCs) are developed for various control applications. Motion control is developed using Allen-Bradley servo drives controlled by AB Control Logix and RSLOGIX 5000 software.

ETS 2535C, Process Control and Instrumentation Process Control and Instrumentation**4 hrs., 3 crs.,**

(Offered spring). Prerequisite: ETS2542C. This course prepares the student for working in the area of process control automation. Lecture and lab assignments provide experience with sensors, level control, flow control, pressure control, temperature control, and digital set point and with analog processing, and P.I.D. control. The Allen-Bradley PLC 1500 PLC processors will be used as the process controllers with a process control trainer to design, construct, interface, program, and troubleshoot control circuits and systems. The process software for the course will be the Allen-Bradley RSLOGIX 5/500 and RSVIEW32 Human Machine Interface.

ETS 2542C, Programmable Logic Controllers Programmable Logic Controllers**4 hrs., 3 crs.,**

(Offered spring). Prerequisite: EET1084C. This course covers the applications, servicing and troubleshooting of programmable logic controller circuits. The Allen-Bradley PLC processor with RSLOGIX software is applied to control applications involving rung programming, sequencers, timers, counters, data manipulations, instructions, math instructions, file-to-file moves, and communications using A/B Data Highway. Laboratory experiences include the design and troubleshooting of ladder logic programs with interfacing to hydraulics, pneumatics, and electrical sensors such as relays, limit switches, photo sensors, proximity detectors, pressure switches, solenoid valves, and a pneumatic pick-and place robot for industrial purposes.

ETS 2604, Robotics Applications**1 hr., 1 cr.,**

This course is designed to introduce students to the basic principles of robots including classification, operation, maintenance, troubleshooting and applications in the robotics industry. Students use hands-on practices to become familiar with sections of a robotic system in corequisite course ETS2604L.

ETS 2604L, Robotics Applications Lab (Capstone)**Robotics Applications Lab (Capstone)****4 hrs., 2 crs.,**

Laboratory work designed to practice and reinforce basic principles of robotics technology learned in the corequisite course, ETS2604 including: classification, operation, maintenance, and troubleshooting in the robotics industry. Students use hands-on practices to become familiar with various sections of a robotic system.

ETS 2606C, Robotics**Robotics****4 hrs., 3 crs.,**

\$101.00 lab fee. (Offered spring). Prerequisite: ETS2542C. Types of robots will be studied, such as servo point-to-point, non-servo pick and place, Cartesian, lead through teach, stepper control, pneumatic PLC control, etc. Robot programming, interfacing, and design of robotic workcells for industrial applications will be developed. A study of robot configurations, programming techniques for applications found in assembly, inspections, welding, painting, and in material handling applications. Lab experiences will be developed with the industrial robot, including a vision system for assembly applications.

ETS 2680C, Mechatronics I**Mechatronics I****5 hrs., 3 crs.,**

Prerequisite: EET1084C or ETS1520C. Provides the student with an introduction to mechatronics and measurement systems. Topics include microcontroller programming and interfacing, data acquisition, and mechatronics control architectures. Laboratory exercises will consist of experiments with microcontrollers, sensors, actuators, and data acquisition hardware.

ETS 2681C, Mechatronics II**Mechatronics II****5 hrs., 3 crs.,**

Prerequisite: ETS2680C. This course serves as a way to integrate all other courses in the sequence in a single system. Topics include mechatronics system concepts, safety, machine operation, sensors, pneumatics, electrical systems, and robotics. Laboratory exercises will consist of operating, programming, and problem solving of mechanical, electronic, and software systems on seven mechatronics training stations and one robotics training station.

ETS 2700C, Electro-Hydraulics & Pneumatics**Electro-Hydraulics & Pneumatics****4 hrs., 3 crs.,**

\$26.00 lab fee. (Offered fall). Prerequisite: ETS2542C. This course covers hydraulic and pneumatic applications as found in industrial control applications. Content includes basic physical laws, properties of fluids, hydraulic pumps, circuit design/applications, deceleration/braking of hydraulic actuators, fluid filtration in hydraulic circuits, and troubleshooting. This course covers pneumatic applications as found in industrial control systems. Content includes basic physical laws, pressure and force, air compressors, control valves, actuators, sequencing and counterbalance circuits, and troubleshooting.

ETS 2931, Special Projects in Computer Integrated Manufacturing**Special Projects in Computer Integrated Manufacturing****2 hrs., 2 crs.,**

(Offered fall and spring). Course centering around topics of current interest or of special interest to students or instructors. Students have the opportunity to research, design, and prototype new projects. Topics or focus may vary from semester to semester. The course can be repeated up to two times.

EGN - Engineering/General**EGN 1110C, Engineering Drawing Engineering Drawing****6 hrs., 3 crs.,**

(Offered fall). Student must provide own drafting instruments. A basic course in graphical expression. This course focuses on using 3-D visualization projects to solve problems and uses traditional drafting practices,. Areas covered will be orthographic projections, geometric constructions, isometric drawings, sectioning, dimensioning, and auxiliary views.

ENC - English Composition**ENC 0022, Developmental Writing I and II Combined Developmental Writing I and II Combined****4 hrs., 3 crs.,**

\$5.00 lab fee (Offered fall, spring, and summer). Must be passed with minimum grade of ?C.? This course is a developmental course that is not intended to satisfy any part of college-level English requirements and not counted as part of the required hours for graduation. A study of the elements of standard English grammar, mechanics, and usage. Writing from the paragraph to the essay; introduction to expressive, expository, and persuasive writing; and introduction to research techniques. Must be passed with minimum grade of ?C.?

ENC 1101, English Composition I English Composition I**3 hrs., 3 crs.,**

\$5.00 lab fee (Offered fall, spring, and summer). This course introduces students to rhetorical concepts and audience-centered approaches to writing including composing processes, language conventions and style, and critical analysis and engagement with written texts and other forms of communication. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 1101C, Enhanced English Composition I Enhanced English Composition I**5 hrs., 4 crs.,**

\$5.00 lab fee (Offered fall, spring, and summer). This course introduces students to rhetorical concepts and audience-centered approaches to writing including composing processes, language conventions and style, and critical analysis and engagement with written texts and other forms of communication. In addition to containing the same course content as the lecture/discussion format of ENC 1101, this course incorporates one credit hour of lab instruction with enhanced learning support in grammar and composition skills. This additional support includes but is not limited to student-teacher writing conferences, writers' workshops, peer review sessions, supplemental mini-lectures, and practice and review of the conventions of Edited American English. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 1101H, Honors English Composition I Honors English Composition I**3 hrs., 3 crs.,**

\$5.00 lab fee. (Offered fall, spring, and summer). This course introduces students to rhetorical concepts and audience-centered approaches to writing including composing processes, language conventions and style, and critical analysis and engagement with written texts and other characters) forms of communication. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 1102, English Composition II English Composition II**3 hrs., 3 crs.,**

\$5.00 lab fee (Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." Rhetoric of the argumentative essay and the documented paper. Compositions based on readings of fiction, non-fiction, poetry, film, and other media. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 1102H, Honors English Composition II Honors English Composition II**3 hrs., 3 crs.,**

\$5.00 lab fee (Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." Rhetoric of the argumentative essay and the documented paper. Compositions based on readings of fiction, non-fiction, poetry, film, and other media. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 2210, Technical Writing Technical Writing**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: ENC 1101 with a minimum grade of "C." Applies written and oral English skills to technical communication assignments, such as definitions, object or mechanism descriptions, process descriptions, instructions, analyses, proposals, memoranda, feasibility, laboratory, and technology research reports and resumes. Emphasizes clarity, objectivity, simplicity, and readability by multiple audiences. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 2301, Supplementary Composition Skills I Supplementary Composition Skills I**1 hr., 1 cr.,**

(Offered fall, spring, and summer). Prerequisite: CLEP credit for General Education English or ENC 1102 with a minimum grade of "C." Expository and argumentative writing for students (a) who have earned CLEP credit for General Education English or Areas II or III Humanities but still need to fulfill the writing requirements of the institution or (b) who have completed ENC1101 and ENC1102 with a minimum grade of "C" and want to develop their writing skills. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 2302, Supplementary Composition Skills II Supplementary Composition Skills II**1 hr., 1 cr.,**

(Meets fall, spring, and summer). Prerequisite: CLEP credit for General Education English or ENC 1102 with a minimum grade of "C." Expository and argumentative writing for students (a) who have earned CLEP credit for General Education English or Areas II or III Humanities but still need to fulfill the writing requirements of the institution or (b) who have completed ENC1101 and ENC1102 with a minimum grade of "C" and want to develop their writing skills. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENC 2949, COOP/Work Experience/English COOP/Work Experience/English**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ENL - English Literature**ENL 2012, English Literature Through the Eighteenth Century English Literature Through the Eighteenth Century****3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) A study of influential authors, historical and cultural contexts, and literary movements, forms, and themes of English literature from its beginning to the end of the eighteenth century. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENL 2022, English Literature: Romantics to Present English Literature: Romantics to Present**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) A study of influential authors, historical and cultural contexts, and literary movements, forms, and themes of English literature from the nineteenth century to the present. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENL 2022H, Honors: English Literature: Romantics To Present Honors: English Literature: Romantics To Present**3 hrs., 3 crs.,**

Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) A study of influential authors, historical and cultural contexts, and literary movements, forms, and themes of English literature from the nineteenth century to the present. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENG - English/General**ENG 2111, Literature and Film Literature and Film****3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement). A study of literature and their film adaptions, comparing written and cinematic narrative forms, writing elements, and film composition techniques. Readings will include selections from the Western canon. This course is a Gordon Rule writing course in which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ENT - Entrepreneurship**ENT 2000, Introduction to Entrepreneurship Introduction to Entrepreneurship****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides an overview and practical applications of the various activities involved in owning and operating a small business enterprise.

ENT 2949, COOP/Work Experience/Entrepreneurship COOP/Work Experience/Entrepreneurship**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

ENT 3003, Principles of Corporate Entrepreneurship Principles of Corporate Entrepreneurship**3 hrs., 3 crs.,**

(Offered fall). This course provides an overview of the multiple elements associated with corporate entrepreneurship. The course introduces the four main models to establish a corporate entrepreneurship strategy. There will be an exploration about building new businesses inside established firms, starting new lines of business or new product units, managing spinoffs, or creating joint ventures, and establishing processes to support these efforts.

EVR - Environmental Studies**EVR 1001, Introduction to Environmental Science Introduction to Environmental Science****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is a survey of basic chemical, biological, and physical principles of environmental science and their applications to environmental issues. This course is appropriate for students in a wide range of disciplines and programs.

EVR 1001H, Honors Introduction to Environmental Science Honors Introduction to Environmental Science**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is a survey of basic chemical, biological, and physical principles of environmental science and their applications to environmental issues.

EUH - European History**EUH 1000, Western Civilization I Western Civilization I****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The course explores the major political, economic, social, religious, and cultural aspects of Western Civilization from antiquity through the Early Modern Period. Topics include Ancient Mesopotamia, Egypt, Greece, Rome, Byzantium, the Islamic Empire, the Middle Ages, the Renaissance, the Protestant Reformation, and the Commercial Revolution. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

EUH 1000H, Honors West Civ I Honors West Civ I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This is a survey of western civilization stressing early development, diffusion of cultural institutions, and the emerging national monarchies to 1600. The subjects covered include Ancient Egypt, Mesopotamia, Greece, Rome, Byzantium, and Islam. Emphasis is placed on the Middle Ages, the Renaissance, the Protestant Reformation, and the Commercial Revolution. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

EUH 1001, Western Civilization II Western Civilization II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course examines modern Western institutions from ca. 1600 to the present day. Topics include the modern state system, the Scientific Revolution, the Enlightenment, the French Revolution, Napoleon, the development of nationalism, democracy, socialism, industrialism, imperialism, the Russian Revolution, the World Wars, and the contemporary world. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

EUH 1001H, Honors Western Civilization II Honors Western Civilization II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course examines modern Western institutions from 1600 to the present day including the Modern State System, the Scientific Revolution, the Enlightenment, the French Revolution, Napoleon, Reaction, the development of Nationalism, Democracy, and Socialism, Industrialism, Imperialism, the Russian Revolution, the World Wars, and the Contemporary World. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

EUH 2021, Survey of Medieval History Survey of Medieval History**3 hrs., 3 crs.,**

(Offered spring). This course will examine the medieval world from the ?fall? of the Roman Empire to the coming of the Renaissance. The main emphasis will be on Western Europe but the course will give due consideration to the neighboring civilizations of Byzantium and Islam. Cultural, intellectual, and social developments will be considered within a political framework.

FIN - Finance**FIN 1100, Personal Finance Personal Finance****3 hrs., 3 crs.,**

(Offered fall and spring). An introductory course in personal finance. This course will include a study of personal financial planning, sources of credit, home ownership, investment strategies, and personal insurance options.

FIN 3400, Financial Management Financial Management**3 hrs., 3 crs.,**

(Offered fall). This course explores methods of deriving information from financial statements, including both published documents and privately prepared reports that would be of interest to lenders and investors. Extensive use is made of computer assisted financial planning and forecasting models.

FIN 4470, Entrepreneurial Finance Entrepreneurial Finance**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: FIN3400. This course enhances the financing skills required for the successful entrepreneur. This course provides the essential tools and knowledge needed to build a solid financial foundation for a profitable business. It will provide students with the finance and business strategies for an entrepreneurial venture.

FFP - Fire Fighting & Protection

FFP 0030, Firefighter 1 Firefighter 1

13 hrs., 6.4 crs.,

\$40.00 lab fee. Prerequisite: Meet the State of Florida qualifications as defined in State Statute 633.412 Firefighters; qualifications for certification and Gulf Coast State College qualification pertaining to the fire science technology limited access program. This course introduces the student to the skills and techniques used in firefighting. Classroom instruction includes a variety of fire related topics. Practical exercises and scenarios are included to enhance classroom instruction and skill development. Those who complete the course receive a state competency certificate as a volunteer firefighter upon successful completion of all Florida Bureau of Fire Standards and Training requirements.

FFP 0031, Firefighter 2 Firefighter 2

20 hrs., 10 crs.,

\$17.00 lab fee. Prerequisites: Meet the State of Florida qualifications as defined in State Statute 633.412 Firefighters; qualifications for certification and Gulf Coast State College qualification pertaining to the fire science technology limited access program. This is a continuation course after Firefighter 1 and prepares the student for employment as a Florida certified firefighter. This course builds upon the skills and knowledge attained in Firefighter 1 and prepares students for mastery of the basic competencies required. After course completion, the student is eligible to take the certification examination given by the Florida Bureau of Fire Standards and Training.

FFP 0069, Firefighter Minimum Standards Capstone Firefighter Minimum Standards Capstone

1.5 hrs., 1.5 crs.,

\$224.00 lab fee. Prerequisites: FFP0010, FFP0020, and FFP1140. This course is designed to provide a comprehensive review of the subjects taught in the program prior to the State of Florida Firefighter Certification Examination. (Limited access: requires admission to the academy or special permission of the chair of Public Safety.)

FFP 1140, First Responder to Medical Emergencies First Responder to Medical Emergencies

3 hrs., 3 crs.,

This course introduces the student to the skills and techniques used for first responder to medical emergencies. Classroom instruction includes a variety of medical related topics encountered by firefighters. Practical exercises and scenarios are included to enhance classroom instruction and skill development. After completion, the student is eligible to continue with Firefighter I certification. (Limited access; requires permission of fire science coordinator.)

FFP 1301, Fire Stream Hydraulics Fire Stream Hydraulics

3 hrs., 3 crs.,

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 most technical computations. Effort is directed toward giving an understanding of how good fire streams are developed.

FFP 1302, Fire Apparatus Operation Fire Apparatus Operation

3 hrs., 3 crs.,

\$26.00 lab fee. Prerequisite: FFP1301 or approval of instructor. The curriculum covers the laws, rules, and driving techniques for emergency vehicles, as well as a review of fire service hydraulics. Fire ground evolutions and a driving course make up the practical part of the course. The evolution portion of the course includes the use of pre-connected lines, tandem pumping, drafting, relays, and master streams. The student should have a basic understanding of fire stream hydraulics prior to entering this course. Students must bring gloves and proper attire for water pumping exercises.

FFP 1505, Fire Prevention Practices Fire Prevention Practices

3 hrs., 3 crs.,

Prerequisite: Basic fire science knowledge. Principles of prevention and investigation; fire hazards of various occupancies; fire codes; OSHA requirements for fire protection; surveying and mapping procedures; recognition of fire hazards; engineering a solution of the hazards; enforcement of the solution; public relations as affected by fire prevention and presentation of arson evidence.

FFP 1510, Building and Fire Codes Building and Fire Codes**3 hrs., 3 crs.,**

Comparison of national, state, and local building and fire codes emphasizing local laws and ordinances pertaining to building construction and design.

FFP 1540, Fire Protections and Devices Fire Protections and Devices**3 hrs., 3 crs.,**

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.

FFP 1610, Fire Cause and Arson Detection Fire Cause and Arson Detection**3 hrs., 3 crs.,**

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.

FFP 1702, Fundamentals of Fire and Emergency Services Fundamentals of Fire and Emergency Services**3 hrs., 3 crs.,**

This course introduces the student to the firefighting profession and reinforces the need for continuous learning for career firefighters. Classroom instruction includes a variety of fire related topics about the firefighting profession. Practical exercises and scenarios are included to enhance classroom instruction and to utilize real world examples.

FFP 1741, Fire Service Course Design Fire Service Course Design**3 hrs., 3 crs.,**

Prerequisites: Certified fire fighter and basic fire science knowledge. Emphasizes techniques that help a fire service instructor develop skills in curriculum development.

FFP 2111, Fire Chemistry Fire Chemistry**3 hrs., 3 crs.,**

Prerequisite: Basic fire science or law enforcement knowledge. This course is designed to show the arson investigator the different forms of matter and energy, common substances, and how they relate to fires. The chemical formulas of flammable and combustible substances, their bondings and separations, as well as the different chemical reactions related to fire and oxidation are covered. Particular emphasis is placed on the specific substance used by arsonists to ignite and accelerate burnings. NOTE: Part of HazMat Tech, Fire Investigator I, Fire Inspector II, and Fire Officer II.

FFP 2120, Building Construction for the Fire Service Building Construction for the Fire Service**3 hrs., 3 crs.,**

Prerequisite: Work experience as paid or volunteer firefighter. The study of problems of building fires; structural fire elements; fire resistance; surface finishes; fire spread by windows, air conditioning, building elements, and nonstructural elements.

FFP 2521, Blueprint Reading and Plans Examination Blueprint Reading and Plans Examination**3 hrs., 3 crs.,**

Preparation course of study for exam in blueprint reading and plans.

FFP 2700, Fire Department Administration, Management, Supervision Fire Department Administration, Management, Supervision**3 hrs., 3 crs.,**

Administrative, managerial, and supervisory principles that apply to the fire science. 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 on leadership traits, training, planning, and company officer responsibilities.

FFP 2706, Public Information Officer Public Information Officer**3 hrs., 3 crs.,**

A study of what public relations is and how a fire department can utilize positive public relations to benefit the organization and the public. This course describes the functions of a public relations officer along with the responsibilities the position holds.

FFP 2720, Company Officer Company Officer**3 hrs., 3 crs.,**

Broad concepts of supervision and leadership; analysis of the kinds of effective leadership needed in the fire sciences; supervising in high stress conditions; use of case studies and individual goal-setting.

FFP 2740, Fire Science Instructor Techniques Fire Science Instructor Techniques**3 hrs., 3 crs.,**

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.

FFP 2770, Ethical and Legal Issues for the Fire Service Ethical and Legal Issues for the Fire Service**3 hrs., 3 crs.,**

Prerequisite: Basic fire science knowledge. A study of the entire spectrum of issues facing today's fire service leaders. Topics include: labor relations, human rights and diversity; conflicts of interest, and making frameworks for ethical decision making.

FFP 2810, Firefighting Strategy and Tactics Firefighting Strategy and Tactics**3 hrs., 3 crs.,**

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.

FFP 2811, Firefighting Strategy and Tactics II Firefighting Strategy and Tactics II**3 hrs., 3 crs.,**

Prerequisites: Certified fire fighter, basic fire science knowledge, and FFP1810 or FFP2810. A study of action plans, command and control, safety, building dynamics, sprinkler operations, fire company operations, and various types of fires. An advanced study intended for higher ranking officers using state or locally provided scenarios.

FFP 2949, COOP/Work Experience/Fire Science COOP/Work Experience/Fire Science**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

FOS - Food Science**FOS 2201, Food Service Sanitation and Safety Food Service Sanitation and Safety****2 hrs., 2 crs.,**

(Offered fall and spring). Designed to develop an understanding of the basic principles of sanitation and safety in order to maintain a safe and healthy environment for the consumer in the food industry. Includes the laws and regulations related to safety, fire, and sanitation and adherence to them in the food service operation.

FSS - Food Service Systems**FSS 1063C, Food Specialties: Baking Food Specialties: Baking****7 hrs., 3 crs.,**

\$77.00 lab fee. (Offered fall and spring). Corequisites: FOS2201, FSS1202C Fundamentals of baking which involve preparation of yeast rolls, breads, pies, cakes, cookies, tarts, doughnuts, holiday specialties, and tortes. Proper use and care for equipment, sanitation and hygienic work habits, and conformation with health laws.

FSS 1105, Food Purchasing Food Purchasing**3 hrs., 3 crs.,**

(Offered spring). Principles of menu planning for various types of facilities and service as well as menu layout, selection and development, and pricing structures. Principles and practices concerned with the purchase and receipt of food, supplies, and equipment for various food service operations.

FSS 1202C, Basic Food Preparation Basic Food Preparation**8 hrs., 4 crs.,**

\$276.00 lab fee. (Offered fall). Corequisite: FOS2201, FSS1063C. Familiarization with tools, equipment, and organization of classical kitchen. Study of basic food recipes, ingredients, cooking theories, terminology, technology, formulas, and procedures. Student learns basic meat fabrication through lecture and hands-on experience/demonstration.

FSS 1222C, Kitchen Management Basic Food Preparation**7.5 hrs., 3 crs.,**

\$223.00 lab fee (Offered spring). Prerequisite: *FOS2201, *FSS1202C, *FSS1063C. Corequisite: HFT1265C. This course is a continuation of Basic Food Preparation, providing intermediate instruction in quantity food preparation with an emphasis on refining techniques. Skills are applied to banquet and catering production, menu planning, international cuisine, and specialty baking.

FSS 1248L, Food Specialties: Garde Manger I Food Specialties: Garde Manger I**4 hrs., 3 crs.,**

\$236.00 lab fee. (Offered spring). Prerequisites: FSS1063C, FSS1202C, FOS2201. Stresses basic garde manger principles as well as a thorough understanding of the functions and duties of the department as it relates and integrates into other kitchen operations. Specific focus on specialty work, including ice carving, buffet decorations, artistic centerpieces, and understanding of equipment and area planning.

FSS 1942, Culinary Externship Culinary and Hospitality Externship**1 hr., 1 cr.,**

(Offered fall and spring). Prerequisites: Permission of instructor. Coordinated work-study reinforcing the educational and professional growth of the student through parallel involvement in classroom studies and field experience.

FSS 2065L, Food Specialties: Pastry Specialization Food Specialties: Pastry Specialization**4 hrs., 3 crs.,**

\$147.00 lab fee. (Offered fall). Prerequisites: FOS2201, FSS1202C, FSS1063C. Students will work in a controlled environment and specialize in advanced procedures of pastry baking and dessert preparation and presentation. Emphasis is placed on decorative work and display pieces. An understanding of pastry decoration, sugar cooking, Pastillage, chocolate, and bread decoration is provided.

FSS 2224L, Advanced Food Preparation Advanced Food Preparation**8 hrs., 3 crs.,**

\$292.00 lab fee. (Offered spring). Prerequisites: FSS2240L, HFT2264C. Prerequisite or Corequisite: HFT2840C. Meal and service planning, including preparation of a complete menu for a service dining room to include appetizers, soup, salad, entree, vegetables, dessert, and cheese and fruit. Production coordinated with dining room staff. Students will rotate and work the classical brigade stations in the kitchen.

FSS 2240L, Food Specialties: World Cuisines Food Specialties: World Cuisines**7 hrs., 3 crs.,**

\$272.00 lab fee. (Offered fall). Prerequisites: FOS2201FSS1222C, HFT1265C. Corequisite: HFT2264C. Study and preparation of popular international cuisines. History studied along with actual preparation of many international recipes. Includes buffet and banquet kitchen procedures.

FSS 2380, Culinary Management Practicum I - Restaurant Management Culinary Management Practicum I - Restaurant Management**6 hrs., 3 crs.,**

Prerequisites: FSS1202C, FOS2201, FSS1063C. Corequisite: FSS2381. Through extensive hands-on experience, students will acquire the skills necessary to plan and prepare various meals utilizing cost control methods.

FSS 2381, Culinary Management Practicum II - Kitchen Management Culinary Management Practicum II - Kitchen Management**7.5 hrs., 3 crs.,**

Prerequisites: FSS1202C, FOS2201, FSS1063C. Corequisite: FSS2380. Through extensive hands-on experience, students will acquire the skills necessary to plan and prepare various meals utilizing cost control methods.

FSS 2949, COOP/Work Experience/Restaurant_Hospitality COOP/Work Experience/Restaurant_Hospitality**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

FOR - Forestry**FOR 2949, COOP/Work Experience/Forestry COOP/Work Experience/Forestry****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

GEB - General Business**GEB 1000, Business Career Strategies Business Career Strategies****1 hr., 1 cr.,**

(Offered fall). This course is designed to enable students to thrive in a competitive business environment. Students will learn business etiquette, alternative career pathways, personal financial management, and budgets. Students will perform self-reflective exercises to determine working and learning styles, research industry positions, learn basic job hunting skills and learn how to develop and present their work. Additionally, they will learn interviewing skills, attend meetings of professional organizations, and career development skills.

GEB 2949, COOP/Work Experience/Business COOP/Work Experience/Business**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

GEB 3213, Business Communication for Professional Effectiveness Business Communication for Professional Effectiveness**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: Must be admitted to one of the BAS programs. This course introduces students to essential writing and speaking communication skills, organizational strategies and formats used by successful business professionals. It provides opportunities for students to apply these skills in correspondence, research, reports and presentations that prepare them for effective job searches and productive careers.

OCE - General Oceanography**OCE 1001, Fundamentals of Oceanography Fundamentals of Oceanography****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Using the scientific method, critical thinking skills, and data analysis, this course will examine the fundamental processes of the ocean system, composed of an atmosphere, hydrosphere, lithosphere, and biosphere, through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize oceanic connections with humanity.

GEA - Geography Regional Areas**GEA 1000, World Regional Geography World Regional Geography****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides a regional survey of the world's nations and people, how they interact with the natural environment, their role in the global system, and contemporary cultural, economic, and political issues.

GEO - Geography Systematic**GEO 1400, Human Geography Human Geography****3 hrs., 3 crs.,**

This course provides an introductory survey of geographic theories, issues, and applications by examining how people interact with each other socially, culturally, economically, politically, economically, across distances, scales, and the natural environment. Global contrasts between urban and rural habitation, local versus transnational trade, and regional uneven economic development will be emphasized.

GIS - Geography: Information Sci**GIS 2030, Fundamentals of Remote Sensing Fundamentals of Remote Sensing****3 hrs., 3 crs.,**

(Offered fall). This course introduces basic concepts and fundamentals of remote sensing, image processing, and the global positioning system (GPS). The principles and processes involved in air-photo interpretation will be reviewed and examined. Image processing techniques will be reviewed from practical and mathematical points of view. The course is intended to provide the student with the background information necessary to successfully use remotely sensed imagery and GPS in conjunction with GIS technology.

GIS 2030C, Fundamentals of Remote Sensing Fundamentals of Remote Sensing**4 hrs., 3 crs.,**

(Offered fall). This course introduces basic concepts and fundamentals of remote sensing, data processing, and the global positioning system (GPS). The principles and processes of orthophotography, LiDAR, sonar, thermography, and radio direction finding/analysis will be reviewed and examined. Additionally, students will be trained to use GIS tools to perform object and pixel-based recognition, and perform stockpile volume/mass analysis.

GIS 2040, Introduction to Geographic Information Systems Introduction to Geographic Information Systems**3 hrs., 3 crs.,**

(Offered spring). This course teaches fundamental concepts and techniques of geographic information systems (GIS). It covers basic concepts such as map projections, spatial data models, relational databases, spatial analysis, and visualization of spatially distributed data and phenomena. The applications of GIS are presented. Future issues for GIS and state-of-the-art technology are also discussed.

GIS 2040C, Introduction to Geographic Information Systems Introduction to Geographic Information Systems**4 hrs., 3 crs.,**

(Offered spring). This course teaches fundamental concepts and techniques of geographic information systems (GIS). It covers basic concepts such as basic geographic and cartographic concepts, GIS data accessibility, spatial data structures, basic spatial relationship analysis, and visualization of spatially distributed data and phenomena to solve practical problems.

GLY - Geology**GLY 1010, Physical Geology Physical Geology****3 hrs., 3 crs.,**

(Offered fall and spring). Using the scientific method, critical thinking skills, data analysis, this course will examine the fundamental processes of the earth system, composed of an atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and exosphere through time. The course will also explore interactions between these spheres, including critical analysis of scientific theories and emphasize lithospheric connections with humanity.

GLY 1032, Natural Disasters Natural Disasters**3 hrs., 3 crs.,**

Exercises in the identification of common rocks and minerals, interpretation of topographic maps and aerial photographs, methods of geological illustration.

GRA - Graphic Arts**GRA 1100, Principles Of Graphic Design Principles Of Graphic Design****3 hrs., 3 crs.,**

(Offered fall). Students attending this course will be exposed to a hands-on introduction to the principles and techniques of graphic design for print and digital media covering print and digital production; resolution and size considerations; vector vs. raster formats; color theory and layout principles; typography; file formats, output, and management. Upon completion, students should be able to creatively produce graphic designs.

GRA 2151, Drawing Techniques for Digital Illustrators Drawing Techniques for Digital Illustrators**3 hrs., 3 crs.,**

This course provides students with experiences in illustration and digital art techniques and the application of vector graphics in the field of graphic design. The content includes, but is not be limited to: identification and investigation of Adobe Illustrator and/or Corel Draw consisting of lines and curves defined by mathematical objects called vectors. Identification and application of general methods for critical, aesthetic, and technical judgments relating to the uses of computer-generated illustrations for print, web, and multimedia designs. Also included is the history of graphic design and the application of computers to the graphic world.

GRA 2156, Computer Graphics for Digital Designers I Computer Graphics for Digital Designers I**3 hrs., 3 crs.,**

(Offered fall and spring). Participants in this course will have an opportunity to explore the basic functions of Adobe Photoshop to create dynamic digital art in the field of Graphic Design. The course begins with the identification and investigation of the Principles and Elements of Design, moves to exploration of the role Photoshop and photo-editing plays in the graphic industry, and concludes with student design and completion of a comprehensive project.

GRA 2157, Computer Graphics for Digital Designers II Computer Graphics for Digital Designers II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: GRA2156. This course further develops the skills developed in GRA2156 in design, grid systems, advertising techniques, and electronic publication by providing students with in-depth proficiency in design principles and vocabulary. With the Adobe Creative Suite, students learn advanced techniques in traditional graphic design and desktop publishing. The course emphasizes practical assignments that examine applied problem solving and professional solutions for graphic designers. Specific themes/topics for the course include visual perception, visual grouping and hierarchy and visual identity development.

HIM - Health Information Mngt**HIM 2949, Health Information Management Coop Health Information Management Coop****1 hr., 1 cr.,**

HSC - Health Science

HSC 0003, Basic Healthcare Worker Basic Healthcare Worker**6 hrs., 3 crs.,**

\$18.00 lab fee. This course is an introduction to the health care delivery system and health occupations. Topics include basic safety, security, and emergency measures, infection control, basic math, and blood borne disease; including HIV/AIDS, and science skills. Communication and interpersonal techniques and employability skills are also covered to provide a basic foundation on which to build subsequent learning. Campus lab experience is provided. This course is one of two courses that meet the requirement for the Certified Nursing Assistant certificate. The core lecture classes are offered as hybrid (distance education).

HSC 0725C, Nurse Aide and Orderly (Articulated) Nurse Aide and Orderly (Articulated)**5 hrs., 2.5 crs.,**

Prerequisite: *HSC0003. Content includes classroom, laboratory, and clinical experiences relating to communication, performance of patient care procedures, including physical comfort and safety functions for geriatric patients. Application of infection control, nutrition principles, and biological, psychological, and social support are used in the performance of supervised organizational functions, following the patient plan of care. Restorative care activities, with an emphasis on geriatrics is also included.

HSC 1000, Orientation to Perioperative Services Orientation to Perioperative Services**3 hrs., 3 crs.,**

(Offered fall). Corequisite: HSC1000L. This course is designed to introduce the student to the health care delivery system including the facility organization, hierarchy of the systems, management, and physical environment and to provide an overview of the role and responsibilities of the perioperative health care team including the professions history, professional responsibilities, mental health/personal hygiene, communication, information technology, interpersonal skills, teamwork, employability skills, infection control, legal/ethical/moral issues, documentation, risk management, All-Hazards Preparation for Disasters, and the personal characteristics of the successful health care professional. Common illnesses will be discussed including discussions of the prevention of disease and promotion of wellness. Topics will also include the development of patient care skills such as patient identification, assessment, the biopsychosocial needs of the patient, multicultural aspects, the special needs patients, monitoring of the patient's status, death and dying, institution of a plan of care, and emergency patient situations will be covered.

HSC 1000L, Orientation to Perioperative Services Lab Orientation to Perioperative Services Lab**3.44 hrs., 1 cr.,**

\$216.00 lab fee (Offered fall). Corequisite: HSC1000. This course prepares the student for the surgical experience and includes OR attire, body mechanics, patient transfer, infection control, gown/glove, urinary catheterization, basic aseptic skills, surgical instruments, and vital signs. Includes 15 hours of clinical observation and orientation.

HSC 1004, Overview of Health Professions Overview of Health Professions**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is designed to assist students in planning and pursuit of their own career goals. Students will be provided with an introduction to the health care industry emphasizing the roles of the various health care professionals and the current trends in healthcare opportunities. The course investigates the wide variety of health care careers, focusing on the nature of the work, job descriptions, necessary abilities, legal and ethical responsibilities, and education preparation and credentialing. An opportunity to interface with health care professionals and explore one or more options in depth will be provided.

HSC 1403C, First Aid, Personal Safety, and Basic Life Support Techniques First Aid, Personal Safety, and Basic Life Support Techniques**3 hrs., 3 crs.,**

\$50.00 lab fee (Offered fall and spring). A study of standards and accepted principles of first aid. Discussion and laboratory practice in dressings and bandages, wounds and their care, artificial respiration and cardiopulmonary resuscitation, poisons, fractures, burns, and transportation of the injured. This course will count as an academic elective.

HSC 1531, Medical Terminology Medical Terminology**2 hrs., 2 crs.,**

(Offered fall, spring, and summer). Study of the language of medicine. Includes construction, analysis, spelling, application, and pronunciation of medical terms and how they relate to the structure and function of the human body. Explores the use of medical words and abbreviations used in clinical procedures, pathophysiology, and case histories.

HSC 2100, Personal and Community Health Personal and Community Health**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course is designed to improve the quality of health, and to explore crucial health issues. This course encourages a more knowledgeable and proactive stance towards maintaining good health. This course will count as an academic elective.

HSC 2520, Microbiology for Perioperative Services Microbiology for Perioperative Services**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Course prepares students for the practice of maintaining sterility. Topics include the history of microbiology, taxonomy, types, structure, and characteristics of microorganisms. The difference between prokaryote and eukaryote cells, structure and function, genetic implications, mutations, and the host/microbe relationships are discussed. The principles of chemistry, pH, electricity, and other factors that affect cells are discussed. Microscopy includes the application of microscopes, staining methods, culture media, interpretations, and culture and sensitivity tests. Microbial morphology, growth, metabolism, and transmission are discussed in some detail. Infection control methods are studied, as well as the infectious process, surgical site infections, and the human body's natural defenses. Various significant aspects of common infectious disease for each system, the immune response, principles of wound healing, and how chemotherapeutic agents assist in this task are discussed.

HSC 2949, COOP/Work Experience/Health Sciences COOP/Work Experience/Health Sciences**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

HSA - Health Services Admin**HSA 3113, Current Trends/Contemporary Issues in Healthcare Current Trends/Contemporary Issues in Healthcare****3 hrs., 3 crs.,**

(Offered fall). The presentation of significant health care issues and their developing trends. Content may differ each time in order to be current with changing events of varying importance, such as aging, coping with dying, women's and minorities' roles in health, and patient privacy issues.

HSA 3553, Legal and Ethical Issues in Healthcare Legal and Ethical Issues in Healthcare**3 hrs., 3 crs.,**

(Offered fall). The principles and rules of law and how they relate to health care organizations and the ethical issues of consumers and providers of health care. The course also focuses on ethics and its principles and application in service settings. Contemporary issues confronting those delivering and using health care will be examined.

HSA 3700, Foundations of Research in Healthcare Foundations of Research in Healthcare**3 hrs., 3 crs.,**

(Offered spring). An introduction to research methods as applied to the healthcare field. In addition to the study of research methods and tools, students complete exercises in literature search, research report analysis covering research design and data analysis, and report writing.

HSA 4110, Healthcare Organization and Management Healthcare Organization and Management**3 hrs., 3 crs.,**

(Offered spring). This course will examine the conceptual framework of healthcare management with an emphasis on the process, functions, and roles that contribute to successful management. Facilities studied will include hospitals, ambulatory facilities, HMOs, and long-term care facilities.

HSA 4160, Strategic Planning and Marketing for Healthcare Strategic Planning and Marketing for Healthcare**3 hrs., 3 crs.,**

(Offered fall). An introduction to the basic concepts of planning and evaluation as the fundamental tools of program design and development. Opportunities for theoretical and practical applications in the use of basic techniques are developed through classroom exercises and class projects.

HSA 4850, Capstone Capstone**6 hrs., 3 crs.,**

(Offered summer). Prerequisite: HSA3700 with a minimum grade of "C." Comprehensive and synthesizing project to apply the knowledge and skills learned in the program courses. Projects must have theoretical and applied components. The capstone project is taken in the student's final semester.

HLP - Health, Leisure & Phys Ed**HLP 1081, Wellness Wellness****3 hrs., 2 crs.,**

(Offered fall and spring). This course is designed and organized so that students of all ages, interests, physical conditions, and activity levels will become more knowledgeable of appropriate wellness and lifestyle choices. Topics covered will include but not be limited to wellness, health, flexibility and strength, cardiovascular endurance, nutrition, weight control, stress, drug and alcohol use, and related issues. There will be a lifetime recreation or lifetime fitness activity component as a part of each class. This course will count as an academic elective.

HFT - Hospitality Management**HFT 1000, Hospitality Industry Hospitality Industry****3 hrs., 3 crs.,**

(Offered fall and spring). An introduction to the hotel-motel-restaurant business, departments, industry's responsibilities, business ethics, and opportunities for creative employment.

HFT 1210, Leadership and Managerial Development Leadership and Managerial Development**3 hrs., 3 crs.,**

(Offered spring). Explore and discuss various managerial styles and techniques as applied to planning, organization, staffing, directing, and controlling within hospitality business concepts. Basic skills and training to develop and understand examples of effective leadership qualities to motivate and improve staff performance, coaching, and working efficiently with peers, superiors, and subordinates.

HFT 1254, Lodging Operations Lodging Operations**3 hrs., 3 crs.,**

(Offered fall). This course introduces students to guest service operations and is designed for students interested in managing hotels, motels, resorts, and other related lodging businesses. The course provides students with practical knowledge of the concepts and procedures used in managing commercial lodging operations. Students are introduced to the rooming and guest service functions. The course includes the theories and principles of guest service management used in the lodging industry. The course gives students the opportunity to develop human relations and customer service skills. Operation of the various functions of the rooming department of a lodging operation are covered.

HFT 1265C, Restaurant Management Restaurant Management**4 hrs., 3 crs.,**

(Offered spring). Prerequisites: *FOS2201, *FSS1202C, *FSS1063C. Corequisite: FSS1222C. This course covers the basic principles of restaurant management. Topics include facility layout, supervision of personnel, labor and food cost control, selection, purchasing, legal considerations, as well as furniture and decor for restaurants and related institutions.

HFT 1300, Managing Housekeeping Operations Managing Housekeeping Operations**3 hrs., 3 crs.,**

Systemic approach to managing housekeeping operations in hospitality industry. Emphasis on role of housekeeping department and understanding managerial skills necessary to efficiently operate department.

HFT 1313, Hospitality Property Management Hospitality Property Management**3 hrs., 3 crs.,**

(Offered spring). Overview of hospitality property management functions, including maintenance, utilities, security, parking, and recreation facilities.

HFT 1600, Hospitality Law Hospitality Law**3 hrs., 3 crs.,**

(Offered fall). A study of the laws impacting the hospitality industry. Topics include an introduction to law, court systems, civil rights law, employment law, contracts, torts, regulations governing the sale of food and alcohol, responsibility for guests' property, and legal rights of innkeepers and restaurateurs.

HFT 1800, Food and Beverage Management Food and Beverage Management**3 hrs., 3 crs.,**

(Offered spring). This course examines the field of food and beverage management within the hospitality industry, including bars, restaurants, cafeterias, hotels, and banquet halls. Students will develop foundational knowledge in key areas including food preparation, menu planning, customer relations, marketing, bartending and beverage management, and event management.

HFT 1860, Beverage Management Beverage Management**3 hrs., 3 crs.,**

(Offered spring). A study of the three categories of alcoholic beverages: wine, beer, and spirits. Provides a strong foundation in beverage purchasing, receiving, storing, control, and sales needed by the professional beverage manager.

HFT 2264C, Banquet and Convention Management Banquet and Convention Management**6 hrs., 3 crs.,**

(Offered fall). Prerequisites: FSS1222C, HFT1265C. Corequisite: FSS2240L. Introduction to the complete set of skills necessary to adequately perform as a hotel banquet manager and convention planner. Actual functions will be used to reinforce the general rules of table service as they apply to buffets and banquets.

HFT 2401, Hospitality Accounting and Financial Analysis Hospitality Accounting and Financial Analysis**3 hrs., 3 crs.,**

(Offered fall). Basic understanding of financial accounting and specifically hospitality industry accounting concepts and procedures used in hotels, restaurants and clubs.

HFT 2451, Cost Control and Purchasing Cost Control and Purchasing**3 hrs., 3 crs.,**

(Offered spring). This course is an overview of the management system with an in-depth study in the control component of the management cycle. It will focus on the principles and procedures involved in an effective system of food, beverage, labor, and sales income control, as well as emphasize the development and use of standards and the calculation of actual costs.

HFT 2501, Hospitality Marketing Hospitality Marketing**3 hrs., 3 crs.,**

(Offered fall). Provides students with basic knowledge and practical experience which will enable them to develop marketing and sales plans for hotel/motel/restaurant properties.

HFT 2750, Convention Service and Management Convention Service and Management**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: HFT1000. Introduces students to the complete set of skills necessary to adequately perform as a hotel banquet manager and convention planner. Actual events will be used to reinforce the general rules of table service, booking functions, staffing banquets/conventions, and responsibilities of a host venue as they apply to buffets and banquets. Prepares students in trade show administration, meeting management and legal issues associated with banquets and conventions.

HFT 2840C, Dining Room Operations Dining Room Operations**8 hrs., 3 crs.,**

(Offered spring). Prerequisites: FSS2240L, HFT2264C. Corequisite: FSS2224L. Types of dining room and beverage service techniques found in the hospitality industry.

HFT 2867C, Wine Essentials Wine Essentials**3 hrs., 3 crs.,**

\$74.00 lab fee (Offered spring). Minimum age of 18 years. This course is an introduction to the subject of wine for hospitality industry managers. Topics include the history of wine, winemaking, wine producing regions of the world, grape and wine varieties, wine tasting, wine and food pairing, and wine service. Classes include wine tasting labs that focus on developing sensory evaluation skills, and varietal identification.

HFT 2949, COOP/Work Experience/Hospitality COOP/Work Experience/Hospitality**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

HUN - Human Nutrition**HUN 1001, Survey of Nutrition Survey of Nutrition****2 hrs., 2 crs.,**

(Offered fall and spring). Relates nutrition to the hospitality industry by way of menu planning, studying nutritional deficiencies diseases, retention of nutrients, and the basic principles for today's society.

HUN 1201, Principles of Nutrition Principles of Nutrition**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Principles and controversies of nutrition with emphasis on the principal nutrients in foods and their utilization by the body as well as determining and meeting food needs for optimum health at different stages of the life span.

HUN 1201H, Honors Principles Of Nutrition Honors Principles Of Nutrition**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Principles and controversies of nutrition with emphasis on the principal nutrients in foods and their utilization by the body as well as determining and meeting food needs for optimum health at different stages of the life span.

HUM - Humanities**HUM 2020, Introduction to Humanities Introduction to Humanities****3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) In this course, students will learn about the creative ideas and accomplishments of various cultures in various fields of humanities that may include art, architecture, drama, history, music, literature, philosophy, and religion. The course will include cultural expressions from the Western canon and may also include expressions from around the globe. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

ISM - Information Systems Mgmt**ISM 3013, Introduction to Management Information Systems Introduction to Management Information Systems****3 hrs., 3 crs.,**

The course introduces fundamental concepts and methods related to the management of information systems in organizations.

ISM 4154, Enterprise-Wide System Implementation and Administration Enterprise-Wide System Implementation and Administration**3 hrs., 3 crs.,**

(Offered summer). Prerequisites: MAN3303, CTS1650. This course will expose students to key aspects involved in the implementation and operation of the r/3 system, and will provide the technical and conceptual foundation necessary for developing appropriate strategies and approaches for implementation and maintenance of an enterprise-wide system.

ISM 4302, Emerging Technologies Emerging Technologies**3 hrs., 3 crs.,**

(Offered summer). Prerequisites: MAN3303, CGS1570, COP1000, COP2700. Corequisite: Permission of department chair. This course covers emerging information and communication technologies that are changing the way the business is being operated in global economy. The students will be introduced to: the assessment and risk associated with emerging technologies, how to manage emerging technologies markets and analyze emerging markets case studies.

ISM 4318, Agile Project Management Agile Project Management**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: CGS1103 or MAN2021. This course will cover the knowledge of agile principles and improve skills with agile techniques. Students will explore many approaches to agile such as Serum, Kanban, Lean, extreme programming (XP) and test-driven development (TDD.) A focus will be given to project management institutes (PMI) content domains for certification for agile practitioners, known as the PMI agile certified practitioner (PMI-ACP).

ISM 4323, Network Security Management Network Security Management**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: CTS1120, CTS1111, ISM4330. Information security in the modern organization is both a management and a technology issue. Course recognizes that technology alone cannot address all the security issues; prepares students for management and control of security of information systems in organizations; prepares students to make informed decisions regarding administration of information security infrastructure.

ISM 4330, Information Security Policy Administration and Management Information Security Policy Administration and Management**3 hrs., 3 crs.,**

(Offered summer). Prerequisite: CTS1120. This course develops the information security knowledge and skills necessary for the successful management of information security technology in an organization. Students will understand an organization's information assets. Students will also learn how to develop and implement policies, procedures and standards as they relate to an information security plan. The course focuses on information classification, risk assessment, business continuity planning and enterprise security architecture, as well as the key concepts of enterprise information security planning and administration.

ISM 4548, Web Analytics Web Analytics**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *DIG2100, *MAN3303. This course covers online data concepts and teaches students how to search, retrieve, visualize, and analyze online quality data from social networks and social media, website usage, and clickstream data. Students will also learn to use key metrics to assess goals and return on investment, and will perform social network analysis to identify key social actors, subgroups, and network properties in social media.

IDH - Interdisciplinary Honors**IDH 1905, Honors Research Honors Research****2 hrs., 1 cr.,**

Prerequisite: Completion of one semester of Honors courses. This course provides an opportunity to carry on a topic of special interest to the individual student. The student will initiate and conduct the research project in consultation with a designated faculty member.

IDH 1910, Directed Honors Research I Directed Honors Research I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Permission of instructor. This course allows students to work in a course setting with faculty on research projects. Students will be allowed to work on a project individually or as a group depending on the research project. All projects will be supervised by a faculty member. This course is intended to help students acquire the skills used in research including hypothesis testing, data collection, data analysis and reporting. Students will be expected to present their research findings once they have completed their projects.

IDH 1911, Directed Honors Research II Directed Honors Research II**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Permission of instructor. This course allows students to work in a course setting with faculty on research projects. Students will be allowed to work on a project individually or as a group depending on the research project. All projects will be supervised by a faculty member. This course is intended to help students acquire the skills used in research including hypothesis testing, data collection, data analysis and reporting. Students will be expected to present their research findings once they have completed their projects.

IDH 2931, Honors Symposium Honors Symposium**1 hr., 1 cr.,**

(Offered fall and spring). Centers around topics of current interest or special interest to students or instructor.

ISS - Interdisciplinary Soc Sci**ISS 2930, Interdisciplinary Social Sciences Interdisciplinary Social Sciences****2 hrs., 2 crs.,**

(Offered fall and spring). This course centers on topics of current interest or of special interest to students or instructors. Topics or foci for the course may vary from semester to semester. (This course does not satisfy the social sciences requirement for the A.A. degree. Transfer of the credit is the prerogative of the receiving institution.) (This course may be repeated up to 3 times for credit.)

INR - International Relations**INR 2002, International Relations International Relations****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides an introduction to the nature of international relations, analysis of trends and international movements (nationalism, imperialism, militarism), armaments and developments in international organizations (governmental and nongovernmental). Principles and practices in foreign policy in the world today as well as historically will be examined.

INR 2002H, Honors International Relations Honors International Relations**3 hrs., 3 crs.,**

(Offered fall and spring). This course provides an introduction to the nature of international relations, analysis of trends and international movements (nationalism, imperialism, militarism), armaments and developments in international organizations (governmental and nongovernmental). Principles and practices in foreign policy in the world today as well as historically will be examined.

JOU - Journalism**JOU 2949, COOP/Work Experience/Journalism COOP/Work Experience/Journalism****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

CJJ - Juvenile Justice

CJJ 1001, Crime and Delinquency Crime and Delinquency

3 hrs., 3 crs.,

This course presents a general view of the juvenile delinquency problem, to include current theories of crime and delinquency, causal factors and treatment.

CJJ 2002, Juvenile Justice Juvenile Justice

3 hrs., 3 crs.,

This course examines the public policy issues pertaining to juvenile delinquency and dependency. The *parens patriae* doctrine is examined in theory and in practice as the fundamental philosophical basis for evolution of the contemporary American juvenile justice system. Major topics explored include causes of delinquency, societal responses, and trends indicative of future directions in juvenile justice.

CJJ 2002H, Honors Juvenile Justice Honors Juvenile Justice

3 hrs., 3 crs.,

This course examines the public policy issues pertaining to juvenile delinquency and dependency. The *parens patriae* doctrine is examined in theory and in practice as the fundamental philosophical basis for evolution of the contemporary American juvenile justice system. Major topics explored include causes of delinquency, societal responses, and trends indicative of future directions in juvenile justice.

CJE - Law Enforcement

CJE 1000, Introduction to Law Enforcement Introduction to Law Enforcement

3 hrs., 3 crs.,

This course is an introduction to the philosophical and historical background of law enforcement. This course covers the organization, purpose and functions of law enforcement and other agencies involved in the administration of criminal justice in the United States. It includes career education.

CJE 1300, Police Organization and Administration Police Organization and Administration

3 hrs., 3 crs.,

This course covers the principles of organization and administration in law enforcement, to include functions and activities, planning and research, public relations, personnel and training, inspection and control, and policy formulation.

CJE 1306, Middle Management Middle Management

3 hrs., 3 crs.,

This course is part of the Criminal Justice Standards and Training Commission Advanced Training Program. It is designed to teach the criminal justice practitioner principles for Mid-level Management within their respective criminal justice organizations.

CJE 1406, Spanish for the Criminal Justice Professionals Spanish for the Criminal Justice Professionals

3 hrs., 3 crs.,

Prerequisites: Students should have successfully completed the Law Enforcement, Correctional, or Correctional Officer Basic Training course or have been exempted and possess sufficient experience and background to meet the standard core of knowledge. Officers must have successfully passed the State Officer Certification Exam. Officers who successfully complete the Spanish for Criminal Justice Professionals course may be eligible for salary incentive payments, or may apply this course toward satisfying their mandatory retraining requirements, per Florida Statutes. This course is part of the Criminal Justice Standards and Training Commission Advanced Training Program. It is one of a series of non-sequential general or specialized skills training programs. Courses in the Advanced (or Specialized) Training Program are designed to enhance an officer's knowledge, skills, and abilities for the job he/she performs. To learn to communicate criminal justice commands using basic Spanish language skills. This is a limited access course.

CJE 1500, Police Operations Police Operations

3 hrs., 3 crs.,

This course provides an overview of the principles of organization and administration as they apply to police organizations. Topics include the responsibilities and activities of the many units and divisions within a law enforcement agency.

CJE 1544, Laser and Radar Speed Measurement Laser and Radar Speed Measurement**3 hrs., 3 crs.,**

Prerequisites: Students should have successfully completed the Law Enforcement Basic Training course or have been exempted and possess sufficient experience and background to meet the standard core of knowledge. Officers must have successfully passed the State Officer Certification Exam. Officers who successfully complete the Laser and Radar Speed Measurement course may be eligible for salary incentive payments, or may apply this course toward satisfying their mandatory retraining requirements, per Florida Statutes. This course is designed for the law enforcement officer whose duties include speed enforcement to improve the officer's effectiveness in speed enforcement through the proper and efficient use of police traffic radar and laser speed measurement devices.

CJE 2304, Line Supervision Line Supervision**5.333 hrs., 5 crs.,**

Provides students with the knowledge and skills needed to function effectively as law enforcement supervisors. Major topics include interpersonal communications, principles of organization and management, human relations, planning and development, policy formulation, and budgeting.

CJE 2309, Building and Maintaining a Sound Behavioral Climate Building and Maintaining a Sound Behavioral Climate**3 hrs., 3 crs.,**

Framework for integrating factors which affect the behavioral climate of an organization to include philosophy of management, agency mission, leadership styles, control system, environmental pressures, expectation of agency members, and policies and procedures.

CJE 2400, Police Community Relations Police Community Relations**3 hrs., 3 crs.,**

This course provides an understanding of the complex factors involved in human relations between the community and law enforcement. The police role and nature, meaning, and implications of professionalism in policing are explored in order to provide a better understanding of the necessity for a successful police-citizen partnership.

CJE 2534, CMS Firearms Instructor Course CMS Firearms Instructor Course**3 hrs., 3 crs.,**

\$138.00 lab fee. Designed for law enforcement, corrections, and correctional probation officers to acquire the necessary skills to become firearms instructors. Emphasis on both technical and practical applications of the revolver, semiautomatic, riot shotgun, and rifle with emphasis on instructor techniques and methodology. The student must successfully pass a written exam with a minimum score of 80% and CJSTC handgun and shotgun course with an above average score (90% or better) and a practical in each respective area. Students are required to provide an approved duty weapon, a safe duty holster and at least two extra speed loaders or magazines. GCSC will provide riot shotguns and AR-15 rifles. The lab fee covers support materials, safety gear, and ammunition for .38 cal., .357 cal., 9 mm, .40 cal. shotgun, and rifle.

CJE 2536, Basic Law Enforcement Driving Instructor Course Basic Law Enforcement Driving Instructor Course**3 hrs., 3 crs.,**

\$27.00 lab fee. Prerequisites: CJB2801, General/CMS Principles for driver instructor. Topics include legal issues in driving instruction, facility development and management, the Basic Recruit curriculum, problems in driving instruction, and evaluation techniques.

CJE 2565, Crisis Intervention Crisis Intervention**3 hrs., 3 crs.,**

Provides patrol officers and investigators with a working knowledge of the dynamics of crisis situations and the ability to deal effectively with humans under extreme stress. Emphasis will be placed on situation assessment, recognition of major types of aberrant behavior, the ethnic and cultural elements of behavior, and calming techniques.

CJE 2567, CMS First Aid Instructor Course CMS First Aid Instructor Course**3 hrs., 3 crs.,**

\$33.00 lab fee. This course is a specialized instructor course that provides the required training an officer must have to apply for a High-Liability Instructor Certification in First Aid for Criminal Justice Officers. Instructor students must possess a General Instructor Certification or be eligible for and apply for the General Instructor Certification at the same time as the High-Liability Instructor Certification. They should possess sufficient experience to meet the standard core of knowledge, pursuant to the requirements outlined in this course.

CJE 2570, Narcotics and Dangerous Drug Investigations Narcotics and Dangerous Drug Investigations**3 hrs., 3 crs.,**

Curricula developed by U.S. Drug Enforcement Administration for teaching law enforcement officers essential concepts and techniques in the area of drug and drug-related crimes.

CJE 2582, Investigative Interview Investigative Interview**3 hrs., 3 crs.,**

Techniques, methods, principles, and legal aspects of conducting interviews and interrogations. Emphasis will be placed on documentation of interrogations, coping with deception, evidentiary uses of confessions, and admissions and lie detection techniques. Individual expertise developed through role playing and other practical exercises.

CJE 2600, Introduction to Criminal Investigations Introduction to Criminal Investigations**3 hrs., 3 crs.,**

This course is a survey of the methods and techniques used by contemporary criminal justice agencies in criminal investigation and its role in society. The course will include studies of such aspects as the discovery of evidence and its preservation and marking, fingerprinting, and identification. The course will also explore the identification and elements of homicide, burglary, robbery, and narcotics violations.

CJE 2634, Injury and Death Investigation Injury and Death Investigation**3 hrs., 3 crs.,**

Designed to teach the criminal justice practitioner goals, rationale, and principles for investigating injuries and deaths.

CJE 2702, Officer Stress Awareness and Resolution Officer Stress Awareness and Resolution**3 hrs., 3 crs.,**

Designed to enhance the law enforcement and correctional officer's ability to deal with stressful situations. Results of stress and physiological/ psychological methods of controlling stress are covered.

LIS - Library & Info Studies**LIS 2004, Research Strategies for College Students Research Strategies for College Students****1 hr., 1 cr.,**

This course is designed to develop the skills needed to use the Internet as a research tool. The course focuses on methods of accessing relevant information resources through the Internet including books, journals, newspapers, government documents, deep Web media, and other research materials using online library catalogs and databases. Students will learn to create search strategies and retrieve, evaluate, and cite Internet resources.

LIS 2949, COOP/Work Experience/Library Science COOP/Work Experience/Library Science**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

LIN - Linguistics

LIN 1670, English Grammar and Style English Grammar and Style

3 hrs., 3 crs.,

Prerequisite: Satisfactory English score on the Florida College Entry-Level Placement Test or completion of ENC0025 with a minimum grade of "C." Introduction to sentence structure, standard practices in grammar and punctuation, and effective stylistic techniques. Designed as a complement to composition courses.

LIN 2004, Languages of the World Languages of the World

3 hrs., 3 crs.,

(Offered fall and spring). This course provides a comprehensive overview of the more than 7,000 languages spoken worldwide. Students will explore the distinctions between languages and dialects, examining the factors that contribute to linguistic similarity and divergence. Students will develop a deeper understanding of the ways in which human language contributes to the study of the human brain. Additionally, the course will introduce key concepts and theoretical frameworks in linguistics, as well as the methodologies employed in linguistic analysis. Topics covered include endangered languages, language contact, language and culture, signed languages, and constructed languages.

LIT - Literature

LIT 2000, Literature and Culture Literature and Culture

3 hrs., 3 crs.,

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, movements, forms, themes, and cultural significance of literature. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2000H, Honors Literature and Culture Honors Literature and Culture

3 hrs., 3 crs.,

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, movements, forms, themes, and cultural significance of literature. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2040, World Drama World Drama

3 hrs., 3 crs.,

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major dramatists and their works from ancient through the present with a focus on historical and cultural significance. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2040H, Honors World Drama Honors World Drama

3 hrs., 3 crs.,

(Offered fall). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major dramatists and their works from ancient through the present with a focus on historical and cultural significance. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2090, Contemporary Literature Contemporary Literature

3 hrs., 3 crs.,

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, works, and literary movements after 1945 with a focus on the cultural significance of contemporary literature. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2090H, Honors Contemporary Literature Honors Contemporary Literature**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, works, and literary movements after 1945 with a focus on the cultural significance of contemporary literature. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2110, World Literature: Ancient Through Renaissance World Literature: Ancient Through Renaissance**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, literary trends, forms, themes, and the historical and cultural significance of world literature from the Ancient World through the Renaissance. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2110H, Honors World Literature: Ancient Through Renaissance Honors World Literature: Ancient Through Renaissance**3 hrs., 3 crs.,**

Major writers, literary trends, forms, themes, and the historical and cultural significance of world literature from the Ancient World through the Renaissance. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2120, World Literature: Enlightenment to Present World Literature: Enlightenment to Present**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, literary trends, forms, themes, and the historical and cultural significance of world literature from the Enlightenment to the present. Readings will include selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2120H, Honors World Literature: Enlightenment To Present Honors World Literature: Enlightenment To Present**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: ENC1102 with a minimum grade of "C." (Meets Literature Humanities requirement.) Major writers, literary trends, forms, themes, and the historical and cultural significance of world literature from the Enlightenment to the present. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

LIT 2380, Women in Literature Women in Literature**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of "C." Major works by women writers in a variety of literary forms with a focus on cultural and historical significance.

LIT 2380H, Honors Women In Literature Honors Women In Literature**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1102 with a minimum grade of ?C.? (Meets Literature Humanities requirement.) This course examines women's writing in a variety of forms. Topics include key themes and representations of gender roles in literature. Historical and cultural context is used to present the lives of women writers and their responses to the "Woman Question." This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

MAN - Management**MAN 1300, Introduction to Human Resource Management Introduction to Human Resource Management****3 hrs., 3 crs.,**

(Offered spring). This course serves as an overview of the field of human resources management. Theories and practices related to human resources management will be explored. The role of the human resources department will be emphasized, with particular attention focused on supervision, training, and customer service. Topics will include hiring and termination decisions, understanding of applicable federal and state employment legislation, labor relations, employee discipline, performance appraisals, wages, and benefits.

MAN 2021, Principles of Management Principles of Management**3 hrs., 3 crs.,**

(Offered fall and spring). Fundamentals of management underlying the solutions of problems of organization and operation of business enterprises covering the management process of planning, organizing, directing, and controlling.

MAN 2160, Foundations of Leadership Foundations of Leadership**3 hrs., 3 crs.,**

(Offered fall and spring). This course will emphasize the leadership function of management. The course gives attention to research findings about leadership, the practice of leadership, and skill development. The course will focus on the visionary and direction-setting aspect of leadership.

MAN 2500, Operations Management Operations Management**3 hrs., 3 crs.,**

Prerequisite: STA2023. (Offered fall). This course introduces students to operations management techniques including their application to functional areas of the business enterprise and operations control.

MAN 2930, Special Topics in Management Special Topics in Management**3 hrs., 3 crs.,**

Prerequisite: Permission of instructor. Course centering around topics of current interest or of special interest to students or instructors. Topics may vary from semester to semester. Course will provide the opportunity for students to demonstrate their mastery of the material learned from the program. It should be taken during the student's last semester.

MAN 3240, Applied Organizational Behavior Applied Organizational Behavior**3 hrs., 3 crs.,**

(Offered fall). Behavioral concepts, techniques, and applications for managing human resources in all types of organizations.

MAN 3303, Principles of Management and Leadership Principles of Management and Leadership**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Admission into Technology Management BAS Program or permission of department chair. This course presents the basic concepts, principles, and techniques of business leadership. Emphasis will be on the student developing a solid leadership foundation while centering them in the real themes, demands, and opportunities of an evolving and dynamic business workplace. This course will incorporate basic leadership skill development as it relates to the core aspects of the management practice.

MAN 3503, Managerial Risk Analysis and Decision Making Managerial Risk Analysis and Decision Making**3 hrs., 3 crs.,**

(Offered summer). This course covers a framework for making decisions, as well as understanding how these decisions can be used to manage risk. Managers need to understand how they personally value risk in order to recognize the potential impact their behavior may have on organizations and stakeholders, this course will study approaches that students develop and apply decision making and risk analysis to solve problems in different operating environments.

MAN 4280, Leadership and Change Management Leadership and Change Management**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Must be admitted to one of the BAS programs. This course will study leadership within an organization and provide students with tactical ways to motivate and lead their team to success while facing both planned and unpredicted business changes such as turnover, cost cutting, organizational structure changes and technology. The course will prepare students to recognize potential future business challenges both internally and externally. The student will gain knowledge to be able to identify the needs of a business in a rapidly changing global climate and learn how to quickly assess, adapt, and implement procedures to ensure long term success of their organization.

MAN 4301, Human Resource Management Human Resource Management**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: Must be admitted to one of the BAS programs. This course will study various areas of Human Resource Management including job design, recruitment, performance evaluation, reward systems, development and training of employees to secure retention and formulation of human resource procedures. The strategic role of human resources and current issues will be discussed.

MAN 4520, Quality Management Six Sigma Quality Management Six Sigma**3 hrs., 3 crs.,**

(Offered fall). Corequisite: MAN3303 or permission of department chair. This course teaches students the significance of quality as a primary competitive strategy for tomorrow's successful business organizations using six sigma methodologies. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations function. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management.

MAN 4900, Capstone Project Capstone Project**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Permission of instructor. This capstone course will provide the opportunity for students to demonstrate their mastery of the material learned from the program and can apply it in the real world. It should be taken during the student's last semester at the college. It provides the student an opportunity to develop a plan to solve a problem dealing with technology management and organizational leadership issues of today.

MNA - Management/Applied**MNA 1100, Human Relations in Management Human Relations in Management****3 hrs., 3 crs.,**

(Offered spring). An introductory course concerned with the nature, scope, and understanding of human interactions as they relate to management. Emphasis on theory and practice using convention and laboratory methods.

MNA 2949, COOP/Work Experience/Management COOP/Work Experience/Management**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, midterm, and end-of-term reflection assignments.

MTE - Marine Tech & Natural Science**MTE 1811C, Introduction to Seamanship Introduction to Seamanship****5 hrs., 3 crs.,**

(Offered summer). This course covers the fundamentals of small boat handling, chart reading, rules of the road, rigging, safety, and boat licensing. Hands-on plotting with local charts, practical knots and other rope work. Weather permitting, on the water practice.

MAR - Marketing**MAR 2011, Marketing Marketing****3 hrs., 3 crs.,**

(Offered fall and spring). Functions and institutions involved in the marketing process; marketing of agricultural products, raw materials, and manufacturing goods; problems involved in the choice of channels of distribution; function and methods of operation of wholesalers, retailers, and other marketing agencies; producer and consumer cooperation; demand creation methods and problems; the pricing problem; and the consumer in our marketing system.

MAR 3802, Entrepreneurial Marketing Entrepreneurial Marketing**3 hrs., 3 crs.,**

(Offered fall). This course introduces the fundamental processes, research, and testing methods, planning aspects, and integrated promotional programs marketers use in designing and launching innovations, including e-business and marketing plans. It also discusses the principles of branding and brand development.

MAR 4413, Entrepreneurial Selling Entrepreneurial Selling**3 hrs., 3 crs.,**

(Offered spring). This course focuses on addressing the issues, processes and strategies related to selling and sales management. This is a comprehensive course in the art of selling, focusing on relationship building, negotiating, and sales management. Various techniques will be explored, including prospecting, lead management, product introduction, negotiation, closing strategies, and relationship management.

MAR 4836, Concept and Product Development Concept and Product Development**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: MAR2011. Prerequisite/Corequisite: ENT2000. This course introduces the fundamental processes, research, and testing methods, planning aspects and integrated promotional programs marketers use in designing and launching innovations, including e-business and marketing plans.

MAC - Math/Calc & Pre-Calc**MAC 1105, College Algebra College Algebra****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAT1033. In this course, students will develop problem-solving skills, critical thinking, computational proficiency, and contextual fluency through the study of equations, functions, and their graphs. Emphasis will be placed on quadratic equations, exponential, and logarithmic functions. Topics will include solving equations and inequalities, definition and properties of a function, domain and range, transformations of graphs, operations on functions, composite and inverse functions, basic polynomial and rational functions, exponential and logarithmic functions, and applications. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator, they must see their instructor in advance for approval.

MAC 1105H, Honors College Algebra Honors College Algebra**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAT1033. In this course, students will develop problem-solving skills, critical thinking, computational proficiency, and contextual fluency through the study of equations, functions, and their graphs. Emphasis will be placed on quadratic equations, exponential, and logarithmic functions. Topics will include solving equations and inequalities, definition and properties of a function, domain and range, transformations of graphs, operations on functions, composite and inverse functions, basic polynomial and rational functions, exponential and logarithmic functions, and applications. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator, they must see their instructor in advance for approval.

MAC 1114, Plane Trigonometry Plane Trigonometry**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1105. This course affords students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving. 1. Trigonometric functions, their properties and graphs 2. Inverse trigonometric functions, their properties and graphs 3. Trigonometric identities 4. Conditional trigonometric equations 5. Solutions of triangles 6. Vector algebra 7. Parametric equations 8. Polar coordinates. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator, they must see their instructor in advance for approval. NOTE: While MAC1114, Plane Trigonometry is not a prerequisite for MAC1140, Pre-Calculus Algebra, the math faculty at GCSC strongly suggest that you take MAC1140, Pre-Calculus before taking MAC1114, Plane Trigonometry.

MAC 1114H, Honors Plane Trigonometry Honors Plane Trigonometry**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1105. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Topics included are properties and graphs of trigonometric functions, properties and graphs of inverse trigonometric functions, trigonometric identities, conditional trigonometric equations, solutions of triangles, vector algebra, parametric equations, polar coordinates, and applications.

MAC 1140, Precalculus Algebra Precalculus Algebra**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1105. This course affords students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving. 1. Polynomial, rational, and other algebraic functions, their properties and graphs 2. Polynomial and rational inequalities 3. Exponential and logarithmic functions, their properties and graphs 4. Piecewise defined functions 5. Conic sections 6. Matrices and determinants 7. Sequences and series 8. Mathematical induction 9. Binomial theorem. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. NOTE: While MAC1114, Plane Trigonometry is not a prerequisite for MAC1140, Pre-Calculus Algebra, the math faculty at GCSC strongly suggest that you take MAC1140, Pre-Calculus before taking MAC1114, Plane Trigonometry.

MAC 1140H, Honors Precalculus Algebra Honors Precalculus Algebra**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1105. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Topics included are properties and graphs of polynomial and rational functions, polynomial and rational inequalities, properties and graphs of exponential and logarithmic functions, piecewise defined functions, conic sections, matrices and determinants, sequences and series, mathematical induction, binomial theorem, and applications. NOTE: While MAC1114, Plane Trigonometry is not a prerequisite for MAC1140, Pre-Calculus Algebra, the math faculty at GCSC strongly suggest that you take MAC1140, Pre-Calculus before taking MAC1114, Plane Trigonometry.

MAC 2233, Calculus for Business and Social Science I Calculus for Business and Social Science I**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Minimum grade of "C" in MAC1105. This course affords students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving. 1. Limits 2. Differentiation of algebraic, logarithmic, and exponential functions 3. Introduction to integration with applications. 4. Applications to business and the social sciences. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval.

MAC 2311, Calculus with Analytic Geometry I Calculus with Analytic Geometry I**4 hrs., 4 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1140 and MAC1114. Placing into MAC2311 by only placement test scores requires permission of the mathematics division chair. To receive permission, the student who has not successfully completed MAC1114 (Plane Trigonometry) must verify successful completion (?C? or higher) of a trigonometry course at the high school level or higher. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area. NOTE: For the Calculus sequence, the math faculty at GCSC strongly advise that students complete the entire sequence at a single institution. Course content may vary depending on the institutions. Completing the sequence assures that no content is lost in transfer.

MAC 2311H, Honors Calculus With Analytic Geometry I Honors Calculus With Analytic Geometry I**4 hrs., 4 crs.,**

(Offered fall, spring, and summer). Prerequisite: Math placement test or minimum grade of "C" in MAC1140 and MAC1114. Placing into MAC2311 by only placement test scores requires permission of the mathematics division chair. To receive permission, the student who has not successfully completed MAC1114 (Plane Trigonometry) must verify successful completion (?C? or higher) of a trigonometry course at the high school level or higher. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area. NOTE: For the Calculus sequence, the math faculty at GCSC strongly advise that students complete the entire sequence at a single institution. Course content may vary depending on the institutions. Completing the sequence assures that no content is lost in transfer.

MAC 2312, Calculus with Analytic Geometry II Calculus with Analytic Geometry II**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisite: Minimum grade of "C" in MAC2311. This course affords students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving. 1. Review of functions 2. Limits and continuity 3. The derivative 4. Differentiation of algebraic functions 5. Differentiation of transcendental functions 6. Mean-value theorem and intermediate value theorem 7. Extrema and graph sketching 8. Area and the definite integral 9. Antidifferentiation 10. Fundamental theorem 11. Inverse functions 12. Arc length 13. Techniques of integration 14. Parametric equations and polar coordinates 15. Taylor's formula, infinite sequences and series 16. Vectors in the plane and 3-space 17. Topics from plane and solid analytic geometry 18. Directional derivatives and curvature 19. Differential calculus of functions of several variables 20. Multiple integration. A graphing calculator is required. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. NOTE: For the Calculus sequence, the math faculty at GCSC strongly advise that students complete the entire sequence at a single institution. Course content may vary depending on the institutions. Completing the sequence assures that no content is lost in transfer.

MAC 2313, Calculus with Analytic Geometry III Calculus with Analytic Geometry III**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisite: Minimum grade of "C" in MAC2312. This course affords students a mastery of foundational mathematical and computation models and methods by applying such models and methods in problem solving. 1. Review of functions 2. Limits and continuity 3. The derivative 4. Differentiation of algebraic functions 5. Differentiation of transcendental functions 6. Mean-value theorem and intermediate value theorem 7. Extrema and graph sketching 8. Area and the definite integral 9. Antidifferentiation 10. Fundamental theorem 11. Inverse functions 12. Arc length 13. Techniques of integration 14. Parametric equations and polar coordinates 15. Taylor's formula, infinite sequences and series 16. Vectors in the plane and 3-space 17. Topics from plane and solid analytic geometry 18. Directional derivatives and curvature 19. Differential calculus of functions of several variables 20.

Multiple integration. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval

MAC 2313H, Honors Calculus with Analytic Geometry III Honors Calculus with Analytic Geometry III**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisite: Minimum grade of "C" in MAC2312. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Topics included are three dimensional space, vectors, vector-valued functions, partial derivatives, and multiple integrals.

MAC 2949, COOP/Work Experience/Mathematics COOP/Work Experience/Mathematics**1 hr., 1 cr.,**

1-3 hrs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

MGF - Math/General & Finite**MGF 1106, Mathematics for Liberal Arts Mathematics for Liberal Arts****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. The TI-83/84 are the only allowable calculators for test days. If students wish to use any other calculator they must see their instructor in advance for approval. Topics covered include sets, logic, geometry, combinatorics, probability, and elementary statistics.

MGF 1107, Survey of Mathematics Survey of Mathematics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. The TI-83/84 are the only allowable calculators for test days. If students wish to use any other calculator they must see their instructor in advance for approval. Topics covered include the history of numbers, number theory, graph theory, mathematical modeling, and transformation geometry.

MGF 1130, Mathematical Thinking Mathematical Thinking**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. Through this course, students will utilize multiple means of problem-solving through student-centered mathematical exploration. The course is designed to teach students to think more effectively and vastly increase their problem-solving ability through practical application and divergent thinking. This course is appropriate for students in a wide range of disciplines/programs.

MTB - Math/Tech & Business**MTB 1370, Math for Health-Related Professions Math for Health-Related Professions****1 hr., 1 cr.,**

(Offered spring). Prerequisite: Knowledge of basic arithmetic. Math for health-related professions is designed for students completing a degree or certificate in a health-related field. The course can count for elective credit but does not count toward the general education mathematics requirement. Topics covered include: 1) arithmetic, 2) the metric system, 3) apothecary measurements, 4) techniques of health-data analysis, and 5) applications to various fields in the health-care system.

MAT - Mathematics**MAT 0012, Developmental Arithmetic with Algebra Developmental Arithmetic with Algebra****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Developmental Arithmetic with Algebra (3.0 credit) is a course designed for students who need to strengthen their mathematical background. The course must be passed with a minimum grade of "C" and is not intended to satisfy general education requirements in mathematics or to count toward required hours for graduation. Calculators are allowed in the course. Topics included operations with integers, fractions, decimals, geometric figures and their measures, pre-algebra topics, including properties of rational numbers, operations of fractional numbers, simplification of polynomials, and equations-solving techniques.

MAT 1033, Intermediate Algebra Intermediate Algebra**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. Intermediate Algebra receives college credit, but only elective credit, and cannot be used to satisfy the math requirements for the Associate in Arts degree. Topics included are factoring, algebraic fractions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, linear equations and inequalities in two variables and their graphs, systems of linear equations and inequalities, introduction to functions, and applications of the above topics.

MAP - Mathematics Applied**MAP 2302, Differential Equations Differential Equations****3 hrs., 3 crs.,**

(Offered spring). Prerequisite or Corequisite: MAC2313 or consent of instructor. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Differential Equations is a study of the classification, solution, and application of ordinary differential equations. Solutions to differential equations are obtained by both the classical and Laplace Transform methods.

MAP 2302H, Honors Differential Equations Honors Differential Equations**3 hrs., 3 crs.,**

(Offered spring). Prerequisite or Corequisite: MAC2313 or consent of instructor. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Differential Equations is a study of the classification, solution, and application of ordinary differential equations. Solutions to differential equations are obtained by both the classical and Laplace Transform methods.

MET - Meteorology**MET 2949, Coop: Meteorology Coop: Meteorology****3 hrs., 3 crs.,**

MCB - Microbiology**MCB 2004, Microbiology Microbiology****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisites: Must have completed 3 hrs. biology or 3 hrs. chemistry.

Corequisite: MCB2004L. The study of bacteria, molds, yeast, and other microorganisms. Emphasis is on distribution, spread, culturing, identification, classification, and the role of these microorganisms in human diseases. This course is not intended for biology majors.

MCB 2004L, Microbiology Laboratory Microbiology Laboratory**3 hrs., 1 cr.,**

\$166.00 lab fee. (Offered fall, spring, and summer). Corequisite: MCB2004. Microbiology lab covers the study of bacterial techniques. Students learn how to culture and stain bacteria as well as perform metabolic tests to aid in bacterial identification. The effects of antibiotics and disinfectants on microbial growth are also tested.

MUN - Music Ensembles**MUN 1340, Singing Commodores Singing Commodores****1 hr., 1 cr.,**

(Offered fall and spring). A show choir performance group. By audition only. Students are expected to participate for the entire academic year. (May be repeated up to three times for credit.)

MUN 1460, Chamber Ensemble Chamber Ensemble**1 hr., 1 cr.,**

(Offered fall and spring). This course provides an in-depth exploration of chamber music in a small ensemble setting. Repertoire will be selected based on ensemble instrumentation and skill level. Students will develop skills in musical collaboration, interpretation, and communication through rehearsals, coaching sessions, and performances. Ensembles may be arranged according to availability and student proficiency each semester to meet the needs of the students. (Open to all college students. May be repeated up to four times for credit.)

MUN 2120, Concert Band I Concert Band I**3 hrs., 1 cr.,**

(Offered fall and spring). The study and performance of a wide variety of concert band literature. (Open to all college students. May be repeated up to two times for credit.)

MUN 2310, Concert Chorale I Concert Chorale I**3 hrs., 1 cr.,**

(Offered fall and spring). The study and performance of works representative of a wide spectrum of choral literature. (Open to all college students. May be repeated up to two times for credit.)

MUN 2312, Concert Chorale II Concert Chorale II**3 hrs., 1 cr.,**

(Offered fall and spring). Prerequisites: MUN2310, permission of instructor. The study and performance of works representative of a wide spectrum of choral literature. (Open to all college students. May be repeated up to two times for credit.)

MUN 2710, Jazz Ensemble Jazz Ensemble**3 hrs., 1 cr.,**

(Offered fall and spring). (Audition and instructor permission required.) The study and performance of jazz and popular band literature. (Open to all college students. May be repeated up to three times for credit.)

MUL - Music Literature**MUL 2010, Understanding Music Understanding Music****3 hrs., 3 crs.,**

(Offered fall and spring). (Meets Fine Arts Humanities requirement). In this course, students will survey the history of Classical music from Antiquity to the Modern period, focusing on Western Music. The curriculum may also integrate a variety of popular and global styles where appropriate.

MUL 2010H, Honors Understanding Music Honors Understanding Music**3 hrs., 3 crs.,**

(Offered fall and spring). (Meets Fine Arts Humanities requirement). In this course, students will survey the history of Classical music from Antiquity to the Modern period, focusing on Western Music. The curriculum may also integrate a variety of popular and global styles where appropriate.

MUL 2110, Survey of Music Literature Survey of Music Literature**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: MUT1112, MUT1242, or permission of instructor. (Meets Fine Arts Humanities requirement.) In this course, students will survey the history of Western music from antiquity to the modern period, including selections from the Western canon. Students will discuss and analyze music, while developing critical thinking skills in reading, writing, and listening. This course is intended for music majors who have completed MUT1111/MUT1241 and is designed to prepare students for upper-level music history and writing at the university level.

MUO - Music Opera/Music Theater**MUO 1020, Musical Productions Musical Productions****1 hr., 1 cr.,**

(Offered as needed). Performance or technical work in musicals, operas, oratorios, or revues. (May be repeated up to three times for credit.)

MUM - Music Tech & Business**MUM 2600, Sound Recording I Sound Recording I****3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite or Corequisite: MUM 2600L. This course offers basic information in the art of recording vocal and instrumental sound with emphasis on understanding the functions of recording equipment, placement of microphones, making initial recordings of various groups or soloists, and the ability to mix-down the initial recordings.

MUM 2600L, Sound Recording Lab Sound Recording Lab**2 hrs., 2 crs.,**

(Offered fall and spring). Prerequisite or Corequisite: MUM 2600. This course is designed to provide students with "hands on" experience in conjunction with live performance activities. This course may be taken four (4) times for credit. Basic computer skills in Windows are essential. Note: This course is a corequisite for MUM2600, MUM2601, and MUM2604.

MUM 2601, Sound Recording II Sound Recording II**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: MUM2600. Corequisite: MUM2600L. This course explores advanced multi-track recording skills, microphone techniques, use of outboard equipment and live multi-track recording.

MUT - Music Theory**MUT 1011, Reading and Writing Music Reading and Writing Music****3 hrs., 3 crs.,**

(Offered as needed). A basic music theory class. Application of the fundamental materials of music theory. (Does not satisfy music major theory requirement.)

MUT 1111, Music Theory I Music Theory I**3 hrs., 3 crs.,**

(Offered fall). Corequisite: MUT1241. A systematic study of the materials and structures of music. Study includes fundamentals, diatonic, chromatic, and twentieth-century concepts.

MUT 1112, Music Theory II Music Theory II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: MUT1111 or permission of instructor. Corequisite: MUT1242. A systematic study of the materials and structures of music. Study includes fundamentals, diatonic, chromatic, and twentieth-century concepts.

MUT 1241, Ear Training and Sight Singing I Ear Training and Sight Singing I**1 hr., 1 cr.,**

(Offered fall). Corequisite: MUT1111. Development of ear training skills and sight singing.

MUT 1242, Ear Training and Sight Singing II Ear Training and Sight Singing II**1 hr., 1 cr.,**

(Offered spring). Prerequisite: MUT1241 or permission of instructor. Corequisite: MUT1112. Development of ear training skills and sight singing.

MUT 2116, Music Theory III Music Theory III**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: MUT1112 or permission of instructor. Corequisite MUT2246. A systematic study of the materials and structures of music. Study includes fundamentals, diatonic, chromatic, and twentieth-century concepts.

MUT 2117, Music Theory IV Music Theory IV**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: MUT2116 or permission of instructor. Corequisite: MUT2247. A systematic study of the materials and structures of music. Study includes fundamentals, diatonic, chromatic, and twentieth-century concepts.

MUT 2117H, Honors Music Theory IV Honors Music Theory IV**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: MUT2116 or permission of instructor. Corequisite: MUT2247. A systematic study of the materials and structures of music. Study includes fundamentals, diatonic, chromatic, and twentieth-century concepts.

MUT 2246, Ear Training and Sight Singing III Ear Training and Sight Singing III**1 hr., 1 cr.,**

(Offered fall). Prerequisite: MUT1242 or permission of instructor. Corequisite: MUT2116. Development of ear training skills and sight singing.

MUT 2247, Ear Training and Sight Singing IV Ear Training and Sight Singing IV**2 hrs., 1 cr.,**

(Offered spring). Prerequisite: MUT2246 or permission of instructor. Corequisite: MUT2117. Development of ear training skills and sight singing.

MVB - Music, Applied Brass**MVB 1011, Applied Music: Trumpet Prep Applied Music: Trumpet Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVB 1012, Applied Music: French Horn Prep Applied Music: French Horn Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVB 1013, Applied Music: Trombone Prep Applied Music: Trombone Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVB 1014, Applied Music: Baritone Prep Applied Music: Baritone Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVB 1015, Applied Music: Tuba Prep Applied Music: Tuba Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVB 1311, Applied Music: Trumpet Applied Music: Trumpet**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 1312, Applied Music: French Horn Applied Music: French Horn**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 1313, Applied Music: Trombone Applied Music: Trombone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 1314, Applied Music: Baritone Applied Music: Baritone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 1315, Applied Music: Tuba Applied Music: Tuba**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 2321, Applied Music: Trumpet Applied Music: Trumpet**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 2322, Applied Music: Applied French Horn Applied Music: Applied French Horn**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 2323, Applied Music: Trombone Applied Music: Trombone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 2324, Applied Music: Baritone Applied Music: Baritone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVB 2325, Applied Music: Tuba Applied Music: Tuba**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVK - Music, Applied Keyboard**MVK 1011, Applied Music: Piano Prep Applied Music: Piano Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVK 1111, Class Piano I Class Piano I**2 hrs., 1 cr.,**

(Offered fall and spring). Beginning class instruction in piano techniques and keyboard harmony. (May be repeated once for credit.)

MVK 1311, Applied Music: Piano Applied Music: Piano**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVK 2121, Class Piano II Class Piano II**2 hrs., 1 cr.,**

(Offered fall and spring). Intermediate class instruction in piano techniques and keyboard harmony. (May be repeated once for credit.)

MVK 2321, Applied Music: Piano Applied Music: Piano**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVO - Music, Applied Other**MVO 2949, COOP/Work Experience/Music COOP/Work Experience/Music****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

MVP - Music, Applied Percussion**MVP 1011, Applied Music: Percussion Prep Applied Music: Percussion Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVP 1311, Applied Music: Percussion Applied Music: Percussion**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVP 2321, Applied Music: Percussion Applied Music: Percussion**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS - Music, Applied Strings**MVS 1011, Applied Music: Violin Prep Applied Music: Violin Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVS 1012, Applied Music: Viola Prep Applied Music: Viola Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVS 1013, Applied Music: Cello Prep Applied Music: Cello Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVS 1014, Applied Music: Double Bass Prep Applied Music: Double Bass Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVS 1016, Applied Music: Guitar Prep Applied Music: Guitar Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVS 1311, Applied Music: Violin Applied Music: Violin**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 1312, Applied Music: Viola Applied Music: Viola**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 1313, Applied Music: Cello Applied Music: Cello**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 1314, Applied Music: Double Bass Applied Music: Double Bass**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 1316, Applied Music: Guitar Applied Music: Guitar**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 2321, Applied Music: Violin Applied Music: Violin**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 2322, Applied Music: Viola Applied Music: Viola**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 2323, Applied Music: Cello Applied Music: Cello**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 2324, Applied Music: Double Bass Applied Music: Double Bass**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVS 2326, Applied Music: Guitar Applied Music: Guitar**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVV - Music, Applied Voice**MVV 1011, Applied Music: Voice Prep Applied Music: Voice Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVV 1012, Applied Music: Musical Theatre Voice Prep Applied Music: Musical Theatre Voice Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVV 1311, Applied Music: Voice Applied Music: Voice**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVV 1312, Applied Music: Musical Theatre Voice Applied Music: Musical Theatre Voice**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVV 2321, Applied Music: Voice Applied Music: Voice**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVV 2322, Applied Music: Musical Theatre Voice Applied Music: Musical Theatre Voice**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW - Music, Applied Woodwinds**MVW 1011, Applied Music: Flute Prep Applied Music: Flute Prep****2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVW 1012, Applied Music: Oboe Prep Applied Music: Oboe Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVW 1013, Applied Music: Clarinet Prep Applied Music: Clarinet Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVW 1014, Applied Music: Bassoon Prep Applied Music: Bassoon Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVW 1015, Applied Music: Saxophone Prep Applied Music: Saxophone Prep**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice for students preparing to enter freshman level of instruction. Placement determined by audition. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only.

MVW 1311, Applied Music: Flute Applied Music: Flute**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 1312, Applied Music: Oboe Applied Music: Oboe**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 1313, Applied Music: Clarinet Applied Music: Clarinet**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 1314, Applied Music: Bassoon Applied Music: Bassoon**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 1315, Applied Music: Saxophone Applied Music: Saxophone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 2321, Applied Music: Flute Applied Music: Flute**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 2322, Applied Music: Oboe Applied Music: Oboe**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 2323, Applied Music: Clarinet Applied Music: Clarinet**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 2324, Applied Music: Bassoon Applied Music: Bassoon**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MVW 2325, Applied Music: Saxophone Applied Music: Saxophone**2 hrs., 2 crs.,**

\$180.00 lab fee. Private lessons in principal instrument or voice. May be repeated up to a maximum of 4 times for credit. Open to music and theatre majors only. Placement determined by audition.

MUS - Music: Other Than Applied**MUS 1020, Recital Class Recital Class****1 hr., 0 crs.,**

(Offered fall and spring). Performance or technical work in musicals, operas, oratorios, or revues. (May be repeated up to three times for credit.)

NUR - Nursing Generic Undergrad**NUR 1000C, LPN-ADN Transition LPN-ADN Transition****5 hrs., 5 crs.,**

\$81.00 lab fee. (Offered fall and spring). Prerequisites: Completion of general education courses described in the application packet: BSC2085, BSC2085L, BSC2086, BSC2086L, DEP2004, HUN1201, NUR1142, POS2041 or AMH2020, and college-level math. Successful completion of a Practical Nursing Program. Receipt of proof of a Practical Nursing License in the State of Florida. This course is designed to facilitate entry of the licensed practical nurse into the associate degree nursing program, building on the P.N. curriculum. All students will demonstrate the transition between the role of the licensed practical nurse to associate degree registered nurse. This course includes program information regarding philosophy, curriculum framework, nursing outcomes, roles and functions of the R.N., utilization of the nursing process, and selected aspects of patient assessment. Students will expand their knowledge regarding pharmacology, pathophysiology, communication and teaching. Evaluation of assessments, selected clinical skills, care planning and management are also included.

NUR 1022C, Foundations of Nursing Practice Foundations of Nursing Practice**3 hrs., 3 crs.,**

\$10.00 lab fee. (Offered fall and spring). Prerequisites: *BSC2085, *BSC2085L, *ENC1101, and college-level math. Prerequisite/Corequisite: *NUR1142. Introduction to the health care system, the nursing role, conceptual model of the curriculum and the nursing process. Theories of Maslow and Erikson as a basis for assessment of needs focusing on normal parameters. Includes a study of medical terminology, communication skills, pharmacology math, health teaching, and introductory nursing management. Concurrent campus lab experiences provided for the development of psychomotor skills.

NUR 1142, Introduction to Pharmacology Introduction to Pharmacology**2 hrs., 2 crs.,**

(Offered fall, spring, and summer). Prerequisite: BSC2085. Prior completion of BSC2086, MCB2004, and knowledge of medical terminology is also helpful. This course is restricted to RN-APP / RN-AS / LPN-ADN transition students, and students must have consent of nursing advisor for enrollment. This is an introductory survey course addressing broad drug groups and classifications. Topics include pharmacokinetics, pharmacodynamics, drug preparations, interactions, adverse and side effects, legal aspects, and application of the nursing process to the pharmacological plan of care.

NUR 1210C, Basic Care of the Adult Basic Care of the Adult**6 hrs., 4 crs.,**

\$43.00 lab fee. (Offered fall and spring). Prerequisite: NUR1022C. This course covers utilization of the nursing process with applications to the adult experiencing alterations in the health state with emphasis on the elderly population. Content addresses foundations of gerontological nursing, alterations in musculoskeletal system, alterations in protective functions, common endocrine disorders, basic fluid and electrolytes, death and dying, alterations in reproductive function, and reproductive surgeries. Introductory nursing management principles are applied in the clinical setting. Concurrent campus and clinical lab experiences are provided.

NUR 1213C, Intermediate Adult Care Intermediate Adult Care**18 hrs., 10 crs.,**

\$922.00 lab fee. (Offered fall and spring). Prerequisite: *NUR1022C, *NUR1210C, *NUR1142, *HUN1201, *BSC2086, *BSC2086L, *DEP2004. This course utilizes the nursing process with application to the adult client experiencing medical and surgical health complications and abnormal health states. Emphasis is placed on metabolic and regulatory mechanisms of the brain, liver, gallbladder, spleen, pancreas, digestive abnormalities, fluid and electrolyte imbalances, the endocrine and the renal system and eye and ear abnormalities and diseases. This course also focuses on neurological dysfunctions and infectious communicable diseases and the characteristics of the older population and normal aging. Focus areas will cover factors that influence dysfunctions and medical management to include effective communication, the nursing process and nurse's role, to assist the nurse in factoring in cultural differences and normal aging. Concurrent clinical experience is provided in acute care, long-term care and community agency settings.

NUR 2214C, Advanced Adult Care Advanced Adult Care**19 hrs., 11 crs.,**

\$246.00 lab fee. (Offered fall and spring). Prerequisites: *NUR1213C, *NUR2420C, *NUR2520C, *NUR2310C, *MCB2004, *MCB2004L. Prerequisites or corequisites: *POS2041 or *AMH2020, and 3 credits from *Humanities I, II, or III. This course is an extension of Intermediate Adult Care. The holistic perspective of this course considers aspects when caring for persons with complex health conditions, clinical decision making, critical thinking, and for persons with multi-systems, complex health problems in an advanced technology with multifaceted medical and nursing interventions. A study of the intensive care experience and emergency nursing is included. Concurrent campus and clinical labs are provided. A preceptorship experience to assist in role transition from student to graduate nurse is provided. Students may be assigned to clinical labs on shifts other than day shifts. Completion of a comprehensive nursing exam is required.

NUR 2310C, Nursing Care of the Child Nursing Care of the Child**4 hrs., 4 crs.,**

\$74.00 lab fee. (Offered fall and spring). Prerequisites: *NUR1213C. This course utilizes the nursing process and family-centered care to provide nursing care for children and their families in the hospital, home, ambulatory and community settings. Emphasis is placed on the application of normal growth and development principles as well as selected health problems of children. A variety of clinical rotation experiences are provided which assist the student in applying theoretical knowledge to clinical situations in the pediatric setting. Specific exercises and opportunities emphasize critical thinking, communication, cultural consideration, growth and development, assessment, legal and ethical considerations, and management principles.

NUR 2420C, Maternal-Infant Nursing Maternal-Infant Nursing**4 hrs., 4 crs.,**

\$45.00 lab fee. (Offered fall and spring). Prerequisites: *NUR1213C. This course focuses on the application of the nursing process to the childbearing family. Content includes reproductive anatomy and physiology, conception and fetal development, pregnancy, pregnancy at risk, the birth process, the postpartum period, the normal newborn, the newborn with selected risks, and methods of fertility control. Legal and ethical concepts are considered, along with selected principles of nursing leadership and management. Concurrent campus and clinical lab experiences are provided.

NUR 2520C, Psychiatric Mental Health Nursing Psychiatric Mental Health Nursing**4 hrs., 4 crs.,**

\$38.00 lab fee. (Offered fall and spring). Prerequisites: *NUR1213C. Utilization of the nursing process with applications to the individual experiencing biopsychosocial alterations in the health state. Emphasis is placed on the use of the therapeutic interpersonal process in meeting client's needs. Management of the therapeutic milieu and time related issues are also addressed. Includes an overview of mental health nursing and care of the persons with disrupted coping patterns and altered thought processes. Concurrent campus and clinical lab experiences are provided in institutional and community-based practice settings.

NUR 2930, Selected Topics in Nursing I Selected Topics in Nursing I**1 hr., 1 cr.,**

(Offered fall and spring). Prerequisite: Permission of instructor. Individualized study of selected aspects in nursing.

NUR 2932, Selected Topics in Nursing II Selected Topics in Nursing II**2 hrs., 2 crs.,**

(Offered fall and spring). Prerequisite: Permission of instructor. A more in depth individualized study of selected aspects of nursing.

NUR 3069, Advanced Health Assessment Advanced Health Assessment**3 hrs., 3 crs.,**

(Offered fall and spring), A course designed to develop the student's knowledge and skills for obtaining and recording a systematic, comprehensive health history and physical examination of the adult. The course involves synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of adults. Variations in children and elders are also analyzed. The process whereby the nurse utilizes interviewing and clinical examination skills to gather and analyze data relevant to common health problems is emphasized.

NUR 3119, Nursing Concepts and Theories Nursing Concepts and Theories**3 hrs., 3 crs.,**

(Offered fall and spring). This course includes information on the profession of nursing and introduces the student to the heritage of nursing. The focus is on the contemporary image of the nursing profession in its varied roles within the health care system. The philosophical and theoretical bases of nursing as a profession are explored. The emphasis is on recognition of nursing as a vital component of health care and on the beginning socialization of students into the professional role.

NUR 3128, Pathophysiology Pathophysiology**3 hrs., 3 crs.,**

(Offered fall and spring). This course includes information about the pathophysiologic base and pharmacologic management of disease processes across the lifespan. The focus is on alterations in physiologic function as manifestations of disease, and differences in children, adults, and older adults. Emphasis is on relating signs, symptoms, and laboratory findings of common alterations and understanding the appropriate pharmacologic management to promote adaptation.

NUR 3167, Research Process for Professional Nursing Research Process for Professional Nursing**3 hrs., 3 crs.,**

(Offered spring and summer). Prerequisite: *STA2023, *NUR3925. This introductory course is designed to promote conceptualization of both the basic research process and the importance of research to support evidenced-based nursing practice. Emphasis is also on understanding and utilizing technological resources available for accessing published healthcare research.

NUR 3636C, Community Health Nursing Community Health Nursing**4 hrs., 4 crs.,**

\$14.00 lab fee. (Offered fall and spring). This course provides an understanding of community nursing including adaptive responses of client groups, research on community nursing and its application to clients within the community, and the concepts of epidemiology and biostatistics. Application in a clinical setting of community nursing includes adaptive responses of client groups, research on community nursing and its application to clients within the community, and the concepts of epidemiology and biostatistics. Assessment of the community and its healthcare delivery systems will be emphasized, including the social structures within the community and family structures. The role of the nurse in dealing with family crises, gerontological problems, child-bearing and child-rearing families, and medical-surgical conditions will be explored. Historical, legal, ethical, and economic issues affecting adult/gerontological nursing will also be a focus.

NUR 3895, Teaching and Learning for the Healthcare Professional Teaching and Learning for the Healthcare Professional**3 hrs., 3 crs.,**

(Offered fall and spring). An overview course designed to include teaching and learning theories, educational needs assessment, development of teaching and learning objectives, teaching strategies and methodologies, and evaluation of instruction. Strategies for teaching individuals, small groups, and the client will also be included.

NUR 3925, Symposium I Symposium I**1 hr., 1 cr.,**

(Offered fall and spring). This select symposium centers around the exploration of a specific topic or to enhance specific professional skills. Topics may vary. Topics are selected on the basis of what is new or currently relevant in the field.

NUR 4655, Multicultural Factors and Health Multicultural Factors and Health**3 hrs., 3 crs.,**

(Offered fall and summer). This course will provide a comparative analytical approach to the study of communication, current problems, issues, health care beliefs, values, and cultural norms as they affect health care practices. Institutional health care policies and standards which conflict with ethical or cultural beliefs will be explored.

NUR 4827C, Leadership and Management Leadership and Management**4 hrs., 4 crs.,**

(Offered spring and summer). Prerequisite/Corequisite: *NUR3636C. This course provides a foundational understanding of how nurse leaders apply the principles of management, leadership, and administrative processes in both private and public organizations. Application in the clinical setting will include promoting a foundational understanding of how nurse leaders apply the principles of management, leadership, and administrative processes in both private and public organizations. Focus topics include an emphasis on: organizational change, measuring quality, performance evaluation, effective communication, motivation, relationship development, and collaborative teamwork.

NUR 4837, Health Care Policy and Economics Health Care Policy and Economics**3 hrs., 3 crs.,**

(Offered fall and summer). This course will provide the student with a foundation for participating in health policy with organizations and for understanding the economic impact of health planning. Content will include a review of the organization of health care systems, health care financing, economic implications, and the role of the provider in policy-making. Emphasis is on the analysis of health policy from a socioeconomic, ideological, political, historical, and technological perspective while integrating clinical management processes and the use of available community fiscal resources.

NUR 4847, Clinical Decision Making Clinical Decision Making**3 hrs., 3 crs.,**

(Offered fall and summer). This course teaches a conceptual understanding of the logical and critical thought processes required of a professional nurse. The reasoning process is the essential link between information gathering and decision making. The aim of this course is to develop the analytical abilities that are necessary for tertiary studies, as well as for professional practice.

NUR 4925, Symposium II Symposium II**1 hr., 1 cr.,**

(Offered fall and spring). Prerequisite: NUR3925. This select symposium centers around the exploration of a specific topic or to enhance specific professional skills. Topics may vary. Topics are selected on the basis of what is new or currently relevant in the field.

NUR 4945C, Nursing Capstone Practicum Nursing Capstone Practicum**2 hrs., 2 crs.,**

(Offered fall and summer). Prerequisite: NUR3167. This course includes practical application in a clinical setting of knowledge learned in the classroom.

NSP - Nursing Special**NSP 2090, Registered Nurse First Assistant Theory Registered Nurse First Assistant Theory****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Proof of current RN licensure or CNOR certification. Designed to prepare registered nurses in the practice of first assisting. Course includes instruction in preoperative management, intraoperative assisting, and postoperative management. Preop management includes but is not limited to the preop assessment, resolution of discrepancies, communicating/collaborating regarding the plan of care, positioning for optimal exposure, the time out verification, and documentation. Intraop first assisting includes but is not limited to synthesizing patient data to detect/prevent potential adverse events, surgical procedures, anticipation, minimizing procedure length, using instruments/devices safely, providing exposure, handling/cutting tissue, providing hemostasis, preventing contamination, preventing foreign body retention, and suturing. Postop management includes but is not limited to documentation of plan of care/postoperative orders/operative notes, postop rounds, assessing patient, and assisting with discharge planning/community resources.

NSP 2090L, Registered Nurse First Assistant Theory Lab and Clinical Registered Nurse First Assistant Theory Lab and Clinical**3 hrs., 3 crs.,**

\$398.00 lab fee. (Offered fall and spring). Prerequisite: NSP2090. This course is designed to provide lab and clinical experience to the registered nurse regarding the expanded functions unique to the RNFA First Assisting intern. This course includes a study of common surgical procedures including but not limited to anatomy and physiology, pathophysiology, sequence of procedure, assisting behaviors, operative technique, and potential complications for the procedure. In addition, course content shall emphasize preoperative, intraoperative and postoperative patient management in collaboration with other health care providers. Includes, but is not limited to performing focused preoperative nursing assessments, communicating and collaborating with other healthcare providers the plan of care, validated documentation of intraoperative experiences, and postoperative patient management such as participating in postoperative rounds and assisting with discharge planning including the identification of appropriate community resources.

NSP 2290, Perioperative Nursing Theory Perioperative Nursing Theory**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite or Corequisite: ENC1101, PSY2012, humanities elective. This course is designed to introduce the registered nurse or nursing student to perioperative nursing with a focus on the interoperative component. This course includes an introduction to surgical technique. There is an additional cooperative clinical/lab component that is available under cooperative education for hands on experience in the surgical setting.

NSP 2290L, Clinical Internship in Perioperative Nursing Clinical Internship in Perioperative Nursing**12.5 hrs., 3 crs.,**

(Offered summer). This course is designed to introduce the individual to perioperative surgical nursing with a focus on intraoperative nursing. This course includes a study of the patient's perioperative experience, roles and responsibilities of the registered nurse; principles and practice of sterile technique; sterilization and disinfection; operating room hazards; and an introduction to surgical technique.

OST - Office Administration**OST 2949, COOP/Work Experience/Secretarial COOP/Work Experience/Secretarial****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PLA - Paralegal Assistant**PLA 2949, COOP/Work Experience/Legal Assisting COOP/Work Experience/Legal Assisting****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PHA - Pharmacy**PHA 2949, COOP/Work Experience/Pharmacy COOP/Work Experience/Pharmacy****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PHI - Philosophy**PHI 2010, Introduction to Philosophy Introduction to Philosophy****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) In this course, students will be introduced to the nature of philosophy, philosophical thinking, major intellectual movements in the history of philosophy, including topics from the western philosophical tradition and various problems in philosophy. Students will strengthen their intellectual skills, become more effective learners, and develop broad foundational knowledge. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2010H, Honors Introduction to Philosophy Honors Introduction to Philosophy**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) In this course, students will be introduced to the nature of philosophy, philosophical thinking, major intellectual movements in the history of philosophy, including topics from the western philosophical tradition and various problems in philosophy. Students will strengthen their intellectual skills, become more effective learners, and develop broad foundational knowledge. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2600, Ethics Ethics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) This introductory course on ethics emphasizes the application of ethical theories to contemporary moral issues such as abortion, euthanasia, punishment, and the death penalty. The course also examines major moral theories through readings and selected primary materials, including selections from the Western canon. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2600H, Honors Ethics Honors Ethics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) This introductory course on ethics emphasizes the application of ethical theories to contemporary moral issues such as abortion, euthanasia, punishment, and the death penalty. The course also examines major moral theories. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2620, Environmental Ethics Environmental Ethics**3 hrs., 3 crs.,**

(Offered fall and spring). This course examines environmental issues and how they have impacted contemporary society and analyzes the historical development of environmental approaches and ethical theories that have been generated by these approaches. Practical issues covered include, but are not limited to, global climate change, use of natural resources, pollution, environmental justice, and maintaining a sustainable, ecologically responsible ecosystem and society.

PHI 2620H, Honors Environmental Ethics Honors Environmental Ethics**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) This course examines environmental issues and how they have impacted contemporary society and analyzes the historical development of environmental approaches and ethical theories that have been generated by these approaches. Practical issues covered include, but are not limited to, global climate change, use of natural resources, pollution, environmental justice, and maintaining a sustainable, ecologically responsible ecosystem and society. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2635, Biomedical Ethics Biomedical Ethics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). This course examines ethical issues that arise within the practice of medicine and within biomedical research. Case studies and thought experiments will be used to explore the ethical and professional responsibilities of those working in the medical profession. Topics may include the patient-physician relationship, abortion, infertility, genetics, cloning, euthanasia, organ transplant, and health care reform.

PHI 2635H, Honors Biomedical Ethics Honors Biomedical Ethics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) This course examines ethical issues that arise within the practice of medicine and within biomedical research. Case studies and thought experiments will be used to explore the ethical and professional responsibilities of those working in the medical profession. Topics may include the patient-physician relationship, abortion, infertility, genetics, cloning, euthanasia, organ transplant, and health care reform. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

PHI 2647, Ethics of Technology Ethics of Technology**3 hrs., 3 crs.,**

(Offered fall and spring). This course extends critical thinking and ethical reasoning to issues concerning technology. Students will investigate and evaluate questions about topics such as the direction and purpose of technological development, problems connected to artificial intelligence, robotics, enhancement technologies, virtual reality, and the risks associated with existing and emerging technologies.

PHI 2949, COOP/Work Experience/Philosophy COOP/Work Experience/Philosophy**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PGY - Photography**PGY 2801C, Digital Photography I Digital Photography I****6 hrs., 3 crs.,**

\$79.00 lab fee. Basic photographic composition and photographic skills; operation of the digital camera; techniques of computer manipulation; printing; and history and criticism of photography approaches as they relate to personal expression. (First priority will be given to students whose program requires photography.)

PGY 2802C, Digital Photography II Digital Photography II**6 hrs., 3 crs.,**

\$79.00 lab fee. Prerequisite: PGY2801C. Intermediate photographic composition and photographic skills; intermediate and advanced techniques of computer manipulation; printing; and history and criticism of photography approaches as they relate to personal expression (First priority will be given to students whose program requires photography.)

PEL - Phys Educ Object Centered**PEL 1214, Intercollegiate Softball Workshop Intercollegiate Softball Workshop****2 hrs., 1 cr.,**

(Offered fall and spring). An activity course designed to serve varsity women's softball team members.

PEL 1219, Intercollegiate Baseball Workshop Intercollegiate Baseball Workshop**2 hrs., 1 cr.,**

(Offered fall and spring). An activity course designed to serve varsity baseball team members.

PEL 1324, Intercollegiate Volleyball Workshop Intercollegiate Volleyball Workshop**2 hrs., 1 cr.,**

(Offered fall and spring). An activity course designed to serve the varsity women's volleyball team members.

PEL 1621, Theory and Practice of Basketball Theory and Practice of Basketball**2 hrs., 1 cr.,**

(Offered fall and spring). This course is designed for students to gain a working knowledge of rules, theory, and strategy of the sport of basketball through lecture, video, and on court demonstration and practice.

PEL 1624, Intercollegiate Basketball Workshop Intercollegiate Basketball Workshop**2 hrs., 1 cr.,**

(Offered fall and spring). An activity course designed to serve varsity basketball team members.

PEL 2949, COOP/Work Experience/Physical Education COOP/Work Experience/Physical Education**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PEO - Phys Educ Object Centered**PEO 2003, Sports Officiating Sports Officiating****3 hrs., 3 crs.,**

(Offered fall). This course is designed to provide students with a working knowledge of sports officiating through the use of lecture, videos, and practical experience. Interpretation of rules from a selection of sport activities will be included. This course will count as an academic elective.

PEM - Phys Educ Performance Cent**PEM 1109, Circuit Training Circuit Training****2 hrs., 1 cr.,**

(Offered fall, spring, and summer). This course is designed for the development and maintenance of physical fitness through regular participation in a continuous sequence with a variety of activities such as cardiovascular exercise, calisthenics, weights, bands, balls, and weight-bearing exercises.

PEM 1116, Lifetime Fitness Lifetime Fitness**2 hrs., 1 cr.,**

This course is designed to improve or maintain strength and fitness levels through cross training. Activities such as weight training, land aerobics, water aerobics, walking and jogging are included. Emphasis is on fitness and proper exercise techniques.

PEM 1121, Yoga Yoga**2 hrs., 1 cr.,**

(Offered fall, spring, and summer). Performance and application using a series of yoga basic movements, breathing, and concentration techniques designed to enhance body awareness, flexibility, balance, and allow the mind to be focused and centered.

PEM 1131, Weight Training Weight Training**2 hrs., 1 cr.,**

(Offered fall and spring). This course is designed to improve or maintain strength and fitness levels through weight training. Emphasis is on fitness and proper use of weight equipment.

PSC - Physical Sciences**PSC 2949, COOP/Work Experience/Physical Science COOP/Work Experience/Physical Science****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PHT - Physical Therapy**PHT 1000, Introduction to Physical Therapy Introduction to Physical Therapy****2 hrs., 2 crs.,**

(Offered fall). Prerequisite: Acceptance into PTA program. This course provides an introduction to the history, present practice, and future trends of the physical therapy profession. An introduction to the team concept in health care including the role and responsibilities of the physical therapist assistant will be discussed. Students will also be presented with: an examination of legal and ethical issues related to the practice of physical therapy, patient's rights and responsibilities, confidentiality of patient information, discussion of structure and services of the American Physical Therapy Association, reimbursement systems and fiscal considerations of providers and consumers of physical therapy services, quality assurance and assessment in the delivery of physical therapy, and basic communication techniques.

PHT 1102, Applied Anatomy for Physical Therapy Assistants Applied Anatomy for Physical Therapy Assistants**2 hrs., 2 crs.,**

(Offered fall). Corequisites: PHT1102L, BSC2085, BSC2085L. This is a course for PTA students that reviews musculoskeletal, neuromuscular, and basic anatomical concepts. Functional anatomy will include the study of human joints, muscles, ligaments, and functional human motion. Application of anatomical concepts to physical therapy procedures will also be introduced. Examination of these concepts will include: coordinated muscle functional and neuromuscular control. This is a preparatory class for PHT1124.

PHT 1102L, Applied Anatomy Lab Applied Anatomy Lab**2 hrs., 1 cr.,**

\$12.00 lab fee. (Offered fall). Corequisite: PHT1102. This is a laboratory course which focuses on the application of anatomical principles presented in PHT1102. This includes the study of human joints, muscles, ligaments and nerves as they relate to function. Application of anatomical concepts to physical therapy procedures will also be introduced, to highlight the importance of patient positioning for optimal function and movement. This is a preparatory laboratory course for PHT1124L.

PHT 1124, Functional Human Motion Functional Human Motion**2 hrs., 2 crs.,**

(Offered spring). Prerequisites: BSC2085, BSC2085L, PHT1102, PHT1102L. Functional Human Motion is a course designed for PTA students to review musculoskeletal, neuromuscular, and basic anatomical concepts. Functional mechanics, planes, and other relationships will be explored as they relate to joints, muscles, ligaments, and human body movement. Also includes the study of basic kinesiological-/biomechanical principles and their application to human movement such as analysis of normal movement patterns, posture, and gait. This course will focus on the axial skeleton, appendicular skeleton, and will explore anatomical concepts as they relate to the field of physical therapy.

PHT 1124L, Functional Human Motion Lab Functional Human Motion Lab**2 hrs., 1 cr.,**

(Offered spring). Prerequisites: PHT1102, PHT1102L, BSC2085, BSC2085L. Corequisite: PHT1124. A laboratory course offering practice in the application of principles presented in PHT1124 for movement, posture and gait analysis/measurement. Focus is on the development and application of kinesiological and biomechanical concepts to human movement. Effective manual and keen observational skills will be developed for surface anatomy and palpation.

PHT 1131, Assessment, Measurement and Documentation Assessment, Measurement and Documentation**1 hr., 1 cr.,**

(Offered spring). Prerequisite: HSC1531. Introduction to medical record keeping. Documentation skills, including SOAP notes, narrative notes, and computerized documentation systems. Reading and interpreting a physical therapy evaluation. Concepts of measurement, assessment, and recording of flexibility, strength, function, balance, endurance, pain, neurological deficit and sensation, segmental length, girth, and volume.

PHT 1131L, Assessment, Measurement, and Documentation Lab Assessment, Measurement, and Documentation Lab**4 hrs., 2 crs.,**

(Offered spring). Corequisite: PHT1131. A laboratory course designed to practice principles presented in PHT1131. Reading and interpreting medical records and examination of a variety of evaluation and assessment forms. Practice in documentation skills, goniometry, muscle testing, neurological and sensory testing, coordination, and functional assessment.

PHT 1200, Basic Skills in Patient Care Basic Skills in Patient Care**2 hrs., 2 crs.,**

(Offered fall). Corequisite: PHT1000. Introduction to basic patient care skills; moving, lifting, and transferring patients; patient positioning and draping; preparation of treatment area; medical asepsis and infection control; body mechanics; wheelchair operation and adjustment; identification of architectural barriers; safety issues in patient care and transport; fitting and application of selected adaptive devices; introduction to activities of daily living; bed mobility skills; vital signs, and range of motion.

PHT 1200L, Basic Skills in Patient Care Lab Basic Skills in Patient Care Lab**2 hrs., 2 crs.,**

\$169.00 lab fee. (Offered fall). Corequisite: PHT1200. A laboratory course designed for practice in the basic patient care skills presented in PHT1200. The focus is on the development of safe and competent patient and equipment handling skills.

PHT 1220, Introduction to Therapeutic Exercise Introduction to Therapeutic Exercise**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: PHT1200, PHT1200L. Introduction to the types and effects of exercise; rationale for and functional basis of exercises and techniques employed for therapeutic reasons; use and maintenance of a variety of exercise equipment; exploration of the concepts of lifespan fitness and wellness.

PHT 1220L, Therapeutic Exercise Lab Therapeutic Exercise Lab**2 hrs., 2 crs.,**

\$31.00 lab fee. (Offered spring). Corequisite: PHT1220. A laboratory course designed to develop skill in the application of the concepts and techniques of exercise therapy presented in PHT1220. Hands-on experience with a variety of exercise equipment and practice in performing, assisting, and teaching of therapeutic exercises.

PHT 2211,**2 hrs., 2 crs.,****PHT 2211L, Therapeutic Modalities Lab Therapeutic Modalities Lab****2 hrs., 2 crs.,**

\$58.00 lab fee. (Offered summer). Corequisite: PHT2211. A laboratory course designed to develop competencies in the application of therapeutic modalities discussed in PHT2211. Positioning, draping, and safety precautions in the use of all modalities will be a strong focus.

PHT 2224,**2 hrs., 2 crs.,****PHT 2224L,****1 hr., 1 cr.,****PHT 2225,****3 hrs., 3 crs.,****PHT 2225L, Therapeutic Interventions II Lab Therapeutic Interventions II Lab****2 hrs., 2 crs.,**

\$18.00 lab fee. (Offered fall). Corequisite: PHT2225. This is a laboratory course designed to develop skill in the application of concepts presented in PHT2225. Practice in performing therapeutic exercises and treatment techniques for selected orthopedic disabilities.

PHT 2226,**3 hrs., 3 crs.,****PHT 2226L, Therapeutic Interventions III Lab Therapeutic Interventions III Lab****2 hrs., 2 crs.,**

(Offered fall). Corequisite: PHT2226. This is a laboratory course designed to develop skill in the application of concepts presented in PHT2226. Practice in performing, assisting, teaching, and documenting therapeutic exercises and treatment techniques for selected neurological disabilities.

PHT 2801, PTA Clinical Practice I PTA Clinical Practice I**10 hrs., 2 crs.,**

\$144.00 lab fee. (Offered fall). Prerequisites: PHT2211, PHT2211L. Students are assigned to an agency providing physical therapy services for an introductory (full-time, 40 hours/week for 4 weeks) experience in the application of skills learned in the classroom to patients in the clinical setting. Students implement PT treatments and perform specific clinical tasks under the close supervision of a physical therapist. This is an introductory experience and emphasis is on developing ease in the moving and handling of patients; confidence in communicating and interacting with staff, patients, and their families; sharpened powers of observation; and an understanding of the role of the physical therapist assistant. A Patient Care Study is completed along with pertinent literature review.

PHT 2810, PTA Clinical Practice II PTA Clinical Practice II**19.2 hrs., 4 crs.,**

(Offered spring). Prerequisite: PHT2801. Corequisite: PHT2931. An intermediate level, full-time clinical placement (40 hours/ week for 7 weeks) designed to be an in-depth experience in the delivery of physical therapy services to patients in a clinical setting. It is a supervised experience in the application of academically acquired knowledge. Problem-solving techniques are employed in the interpretation and execution of patient care plans. An in-depth patient care study will be completed, and students will prepare and give an in-service to the facility staff.

PHT 2820, PTA Clinical Practice III PTA Clinical Practice III**41 hrs., 4 crs.,**

(Offered spring). Prerequisite: PHT2810. Corequisite: PHT2931. This course is an advanced level, full-time clinical placement (40 hours/week for 7 weeks) designed to be an in depth experience in the delivery of physical therapy services to patients in a clinical setting. Although a supervised experience in the application of academically and clinically acquired knowledge, emphasis will be on the student developing more autonomy in patient care and more independence in involvement with the entire scope of physical therapy services from clerical to patient scheduling and treatment to department maintenance. Also of emphasis will be a continuation of the development of critical thinking, problem-solving, and communication/teaching skills. An in depth patient care study will be completed and a quality assurance study will be conducted. Grade mode: pass/fail.

PHT 2931, Seminar Seminar**2 hrs., 2 crs.,**

\$129.00 lab fee. (Offered spring). Corequisites: PHT2810, PHT2820. This course is designed to broaden the scope of the student's understanding of clinical practice. Relationship of clinical research to clinical practice. Reading and review of professional literature in physical therapy or related fields. Conduction and presentation of patient care studies. Responsibilities for continuing education and professional development and quality assurance. Licensure issues. Job skills such as resumes and interview techniques. Reviewing for final competency exam and licensing exam preparation. Presentation of in-service and quality assurance projects. Final comprehensive exam.

PHT 2949, COOP/Work Experience/Physical Therapy COOP/Work Experience/Physical Therapy**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PHY - Physics**PHY 1020, Basic Concepts of Physics Basic Concepts of Physics****3 hrs., 3 crs.,**

(Offered fall and spring). This is a basic overview course presenting physics concepts with a minimum emphasis on mathematics. As a conceptual course, it is designed to help students develop a clear and logical understanding of the fundamental physics principles to include motion, gravity, vectors, momentum, energy, vibrations, waves, heat and thermodynamics. Further, it will include practical examples that demonstrate the role of physics in other disciplines.

PHY 1023, Survey of General Physics Survey of General Physics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: MAC1140, MAC1114. A conceptual approach to physics with emphasis on problem solving. This course is designed for students who plan to take PHY 2048 and have had no previous physics course.

PHY 1023H, Honors Survey of General Physics Honors Survey of General Physics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: MAC1140, MAC1114. A conceptual approach to physics with emphasis on problem solving. This course is designed for students who plan to take PHY2048 and have had no previous physics course.

PHY 2048, University Physics I University Physics I**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisites: MAC2311, PHY1023 or equivalent. Corequisites: MAC2312, PHY2048L. This calculus-based course serves as the first in a two-part series, covering topics like kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. Designed for science and engineering majors, the course integrates critical thinking, analytical skills, and real-world applications.

PHY 2048H, Honors University Physics I Honors University Physics I**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisites: MAC2311, PHY1023 or equivalent. Corequisites: MAC2312, PHY2048L. This calculus-based course serves as the first in a two-part series, covering topics like kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. Designed for science and engineering majors, the course integrates critical thinking, analytical skills, and real-world applications.

PHY 2048L, University Physics I Laboratory University Physics I Laboratory**3 hrs., 1 cr.,**

\$5.00 lab fee. (Offered fall and spring). Corequisite: PHY2048 or consent of instructor. Investigation of lecture-related materials with an emphasis on the relationship of theoretical concepts to realistic measurements.

PHY 2049, University Physics II University Physics II**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisites: PHY2048, MAC2312. Corequisite: PHY2049L. A continuation of PHY2048 involving selected topics from sound, thermodynamics, optics, electricity, and magnetism.

PHY 2049L, University Physics II Laboratory University Physics II Laboratory**3 hrs., 1 cr.,**

\$5.00 lab fee. (Offered fall and spring). Corequisite: PHY2049 or consent of instructor. A continuation of PHY2048L.

PHY 2053, College Physics I College Physics I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: MAC1140, MAC1114. Corequisite: PHY2053L. This course is the first in a two-part series intended for non-physics majors, offering an algebra and trigonometry approach to topics such as kinematics, dynamics, energy, momentum, rotational motion, fluid dynamics, oscillatory motion, and waves. The course fosters analytical and critical thinking skills to promote a scientific understanding of the real world.

PHY 2053L, College Physics I Laboratory College Physics I Laboratory**2 hrs., 1 cr.,**

\$5.00 lab fee. (Offered fall). Corequisite: PHY2053 or consent of instructor. Laboratory work involves investigation of lecture-related materials and alternative approaches to problem solving.

PHY 2054, College Physics II College Physics II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: PHY2053. Corequisite: PHY2054L. A continuation of PHY2053 involving selected topics from mechanics, wave motion, sound, optics, electricity, magnetism, and atomic physics.

PHY 2054L, College Physics II Laboratory College Physics II Laboratory**2 hrs., 1 cr.,**

\$5.00 lab fee (Offered spring). Corequisite: PHY2054 or consent of instructor. A continuation of PHY2053L.

PHY 2949, COOP/Work Experience/Physics COOP/Work Experience/Physics**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PEN - Physl Education Water**PEN 1171, Water Aerobics Water Aerobics****2 hrs., 1 cr.,**

(Offered fall, spring, and summer). This course is designed and organized so students can maintain and/or improve their health and fitness. Instruction in water exercises will contribute to the strength, flexibility, and cardiovascular endurance of the student. NOTE: Swimming skills are not a prerequisite.

PEN 1172, Fitness Swim Fitness Swim**2 hrs., 1 cr.,**

(Offered fall, spring, and summer). Prerequisite: PEN1121 or complete basic water skills test the first day of class. This course is a noncompetitive but structured lap-swim program combined with stroke analysis and training techniques. The course is designed so students can maintain and/or improve their health and fitness.

PEN 2136, Basic and Advanced Skin and Scuba Diving Basic and Advanced Skin and Scuba Diving**6 hrs., 3 crs.,**

\$132.00 lab fee. (Offered fall, spring, and summer). Prerequisite: Student must pass a basic water skills test the first class meeting. This course provides an orientation and introduction to physics of diving; anatomy; barotrauma, decompression sickness and decompression tables; general diving and scuba operation and maintenance; diving first aid and CPR; dive planning, environment and marine life.

PEN 2137, Advanced Scuba Diving Advanced Scuba Diving**4 hrs., 2 crs.,**

\$150.00 lab fee. (Offered fall, spring, and summer). (The lab fee covers one offshore training dive and class materials). Each student must provide all of his/her own equipment or make arrangements for rental of equipment. A medical form is required and any history of heart or respiratory problems will require a doctor's exam. Prerequisite: Open water scuba certification from a recognized certifying agency. The student will have logged a minimum of 10 open water dives prior to taking this class. Students must be at least average swimmers and comfortable in the water. A preliminary swimming evaluation will be made. Topics include underwater navigation, night, low visibility, current, river and deep diving, site evaluation, dive planning, equipment, medical aspects and search and recovery. Six open water dives are required during this course.

PEN 2138, Rescue Diver Rescue Diver**4 hrs., 2 crs.,**

\$130.00 lab fee. (Offered fall, spring, and summer). The lab fee covers all classroom materials, text books and manuals, and certification materials after successful completion of open water sessions. Certificates include NAUI Rescue Diver and DEMP (Diver Emergency Management Provider) from the Divers Alert Network DEMP is a four course package that includes Oxygen First Aid for Dive accidents, Neurological Assessment, Hazardous Marine Life First Aid, and Basic Life Support. Prerequisite: Advanced SCUBA, pool skill evaluation and each student must provide all of his/her own equipment suitable for open water or make arrangements for rental of equipment. A medical form is required and any history of heart or respiratory problems will require a doctor's exam. The course covers all academics, pool sessions, and open water skill sessions necessary for certification. Topics will include but not be limited to: identifying emergency situations, self-rescue, buddy team rescues, identifying stress, reaction to panic, and prevention techniques. Practice skills to include but not be limited to self-rescue, diver assists, surface and subsurface rescues, beach and boat extrications, and victim management.

POS - Political Science**POS 2041, American National Government American National Government****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will investigate how the national government is structured and how the American constitutional republic operates. It covers the philosophical and historical foundations of American government, including but not limited to: the Declaration of Independence, the US Constitution and its amendments, and The Federalist Papers. The course examines the branches of government and the government's laws, policies, and programs. It also examines the ways in which citizens participate in their government and ways their government responds to citizens.

POS 2041H, Honors American National Government Honors American National Government**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will investigate how the national government is structured and how the American constitutional republic operates. It covers the philosophical and historical foundations of American government, including but not limited to: the Declaration of Independence, the US Constitution and its amendments, and The Federalist Papers. The course examines the branches of government and the government's laws, policies, and programs. It also examines the ways in which citizens participate in their government and ways their government responds to citizens.

POS 2112, State and Local Government State and Local Government**3 hrs., 3 crs.,**

(Offered fall and spring). The course is a study of state and local forms of government and the dynamics of governmental administrative processes. The State of Florida is used as an example of activities and patterns common within state-level governance. The responsibilities of local government at the county and city levels are explored as well.

POS 2112H, Honors State and Local Government Honors State and Local Government**3 hrs., 3 crs.,**

(Offered fall and spring). The course is a study of state and local forms of government and the dynamics of governmental administrative processes. The State of Florida is used as an example of activities and patterns common within state-level governance. The responsibilities of local government at the county and city levels are explored as well.

POS 2949, Coop:Polit Sc Coop:Polit Sc**3 hrs., 3 crs.,**

PRN - Practical Nursing**PRN 0098C, Practical Nursing Foundations 1 Practical Nursing Foundations 1****20 hrs., 10 crs.,**

\$21.00 lab fee. (Offered fall). This course is an introduction to the health care delivery system and basic nursing care. Topics include basic safety, security, emergency procedures, blood-borne diseases, including HIV/AIDS, and principles of nutrition. Legal and ethical responsibilities, communication skills, and basic nursing procedures, including restorative activities are also covered. Students will practice infection control with aseptic technique, personal care, and learn to organize patient care. Medical terminology and normal structure and function of the human body are covered to provide a basic foundation on which to build subsequent learning. Laboratory and clinical experiences are provided for skills performance of personal and basic care of the patient. Concurrent campus and clinical lab experiences are provided.

PRN 0099C, Practical Nursing Foundations 2 Practical Nursing Foundations 2**20 hrs., 10 crs.,**

\$15.00 lab fee. (Offered fall). Prerequisite: PRN0098C. This course concentrates on nursing principles and the role of the practical nurse in assisting the professional nurse in gathering information, identifying problems, planning interventions, and evaluating patient outcomes. A review of normal human growth and development with a focus on interpersonal relationships, mental health concepts, community health issues, and hospice care is included. The content will provide the basis to improve the behavioral aspects of the nurse/client relationship throughout the life span in various care settings. Performance of nursing procedures, skills, and safe medication administration are emphasized. Students will learn the symbols used in the measurement of medication, convert units of measure from one system to another, and calculate amounts of medication to give from the medication on hand. Concurrent campus and clinical lab experiences are provided.

PRN 0290C, Medical-Surgical Nursing 1 Medical-Surgical Nursing 1**20 hrs., 10 crs.,**

\$3.00 lab fee. (Offered spring). Prerequisite: PRN0099C. This course focuses on providing nursing care through the identification of signs and symptoms, diagnostic testing, medications, and nutritional needs of the adult client experiencing alterations in function of the cardiovascular, respiratory, lymphatic, musculoskeletal, endocrine or integumentary systems requiring medical or surgical management. Concurrent campus and clinical lab experiences are provided.

PRN 0291C, Medical-Surgical Nursing 2 Medical-Surgical Nursing 2**20 hrs., 10 crs.,**

\$5.00 lab fee. (Offered spring). Prerequisite: PRN0290C. This course focuses on providing nursing care through the identification of signs and symptoms, diagnostic testing, medications, and nutritional needs of the adult client experiencing alterations in function of the gastrointestinal, neurological, urinary, reproductive systems, and oncologic disorders requiring medical or surgical management. Concurrent campus and clinical lab experiences are provided.

PRN 0690C, Comprehensive Nursing and Transitional Skills A (Maternal-Child Nursing) Comprehensive Nursing and Transitional Skills A (Maternal-Child Nursing)**10 hrs., 5 crs.,**

\$314.00 lab fee. (Offered summer). Prerequisite: *PRN0291C. This course will assist the student to utilize nursing principles in the care of the expectant mother, newborn, and pediatric patient and their families. The promotion and maintenance of health, selected pediatric health problems and the prevention of SIDS/SUIDS are emphasized. Employability skills and preparation for the state licensing examination are included to assist the student to transition to the practical nursing role. Completion of a comprehensive nursing exam is required. Concurrent campus and clinical lab experiences are provided.

PMT - Precision Metals Tech**PMT 2213C, Machining - Lathe Machining - Lathe****4 hrs., 3 crs.,**

(Offered fall). This course concentrates on the lathe series of machines and includes set-up, centering, turning, facing, filing, polishing, burning, thread cutting, and other processes common to the lathe series.

PMT 2214C, Machining - Mill Machining - Mill**4 hrs., 3 crs.,**

(Offered spring). This course concentrates on vertical milling machines and includes set-up and procedures for various types of surfaces as key-seats. It also includes milling procedures using the dividing head and rotary table.

PMT 2250C, CNC Programming I CNC Programming I**4 hrs., 3 crs.,**

\$97.00 lab fee. (Offered spring). This is an introductory course in CNC programming utilizing mill, lathe, and routers.

PMT 2254C, CNC Programming II CNC Programming II**4 hrs., 3 crs.,**

\$65.00 lab fee. (Offered fall). Prerequisite: PMT2250C. This course is a continuation of PMT2250C, CNC Programming I. The student will learn to create their own programs from CAM software. The student will create parts utilizing mill, lathe, and routers.

PSY - Psychology**PSY 2012, General Psychology General Psychology****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course students will gain an introduction to the scientific study of human behavior and mental processes. Topics may be drawn from historical and current perspectives in psychology.

PSY 2012H, Honors General Psychology Honors General Psychology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course students will gain an introduction to the scientific study of human behavior and mental processes. Topics may be drawn from historical and current perspectives in psychology.

PSY 2930, Special Topics in Psychology Special Topics in Psychology**3 hrs., 3 crs.,**

(Offered fall and spring). This course will cover a variety of special topics for students who wish to further explore the field of psychology. Students will explore the application of psychological theories and principles to areas ranging from popular culture to real world problems and concerns. (May be repeated once for a total of six credits.)

PSY 2930H, Honors Special Topics in Psychology Honors Special Topics in Psychology**3 hrs., 3 crs.,**

(Offered fall and spring). This course will cover a variety of special topics for students who wish to further explore the field of psychology. Students will explore the application of psychological theories and principles to areas ranging from popular culture to real world problems and concerns. (May be repeated once for a total of six credits).

PSY 2949, COOP/Work Experience/Psychology COOP/Work Experience/Psychology**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PAD - Public Administration**PAD 2949, COOP/Work Experience/Public Administration COOP/Work Experience/Public Administration****1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

PAD 3391, Foundations of Emergency Management Foundations of Emergency Management**3 hrs., 3 crs.,**

This course provides the student with a comprehensive foundation of the history, terminology, structure, organization, and challenges that involve the management of disastrous events.

PAD 3936, Public Safety Robotics and Informatics Public Safety Robotics and Informatics**3 hrs., 3 crs.,**

Introduction to the use and application of unmanned systems, emergency informatics, emerging interdisciplinary technologies, to address the Department of Homeland Security Geospatial Concept of Operations (GeoCONOPS) processes (real-time collection, analysis, distribution, and visualization) using unmanned systems (Robotics) for prevention, preparedness, response and recovery from emergencies.

PUR - Public Relations

PUR 2949, COOP/Work Experience/Public Relations COOP/Work Experience/Public Relations**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

RTV - Radio Television

RTV 2949, COOP/Work Experience/Broadcasting COOP/Work Experience/Broadcasting**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

RTE - Radiologic Technology

RTE 1000, Introduction to Diagnostic Imaging Introduction to Diagnostic Imaging**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: RTE1111C. This course covers the organization and operation of a medical imaging department. Radiologic topics include: x-ray equipment operation, historical aspects of radiography, department organizational structure, safety, radiation protection, pharmacology, infection control, aseptic and nonaseptic techniques, medical law, professional ethics and conflict resolution, health records, professional development, certification, and accreditation.

RTE 1111C, Introduction to Patient Care Introduction to Patient Care**2 hrs., 2 crs.,**

\$13.00 lab fee. (Offered fall). Prerequisite: Program admission. An introduction to the principles and practices of patient care during radiographic examinations. Topics include medical legal issues, patient assessment and communication, patient care and safety, infection control, surgical asepsis, vital signs and oxygen administration, electrocardiography, medical emergencies, trauma and mobile considerations, and the care of pediatric and geriatric patients.

RTE 1418, Principles of Radiographic Exposure I Principles of Radiographic Exposure I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Program admission. The fundamentals of atomic structure, magnetism, electricity, and radiation physics as they relate to the principles of x-ray production will be presented. Topics include the factors that govern and influence the production of an image, image acquisition, and image receptor systems. Also, technical factors of image quality including theory and application of exposure factors, intensifying screen, radiographic film, filtration, and beam limitation will be presented.

RTE 1457, Principles of Radiographic Exposures II Principles of Radiographic Exposures II**4 hrs., 4 crs.,**

(Offered spring). Prerequisite: RTE1418. A continuation of RTE 1418 with emphasis on computerized and digital radiography principles and equipment operations, picture archiving and communication systems, digital receptors, image acquisition and analysis, fluoroscopy equipment, quality control, advancements in medical imaging, and continuous quality improvement.

RTE 1503, Radiographic Positioning and Procedures I Radiographic Positioning and Procedures I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Program admission. Corequisite: RTE1503L. This course is designed to prepare the student for practical experience in the clinical setting. Topics include basic anatomy and radiographic positioning of the human body in examination of the chest, abdomen, upper extremities, humerus, and shoulder girdle.

Special considerations for pediatric patients and geriatric patients will be discussed. Additionally, the student will be introduced to mobile exams, trauma situations, and cross-anatomy of the chest, abdomen, upper extremities, humerus, and shoulder girdle as seen in the transverse, coronal, and sagittal planes using CT and MRI images.

RTE 1503L, Radiographic Positioning and Procedures Lab I Radiographic Positioning and Procedures Lab I**2 hrs., 1 cr.,**

(Offered fall). Prerequisite: Program admission. Corequisite: RTE1503. Practical application of theory taught in RTE 1503 class. Students practice positioning techniques relating to radiography of the chest, abdomen, upper extremities, humerus and shoulder girdle. Special considerations for pediatric patients, geriatric patients, mobile exams, and trauma situations will be discussed.

RTE 1513, Radiographic Positioning and Procedures II Radiographic Positioning and Procedures II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: RTE1503. Corequisite: RTE1513L. This course is designed to prepare the student for practical experience in a clinical setting. Topics include basic anatomy and radiographic positioning of the human body in examination of the lower extremities, pelvic girdle, spine, and bony thorax. Special considerations for pediatric patients and geriatric patients will be discussed. Additionally, the student will be introduced to mobile exams, trauma situations, and cross-sectional anatomy of the lower extremities, pelvis, spine, and bony thorax as seen in the transverse, coronal, and sagittal planes using CT and MRI images.

RTE 1513L, Radiographic Positioning and Procedures Lab II Radiographic Positioning and Procedures Lab II**2 hrs., 1 cr.,**

(Offered spring). Prerequisite: RTE1503L. Corequisite: RTE1513. The student will demonstrate in a laboratory setting basic anatomy, terminology, and radiographic positioning of the human body as it relates to radiographic examinations of the spine, ribs, bony thorax, lower extremities and shoulder girdle. Discussion includes trauma radiography along with the application of radiographic equipment and technical exposure factors for the exams presented. Special considerations for pediatric patients, geriatric patients, and trauma situations will be discussed.

RTE 1523, Radiographic Positioning and Procedures III Radiographic Positioning and Procedures III**2 hrs., 2 crs.,**

(Offered summer). Prerequisite: RTE1513. Corequisite: RTE1523L. This course is designed to prepare the student for practical experience in the clinical setting. Topics include basic anatomy and radiographic positioning of the human body in examination of the head and upper and lower gastrointestinal systems. Special considerations for geriatric and pediatric patients will be discussed. Additionally, the student will be introduced to mobile exams, trauma situations, and cross-sectional anatomy of the head and upper and lower gastrointestinal systems as seen in the transverse, coronal, and sagittal planes using CT and MRI images.

RTE 1523L, Radiographic Positioning and Procedures Lab III Radiographic Positioning and Procedures Lab**III****2 hrs., 1 cr.,**

(Offered summer). Prerequisite: RTE1513L. Corequisite: RTE1523. Practical application of theory taught in RTE 1523. Students practice positioning techniques relating to radiography of the skull, facial bones, sinuses, and upper and lower gastrointestinal systems. Special considerations for pediatric patients, geriatric patients, mobile exams, and trauma situations will be discussed.

RTE 1804, Clinical Education I Clinical Education I**14.4 hrs., 3 crs.,**

\$110.00 lab fee. (Offered fall). Prerequisites: Current certification in cardiopulmonary resuscitation, all required program immunizations, physical exam report on file in the document management system. Corequisite: RTE1111C. (216 total clinical hours). Observation and application of health care principles will be the focus of this clinical rotation. The student will spend time orienting to the medical facility, learning to understand the departmental process and procedures, and becoming familiar with the flow of the radiology department. The student will begin to apply the radiographic principles and skills taught in RTE1503 and will perform exams under direct and indirect supervision of a clinical preceptor.

RTE 1814, Clinical Education II Clinical Education II**14.4 hrs., 3 crs.,**

(Offered spring). Prerequisite: RTE1804. (216 total clinical hours). Observation and application of the primary healthcare principles will be the focus of this clinical rotation. The student will begin to apply the radiographic principles and skills taught in RTE1503 and RTE1513 and will perform exams under direct and indirect supervision of a clinical preceptor.

RTE 1824, Clinical Education III Clinical Education III**19.2 hrs., 4 crs.,**

(Offered summer). Prerequisites: RTE1814. (288 total clinical hours). Observation and application of the primary of healthcare principles will be the focus of this clinical rotation. The student will continue to build on the radiographic principles and skills taught in RTE1503 and RTE1513. In addition, the student will begin applying the principles taught in RTE1523 and will perform exams under direct and indirect supervision of a clinical preceptor.

RTE 2061, Radiography Seminar Radiography Seminar**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: RTE2834. An in depth review of American Registry of Radiologic Technology (ARRT) certification in Radiologic Science. Emphasis is placed on patient care, radiation protection, equipment operation and maintenance, image production and evaluation, and overall radiographic procedure.

RTE 2385, Radiobiology and Radiation Protection Radiobiology and Radiation Protection**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: RTE1457. The student will study the interactions and effects of ionizing radiation on cells, tissues, and the human body. In addition, the student will learn the principles of radiation protection and the safety requirements of regulatory agencies related to radiography.

RTE 2563, Advanced Medical Imaging Advanced Medical Imaging**3 hrs., 3 crs.,**

(Offered fall). This course prepares the student to perform trauma, mobile, urinary, and advanced medical imaging exams. Students will learn how to perform venipuncture in this course. This course introduces the student to advanced imaging modalities in procedures and introduces the student to advanced imaging modalities in computerized tomography, magnetic resonance imaging, ultrasonography, nuclear medicine, surgical radiography, mammography, bone densitometry, interventional vascular imaging, cardiovascular imaging and radiation therapy. In addition, the topic of artificial intelligence in medical imaging will be introduced.

RTE 2584, Mammography Mammography**3 hrs., 3 crs.,**

(Offered fall). This course is offered to registered radiographers, in good standing with the American Registry of Radiologic Technologists (ARRT) and to radiography students currently enrolled in the radiography program. This course is designed to fulfill the 45 hours of mammography education required by the ARRT to be eligible to apply for the national certification in Mammography. The course covers the anatomy and pathologies of the breast identified through imaging, routine and special imaging projections of the breast to include proper exposure factors, radiation safety, and the components and procedures of a quality assurance program.

RTE 2762, Sectional Anatomy Sectional Anatomy**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: BSC2086, BSC2086L. Identification of normal and abnormal anatomic structures of the skull, neck, thorax, reproduction, central nervous, cardiovascular, and musculoskeletal systems by the use of cross-sectional imaging modalities.

RTE 2782, Radiographic Pathology Radiographic Pathology**2 hrs., 2 crs.,**

(Offered spring). Prerequisite: RTE1111. The objective of this course is to introduce the disease processes most frequently encountered in the radiology department. The etiology, pathogenesis, treatment, and resolution of each disease is discussed with an attempt to relate recent advances in these areas. Emphasis is placed on radiologic diagnosis and the relationship of the radiographic appearance of the disease to its anatomic, physiologic, and pathologic characteristics.

RTE 2834, Clinical Education IV Clinical Education IV**24 hrs., 5 crs.,**

\$90.00 lab fee. (Offered fall). Prerequisites: RTE1824. Observation and application of primary healthcare principles is the focus of this clinical rotation. The student will continue to build on the radiographic principles and skills taught in RTE 1503, RTE 1513, and RTE1523 and will perform exams under direct and indirect supervision of a clinical preceptor. In addition, the student will begin clinical rotations into the surgical suite and computed tomography.

RTE 2844, Clinical Education V Clinical Education V**24 hrs., 5 crs.,**

(Offered spring). Prerequisite: RTE2834. Observation and application of primary healthcare principles will be the focus of this clinical rotation. The student will continue to build on the radiographic principles and skills taught in RTE 1503C, RTE 1513C, and RTE 1523C and perform exams under direct and indirect supervision of a clinical preceptor. In addition, the student will begin clinical rotations into advanced imaging modalities for observation only.

REA - Reading**REA 0019, Developmental Reading I and II Combined Developmental Reading I and II Combined****4 hrs., 3 crs.,**

\$5.00 lab fee. (Offered fall, spring, and summer). Prerequisite: Option for students who score below the prescribed state levels on the placement test. Must be passed with a minimum grade of ?C.? Option for students who score below the prescribed state levels on the placement test. Must be passed with a minimum grade of ?C.? This course is a developmental course that is not intended to satisfy any part of General Education requirements and is not counted as part of the required hours for graduation. An intensive reading course designed to improve each student?s level of comprehension and critical thinking skills.

REL - Religion**REL 2121, Introduction to Religion in America Introduction to Religion in America****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) Through readings, discussions, and selected primary materials, including selections from the Western canon, this course provides an examination of the ideological origins and social context of American religious history. Emphasis is placed on the rich diversity of American religious life through an examination of American originals (e.g., native Americans, Mormons, Christian Scientists, Seventh-Day Adventists), imported religions (e.g., Protestantism, Catholicism, Islam, Judaism, Buddhism), and pop culture religion. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

REL 2121H, Honors Introduction to Religion in America Honors Introduction to Religion in America**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) This course provides an examination of the ideological origins and social context of American religious history. Emphasis is placed on the rich diversity of American religious life through an examination of American originals (e.g., native Americans, Mormons, Christian Scientists, Seventh-Day Adventists), imported religions (e.g., Protestantism, Catholicism, Islam, Judaism, Buddhism), and pop culture religion. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

REL 2300, Religions of the World Religions of the World**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) Through readings, discussions, and selected primary materials, including selections from the Western canon, this course examines the primitive and the living religions of Hinduism, Jainism, Sikhism, Buddhism, Confucianism, Taoism, Judaism, Shinto, Zoroastrianism, Islam, and Christianity, noting distinctions and similarities. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

REL 2300H, Honors Religions of the World Honors Religions of the World**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: ENC1101 with a minimum grade of "C." (Meets Philosophy/Religion Humanities requirement.) A study of primitive and the living religions of Hinduism, Jainism, Sikhism, Buddhism, Confucianism, Taoism, Judaism, Shinto, Zoroastrianism, Islam, and Christianity, noting distinctions and similarities. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

REL 2315, Eastern Religions Eastern Religions**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101. This introductory course surveys a broad range of religious ideas and practices belonging to Eastern traditions of Asia. The survey includes Hinduism, Jainism, Buddhism, Taoism, Confucianism, and Shinto. Geographically, the foci of this course will be India, China, and Japan. . This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

REL 2315H, Honors Eastern Religions Honors Eastern Religions**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: ENC1101. This introductory course surveys a broad range of religious ideas and practices belonging to Eastern traditions of Asia. The survey includes Hinduism, Jainism, Buddhism, Taoism, Confucianism, and Shinto. Geographically, the foci of this course will be India, China, and Japan.

REL 2949, COOP/Work Experience/Religion COOP/Work Experience/Religion**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

RET - Respiratory Therapy**RET 1005, Management of Cardiopulmonary Microbiology and Disorders Management of Cardiopulmonary Microbiology and Disorders****3 hrs., 3 crs.,**

(Offered fall). This course introduces the student to microbiology as it relates to the profession of respiratory therapy. Topics may include but are not limited to: scope of microbiology, bacteria, viruses, physical and chemical methods of control, laboratory techniques, safety issues, and infections and disorders encountered in respiratory care.

RET 1024, Respiratory Care I Respiratory Care I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: Program acceptance. Corequisite: *RET1024L, *RET1832. This course introduces the student to patient assessment and vital signs, principles of infection prevention and control, bedside monitoring of patients with cardiopulmonary disorders, lung expansion therapy and airway clearance, devices used to deliver medical gas therapy, and the manufacturing, storage, handling, and transportation of medical gases.

RET 1024L, Respiratory Therapy I Lab Respiratory Therapy I Lab**4 hrs., 2 crs.,**

\$662.00 lab fee. (Offered fall). Corequisite: *RET1024, *RET1832. Through practice and performance testing, the student will demonstrate mastery in patient assessment and vital signs, principles of infection prevention and control, bedside monitoring, lung expansion and airway clearance, and delivery of medical gas therapy. Simulations will be utilized to enhance the learning experience and achieve course objectives while applying procedural knowledge gained in RET1024.

RET 1264, Respiratory Care II Respiratory Care II**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: *RET1024, *RET1024L, *RET1832. Corequisites: RET1264L, RET1833. This course includes the theory, procedures, and equipment used to deliver respiratory therapy medications. The student will be introduced to blood gas analysis, airway care, and basic life support.

RET 1264L, Respiratory Care II Lab Respiratory Care II Lab**4 hrs., 2 crs.,**

\$287.00 lab fee. (Offered spring). Prerequisites: *RET1024, *RET1024L, *RET1832. Corequisites: RET1264, RET1833. Through practice and performance testing, the student will demonstrate the mastery of equipment used to delivery respiratory therapy medications, airway care, basic life support, and arterial blood gas analysis. Simulations will be utilized to enhance the learning experience and achieve course objectives while applying procedural knowledge gained in RET1264.

RET 1400, Cardiopulmonary Procedures Cardiopulmonary Procedures**3 hrs., 3 crs.,**

(Offered spring). This course introduces the student to the fundamental concepts of hemodynamic monitoring, interventional pulmonary procedures, pulmonary function testing, and related pharmacologic agents.

RET 1483, Cardiopulmonary Assessment Cardiopulmonary Assessment**3 hrs., 3 crs.,**

(Offered spring). This course introduces the student to basic assessment of patients with cardiopulmonary disorders. Topics may include but are not limited to: patient relationship, vital signs, dyspnea, cough and phlegm, chest inspection and palpation, percussion and breath sounds, chemistry, gram stains, and cultures, cardiac function, hematology, liver failure, and diagnostic radiological studies of the lungs.

RET 1485, Cardiopulmonary Anatomy and Physiology Cardiopulmonary Anatomy and Physiology**3 hrs., 3 crs.,**

(Offered fall). This course includes the anatomy and physiology of the cardiopulmonary system incorporating ventilatory mechanics, gas transport, gas laws, acid base physiology, neural/chemical regulation of breathing, and ventilation perfusion relationships with regard to respiratory care.

RET 1832, Respiratory Care Clinical I Respiratory Care Clinical I**4 hrs., 1 cr.,**

(Offered fall). Corequisites: *RET1024, *RET1024L. This clinical course requires the student to apply theory and procedural knowledge gained from RET1024 and RET1024L to the patient care setting. Emphasis will include patient assessment and vital signs, principles of infection prevention and control, bedside monitoring, lung expansion and airway clearance, and delivery of medical gas therapy.

RET 1833, Respiratory Care Clinical II Respiratory Care Clinical II**8.533 hrs., 2 crs.,**

(Offered spring). Prerequisites: *RET1024, *RET1024L. Corequisites: RET1264, RET1264L/1272L. This clinical course requires the student to apply theory and procedural knowledge gained from RET1264 and RET1264L to the patient care setting. Emphasis will include inhaled medication delivery, hyperinflation therapy, and bronchial hygiene therapy.

RET 1934, Selected Topics Seminar Selected Topics Seminar**1 hr., 1 cr.,**

\$16.00 lab fee. (Offered summer). Advanced Cardiovascular Life Support (ACLS). This course builds on the foundation of lifesaving BLS skills, emphasizing the importance of preventing cardiac arrest, early and continuous high-quality CPR, and high-performing teams resulting in the obtainment of the Advance Cardiovascular Life Support (ACLS) certification. Science and education from the most current American Heart Association Guidelines for CPR and Emergency Cardiovascular Care will be utilized.

RET 1935, Selected Topics Seminar VI Selected Topics Seminar VI**1 hr., 1 cr.,**

(Offered summer). This course will cover the theory, procedures, and selected clinical practice of pulmonary function testing.

RET 2007, Cardiopulmonary Pharmacology Cardiopulmonary Pharmacology**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: RET1350. This course extends the study of pulmonary pharmacology to include anti-microbial agents, nicotine replacement therapy, neonatal and pediatric drug therapy, critical care medications and drugs to support the failing cardiovascular system.

RET 2280, Respiratory Care IV Respiratory Care IV**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: *RET2878, *RET2878L, *RET2834. Corequisites: RET2280L, RET2835. This course will focus on the thorough review of mechanical ventilation with emphasis on adult applications. Included is etiology of respiratory failure, methods of providing positive pressure ventilation, prescribing machine settings and managing patient ventilator interactions, monitoring hemodynamics and gas exchange, weaning/extubation techniques and advanced modes of mechanical ventilation.

RET 2280L, Respiratory Care IV Lab Respiratory Care IV Lab**4 hrs., 2 crs.,**

\$384.00 lab fee. (Offered fall). Prerequisites: *RET2878, *RET2878L, *RET2834. Corequisites: RET2280, RET2835. Through practice and performance testing, the student will demonstrate mastery in the application of advanced modes of mechanical ventilation, ventilator graphics and waveforms, and specialty gases. Review of non-invasive ventilation, basic mechanical ventilation, and caring for critically ill patients are emphasized. Simulation will be utilized to enhance learning and achieve course objectives while applying procedural knowledge gained in RET2280.

RET 2714, Respiratory Care V Respiratory Care V**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: *RET2835. Corequisites: RET2714L, RET2836. This course will focus on fetal growth and development, the examination and evaluation of labor, delivery, and physiological changes after birth, techniques of neonatal resuscitation and stabilization, techniques of Pediatric Advanced Life Support, assessment of the neonatal and pediatric patient, medications used in neonatal and pediatric respiratory therapy, neonatal and pediatric diseases, theories and concepts of neonatal and pediatric ventilatory support, grief and death and dying. Respiratory Care practices in the home care and long-term care settings will be explored and the NBRC Detailed Content Outline will be reviewed.

RET 2714L, Respiratory Therapy V Lab Respiratory Therapy V Lab**2 hrs., 2 crs.,**

\$400.00 lab fee. (Offered spring). Prerequisites: *RET2280, *RET2280L, *RET2835. Corequisites: RET2714, RET2836. Through practice and performance testing, the student will demonstrate mastery in mechanical ventilation techniques for newborn and pediatric patients resulting in the obtainment of the Neonatal Resuscitation Program (NRP) and Pediatric Advanced Life Support (PALS) certifications. Simulation will be utilized to enhanced learning and achieve course objectives while applying procedural knowledge gained in RET2714.

RET 2834, Respiratory Care Clinical III Respiratory Care Clinical III**2 hrs., 2 crs.,**

(Offered summer). Prerequisites: *RET1264, *RET1264L, *RET1833. Corequisites: RET2878, RET2878L. This clinical course requires the student to apply theory and procedural knowledge gained from RET2878 and RET 2878L to the patient care setting. Emphasis will be on critical care procedures, continuous patient monitoring, introduction to mechanical ventilation, and review and interpretation of EKGs and ABGs.

RET 2835, Respiratory Care Clinical IV Respiratory Care Clinical IV**2 hrs., 2 crs.,**

(Offered fall). Prerequisites: *RET2878, *RET2878L. Corequisites: RET2280, RET2280L. This clinical course requires the student to apply theory and procedural knowledge gained from RET2280 and RET2280L to the patient care setting. Emphasis will be on advanced modes of mechanical ventilation, ventilator graphics and waveforms, and specialty medical gases.

RET 2836, Respiratory Care Clinical V Respiratory Care Clinical V**12.8 hrs., 3 crs.,**

(Offered spring). Prerequisites: *RET2280, *RET2280L, *RET2835. Corequisites: RET2714, RET2714L. This clinical course requires the student to apply theory and procedural knowledge gained from RET2714 and RET2714L to the patient care setting. Emphasis will be on neonatal and pediatric respiratory care.

RET 2878, Respiratory Care III Respiratory Care III**3 hrs., 3 crs.,**

(Offered summer). Prerequisites: *RET1264, *RET1264L, *RET1833. Corequisites: RET2878L, RET2834. This course is an introduction to critical care and thinking. Noninvasive ventilation, basic mechanical ventilation, airway care, intubation, and arterial blood gas sampling theory will be of primary focus.

RET 2878L, Respiratory Care III Lab Respiratory Care III Lab**2 hrs., 2 crs.,**

\$339.00 lab fee (Offered summer). Prerequisites: *RET1264, *RET1264L, *RET1833. Corequisites: RET2878, RET2834. Through practice and performance testing, the student will demonstrate mastery in continuous patient monitoring, mechanical ventilation, airway management, intubation, suctioning, O2 therapy, EKG's, and ABG's. Simulation will be utilized to enhance learning and achieve course objectives while applying procedural knowledge gained in RET2878 and RET2878L.

SOW - Social Work**SOW 2020, Introduction to Social Work Introduction to Social Work****3 hrs., 3 crs.,**

(Offered fall). This course is an introduction to an analysis of the relationship of social problems and their determinants to clients, social welfare institutions, services, policies, and social service delivery systems.

SOW 2020H, Honors Introduction To The Field Of Social Work Honors Introduction To The Field Of Social Work**3 hrs., 3 crs.,**

(Offered fall). This course is an introduction to an analysis of the relationship of social problems and their determinants to clients, social welfare institutions, services, policies, and social service delivery systems.

SOW 2949, COOP/Work Experience/Social Services COOP/Work Experience/Social Services**1 hr., 1 cr.,**

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student's major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

SYG - Sociology General**SYG 2000, Principles of Sociology Principles of Sociology****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will gain an understanding of the basic sociological concepts and vocabulary, including the methodological tools, sociological perspectives, and scientific procedures used by social scientists to collect data and conduct research. Topics generally include: society and culture, institutions, socialization, influences, crime, change, groups, sex, race and ethnicity, family, class, and population.

SYG 2000H, Honors Principles of Sociology Honors Principles of Sociology**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). In this course, students will gain an understanding of the basic sociological concepts and vocabulary, including the methodological tools, sociological perspectives, and scientific procedures used by social scientists to collect data and conduct research. Topics generally include: society and culture, institutions, socialization, influences, crime, change, groups, sex, race and ethnicity, family, class, and population.

SYG 2010, Social Problems Social Problems**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The course provides an introduction to the concepts, theories, and methods of the sociological study of social problems. Major topics include: the origins and trends of social problems and their associated solutions with a focus on poverty and inequality, racism, sexism, substance abuse, crime and violence, urban and environmental problems, technology, and social change.

SYG 2010H, Honors Social Problems Honors Social Problems**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). The course provides an introduction to the concepts, theories, and methods of the sociological study of social problems. Major topics include: the origins and trends of social problems and their associated solutions with a focus on poverty and inequality, racism, sexism, substance abuse, crime and violence, urban and environmental problems, technology, and social change.

SYG 2430, Marriage and Family Living Marriage and Family Living**3 hrs., 3 crs.,**

(Offered fall and spring). This course is an analysis of courtship, mate selection, engagement, marriage, and child rearing, with emphasis on the contemporary American family.

SON - Sonography**SON 1000, Introduction to Sonography Introduction to Sonography****1 hr., 1 cr.,**

(Offered spring). Prerequisite: Program acceptance. This course is an introduction to the profession of sonography and the role of the sonographer. Emphasis is on medical terminology, ethical/aspects, written and verbal communication, patient care and professional issues relating to registry, accreditation, professional organizations, and history of the profession.

SON 1052, Sonography Pathology Sonography Pathology**4 hrs., 4 crs.,**

(Offered fall). Prerequisite: SON1144. This course is designed to enhance the student's knowledge of normal and abnormal anatomy. Emphasis is placed on sonographic appearance, both normal and pathological. Clinical scenarios will enable the student to apply information in the clinical setting, and encourage the necessary critical thinking skills. Case studies and study questions will evaluate the student's comprehension of the topic.

SON 1100, Principles and Protocols of Sonography Imaging Principles and Protocols of Sonography Imaging
2 hrs., 2 crs.,

(Offered summer). Prerequisite: *SON1000. A basic introduction to sonographic scanning of the abdomen, pelvis, vascular systems with laboratory practice and application.

SON 1111, Abdominal Sonography I Abdominal Sonography I**3 hrs., 3 crs.,**

(Offered fall). Prerequisites: *SON1100. This course is designed to correlate the sonographic anatomy, physiology, and pathology, including but not limited to, the abdominal cavity, organs and abdominal vasculature. The course will emphasize features and characteristics of normal and abnormal anatomy including pathologies while integrating clinical and diagnostic procedures common to and specific to each organ.

SON 1112, Abdominal Sonography II Abdominal Sonography II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *SON1111. This course is a continuation of SON1111. Focus will be on review and supplemental pathological findings of intra- and retroperitoneal organs, clinical and diagnostic procedures common to and specific to each organ, neonatal and pediatric abdominal imaging, and neonatal hips and neurosonography. Advancements in sonographic imaging to include new innovations in equipment and techniques will also be included.

SON 1121, OB/GYN Sonography I OB/GYN Sonography I**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: SON1100. This course is designed to give the sonography student an understanding of the anatomy, physiology, and pathology of the gravid and non-gravid female pelvis. The student will be introduced to the first trimester of pregnancy including its related anatomy, physiology, possible pathology and/or complications. Embryology, early fetal development, sonographic identification and imaging of the embryo and fetus, trans-abdominal and trans-vaginal scanning techniques will be included.

SON 1122, OB/GYN Sonography II OB/GYN Sonography II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *SON1121. This course is a continuation of OB/GYN Sonography I and is designed to give the student detailed instruction as to the role of Sonography during the second and third trimesters of pregnancy. Fetal development, physiology, all major anomalies, and maternal complications directly related to the second and third trimesters of pregnancy will be discussed in detail.

SON 1144, Superficial Structures Superficial Structures**1 hr., 1 cr.,**

(Offered summer). Prerequisite: SON1112. The course is an overview emphasizing the sonographic features and characteristics of normal and abnormal anatomy of the superficial structures. These include, but are not limited to, the male pelvis and scrotum, breasts, neck and thyroid while integrating clinical and diagnostic procedures pertinent to each area.

SON 1170, Sonography of the Circulatory System Sonography of the Circulatory System**2 hrs., 2 crs.,**

(Offered summer). Prerequisite/Corequisite: *SON2113. An introduction to the hemodynamics of the circulatory systems and the sonographic imaging and Doppler assessment of the cardiac and vascular structures.

SON 1211, Medical Sonography Physics Medical Sonography Physics**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: Program acceptance. This course is designed to present the Sonography student with detailed explanations of sound physics and instrumentations. The fundamental properties of diagnostic ultrasound stressing the operation of diagnostic ultrasound equipment, images and Doppler system, pulse wave, and continuous wave transducers, artifacts, focusing characteristics, tissue interactions, biological effects, and quality assurance methods will be discussed and evaluated.

SON 1214, Practical Aspects of Sonography Practical Aspects of Sonography**1 hr., 1 cr.,**

(Offered spring). Prerequisite: Program acceptance. A study of the principles of diagnostic ultrasound and practical aspects of scanning techniques, image critique, image identification, and patient care and handling as related to sonographic examination. Stressing operation of diagnostic equipment and routine images obtained.

SON 1804, Clinical Education I Clinical Education I**6 hrs., 1 cr.,**

\$264.00 lab fee (Offered summer). Prerequisite: SON1214. This course introduces the patient/sonographic role in a simulated clinical environment. It is designed to subject the students to clinical situations as they become familiar with the role and responsibilities of a sonographer. A portion of the clinical hours will take place in the college campus sonography setting.

SON 1814, Sonography Clinical Education II Sonography Clinical Education II**18 hrs., 3 crs.,**

\$62.00 lab fee (Offered fall). Prerequisite: SON1804. This course applies the principles learned in Abdominal OB/GYN I to actual clinical rotations. The student will receive sonographic instruction in the following ways: by performing a variety of sonographic examinations: initiation of affiliate protocols; appropriate operation of equipment; providing patient care; exam documentation; and evaluation by the clinical instructor. A portion of the clinical hours will take place in the college campus sonography lab setting.

SON 1824, Clinical Education III Clinical Education III**24 hrs., 4 crs.,**

\$272.00 lab fee (Offered spring). Prerequisite: SON1814. This course applies the principles learned in SON1112, SON1122, and SON2175 to actual clinical rotations. The student will receive sonographic instruction by performing a variety of sonographic examinations, demonstrating appropriate operation of equipment, providing patient care, and documenting exam results. A portion of the clinical hours will take place in the college campus sonography lab setting.

SON 2061, Sonography Review Sonography Review**2 hrs., 2 crs.,**

(Offered fall). This course provides a comprehensive review of the entire Sonography Program content. Physics review will include all material covered in SON1211, SON1170, SON2171, SON2175, and includes a physics mock registry exam(s). Abdominal review includes all material covered in SON1111, SON1112, SON1144, and includes an abdomen mock registry exam(s). Obstetrics and Gynecology includes material covered in SON1121, SON1122, and includes an OB/GYN mock registry exam(s).

SON 2113, Cross-Sectional Anatomy Cross-Sectional Anatomy**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: Program acceptance. This course is designed to prepare the student to identify internal structures including organs and vasculature that are important to the objectives of Diagnostic Medical Sonography. The students will build upon their entry level gross anatomy knowledge base to develop their cross-sectional anatomic recognition skills. Sonographic scanning protocols will be included relative to the anatomy being studies, which will serve as a linkage to the clinical environment.

SON 2171, Introduction to Vascular Sonography Introduction to Vascular Sonography**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: *SON1170. This course introduces the fundamental theory and skills necessary for the evaluation of vascular disease using noninvasive technique. Hemodynamics, instrumentation, vascular anatomy, physiology and physical principles are emphasized. Cerebrovascular, peripheral arterial and venous testing are included in this course.

SON 2175, Vascular Sonography Vascular Sonography**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *SON2171. This course is a continuation of the material covered in SON1170. Sonographic imaging and Doppler assessment/analysis of both normal and abnormal flow patterns of the cerebrovascular and peripheral vascular systems are emphasized as well as interpretation of test results.

SON 2834, Clinical Education IV Clinical Education IV**24 hrs., 4 crs.,**

(Offered summer). Prerequisite: SON1824. Working under indirect supervision, the student will apply knowledge and scanning skills learned in superficial structures. Student will apply appropriate scanning techniques to obtain diagnostic images of the male reproductive system, breasts and thyroid. Students will continue to apply knowledge and scanning skills of abdominal, OB/GYN and vascular exams while exercising independent judgment relative to the entirety of the sonographic examinations being performed.

SON 2844, Sonography Clinical Education V Sonography Clinical Education V**30 hrs., 5 crs.,**

(Offered fall). Prerequisite: *SON2834. Students will perform under indirect supervision while exercising independent judgment relative to the entirety of the sonographic examinations being performed and to generally progress to the point of being recognized as a competent entry level sonographer. The student will apply didactic knowledge and performance scanning skills to obtain and complete the required ARRT competency sonographic exams, further mastering of all skills gained and emphasizing OB/GYN, Superficial Structures, Vascular and Abdominal examination techniques. The student must demonstrate patient preparation, exam protocol and image evaluation to include identifying normal and abnormal anatomy.

SON 2930, Special Topics in Sonography Special Topics in Sonography**1 hr., 1 cr.,**

Prerequisite: Must be currently enrolled in a sonography program, a practicing sonographer, or have consent from the program coordinator. This course introduces the fundamental theory and skills necessary for the evaluation of selected topics. Selection of the topic will be determined by student and clinical needs.

SPN - Spanish Language**SPN 1120, First-Year Spanish I First-Year Spanish I****4 hrs., 4 crs.,**

(Offered fall, spring, and summer). This course aims to develop basic communicative skills in Spanish, including speaking, listening, writing and reading, and to apply those skills to gain knowledge of other cultures. By the end of this course students will be able to communicate in Spanish about a variety of topics including greetings and questions, daily activities at a university, family relationships, leisure-time activities, and a house or personal residence. A minimum grade of "C" in SPN1120 must be attained in order to enroll for SPN1121.

SPN 1120H, First-Year Spanish I Honors First-Year Spanish I Honors**4 hrs., 4 crs.,****SPN 1121, First-Year Spanish II First-Year Spanish II****4 hrs., 4 crs.,**

(Offered fall, spring, and summer). Prerequisite: SPN1120. This course is a continuation of SPN1120. Successful completion of SPN1120 with a minimum grade of "C" is required. This course will continue to develop basic communicative skills in Spanish, including speaking, listening, writing and reading, and to apply those skills to gain knowledge of other cultures. By the end of this course, students will be able to communicate in Spanish about a variety of topics including health and the body, food, shopping, holidays, travel, relationships, professions, and the environment. A minimum grade of "C" in SPN1121 must be attained in order to enroll for SPN2200.

SPN 1121H, Honors First Year Spanish II Honors First Year Spanish II**4 hrs., 4 crs.,**

(Offered fall, spring, and summer). Prerequisite: SPN1120. This course is a continuation of SPN1120. Successful completion of SPN1120 with a minimum grade of ?C? is required. This course will continue to develop basic communicative skills in Spanish, including speaking, listening, writing and reading, and to apply those skills to gain knowledge of other cultures. By the end of this course, students will be able to communicate in Spanish about a variety of topics including health and the body, food, shopping, holidays, travel, relationships, professions, and the environment. A minimum grade of ?C? in SPN1121 must be attained in order to enroll for SPN2200.

SPN 2200, Second-Year Spanish I Second-Year Spanish I**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisites: ENC1101 and SPN1121 or equivalent. This course aims to develop intermediate communicative skills in Spanish, including speaking, listening, writing, and reading. Readings and audiovisual materials dealing with Spanish culture and civilization favor grammar review and expansion, as well as oral practice.

SPN 2200H, Honors Second Year Spanish I Honors Second Year Spanish I**4 hrs., 4 crs.,**

(Offered fall and spring). Prerequisites: *ENC1101 and *SPN1121 or equivalent. (Meets Philosophy/Religion Humanities requirement.) This course aims to develop intermediate communicative skills in Spanish, including speaking, listening, writing, and reading. Readings and audiovisual materials dealing with Spanish culture and civilization favor grammar review and expansion, as well as oral practice. This is a course for which students will produce extensive college-level writing and which requires completion with a minimum grade of "C."

SPN 2201, Second-Year Spanish II Second-Year Spanish II**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: SPN2200 or consent of instructor. This course is a continuation of SPN2200 with emphasis on conversation with authentic cultural materials. Authentic listening, reading, and audiovisual materials based on everyday culture and civilization of people from Spain and Hispanic America, basic grammar review, intermediate-level grammar, and development of listening, reading, writing, and speaking skills in the intermediate level.

SPN 2201H, Honors Second Year Spanish II Honors Second Year Spanish II**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: SPN2200 or consent of instructor. This course is a continuation of SPN2200 with emphasis on conversation with authentic cultural materials. Authentic listening, reading, and audiovisual materials based on everyday culture and civilization of people from Spain and Hispanic America, basic grammar review, intermediate-level grammar, and development of listening, reading, writing, and speaking skills in the intermediate level.

SPC - Speech Communication**SPC 1300, Interpersonal Communication Interpersonal Communication****3 hrs., 3 crs.,**

(Offered fall and spring). Theory and practice in the process and dynamics of human communication skills in one-to-one interactions. Emphasis on developing interpersonal and intrapersonal communication skills, verbal and nonverbal communication, cultural communication competencies, and conflict management skills.

SPC 1420, Group Discussion Group Discussion**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Theory and practice in the process and dynamics of group discussion. Emphasis on techniques for the problem-solving or decision-making group.

SPC 1608, Introduction to Public Speaking Introduction to Public Speaking**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Verbal elements of public speaking (purpose, organization, development, style, and methods of presentation of the message and relationship of the message to specific audiences) and nonverbal elements of public speaking (body action, voice, and general bearing). Designed to meet the practical needs of the general student.

SPC 1608H, Honors-Introduction To Public Speaking Honors-Introduction To Public Speaking**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Verbal elements of public speaking (purpose, organization, development, style, and methods of presentation of the message and relationship of the message to specific audiences) and nonverbal elements of public speaking (body action, voice, and general bearing). Designed to meet the practical needs of the general student.

STA - Statistics**STA 2023, Statistics Statistics****3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. This course is appropriate for students in a wide range of disciplines and programs. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator, they must see their instructor in advance for approval. (The combination of STA2023 and STA2122 will not meet the six-hour math General Education requirement. An additional three hours in math will be required.)

STA 2023H, Honors Statistics Honors Statistics**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). Prerequisite: Successful completion of developmental courses, appropriate placement test scores or meet state exemption requirement. In this course, students will utilize descriptive and inferential statistical methods in contextual situations, using technology as appropriate. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. The course is designed to increase problem-solving abilities and data interpretation through practical applications of statistical concepts. This course is appropriate for students in a wide range of disciplines and programs. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator, they must see their instructor in advance for approval. (The combination of STA2023 and STA2122 will not meet the six-hour math General Education requirement. An additional three hours in math will be required.)

STA 2122, Statistical Applications In Social Sciences I Statistical Applications In Social Sciences I**4 hrs., 4 crs.,**

(Offered spring). Prerequisite: Satisfactory score on math placement test or a minimum grade of "C" in MAT1033. A graphing calculator is required. The TI-83/84 are the only allowable calculators for test days. If a student wishes to use any other calculator they must see their instructor in advance for approval. Topics include summarization of data, sample mean and standard deviation, probability, probability distributions, normal distribution, statistical estimation, testing hypotheses, linear correlation/regression, chi-square distributions, ANOVA and non-parametric statistics. This course provides a more indepth study of statistics than STA2023. (The combination of STA2023 and STA2122 will not meet the six-hour math General Education requirement. An additional three hours in math will be required.)

SLS - Student Life Skills**SLS 1201, Personal Development Personal Development****3 hrs., 3 crs.,**

The course is aimed toward improving self-esteem of the student. Motivation, interpersonal relationships, study skills, basic academic skill level, and future potential of the individual are examined. (A student cannot receive credit for SLS 1300 or SLS 1302 and SLS 1201). This course is highly recommended for students who test into two or more developmental courses.

SLS 1301, College and Career Management College and Career Management**3 hrs., 3 crs.,**

(Offered fall and spring). Emphasis is placed on academic, personal, and interpersonal skills that will equip the student with the skills necessary to succeed in college and the creation of a sense of career importance. This course will include a study of basic financial principles including federal financial aid, debt management, how to borrow and save money responsibly, how and why to save for retirement, and budget development. This course is highly recommended for students who test into two or more developmental courses.

SLS 2264, Leadership Development Seminar Leadership Development Seminar**3 hrs., 3 crs.,**

This course encourages participants to develop their leadership potential by discovering the style that works best with their personal strengths and beliefs. The student will build skills for communication, conflict resolution, positive motivation, team building, and decision making. Community service is a required component to this course to expand the students understanding of citizenship and to provide a platform for expanding their newly acquired leadership skills.

STS - Surgical Technology**STS 1310, Surgical Techniques and Procedures Surgical Techniques and Procedures****5 hrs., 5 crs.,**

(Offered spring). Prerequisite: *HSC1000. Corequisite: STS1310L. Course introduces the discipline of surgery, the surgical team, and the perioperative care of the patient (preoperative, intraoperative, and postoperative). Emphasis is placed on the duties of the surgical technologist in the assistant circulator, first scrub and second scrub roles. Topics include the physical environment, attire, legal/ethical responsibilities, aseptic technique, chart review, infection control, equipment, instrumentation, supplies, methods of disinfection and sterilization, sterile storage and distribution, hazards of the environment, principles of electricity and robotics, environmental sanitation, principles of wound healing and wound management, and the typical sequence of surgery. Skills include patient identification, positioning, skin prep, urinary catheterization, counts, draping, incisions, exposure, hemostasis, application of catheters, drains and dressings and specimen care. An introduction to patient assessment and the specialties of surgery is included.

STS 1310L, Surgical Techniques and Procedures Lab Surgical Techniques and Procedures Lab**7.333 hrs., 2 crs.,**

\$338.00 lab fee (Offered spring). Prerequisites: HSC1000L. Corequisite: STS1310. Course prepares students for the application of the roles of assistant circulator, second scrub and first scrub roles. Skills includes the principles of sterile technique, the preoperative preparation of the patient, the use and preparation of surgical instrumentation, use of surgical supplies, tissue replacement materials, preparation of suture, passing of instruments and the surgical setup. Skills include the application of sterile technique, transfer of patient, positioning, skin prep, preparation of sterile supplies, the identification and passing of instrumentation, specialty equipment usage, and universal case setup. Simulation lab exercises will include role rotation during common surgical procedures such as a breast biopsy, hernia repair and laparoscopic cholecystectomy.

STS 1340C, Pharmacology and Anesthesia Pharmacology and Anesthesia**4 hrs., 3 crs.,**

\$46.00 lab fee (Offered fall, spring, summer). This course is designed to introduce students to most commonly used pharmacological agents utilized for surgical patients in each phase of the perioperative experience and those utilized in the treatment of complications and emergencies. Emphasis is placed on preoperative medications, anesthetics and medications utilized within the sterile field stressing identification, preparation, measurements, management within the sterile field, handling/transfer, and usage. Other topics include pain management, airway and respiratory management, IV fluid and electrolyte replacement therapy, and a comparison of the types of anesthesia, physiological effects, complications and treatment. Includes 15 hours of hands on training.

STS 1940C, Introduction to Surgery Clinical Introduction to Surgery Clinical**11.332 hrs., 2 crs.,**

\$80.00 lab fee (Offered spring). Combined course provides orientation to the operating room environments and novice level assignments including case prep, room turnover, central sterile, observation, circulating, patient care sequencing assignments, and initial scrub experiences. Preconference preparation and assignments prepare the student for the clinical assignment.

STS 2323, Surgical Procedures I Surgical Procedures I**4 hrs., 4 crs.,**

(Offered summer). Prerequisite: STS1310, STS1310L. Course is designed to prepare students for surgical procedures including the review of surgical anatomy, physiology, pathophysiology, relevant equipment, supplies, and techniques regarding general surgery, endoscopic surgery, gynecological and obstetrical surgery, genitourinary surgery, orthopedic surgery, and otorhinolaryngological surgery (ear, nose and throat), diagnostic procedures and relevant equipment, supplies, and techniques. Depth of coverage will be determined by the Core Curriculum for Surgical Technologists published by the Association of Surgical Technologists.

STS 2323L, Surgical Simulation Lab I Surgical Simulation Lab I**3.666 hrs., 1 cr.,**

\$257.00 lab fee (Offered summer). Prerequisite: STS1310, STS1310L. Corequisite: STS2323. Course introduces student to instrumentation usage and identification, completion of core mock surgical procedures to facilitate the student's ability to anticipate the steps of the procedure and permits the evaluation of the student's performance regarding the critical elements of the surgical technologist's responsibilities.

STS 2324, Surgical Procedures II Surgical Procedures II**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: STS2323, STS2323L. Course is designed to prepare students for specialty surgical procedures including the review of surgical anatomy, physiology, pathophysiology, relevant equipment, supplies, and techniques regarding plastic and reconstructive surgery, maxillary/mandibular surgery, oral surgery, neurosurgery, cardio thoracic surgery, peripheral vascular surgery, trauma and surgery for all ages. Depth of coverage will be determined by the current edition of the Core Curriculum for Surgical Technologists published by the Association of Surgical Technologists.

STS 2324L, Surgical Simulation Lab II Surgical Simulation Lab II**3.666 hrs., 1 cr.,**

\$263.00 lab fee (Offered fall). Prerequisite: STS2323, STS2323L. Corequisite: STS2324. Course prepares student for the completion of specialty mock surgical procedures to facilitate the student's ability to anticipate the steps of the procedure and permits the evaluation of the student's performance regarding the critical elements of the surgical technologist's responsibilities.

STS 2330C, Principles of Surgical Assisting Principles of Surgical Assisting**4.333 hrs., 2 crs.,**

\$354.00 lab fee (Offered fall and spring). Prerequisite: STS2323 or nationally accredited certification as a surgical technologist (CST). Course provides an in-depth study of the SFA role including history, professional, legal, moral, and ethical responsibilities. Review of healthcare facility information, documentation, and risk management. Topics include: instrument usage, trocar/incisions, tissue handling, dissection, exposure, hemostasis, retraction, suturing, wound healing, tissue replacement materials, irrigation, specimen care, catheter/drain placement, surgical hazard management, IV fluid/auto-transfusion techniques, medication administration, and wound management. Patient care skills include: interview/history techniques, physical assessment, diagnostic exams, planning, patient education, patient monitoring, and perioperative patient care skills. Application of principles includes: the technological sciences, infection control, sterile technique, disinfection and sterilization and problem solving regarding the prevention and treatment of potential complications or emergencies. Includes on-site lab simulation.

STS 2335, Advanced Integrated Surgical Sciences Advanced Integrated Surgical Sciences**2 hrs., 2 crs.,**

(Offered fall, spring, and summer). Prerequisite: Nationally accredited certification as a surgical technologist (CST). Corequisite: STS2336. Course prepares student for the advanced detail of surgical anatomy, physiology. Includes a review of the common function and structures of the human body including the surface anatomy. Other topics include relevant medical terminology, pathophysiology, etiology, disease, chemistry, microbiology, physics, and the technological sciences and congenital anomalies that are commonly encountered during surgical related interventions. In addition, pathology classification, cellular injury, types of necrosis, inflammation, types of injury, nutritional and metabolic pathologies, immunological disorders, neoplastic disorders, circulatory pathologies, hemodynamic management, and pain management will be included.

STS 2336, Advanced Surgical Procedures for the Surgical Assistant Advanced Surgical Procedures for the Surgical Assistant**2 hrs., 2 crs.,**

(Offered fall, spring, and summer). Prerequisite: Nationally accredited certification as a surgical technologist (CST). Corequisite: STS2335. Prepares surgical technologist students with the additional core knowledge to assist with surgical procedures. Includes relevant preoperative diagnosis, common complications, surgical sequence, pharmacology, instrumentation, equipment, operative pathophysiology, and postoperative care for common surgical procedures that may require a surgical assistant. Core surgical specialties to be covered include the services of general, gynecologic and obstetric, otolaryngology, genitourinary, and orthopedic, ophthalmic, plastic and reconstructive, neurosurgery, vascular, and cardiothoracic.

STS 2361, The Art of Teamwork in Surgery The Art of Teamwork in Surgery**1 hr., 1 cr.,**

(Offered fall, spring, and summer). This course will introduce student to the principles of Human Factors science as applied to the system of care, teaching them about the skills needed to function effectively and safely in teams in a modern surgical environment. The course will cover the background psychology of interpersonal interactions and the evidence from other industries on the barriers to safe and effective team communication and cooperation. Students will develop their teamwork and communication skills, explore the principles of hierarchy and power distance, personal styles and coping strategies, situational awareness, secure communications loops, use of checklists and standard operating procedures, how to deal with team dysfunction, leadership, followership, effective briefing and debriefing, models of risk and error in health care, and the principles of risk minimization in systems involving humans.

STS 2365, Professional Skills for the OR Team Professional Skills for the OR Team**1 hr., 1 cr.,**

(Offered fall, spring, and summer). This course will introduce students to the principles of professionalism including such topics as how to work well with many different people/cultures, how to demonstrate respect for and place value on different perspectives, the importance of providing and responding to constructive criticism, mechanisms which can help the individual work well under pressure, discussions regarding the willingness to work hard, discussions regarding multi-tasking and safety procedures which can enhance the ability to complete a variety of tasks simultaneously, the importance of professional organizations, the credentialing process, and how to work within the committee process.

STS 2366C, Surgical Assistant Professional Skills Surgical Assistant Professional Skills**3 hrs., 2 crs.,**

\$154.00 lab fee (Offered spring). This course is designed to prepare the student to effectively function in the role of surgical first assistant. Assignments will explore job description, employment options and career opportunities. Didactic, clinical and/or simulation assignments will include advanced surgical first assistant technical skills, critical analysis such as diagnostic and assessment data analysis, selecting the correct option for patient care and wound management, professional skills including ethics, interprofessional skills, communication, conflict resolution, change management, leadership, followership, mentoring others, interviewing techniques, liability, risk management responsibilities, and effective documentation.

STS 2367, Management in Healthcare Management in Healthcare**2 hrs., 2 crs.,**

(Offered fall, spring, and summer). Introduces the basics of management in the healthcare setting for the supervisor to middle management level includes interpersonal skills, budget management, inventory management, performance appraisal, and policy formation.

STS 2370, Surgical Assisting Clinical I Surgical Assisting Clinical I**16 hrs., 2 crs.,**

\$67.00 lab fee (Offered fall, spring, and summer). Prerequisite: Nationally accredited certification as a surgical technologist (CST). SFA clinical internship which includes the evaluation of the student's performance regarding the critical elements of the surgical first assistant's responsibilities. The course is designed to prepare students for preoperative, intra-operative, and postoperative surgical procedure experiences.

STS 2936, Surgical Certification Symposium Surgical Certification Symposium**1 hr., 1 cr.,**

(Offered fall, spring, and summer). Course provides instruction, guidance, and preparation for the surgical specialist to enter the surgical field as a professional.

STS 2944C, Surgical Clinical I Surgical Clinical I**16.666 hrs., 3 crs.,**

\$21.00 lab fee (Offered summer). This is a combined clinical course designed to prepare students for preoperative, intraoperative, and postoperative surgical procedure experiences. Preconference and case preparation prepares students to gain experiences in the role of the scrub, assistant circulator, and second assistant. Performance evaluation includes surgical techniques, sterile technique, medication administration, prevention of wrong site surgery, prevention of foreign body retention, safe work practices, work attitudes, professional ethics, legal requirements, reporting, documentation, and efficiency in the work arena. Students gain hands-on experience in the application of surgical techniques under the supervision of their preceptor and surgeon for the case. Depth of coverage, role performance, and case completion requirements for graduation are determined by the current edition of the Core Curriculum for Surgical Technologists as published by the Association of Surgical Technologists.

STS 2945C, Surgical Clinical II Surgical Clinical II**16.666 hrs., 3 crs.,**

\$341.00 lab fee (Offered fall). Prerequisite: STS2944C. This is a combined clinical course designed to prepare students for preoperative, intra-operative, and postoperative surgical procedure experiences. Preconference and case preparation prepares students to gain experiences in the role of the scrub, assistant circulator, and second assistant. Performance evaluation includes surgical techniques, sterile technique, medication administration, prevention of wrong site surgery, prevention of foreign body retention, safe work practices, work attitudes, professional ethics, legal requirements, reporting, documentation, and efficiency in the work arena. Students gain hands-on experience in the application of surgical techniques under the supervision of their preceptor and surgeon for the case. Depth of coverage, role performance, and case completion requirements for graduation are determined by the current edition of the Core Curriculum for Surgical Technologists as published by the Association of Surgical Technologists.

STS 2953, Surgical Technologist Portfolio I Surgical Technologist Portfolio I**1 hr., 1 cr.,**

(Offered summer). Course is designed to prepare students for the surgical setting and employment by incorporating case preparation techniques into a final document describing their experiences and course work preparing them for a lifetime of continuing education. Activities will include the design of their own student portfolio which will document their accomplishments in the program, presentations, journals, papers, case preparation, and their experiences in the clinical setting.

STS 2954, Surgical Technologist Portfolio II Surgical Technologist Portfolio II**1 hr., 1 cr.,**

(Offered fall, spring, and summer). Course is designed to prepare students for the surgical setting and employment by incorporating case preparation techniques into a final document describing their experiences and course work preparing them for a lifetime of continuing education. Activities will include the design of their own student portfolio which will document their accomplishments in the program, presentations, journals, papers, case preparation, and their experiences in the clinical setting.

TAX - Taxation**TAX 1000, Principles of Taxation I Principles of Taxation I****3 hrs., 3 crs.,**

(Offered fall). A survey of federal income taxation with primary emphasis on the taxation of individuals.

TAR - Technical Architecture**TAR 2122, Residential Architectural Design Residential Architectural Design****1 hr., 1 cr.,**

(Offered fall). Prerequisite: ARC1302C. Corequisite: TAR2122L. A continuation of Architectural Drafting with emphasis on light construction principles. The student will design a multi-level residence and develop all details, presentation drawings, and a scale model.

TAR 2122L, Residential Design Lab Residential Design Lab**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: ARC1302C. Corequisite: TAR2122. Investigation and implementation of TAR 2122 lecture content with emphasis on drafting solutions using computer-aided design system.

TAR 2154, Commercial Architectural Design Commercial Architectural Design**1 hr., 1 cr.,**

(Offered spring). Prerequisite: ARC1302C. Corequisite: TAR2154L. A continuation of Architectural Drafting with emphasis on structural and mechanical systems design. Students will design a commercial building of their choice, making a complete set of details and presentation drawings. Emphasis will be placed on using computer-aided design and equipment software.

TAR 2154L, Commercial Design Lab Commercial Design Lab**6 hrs., 3 crs.,**

(Offered spring). Prerequisite: ARC1302C. Corequisite: TAR2154. Investigation and implementation of TAR 2154 lecture content with emphasis on drafting solutions using computer-aided design system.

TPP - Theatre Performance/Trng**TPP 1500, Movement Techniques for the Theatre Movement Techniques for the Theatre****3 hrs., 3 crs.,**

(Offered as needed). In-depth study of inner resources: Believable action through developing imagination, observation, concentration, sense recall, emotional response as preparation for stage movements, crosses, gesturing, body positions, motivation and stage business. Practical application of movement studies will be made through class use of scenes from plays or one-act plays.

TPP 1700, Voice Techniques for the Theatre Voice Techniques for the Theatre**3 hrs., 3 crs.,**

(Offered as needed). In-depth study of improving voice techniques, oral reading, retelling stories, interpreting lines and memorization. Application of techniques will be made through reading poetry, scenes and scripts for commercials, television, and radio. Voice for the theatre and amplified voice techniques are included.

TPP 2110, Acting I Acting I**3 hrs., 3 crs.,**

(Offered fall). Study of the acting process, including basic acting techniques, preparation, improvisation, role-playing, text analysis, and character development with emphasis on a truthful and honest approach.

TPP 2111, Acting II Acting II**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: TPP2110 or consent of instructor. Advanced study of characterization through the use of effective preparation, the review of essential acting techniques, and the application of these in monologues, scenes, and audition pieces.

TPP 2250, Introduction to Musical Theatre Introduction to Musical Theatre**3 hrs., 3 crs.,**

(Offered as needed). Study of musical theatre analysis, creation, and performance applied through the study of voice, dance, and acting.

TPP 2300, Directing I Directing I**3 hrs., 3 crs.,**

(Offered as needed). Prerequisites: THE2000 and TPP2110 or permission of instructor. Introduction to the fundamental principles and techniques of play direction to include script selection and analysis, casting, composition, picturization, blocking, interpretation, and staging of plays.

TPP 2930, Selected Topics in Theatre Performance Selected Topics in Theatre Performance**3 hrs., 3 crs.,**

(Offered as needed). Prerequisite: TPP2110. Rotating topics in theatre performance such as period acting styles, advanced scene study, creation of new works, circus training, and stage combat. May include field work as part of the curriculum. (May be repeated up to two times for credit).

TPA - Theatre Production & Admin**TPA 1210, Stagecraft I Stagecraft I****3 hrs., 3 crs.,**

\$37.00 lab fee. (Offered fall and spring). Corequisite: TPA1290L. This course serves as an introduction to the technical aspects of theatre. It will provide a basic understanding of tools and their operation in set construction along with providing opportunities to apply that knowledge. In addition, this course will cover other backstage topics such as painting, AV hookup, and basic electrical safety.

TPA 1211, Stagecraft II Stagecraft II**3 hrs., 3 crs.,**

\$37.00 lab fee. (Offered fall and spring). Prerequisite: *TPA1210, *TPA1290L. Corequisite: TPA1291L. This class serves as an continuation of TPA1210 and TPA1290L. This class focus on advanced construction, rigging, and basic scenic sculpting.

TPA 1220, Introduction to Stage Lighting Introduction to Stage Lighting**3 hrs., 3 crs.,**

(Offered fall and spring). This course is an introduction to the fundamentals of lighting the stage, including a basic introduction to electricity, stage lighting instrumentation and control, color science, and an introduction to lighting design to create theatrical mood and interpretation of a production. Work outside of class on productions is required. Students will serve on lighting crews for hands-on application of the classroom material.

TPA 1290L, Technical Theatre Lab I Technical Theatre Lab I**3 hrs., 2 crs.,**

(Offered fall and spring). Corequisite: *TPA1210. This lab provides students the opportunity to gain practical experience in the safe use of tools and equipment used in set construction. In addition, this course will provide students with opportunities to work backstage as production and run crew.

TPA 1291L, Technical Theatre Lab II Technical Theatre Lab II**3 hrs., 2 crs.,**

(Offered fall and spring). Prerequisites: *TPA1210, *TPA1290L. This lab serves as a continuation of TPA1210 and TPA1290L allowing students to gain practical experience in technical theatre skills. This class will focus on set construction, rigging, and basic scenic sculpting.

TPA 1340, Drafting for the Theatre I Drafting for the Theatre I**3 hrs., 3 crs.,**

(Offered fall). Students will receive instruction on the use of AutoCAD 2015 drawing techniques and how to use them in theatrical application. Through instruction, exercises, and projects, students will demonstrate competence in the use of computer and hand drafting.

TPA 2070, Scenic Painting and Sculpting Scenic Painting and Sculpting**3 hrs., 3 crs.,**

\$36.00 lab fee. (Offered fall and spring). This course is an introduction to the tools, materials, and techniques used to paint and sculpt scenery for the theatre.

TPA 2070H, Honors Scenic Painting and Sculpting Honors Scenic Painting and Sculpting**3 hrs., 3 crs.,**

\$36.00 lab fee. (Offered fall and spring). Prerequisite: *TPA1210. This course is an introduction to the tools, materials, and techniques used to paint and sculpt scenery for the theatre.

TPA 2072, Advanced Scenic Painting and Sculpting Advanced Scenic Painting and Sculpting**3 hrs., 3 crs.,**

\$36.00 lab fee. (Offered fall and spring). Prerequisite: *TPA2070. This course is an introduction to the tools, materials, and techniques used to paint scenery for the theatre. Assigned practical work in supervised production activities outside of class is required, with a minimum of 15 hours for the term.

TPA 2072H, Honors Advanced Scenic Painting and Sculpting Honors Advanced Scenic Painting and Sculpting**3 hrs., 3 crs.,**

\$36.00 lab fee (Offered fall and spring). Prerequisite: *TPA2070. This course is an introduction to the tools, materials, and techniques used to paint scenery for the theatre. Assigned practical work in supervised production activities outside of class is required, with a minimum of 15 hours for the term.

TPA 2212, Sound for the Stage Sound for the Stage**3 hrs., 3 crs.,**

(Offered fall). This course is an introduction to the application and principles of theatre sound. The course includes training in the use and maintenance of theatre sound equipment, recording and editing sound effects, and training in electronic sound reinforcement.

TPA 2221, Advanced Stage Lighting Advanced Stage Lighting**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: *TPA1220. This course is a continuation of TPA1220, Introduction to Stage Lighting, with more emphasis on lighting design, and for developing a lighting design portfolio. Work outside of class on productions is required. Qualified students will be given design assignments on productions.

TPA 2221H, Honors Advanced Stage Lighting Honors Advanced Stage Lighting**3 hrs., 3 crs.,**

(Offered fall and spring). Prerequisite: *TPA1220. Corequisite: TPA2293L. This course is a continuation of TPA1220, Introduction to Stage Lighting, with more emphasis on lighting design, and for developing a lighting design portfolio. Work outside of class on productions is required. Qualified students will be given design assignments on productions.

TPA 2292L, Technical Theatre Lab III Technical Theatre Lab III**3 hrs., 2 crs.,**

(Offered fall and spring). Prerequisite: *TPA1291L. This course focuses on developing crew heads and team leaders within the program. Students will be assigned crew role based on the needs of the upcoming GCSC productions and student's chosen area of focus. Students in TPA2292L are expected to serve as leaders and mentors to students currently enrolled in TPA1290L and TPA1291L. While, this course continues to expand the students technical skills and knowledge, there is a high degree of focus on problem solving and applying the knowledge gained in TPA1290L/1291L in the unpredictable backstage environment.

TPA 2293L, Technical Theatre Lab IV Technical Theatre Lab IV**3 hrs., 2 crs.,**

(Offered fall and spring). Prerequisite: *TPA1291L. The course includes practical experience in the backstage operations of a theatre. The course will emphasize skills in working independently with a high level sense of responsibility for the work assigned. The concentration of this course will vary depending on the skills of students and the needs of the theatre.

TPA 2341, Drafting for Theatre II Drafting for Theatre II**3 hrs., 3 crs.,**

(Offered as needed). Prerequisite: *TPA1340. Students will receive instruction on the use of AutoCad 2015 drawing techniques and how to apply them to theatrical applications. Through instruction, exercises and projects, students will gain confidence in the use of computer drafting.

TPA 2930, Special Topics in Entertainment Technologies Special Topics in Entertainment Technologies**3 hrs., 3 crs.,**

(Offered as needed). This class is offered for qualifying students in their final semester before graduation with the A.S. degree in Entertainment Technology. Students will produce work, both individually and in small groups, to demonstrate their competencies in all areas within the program. Individual projects will be designed for students to showcase their strengths as well as to improve upon their weaknesses. These projects will be assessed by members of the instructional program, fellow students, and invited industry professionals. Permission of instructor is required.

THE - Theatre Stds & Gn Resource**THE 1925, Play Production Play Production****3 hrs., 1 cr.,**

(Offered fall). Participation in theatrical productions with work in preparation and performance, including both acting and technical fields. (May be repeated up to three times for credit.)

THE 1925H, Honors Play Production Honors Play Production**3 hrs., 1 cr.,**

THE1925, Play Production 3 hrs., 1 cr. (Offered fall). Participation in theatrical productions with work in preparation and performance, including both acting and technical fields. (May be repeated up to three times for credit.)

THE 2000, Understanding Theatre Understanding Theatre**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). (Meets Fine Arts Humanities requirement). In this course, students will explore dramatic structure, techniques, and various organizational elements. The course provides an introduction to theatre as a collaborative art form through the critical analysis of its historical context, production, theory and connections to theatrical literature, including the Western canon.

THE 2000H, Honors Understanding Theatre Honors Understanding Theatre**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). (Meets Fine Arts Humanities requirement). In this course, students will explore dramatic structure, techniques, and various organizational elements. The course provides an introduction to theatre as a collaborative art form through the critical analysis of its historical context, production, theory and connections to theatrical literature, including the Western canon.

THE 2071, Survey of Film, Television, and Video Survey of Film, Television, and Video**3 hrs., 3 crs.,**

(Offered fall, spring, and summer). An introduction to film analysis. A look at the artistic and technical elements of filmmaking. Topics include: narrative, genre, cinematography, acting, editing, sound, film history, filmmaking technologies and production systems. Through this course, students develop criteria for evaluating and enjoying films. Online E-book optional.

THE 2305, Script Analysis Script Analysis**3 hrs., 3 crs.,**

(Offered as needed). Prerequisites: THE2000, TPP2110. An introduction to dramatic structure and methods of script analysis as a preparation for writing, directing, designing, performing and criticizing plays.

BIO - Transfer Generic Biology**BIO XXX1, Gen Biology Gen Biology****3 hrs., 3 crs.,****WOH - World History****WOH 2012, World History I World History I****3 hrs., 3 crs.,**

(Offered fall and spring). This course provides a survey of civilizations from ancient times to the modern era, including a study of change and continuity over time. Multiple regions will be included so as to present history from a global perspective. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

WOH 2022, World History II World History II**3 hrs., 3 crs.,**

(Offered fall and spring). This course provides a survey of world civilizations from the modern period to contemporary times, including a study of change and continuity over time. Multiple regions will be included so as to present history from a global perspective. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)

WOH 2022H, Honors World History II Honors World History II

3 hrs., 3 crs.,

(Offered fall and spring). This course provides a survey of world civilizations from the modern period to contemporary times, including a study of change and continuity over time. Multiple regions will be included so as to present history from a global perspective. (Students are advised to take either WOH2012/2022 or EUH1000/1001.)
