

VALENCIA COMMUNITY COLLEGE  
CHANGES BETWEEN 2010-2011 and 2011-2012 CATALOGS

**1. TRANSFER PLANS**

- No changes in this section

**2. HONORS AND INTERDISCIPLINARY STUDIES PROGRAMS**

- **PERT Cut Scores for Honors Placement** – The Honors Department submitted a memorandum, Catalog markup, Honors Program placement criteria, and the Minutes of the January 21, 2011, Honors Advisory Board meeting. Focus was on the new PERT implementation as it impacts Honors Program placement

**3. DEGREES**

- No significant changes

**4. UNIVERSITY PARALLEL PROGRAM: ASSOCIATE IN ARTS (AA) DEGREE**

- Added Pre-Major: Music Performance, A.A. Degree
- Eliminated Musicianship I, MUT 1121 from Gen Ed Humanities and added Music Theory I, MUT 1111 due to the new A.A. Music Pre-Major
- Added A.A. Pre-Major: Computer Science (UCF), A.A. to B.S. Degree
- Associate in Arts in Dance Performance degree Program Outcomes Modification: removal of the following two Program Outcomes: Apply dance fitness principles and Appreciate dance principles and concepts
- Addition of MUT 1011C, Introduction to Music Theory, to General Education Program Requirements. The addition will satisfy a non-writing Humanities General Education requirement for the Sound Technology Specialization in the Sound and Music Technology A.S. Degree program
- Associate in Arts, Foreign Language Proficiency Requirement - Addition of SPN 1340 Spanish for Heritage Speaker I and SPN 1341 Spanish for Heritage Speaker II to the General Education Foreign Language Proficiency Requirements
- Pre-Major: Sign Language Interpretation, A.A. Degree - 1) Reflect the curriculum changes in excluding using the fourth levels of foreign language to meet a Humanities requirement; 2) To add ASL 2510 Deaf Culture as the required Social Science for the Pre-major AA in Sign Language Interpretation; 3) To reflect the deletion of 2 credits of INT2941 Internship Exploration in Sign language
- Addition of ASL 2510, Deaf Culture, to the list of eligible courses for General Education credit in Area 5. Social Sciences
- Associate in Arts Degree Program Outcomes – Program outcomes developed for A.A. Degree, which will be implemented for the 2011-12 academic year
- Articulated Pre-Major: Engineering (UCF) - Editorial changes in Valencia's 2011-12 Catalog will be made to this program, based upon the following changes that UCF has made to their Catalog. Valencia has an articulation agreement with UCF governing this program:

- In engineering electives (UCF) section, change "EGS 2373 (all majors except computer and electrical)" to "(all majors except civil, computer, construction, environmental, and electrical);"
- Remove SUR 1101C from the listing;
- Remove the NOTE section

## **5. CAREER PROGRAMS: ASSOCIATE IN APPLIED SCIENCE (A.A.S.) DEGREES**

### **ASSOCIATE IN SCIENCE (A.S.) DEGREES**

#### **APPLIED TECHNOLOGY DIPLOMA**

#### **CERTIFICATES**

- Added two new courses – EET 2552C (Photovoltaic Systems) and EST 1835 (Introduction to Alternative and Renewable Energy) to the Electronics Engineering Technology with Specializations in: Electronics, Laser and Photonics, Robotics and Simulation, Telecommunication and Wireless, A.S. degree Program's Degree Electives section
- Eliminated required courses that are being deleted from the Catalog and substituted with the equivalent courses that replace the deletions in the Sound and Music Technology A.S. degree
- Added Film-Film Production Fundamentals Technical Certificate
- Added a new course (RTE 1111C) in Patient Care for the Radiography Program, replacing the previous course, HSC 1230C, Methods of Patient Care. HSC 1230C is being modified, and will be used only for the Sonography Program
- Aligned Gen Ed Program in the Career Programs section to match Gen Ed Program in the University Parallel Program section of the catalog
- Modified Hospitality and Tourism Management, A.A.S. Degree to clarify student needs in registration and graduation
- Removed ENC 1102 (Freshmen Composition II) from Gen Ed in Hospitality and Tourism Management, A.S. Degree (Articulated AS to BS Career Path), and replaced with a Humanities course from Gen Ed
- Add three homeland security electives and a three-course specialization in Homeland Security that consists of the three homeland security electives to Criminal Justice Technology, A.S. Degree
- Added Criminal Justice Technology Specialist, Technical Certificate
- Deleted Criminal Justice Technology, A.A.S. Degree since state is looking to eliminate A.A.S. degrees
- Added OST 2466, Capstone Simulation for Coding, to the Medical Information Coder/Biller Administration, A.S. Degree Program. Removing OST 1461, Medical Office Simulation, since it does not apply to coding
- Added Medical Office Management, Technical Certificate
- Temporary removal of Magnetic Resonance Imaging and Computed Tomography ATC's, while course leveling changes are discussed with the State
- Diagnostic Medical Sonography, A.S. Degree Program - Changes being made to SON 1001C and SON 1112C, as well as the addition of the "L" (lab) designation for four courses; In addition, in order to be in compliance with our accreditation agency (JRC-DMS), the following changes need to be made: JRC-DMS Finding: Only prerequisite is Anatomy & Physiology I III. RESOURCES Curriculum 1. Curriculum Requisites: The following curriculum requisites must be met prior to the beginning of the core curriculum of the diagnostic medical sonography education program; they must be included in college level courses: a. Algebra, statistics, or higher mathematics course b.

General college-level physics and/or radiographic physics c. Communication skills and d. Human anatomy and physiology RESPONSE The following courses are being changed from co-requisites to prerequisites: BSC 1094C Human Anatomy and Physiology II MAC 1105 College Algebra ENC 1101 Freshman Composition I PSY 1012 General Psychology Humanities There is no change to the courses, just a change in the arrangement of the courses. Total credit hours remain at 72

- Computer Engineering Technology (Networking), A.S. Degree program - Replace the obsolete curriculum and technology with the current requirements; include the required general education courses; and adjust the credit hours and prerequisite requirements to meet the new curriculum changes
- Cisco Network Associate (CCNA), Technical Certificate - Reflect the changes made in the CET program: 1) reduce the credit hour CET 1610C and CET 2615C from 4 to 3; 2) add 2 credit hours of electives to maintain the total program hours at 12
- Microcomputer Repairer/Installer, Technical Certificate – Modify the required electives
- Microsoft Systems Administrator, Technical Certificate - Reflect the changes in the Microsoft certification requirements
- Microsoft Systems Engineer (MCSE), Technical Certificate is being deleted due to changes in the Microsoft certification requirements. Summer 2011 is the last session students can enter the program
- Electronics Engineering Technology, A.S. Degree - 1. Remove CET 2486C from the Foundation courses; 2. Increase the general education requirements from 15 to 18 credit hours; 3. Add SPC 1608, POS 2041, and MAC 1105 to foundation courses section to satisfy the general education requirements; 4. Modify the Telecommunication and Wireless Specialization to reflect the changes made by the CET program
- Wireless and IP Communication Technician, Technical Certificate - Adjust CET 2675 credit hours from 4 to 3; adjust the elective credits from 2 to 3
- Nursing, Generic Track, A.S. Degree (AS to BS Career Path) - Change Nursing, Generic Track Curriculum Prerequisites for Admission for Humanities to read: "Any course that meets the Humanities General Education requirements"
- Nursing, Advanced Standing Track, A.S. Degree - Change Nursing, Advanced Standing Track Curriculum Prerequisites for Admission for Humanities to read: "Any course that meets the Humanities General Education requirements"
- A.S./A.A.S. Degrees with INP 1301 Option - Remove INP 1301 from programs offering it, because INP 1301 is no longer a General Education option
- Respiratory Care, A.S. Degree - 1. Remove MAT 1033C since it is no longer a general education course. 2. Un-bold and move HSC 2550 under pre-requisite since it no longer a general education course and it's more appropriate as a pre-requisite. 3. Remove ENC 1102 since it no longer a general education humanities course
- Emergency Medical Services Technology, A.S. Degree - 1. To change the math/science component of the AS degree in EMS Technology to align with the general education requirements for the college
- Graphics Technology, A.S. Degree - 1) Change current requirement GRA 1933 Fundamentals of Creative Thinking to instead be DIG 2100C Web Essentials. Do not "Delete" GRA 1933 Fundamentals of Creative Thinking from the program offerings because it will be modified to be a 3 credit hour course (it is currently 2 credit hours) and will be included as one of the "Graphics Elective" offerings; 2) Change current requirement, GRA 2141C Illustrating to instead be "Graphics Elective." Student will be able to pick from a list of pre-approved elective options. Do not "Delete"

GRA 2151C Illustrating from program offerings because it will be included as one of the “Graphics Elective” offerings; 3) Since INP 1301 Psychology in Business & Industry is being removed from Valencia’s General Education core, change current General Education course requirement in Social Science to read “PSY 1012 General Psychology OR SYG 2000 Introductory Sociology.” (Currently reads: “PSY 1012 General Psychology OR INP Psychology in Business and Industry”); 4) Create “Graphics Elective” course options list: GRA 2151C Illustrating, GRA 2207C Advanced Image Editing, GRA 2930 Selected Topics in Graphic Arts, ART 2400C Printmaking, ART 1301 Drawing II, PGY 1800C Digital Photography, PGY 2401C Photography I, DOG 2430C Digital Storytelling, GEB 1011 Introduction into Business, MKA 2511 Advertising, MAR 2011 Principles of Marketing; 5) Change current requirement, GRA 2207C Advanced Image Editing to instead be “Graphics Elective”

- Computer Information Technology, A.S. Degree - 1) To simplify program electives, restricted and non-restricted electives are combined into a single description of CIT electives. A) Under Foundation Courses: “Remove CTS 1120;” B) Add CET 2178C; C) Under Intermediate Courses: Remove CET 2178C Add CTS 1120 and CGS 2091; D) Change Total Credits to 24 from 21; E) Under Advanced Courses: Remove reference to Restricted and Non-Restricted Electives and change to “Computer Information Technology Electives,” F) Change CIT Electives hours to 13 from 16; G) Change Total Credits to 18 from 21; H) Remove references to Restricted and Non-Restricted Electives and change to “Computer Information Technology Electives”; I) Under Computer Information Technology Business Electives: Remove ACG 2021, BUL 2241, GEB 1136, MNA 1031; J) Under Computer Information Technology Non-Restricted Electives: Remove entirely and replace with “Computer Information Technology Electives” any course in the Course Descriptions section of the Valencia Catalog with the subject prefix of CET, CGS, (except CGS 1060), CTS, CAP, CIS, COP, or COT prefix not already used to satisfy program requirements
- Computer Information Technology Analyst, Technical Certificate - 1) To simplify program electives, restricted and non-restricted electives are combined into a single description of CIT electives; A) Under Foundation Courses: Remove reference to Restricted and Non-Restricted Electives and change to “Computer Information Technology Electives”
- Computer Information Technology Specialist, Technical Certificate - 1) To simplify program electives, restricted and non-restricted electives are combined into a single description of CIT electives; A) Under Foundation Courses: Remove reference to Restricted and Non-Restricted Electives and change to “Computer Information Technology Electives
- Computer Programming and Analysis, A.S. Degree - 1) Increase consistency among the students and guarantee that all of the program outcomes are met by every student. A) All students required to take Operating Systems; B) Under Foundation Courses: Remove “or CET 2179C” This will require all CP&A students to have CGS 2091 Social, Legal and Ethical Issues in IT; C) Also, we are evening out the intermediate and advanced lists. Under Intermediate Courses: Add CGS 2091 Social, Legal and Ethical Issues in IT; D) Add A.S. General Education Elective; E) Increase Total Credits to 21 from 15, students can take any Gen Ed elective to make 18 credits for this degree. They are no longer pushed toward COMP II; F) Under Advanced Courses: Remove “CGS 2091 or ENC 1102”; G) Reduce Comp. Prog. Electives hours to 10 from 13; H) Reduce Total Credits to 21 from 27. This will allow students to use some CGS courses as electives that were previously not permitted. No student can use both CGS 21200 AND CGS 1060; I) Under Computer Programming and Analysis Electives: After CGS add “(except CGS 1060)”

- Computer Programming w/Specializations in: Computer Programming, Web Development, Game Programming, Technical Certificate - 1) To reflect the rearrangement of electives in the parent A.S. Degree. Under Foundation Courses: Remove “or CET 2179C”
- Computer Programming Specialist, Technical Certificate – 1) To reflect the rearrangement of electives in the parent A.S. Degree. Under Foundation Courses: remove “or CET 2179C”
- Sound and Music Technology-Sound Technology Specialization, A.S. Degree - 1) Re-introduction of MUT 2720 Music Business II, modified to address the needs of Sound & Music Entrepreneurs & Freelancers. 2) Replacement of MUM 2607C Soundtrack Development by DIG 2282C Visual Media for Audio Professionals. 3) Replacement of PSY 1012 General Psychology by POS 2041 U.S. Government as the required Social Science General Education course
- Sound and Music Technology-Audio Engineering Specialization, A.S. Degree - Creates an articulated pathway from the A.S. in Sound & Music Technology to the B.S.E.C.E.T.
- Entertainment Design and Technology – Production Design Specialization - Update curriculum, increase student choice for courses selection and allow for better student and program assessment
- Business Management, Marketing and Administration, A.S. Degree – The A.S. degree is being created due to the current A.A.S. Degree in Business Administration with Specializations being phased out by the state
- Property and Casualty Insurance Management Operations, Technical Certificate - This new certificate program is designed for students seeking specialized training in the insurance industry in the areas of life, health, property and casualty insurance for employment or career advancement
- Property and Casualty Insurance Management Specialist, Technical Certificate – This new certificate program is designed for students seeking specialized training in the insurance industry in the areas of life, health, property and casualty insurance for employment or career advancement
- Business Administration w/Specializations, A.A.S. Degree - The A.A.S. Degree will be phased out by the State and since we need to make changes to one of our Specializations, it makes sense to go ahead and delete the A.A.S. and create a new A.S. with our updated Specializations. Session 4 was the last session that a student could begin this program
- Property and Casualty Insurance Management, Technical Certificate – This TC is being deleted due to the courses for our Insurance Specialization changing. Session 4 was the last session that a student could begin this program
- Sound and Music Technology w/Specializations, A.S. Degree – Add MUT 1011C, Introduction to Music Theory, to the list of General Education requirements; delete a course from the required list of courses; add one elective to specialization

## **6. BACHELORS DEGREE SECTION ADDED**

- Added Radiologic and Imaging Sciences, B.S. Degree
  - Revision of list of core courses, requirements for concentrations, and list of acceptable elective courses
- Added Electrical and Computer Engineering Technology, B.S. Degree

## 7. COURSE DESCRIPTIONS (ADDITIONS, MODIFICATIONS, AND DELETIONS)

### Course Additions

#### **CET 3136C Logic Devices Programming**

**Catalog Course Description:** An in-depth study of hardware and software architecture of programmable logic devices. Topics include PLDs architecture and design of Altera hardware and software description language, HDL format and syntax, and representation of data in AHDL and VHDL logic circuits. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$67.00); **Prerequisites:** CET 2113C; **Co-requisites:** None.

#### **CET 3383 Software Applications in Engineering Technology**

**Catalog Course Description:** Student is introduced to the latest computer software applications including virtual circuit creation and analysis (Pspice), computer aided drafting (AutoCAD), procedural programming (MATLAB), and graphical programming (LabVIEW) to solve a variety of engineering related problems. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$65.00); **Prerequisites:** PHY 2048C and a minimum grade of C in MAC 2312; **Co-requisites:** None.

#### **CET 4126C Microprocessor Programming**

**Catalog Course Description:** This course is designed to introduce the student to the hardware architecture and software architecture programming of the microprocessors. Main topics include Microcomputer Assembly Programming, operating system environment, and the hardware characteristics of the microprocessor. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$39.00); **Prerequisites:** Minimum grade of C in CET 4333; **Co-requisites:** None.

#### **CET 4333 Computer Architecture**

**Catalog Course Description:** A study of the computer architecture. Major topics include instruction sets, modeling and analysis of computer systems, hardware and software interface, memory management, and system performance. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** CET 2123C and a minimum grade of C in CET 3136C; **Co-requisites:** None.

#### **CET 4367C Microcontroller Devices**

**Catalog Course Description:** A course emphasizing the design and programming of microcontrollers. Student will be introduced to microcontroller architecture, use of programmable counter/timer arrays, analog interfaces, serial communications and other peripherals. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$49); **Prerequisites:** EET 1141C and a minimum grade of C in EET 3086C; **Co-requisites:** None.

#### **CET 4382 Data Communication and Networking**

**Catalog Course Description:** An in-depth study of different layers in a computer network and processes related to each one of them. Topics includes Physical, Data link, Network, Transport and Application layers and their roles in communication of data in networking. Design and performance of

a network will be analyzed through mathematical techniques. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in CET 3136C; **Co-requisites:** None.

### **CET 4663 Computer and Network Security**

**Catalog Course Description:** This course introduces fundamental concepts and techniques of computer security. Topics include; secure communications, secure operating systems, and network protection technologies such as firewall, intrusion detection systems, and access control policies. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in CET 4382; **Co-requisites:** None.

### **EET 3048 Electromagnetic Fields**

**Catalog Course Description:** This course introduces the concepts of steady and dynamic electromagnetic fields that are important in the design and analysis of electrical and communication systems, wireless applications, high-frequency radiation sources and microwave devices. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** PHY 2049C and a minimum grade of C in EST 3360; **Co-requisites:** None.

### **EET 3086C Circuit Analysis**

**Catalog Course Description:** An advanced course using differential and integral calculus and transform methods to analyze steady-state and transient responses of electrical networks in time and frequency domains. Circuit simulator and laboratory projects will provide an in-depth understanding and hands-on experience. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees: \$67); **Prerequisites:** EET 1025C and a minimum grade of C in EST 3360; **Co-requisites:** None.

### **EET 3320C Communications Systems**

**Catalog Course Description:** A fundamental course in communication systems theory. Topics include relationship between time and frequency domain signals, comparison of different modulators and demodulators designs, bandwidth consideration, effect of noise and performance analysis of different communication systems. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees: \$49); **Prerequisites:** Minimum grades of C in EET 3086C and EST 3360; **Co-requisites:** None.

### **EET 3716 Linear Systems and Signals**

**Catalog Course Description:** This fundamental technology course bridges the gap between analog and digital worlds. Topics include time and frequency domain analysis of continuous- and discrete-time systems, transformation techniques, and sampling theory. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grades of C in CET 3383 and EST 3360; **Co-requisites:** None.

### **EET 3732 Linear Control Systems**

**Catalog Course Description:** This course introduces the principles of Control Systems with an emphasis on Linear Control Systems. Topics include characterization, design, and mathematical techniques required to analyze linear control systems. Minimum grade of C required if used to satisfy

Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grades of C in CET 3383 and EET 3086C; **Co-requisites:** None.

#### **EET 4158C Linear Integrated Circuits and Systems**

**Catalog Course Description:** An in-depth course of Operational Amplifier and its applications. Topics include study of amplifier concepts, analysis of ideal and linear operational amplifiers under DC and AC conditions, and discussion of important applications. Circuit simulator and laboratory projects will provide an in-depth understanding and hands-on experience. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special Fees: \$49); **Prerequisites:** Minimum grade of C in EET 3086C or minimum grade of C in EST 3360; **Co-requisites:** None.

#### **EET 4190C Digital Signal Processing**

**Catalog Course Description:** This advanced signal processing course includes the study of signals and systems, transformation techniques, digital filter designs, and practical applications of DSP. Students will use MATLAB and a DSP microprocessor to get an in-depth understanding and hands-on experience. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees: \$49); **Prerequisites:** Minimum grades of C in CET 3383 and EET 3086C; **Co-requisites:** None.

#### **EET 4320 Wireless Communication**

**Catalog Course Description:** This course focuses on the analysis of wireless signals, deterioration due to diffraction and noise, ways to improve signal quality, wireless signal modulation, multiple access techniques, and an overview of current wireless standards, wireless networking, and cellular concepts. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grades of C in EET 3086C and EST 3340; **Co-requisites:** None.

#### **EET 4359C Digital Communication**

**Catalog Course Description:** An advanced communication course introducing students to digital modulation and demodulation schemes, quantification of channel noise, signal coding schemes, multiple-access and spread spectrum techniques. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees: \$49); **Prerequisites:** Minimum grades of C in EET 3086C and EST 3340; **Co-requisites:** None.

#### **EET 4360C Geometrical and Wave Optics**

**Catalog Course Description:** Basic principles of geometrical and wave optics. Topics include refraction and reflection, Gaussian optics, Paraxial optics, simple optical instruments, electromagnetic fields and waves; Fourier series and Fourier transforms; interference, interferometers, diffraction, image formation, and polarized light. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$49); **Prerequisites:** EST 1210 and minimum grade of C in EST 3360; **Co-requisites:** None.

#### **EET 4361C Optical Communication Systems**

**Catalog Course Description:** Physics of optical communication components and applications to communication systems. Topics include fiber attenuation and dispersion, laser modulation, photo



detection and noise, receiver and transmitter designs, bit error rate calculations, and coherent communications. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$65); **Prerequisites:** EST 2220C or PHY 2049C and minimum grade of C in EST 3360; **Co-requisites:** None.

#### **EET 4362C Optical Engineering & Lens Design**

**Catalog Course Description:** Fundamentals of optical system layout and design; exact and paraxial ray tracing. Use of optical design software in lens design, optical materials, aberrations theory and balancing, image evaluation. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$49); **Prerequisites:** EST 2221C or PHY 2049C and minimum grade of C in EST 3360; **Co-requisites:** None.

#### **EET 4363C Optical Detectors and Systems**

**Catalog Course Description:** An in-depth study of Optical Detectors and Systems. Topics include: photodetector, thermal detectors, figures of merit, responsivity, NEP, D\*, and BLIP conditions, search systems, thermal-imager systems, optical detector classifications, quantitative detector comparisons, and Modulation Transfer Function. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$49); **Prerequisites:** Minimum grades of C in EET 3086C and EET 4360C; **Co-requisites:** None.

#### **EET 4364C Advanced Electro-Optical Devices**

**Catalog Course Description:** This course aims to give a broad understanding of the physics and technology of discrete and integrated optical and optoelectronic components. The main focus is on important optoelectronic components such as waveguides, lasers, detectors and other photonic components. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$49); **Prerequisites:** EST 2221C and a minimum grade of C in EET 4360C; **Co-requisites:** None.

#### **EET 4365C Laser Engineering Design**

**Catalog Course Description:** This course will cover the fundamental physical processes relevant to lasers and explore a variety of specific laser systems. Topics include optical resonators, laser gain and oscillation, pulsed and CW laser operation, system design considerations, and environmental effects. Focus on an examination of existing semiconductor lasers, solid-state lasers, fiber lasers, rare earth lasers, and systems that incorporate lasers as a primary component. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement (Special fees \$49); **Prerequisites:** EST 2230 or PHY 2049C and a minimum grade of C in EET 3086C; **Co-requisites:** None.

#### **EET 4366 Biophotonics Technologies**

**Catalog Course Description:** An overview of the field of biophotonics and the basic physics of light-biomatter interactions and tissue optics, light induced effects in bio-systems, diagnostic techniques and instrumentation, therapeutic instrumentation and applications, optical biosensors, imaging, and basics of optical tomography. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** EST 2221C or PHY 2049C and a minimum grade of C in EST 3360; **Co-requisites:** None.

**EET 4367    Antenna and Radar System Design**

**Catalog Course Description:** This course examines concepts of radar & antenna theories and systems. Topics include radar range equation, radar cross-section calculations, random processes and noise, array antennas, beam steering, doppler and range processing, FM and CW systems, pulse compression, SAR, clutter, evaluation of various antennas, and an in-depth understanding and analysis of antenna and Radar-related topics through term projects. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement;

**Prerequisites:** Minimum grade of C in EET 3320C; **Co-requisites:** None.

**EET 4368    Laser Satellite and Space Communication**

**Catalog Course Description:** An introduction and overview of laser satellite communication principles and technologies for unguided, free-space beam propagation. Special emphasis is placed on highlighting the differences, as well as similarities to RF communications and other laser systems, and design issues and options relevant to future laser communication systems. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement;

**Prerequisites:** Minimum grade of C in EET 3320C or minimum grade of C in EET 4361C; **Co-requisites:** None.

**EET 4541    Power Systems and Energy Conversion**

**Catalog Course Description:** A study of generation and transmission of electric energy. It introduces the student to the fundamentals of electrical machine and power electronics design, system integration, control, energy management as well as techniques used for protection and economic operation of power systems. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** PHY 2049C and a minimum grade of C in EET 3086C; **Co-requisites:** None.

**EET 4548C    Power Electronics**

**Catalog Course Description:** An advanced level course accompanied by hands-on experiments covering the topics of control and conversion of electrical power with high efficiency. Circuits such as power converters, inverters, rectifiers, cycloconverters, and other commonly used applications will be discussed. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special fees: \$67); **Prerequisites:** Minimum grade of C in EET 4541; **Co-requisites:** None.

**EET 4939    Senior Project Design**

**Catalog Course Description:** This course is designed to test the student's ability to develop and complete a proposed project by utilizing the knowledge and experience gained from previous courses. For this final project the student is required to present a working model of the project in a professional manner. The project requirements include a comprehensive written report, research and analysis data, and oral presentations. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Department approval; **Co-requisites:** None.

**EST 3140    Engineering Management and Ethics**

**Catalog Course Description:** This course explores the traditional principles of management and professional ethics related to engineering technology professions. Major emphasis will be on project

planning and design alternatives to meet cost, performance, and the user along with legal issues, professional development, and technology transfer as they relate to graduating engineering technology students. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in ENC 1102; **Co-requisites:** None.

#### **EST 3144 Engineering Documentation & Communication**

**Catalog Course Description:** This course introduces the student to the importance of writing in the professional engineering career. Topics include guidelines for professional engineering writing, eliminating intermittent noise in writing, writing letters, memoranda, online communication, common engineering documents, reports, interviews resumes, and ethics in engineering writing. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in ENC 1102; **Co-requisites:** None.

#### **EST 3340 Statistical Theory for Engineering Technology**

**Catalog Course Description:** Statistics and probability theory, sampling, correlation, regression as applied to Engineering Technology. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in MAC 2312; **Co-requisites:** None.

#### **EST 3360 Engineering Mathematical Analysis**

**Catalog Course Description:** Advanced mathematical concepts and methods needed to solve engineering and engineering technology problems. Topics include Complex Variables, First- and Higher-Order differential equations, Laplace transforms, Fourier series, Fourier Transforms, Z-transforms, vector calculus and analysis, Linear Algebra, and matrix analysis. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grade of C in MAC 2312; **Co-requisites:** None.

#### **EST 3537 Quality Assurance and Testing Methods**

**Catalog Course Description:** A broad understanding of the quality assurance and testing methods. Topics cover various aspects of quality assurance for components used in electronic devices, improve product quality without increasing product cost. Apply Six Sigma process, methodologies, and tools to develop robust engineering products, processes, and services. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** Minimum grades of C in EET 3086C and EST 3360; **Co-requisites:** None.

#### **EST 4360 Nanotechnology Systems and Applications**

**Catalog Course Description:** An in-depth study of the fundamentals of nanoscience and nanotechnology in a wide range of applications. The main facets of nanotechnology are covered: nanomaterials, nanomechanics, nanoelectronics, nanoscale heat transfer, nanophotonics, nanoscale fluid mechanics, and nanobiotechnology. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** PHY 2049C and a minimum grade of C in EET 3086C; **Co-requisites:** None.

**EST 4880 Photovoltaic Technologies**

**Catalog Course Description:** Students will use PSpice and LabVIEW to analyze and simulate the performance of PV systems. Topics covered will be solar cell technological processes, PV systems engineering, characterization and testing methods, sizing procedures, economic analysis, and instrumentation. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement; **Prerequisites:** EET 1025C and a minimum grade of C in EST 3360; **Co-requisites:** None.

**COP 3275 C/C++ Programming for Engineers**

**Catalog Course Description:** A comprehensive course in computer programming using the C and C++ programming languages. Structured programming in C, especially for solving numerical problems is covered in detail, and object-oriented programming in C++ is introduced. Computer programming is used to improve quantitative problem solving skills by developing algorithms that apply mathematical techniques. Minimum grade of C required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$34); **Prerequisites:** Minimum grade of C in MAC 2312; **Co-requisites:** None.

**HSA 4340 Principles of Human Resources Management**

**Catalog Course Description:** The course will provide students with the most common methods and application involving the management of human resources within health-related organizations. Topics include employee recruitment, selection, training, evaluation, and retention and the most common practices of each. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**HSC 4555 Pathophysiology**

**Catalog Course Description:** A rich appreciation of the characteristics and manifestations of diseases caused by alterations or injury to the structure or function of the body are essential to the radiologic science professional. The in-depth study of pathophysiology allows the professional to communicate better with other health care professionals, including physicians and scientists, as well as with the patient, for the history and physical assessment. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement **Prerequisites:** None; **Co-requisites:** None.

**HSC 4640 Health Law and Compliance**

**Catalog Course Description:** Health care law and compliance is important because of its financial and emotional impact on technologists, patients, and health care facilities. This content is geared toward legal and compliance issues that affect the employee and employer directly regarding accreditation and compliance issues. In addition, this content gives guidance on risk management techniques, including reporting, that can help mitigate noncompliance. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**HSC 4652 Ethics and Health Care in a Pluralistic Society**

**Catalog Course Description:** The course is designed to provide students with an ethical framework for decision-making in the context of a pluralistic society. Models and principles of ethical justification among diversity of cultures and belief systems will be analyzed. Specific applications are made to concerns in clinical and health care management. Topics include the right to health care,

community health ethics, end-of-life issues, and organizational ethics. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

#### **RTE 3116C Advanced Patient Care**

**Catalog Course Description:** As the role of the medical imaging professional continues to expand, more knowledge is needed in all areas. Patient care is no exception. Advanced patient care skills are essential elements of providing high quality patient care. This course focuses on patient education, assessment, communication, pre-procedural and post-procedural care, and proper charting and documentation. Technologists' responsibilities and intervention in cases of critical patient need also will be discussed. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement. (Special Fee: \$20.00); **Prerequisites:** None; **Co-requisites:** None.

#### **RTE 3205 Administration and Supervision**

**Catalog Course Description:** This course focuses on the administrative structures of radiology departments. It encompasses analysis of systems, decision-making processes, and communication techniques to interact with all levels of management and supervision within and outside of the Radiology department. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

#### **RTE 3213 Radiology Information Systems**

**Catalog Course Description:** This course will give the imaging professional the knowledge and skills relating to the purpose, use, maintenance, and regulations associated with the most current radiology management, health information, and picture archival medical systems. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

#### **RTE 3253 Teaching in the Health Professions**

**Catalog Course Description:** This course presents an analytical and developmental approach to the roles and functions of the health professional teacher. It focuses on teaching roles, style and philosophy, and the application of learning theory to instructional design and lesson planning. Emphasis is placed on selection and application of appropriate teaching strategies, supportive technologies, and assessment methods necessary for a diverse student population. Student problem management and key ethical and legal responsibilities are addressed. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

#### **RTE 4206 RTE Leadership**

**Catalog Course Description:** This course involves the study of the theories, principles and skills needed to function in a leadership position. Emphasis is placed on the development of competencies applicable to not only your professional practice but also your role as a member of the community. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**RTE 4208    Managed Care Concepts**

**Catalog Course Description:** It is important for the radiologic technologist to understand the various methods of health care delivery to remain knowledgeable in the changing face of technology. Emphasis on provider and payer sponsored systems, methods of financing and reimbursement, and common operational issues. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**RTE 4474    Quality Management**

**Catalog Course Description:** This course involves the study of quality assurance, quality improvement and quality control. It describes the role of the imaging technologist in developing and implementing quality assurance programs to ensure accurate diagnosis and safe patient care. It includes specific quality control procedures used to evaluate equipment operation and monitor procedure protocols. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**RTE 4574    Advanced Imaging Modalities**

**Catalog Course Description:** The course is an introduction to the physical principles that apply to image production through the use of high frequency x-ray and its interface with computer technology; the use of magnetic fields and radio frequency; the use of radiopharmaceuticals; and the use of ultrasound. Major emphasis is on understanding the application of physics for production of medical images through computer technology with computed tomography, magnetic resonance, mammography, cardiovascular/intervention technology, ultrasound and nuclide imaging. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**RTE 4914    Research Methods and Information Literacy**

**Catalog Course Description:** Research methods and information literacy are important because the health care profession is continually changing, which requires the radiologic technologist to possess new knowledge to function competently. The radiologic technologist should contribute to the body of knowledge and be able to effectively analyze resources to promote growth in the profession. The attitude of lifelong learning enables the radiologic technologist to stay in step with the current health care environment and be prepared to help foster the future and increase awareness of the profession in the global community. This content is geared to increase and disseminate intellectual inquiry, information literacy and the use of scholarly research methods. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** None; **Co-requisites:** None.

**RTE 4941    Practicum**

**Catalog Course Description:** Practical application in a clinical setting of knowledge acquired in the classroom. Minimum grade of C required if used to satisfy Radiologic and Imaging Sciences B.S. degree requirement; **Prerequisites:** All courses required for individual concentration: Magnetic Resonance Imaging – RTE 3765 and RTE 3592; Computed Tomography – RTE 3765 and RTE 3590; and Quality Management – RTE 4474, RTE 3205, and HAS 4340; **Co-requisites:** None.

**MUT 1111 Music Theory I**

**Catalog Course Description:** Study of the fundamentals of music through analysis and composition. Designed for music majors. It is recommended that students take MUT 1241C concurrently with this course; **Pre- and Co-requisites:** None.

**MUT 1112 Music Theory II**

**Catalog Course Description:** Continuation of MUT 1111 with emphasis on part-writing and harmonic analysis; **Prerequisites:** MUT 1111; **Co-requisites:** None.

**MUT 2116 Music Theory III**

**Catalog Course Description:** Continuation of MUT 1112, analyzing Western harmonic practice through the end of the 19<sup>th</sup> century; **Prerequisites:** MUT 1112; **Co-requisites:** None.

**MUT 2117 Music Theory IV**

**Catalog Course Description:** Continuation of MUT 2116, dealing with advanced techniques of composition and including modern styles; **Prerequisites:** MUT 2116; **Co-requisites:** None.

**MUT 1241C Sight Singing and Ear Training I**

**Catalog Course Description:** The development of basic skills in sight singing and dictation; **Pre- and Co-requisites:** None.

**MUT 1242C Sight Singing and Ear Training II**

**Catalog Course Description:** A continuation of MUT 1241C; continued development of skills in dictation and sight singing; **Prerequisite:** MUT 1241C; **Co-requisites:** None.

**MUT 2246C Sight Singing and Ear Training III**

**Catalog Course Description:** A continuation of MUT 1242C; further development of skills in dictation and sight singing; **Prerequisites:** MUT 1242C; **Co-requisites:** None.

**MUT 2247C Sight Singing and Ear Training IV**

**Catalog Course Description:** A continuation of MUT 2246C; further development of skills in dictation and sight singing; **Prerequisite:** MUT 2246C; **Co-requisites:** None.

**MVK 1112C Piano Class for Music Majors II**

**Catalog Course Description:** Continuation of MVK 1111C. Elementary course in piano, designed to prepare non-keyboard music majors for minimum proficiency requirements in music major programs; **Prerequisites:** MVK 1111C; **Co-requisites:** None.

**MVK 1121C Piano Class for Music Majors III**

**Catalog Course Description:** Continuation of MVK 1112C, with emphasis placed on improvisation, harmonization of melodies, and elementary score reading; **Prerequisites:** MVK 1112C; **Co-requisites:** None.

#### **MVK 1122C Piano Class for Music Majors IV**

**Catalog Course Description:** Continuation of MVK 1121C, with particular attention placed on transposition, score reading, and melody harmonization; **Prerequisites:** MVK 1121C; **Co-requisites:** None.

#### **HUN 2015 Diet Therapy for Health Care Professionals**

**Catalog Course Description:** Assessment and application of nutrition within health care, focusing on prevention and medical nutrition therapy in disease management; **Prerequisites:** HUN 1001 or department approval, based on prior completion of a college nutrition course with a minimum grade of C; **Co-requisites:** None.

#### **RTE 1111C Patient Care in Radiography**

**Catalog Course Description:** Content is designed to provide the basic concepts of patient care including consideration for physical, psychological, legal, and ethical needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified. Basic concepts of pharmacology/drug administration and theory and practice of venipuncture techniques are presented. A minimum grade of C is required to pass this course (Special Fee: \$20.00); **Prerequisites:** Acceptance to Radiography, A.S. Degree program; **Co-requisites:** RTE 1000.

#### **DSC 1006 Introduction to Homeland Security**

**Catalog Course Description:** This course will introduce students to the vocabulary and important components of Homeland Security. Students will learn about the agencies associated with Homeland Security and their inter-related duties and relationships. Students will examine historical events that impact Homeland Security. Students will explore state, national, and international laws impacting Homeland Security and students will examine the most critical threats confronting Homeland Security; **Pre- and Co-requisites:** None.

#### **DSC 2242 Transportation and Border Security**

**Catalog Course Description:** Students will understand issues related to modern border and transportation security. Specific topics will include security for seaports, ships, aircraft, trains, trucks, pipelines, buses, etc. Students will learn about the technology needed to detect terrorists and their weapons, as well as understand the legal, economic, political, and cultural aspects of the problem; **Prerequisites:** DSC 1006 or department approval; **Co-requisites:** None.

#### **DSC 2590 Intelligence Analysis and Security Management**

**Catalog Course Description:** This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks, man-made disasters and natural disasters. It also explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates; **Prerequisites:** DSC 1006 or department approval; **Co-requisites:** None.



**OST 2466 Capstone Simulation for Coding**

**Catalog Course Description:** This course provides a review of important coding and billing concepts. It exposes the student to situations and tasks that will be encountered on the job. Students will use their skills in coding and performing medical office tasks. (Special Fee: \$34.00); **Prerequisites:** OST 2452 and OST 2454; **Co-requisites:** None.

**RTE 2762 Sectional Anatomy**

**Catalog Course Description:** Detailed study of gross anatomical structures will be systematically conducted for location, relationship to other structures, and function. Identification of anatomical structures in axial (transverse), sagittal, coronal and orthogonal (oblique) planes will be achieved using illustrations and anatomy images comparing computed tomography, magnetic resonance imaging and ultrasound images, when applicable. A minimum grade of C is required for all radiography and sonography program courses; **Prerequisites:** BSC 2094C; **Co-requisites:** None.

**CET 2544C Computer Virtualization Technology**

**Catalog Course Description:** This course is designed to provide students with a working knowledge of VMware Workstation as a leading virtualization product. In addition to learning how to install and use VMware Workstation, students will learn how to apply virtualization technology to set up virtual networks, provide for disaster recovery, create high-availability solutions with clustering, improve security and performance, and use management software to administer multiple virtual machines. (Lab Fee: TBD); **Prerequisites:** CET 2178C and CET 2486C; **Co-requisites:** None.

**CET 2546C VMWare Infrastructure Architecture**

**Catalog Course Description:** This course will provide the learner with the insight needed to design, implement, and troubleshoot virtual data centers using VMware Infrastructure. Some of the explored topics include: vCenter server deployment; ESXi server configuration and management; Distributed vSwitch services; vSphere Networking Fundamentals, and virtual infrastructure security guidelines. (Lab Fee: TBD); **Prerequisites:** CET 2544C and CET 2792C; **Co-requisites:** None.

**MAT 0029 Developmental Math for Statistical Understanding**

**Catalog Course Description:** Prerequisite: Minimum grade of C in MAT 0012C or appropriate score on approved assessment. This course provides instruction in developmental mathematics concepts that serve as a foundation for statistical understanding. These mathematics concepts are presented in a context that is relevant and meaningful to students. Technology is used to aid computation so that time can be focused on deepening students' conceptual understanding of the mathematics topics. Suggested external resources for further exploration of mathematics topics and assistance in procedural fluency are provided. **Prerequisites:** Minimum grade of C in MAT 0012C or appropriate score on approved assessment; **Co-requisites:** None.

**PGY 2231 Nature Photography**

**Catalog Course Description:** Introduction to nature photography, encompassing the areas of wildlife, landscape, and macro photography. Students will learn to apply basic techniques of camera operation, effective use of tripods and flash, image composition, exposure control, and motion effects to natural subjects in outdoor settings. The course includes four field trips to local nature preserves and parks. Students will supply their own camera (a digital camera with moderate telephoto capability is recommended but not mandatory). **Prerequisites or Co-requisites:** None.

**DIG 2282C Visual Media for Audio Professionals**

**Catalog Course Description:** Students will learn basic concepts of video production, video editing, graphics creation, project authoring, and distribution of media for audio professionals; **Prerequisites:** Minimum grade of C in MUM 2600C and MUM 2634C or departmental approval.

**MUM 2721 Business of Music II: Entrepreneurship & Freelancing**

**Catalog Course Description:** This course prepares students for careers as entrepreneurs and freelancers in the music and audio business. The course stresses issues such as budgeting, bidding, taxes, liability, laws and regulations that prepares students to find and maintain clients for their skills; **Prerequisites:** Minimum grade of C in MUM 2720.

**TPA 2600 Stage and Production Management**

**Catalog Course Description:** An introduction to the organization and management of a live entertainment production. The course will focus on the paperwork, budgeting and scheduling required to manage a production along with collaborative leadership in the execution of an entertainment production; **Prerequisites:** TPA 1380 and THE 1020.

**TPA 2190C Theater Design Practicum**

**Catalog Course Description:** This a production-based capstone experience will require that students serve in a key design or assistant design role in a Valencia Theater production. Requires a minimum of 10 hours per week on costume, lighting or scenery design assignment. Multiple credit course. May be repeated for a maximum of 6 credits, but grade forgiveness cannot be applied. (Special Fee: \$22.00); **Prerequisites:** TPA 2292, TPA 2000, TPA 2030 and TPA 2060.

**TPA 2221 Intermediate Stage Lighting**

**Catalog Course Description:** Stage lighting techniques, practices and equipment. Focuses on control board operation, selection of lighting equipment, implementation of lighting designs and troubleshooting lighting systems. (Special Fee: \$40.00); **Prerequisites:** TPA 2220.

**RMI 1201 Principles of Property and Liability**

**Catalog Course Description:** This course covers basic Property and Liability insurance concepts. This includes insurance fundamentals such as types of insurers, institutions that provide insurance, how it is regulated, measurement of financial performance, insurance operations such as marketing, underwriting and claims, insurance contracts, loss exposure and risk management. **Prerequisites:** None; **Co-requisites:** None.

**RMI 2110 Personal Insurance Planning**

**Catalog Course Description:** This course covers all forms of personal insurance, including auto, home, other residential insurance such as fire and earthquake insurance; marine insurance; other personal property and liability insurance; financial planning; life insurance and health insurance. **Prerequisites:** RMI 1201; **Co-requisites:** None.

**RMI 2213 Commercial Insurance**

**Catalog Course Description:** This course covers all forms of commercial insurance, including commercial property, business income, commercial crime, equipment breakdown, inland and ocean

marine, commercial general liability, commercial automobile, business owners policies and farm insurance, workers compensation and employers liability, and other miscellaneous coverage;

**Prerequisites:** RMI 1201 AND RMI 2110; **Co-requisites:** None.

### **CTS 1163C Microsoft Windows 7**

**Catalog Course Description:** This course will enable the student to install and administer the Microsoft Windows 7 client operating system. The student will learn about settings in which the client is installed, and administer it for various user environments. The student will create and configure user accounts, plan and manage permissions, and configure the operating system to use various network services. The student will also backup and restore system files, manage the update process, troubleshoot problems, and audit operating system activity. This course will prepare the student for the Microsoft Certified Technology Specialist (MCTS) 70-680 exam. **Prerequisites:** CET 2179C or CGS 1560; **Co-requisites:** None.

### **Course Modifications**

#### **MVK 1111 Piano Class for Music Majors I and II**

**Revised Official Course Number:** MVK 1111C; **Revised Official Course Title:** Piano Class for Music Majors I.

#### **MUT 1011 Music Theory**

**Revised Official Course Number:** MUT 1011C; **Revised Official Course Title:** Introduction to Music Theory.

#### **RTE 2571 Computed Tomography**

**Purpose:** Course number change so that this Advanced Technical Certificate course can be included in the proposed B.S. degree in Radiologic and Imaging Sciences curriculum; **Revised Course Number:** RTE 3590 (previously RTE 2571).

#### **RTE 2575 Magnetic Resonance Imaging I**

**Purpose:** Course number change so that this Advanced Technical Certificate course can be included in the proposed B.S. degree in Radiologic and Imaging Sciences curriculum; **Revised Course Number:** RTE 3591 (previously RTE 2575).

#### **RTE 2576 Magnetic Resonance Imaging II**

**Purpose:** Course number change so that this Advanced Technical Certificate course can be included in the proposed B.S. degree in Radiologic and Imaging Sciences curriculum; **Revised Course Number:** RTE 3592 (previously RTE 2576).

#### **RTE 2762 Sectional Anatomy**

**Purpose:** Course number change so that this Advanced Technical Certificate course can be included in the proposed B.S. degree in Radiologic and Imaging Sciences curriculum; **Revised Course Number:** RTE 3765 (previously RTE 2762).

### **HSC 1230C Methods of Patient Care**

**Revised Catalog Course Description:** Introduces basic theories, skills, and techniques of quality patient care. Includes communication, assessment skills, aseptic technique, drug administration, emergency situations, and AIDS education. Presents theoretical and practical knowledge to make sound clinical judgments and carry out patient care activities. (Special Fee: \$20.00); **Revised Prerequisites:** Acceptance to Sonography A.S. Degree Program (previously, "Acceptance to A.S. Degree Radiography Program"); **Revised Co-requisites:** SON 1000C (previously, "Minimum grade of C in RTE 1000"); **Revised Credit/Class/Lab Hours:** 2/1/3 (previously, "3/2/3").

### **ETD 2355 3-D CADD**

**Revised Official Course Number:** ETD 2355C (previously ETD 2355); **Revised Catalog Course Description:** Engineering drawing and computer-aided drafting recommended. This course provides the CADD student with the opportunity to approach mechanical drafting and design problems from a 3-D solid modeling perspective. The student will learn how to create parametric 3-D solid models with computer software and how to take advantage of the information contained within to improve the design process. (Special Fee: \$35.00); **Revised Prerequisites:** None (previously, ETD 1340 or department approval).

### **OST 1100 Keyboarding and Document Processing I**

**Revised Catalog Course Description:** Students will develop touch control of the keyboard and proper keyboarding techniques to build basic speed and accuracy. Practice will be provided in applying basic skills to formatting e-mails, reports, letters, memos, tables, and other personal and business communications. For students with little or no keyboarding experience. (Special Fee: \$34.00).

### **OST 1110 Keyboarding and Document Processing II**

**Revised Catalog Course Description:** Previous keyboarding, document, and word processing experience strongly recommended. This course continues building keyboarding speed and accuracy using a computer and word processing software. It emphasizes production of advanced features of correspondence, tables, reports, and forms. (Special Fee: \$34.00).

### **OST 1141 Computer Keyboarding**

**Revised Catalog Course Description:** Basic instruction on a computer to learn the touch system for the alphabetic keyboard, number keyboard, and the ten-key numeric pad. This course may not be used for credit as part of the Office Administration A.S. Degree Program. (Special Fee: \$34.00); **Credit/Class (Lecture)/Lab Hours:** 1/1/0 (previously, 1/2/0).

### **OST 1320 Ten Key Mastery**

**Revised Catalog Course Description:** Students will learn the numeric keypad by touch and develop speed and accuracy for data entry situations as: data entry employment; on-line, point-of-sale entries; spreadsheets; accounting; and other numeric computer-related applications. This skill will easily transfer to the ten-key calculator for those students for whom speed and accuracy are necessary. (Special Fee: \$34.00).

### **PLA 2003 Introduction to Paralegal Practices and Ethics**

**Revised Official Course Number:** PLA 1003 (previously PLA 2003).

**ENC 1101 Freshman Composition I**

**Revised Catalog Course Description:** Development of essay form, including documented essay; instruction and practice in expository writing. Emphasis on clarity of central and support ideas, adequate development, logical organization, coherence, appropriate citing of primary and/or secondary sources, and grammatical and mechanical accuracy. Gordon Rule course in which the student is required to demonstrate college-level writing skills through multiple assignments. Minimum grade of "C" is required if ENC 1101 is used to satisfy Gordon Rule and General Education Requirements.

**OST 2120 Office Administration Simulation**

**Revised Prerequisites:** OST 2756; OST 2813; OST 2836; OST 2854; OST 2858 (previously OST 2854).

**CCJ 1020 Introduction to Criminal Justice**

**Revised Catalog Course Description:** Introduction to, and overview of, history, philosophy, and operations of criminal justice system.

**LIT 2955 Holocaust Studies Trip Abroad**

**Revised Prerequisites:** LIT 2174 or LIT 2174H or department approval (previously LIT 2174 or LIT 2174H).

**BSC 2093C Human Anatomy & Physiology I**

**Revised Prerequisites:** Satisfactory completion of all mandated courses in reading, mathematics, English and EAP; and a minimum grade of C in Honors high school biology or Advanced Placement biology AND Honors high school chemistry or Advanced Placement Chemistry; or BSC 1010C (Previously: Satisfactory completion of all mandated courses in reading, mathematics, English and EAP and minimum grade of C in: one year each of high school science laboratory courses in either biology and chemistry or in anatomy and physiology and chemistry or BSC 1005 and BSC 1005L or BSC 1005C or BSC 1010C or MCB 2010C); **Revised Catalog Course Description:** Tissues, structure and function of integumentary, skeletal, muscular, endocrine and nervous systems, and organs of special sense. Lab exercises emphasize anatomic and physiologic principles associated with classroom work. (Special Fee: \$35.00).

**MCB 2010C Microbiology**

**Revised Prerequisites:** Minimum grade of C in BSC 1010C or BSC 2093C (previously: Satisfactory completion of all mandated courses in reading, mathematics, English, and English for Academic Purposes and minimum grade of C in: BSC 1005 and BSC 1005L or BSC 1005C or BSC 1010C or BSC 2093C).

**CHM 1025C Introduction to General Chemistry**

**Revised Special Fee:** \$61 (previously \$52).

**CHM 1045C General Chemistry w/Qualitative Analysis I**

**Revised Special Fee:** \$62 (previously \$57).

**1011-028 CHM 1046C General Chemistry w/Qualitative Analysis II**

**Revised Special Fee:** \$62 (previously \$77).

**CHM 2210C Organic Chemistry I**  
*Revised Special Fee:* \$148 (previously \$132).

**CHM 2211C Organic Chemistry II**  
*Revised Special Fee:* \$136 (previously \$131).

**BSC 1005C Biological Science**  
*Revised Special Fee:* \$49 (previously \$37).

**BSC 1005L Lab in Applied Biology**  
*Revised Special Fee:* \$49 (previously \$37).

**BSC 1010C Fundamentals of Biology I**  
*Revised Special Fee:* \$49 (previously \$56).

**BSC 1011C Fundamentals of Biology II**  
*Revised Special Fee:* \$58 (previously \$53).

**BSC 2093C Human Anatomy & Physiology I**  
*Revised Special Fee:* \$44 (previously \$51).

**BSC 2094C Human Anatomy & Physiology II**  
*Revised Special Fee:* \$58 (previously \$43).

**MCB 2010C Microbiology**  
*Revised Special Fee:* \$87 (previously \$75).

**FSS Various Culinary Courses (per list)**  
*Revised Special Fee:* See List Below for Proposed Fees and Current Fees.

<b>COURSE #</b>	<b>COURSE NAME</b>	<b>CURRENT FEE</b>	<b>PROPOSED FEE</b>
FSS1050C	Baking Ingredients and Technology	\$0	\$50
FSS1052C	Specialty Breads	\$120	\$150
FSS1203C	Quantity Food Production I	\$120	\$150
FSS1204C	Classical Cuisine	\$120	\$150
FSS1246C	Baking and Pastries I	\$120	\$150
FSS2054C	Contemporary Cakes and Desserts	\$120	\$150
FSS2056C	Pastry Techniques	\$120	\$150
FSS2057C	Individual and Production Pastries	\$120	\$150
FSS2058C	Confectionary Art and Principles of Design	\$120	\$150
FSS2059C	Chocolates and Confections	\$120	\$150

FSS2060C	Restaurant and Production Desserts	\$120	\$150
FSS2061C	Basic and Classical Cakes and Pastries	\$120	\$150
FSS2204C	Quantity Food Production II	\$120	\$150
FSS2205C	Quantity Food Production III	\$120	\$150
FSS2242C	International and Regional Foods	\$120	\$150
FSS2247C	Baking and Pastries II	\$120	\$150
FSS2248C	Garde-Manger	\$120	\$150
FSS2950C	Culinary Competition	\$120	\$150

**RTE 3116C Advanced Patient Care**

**Revised Course Number:** RTE 3116 (previously RTE 3116C); **Revised Lab Fees:** None (previously \$20).

**RTE 3765 Sectional Anatomy**

**Revised Course Number:** RTE 3765 (previously RTE 2762); **Revised Course Title:** Anatomy for the Medical Imager (previously Sectional Anatomy); **Revised Catalog Course Description:** An advanced study of normal anatomical structures to include location, relationship to other structures and function. Identification of anatomical structures in multiplanar sections will be achieved using diagrams and diagnostic images comparing Computed Tomography, Magnetic Resonance Imaging and Ultrasound images, when applicable. A minimum grade of C is required for all Radiologic & Imaging Sciences Program courses.

**RTE 4914 Research Methods and Information Literacy**

**Revised Prerequisites:** STA 2023; and A.S. Degree in Radiography, Diagnostic Medical Sonography, Nuclear Medicine Technology or Radiation Therapy and credentialed by ARRT, NMTCB, or ARDMS.

**RTE 4941 Practicum**

**Revised Course Number:** RTE 4941L (previously RTE 4941).

**RTE 1418C Principles of Radiography I**

**Revised Course Number:** RTE 1418 (previously RTE 1418C).

**SON Var (Various Sonography Courses per List)**

Add "L" to the following clinical courses to designate that they are lab only courses.

Son 1804	to	Son 1804L	Clinical Sonography I
Son 1814	to	Son 1814L	Clinical Sonography II
Son 2824	to	Son 2824L	Clinical Sonography III
Son 2834	to	Son 2834L	Clinical Sonography IV
Son 2882	to	Son 2882L	Medical Sonography Clinical Practicum

**SON 1001C Fundamentals of Sonography**

**Revised Course Title:** Abdominal Sonography I (previously Fundamentals of Sonography); **Revised Catalog Course Description:** This course is an in-depth study in the sonographic imaging of the

abdominal viscera and the pathological processes that affect this area of the body. This course also includes sonographic terminology and correlation of the ultrasound findings with clinical laboratory test. This course includes a hands-on lab with activities designed to ensure competence in the basic use of computers and to enhance scanning skills (Special Fee: \$22).

### **SON 1112C Abdominal Sonography**

**Revised Course Title:** Abdominal Sonography II (previously Abdominal Sonography); **Revised Catalog Course Description:** This course is a continuation of Abdominal Sonography I. It is an in-depth study in the sonographic imaging of the abdominal viscera and the pathological processes that affect this area of the body. The course also includes correlation of the ultrasound findings with clinical laboratory tests and a hands-on lab (Special Fee: \$16.00).

### **CET 1610C Cisco Router Technology**

**Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/4/0).

### **CET 2615C Cisco Advanced Router Technology**

**Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/4/0).

### **CET 2792 MS Windows Server 2003 Network**

**Revised Course Number:** CET 2792C (previously CET 2792); **Revised Course Title:** Microsoft Windows Server Network (previously MS Windows Server 2003 Network); **Revised Catalog Course Description:** This course provides student with the knowledge and skills necessary for installing, configuring, managing, and supporting the latest Microsoft network infrastructure. Major focus would be on the understanding of the network technologies most commonly used with Windows Server 2008 and IP-enabled networks. This course will prepare the student for the Microsoft Certified Technology Specialist (MCTS) 70-642 Windows Server 2008 Network Infrastructure exam and is a required course for the MCITP: Server Administrator certification. (Special Fee: TBD); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/4/0).

### **CET 2793 Planning and Maintaining a MS Windows Server 2003 Network Infrastructure**

**Revised Course Number:** CET 2793C (previously CET 2793); **Revised Course Title:** Microsoft Windows Server Administration (previously "Planning and Maintaining a MS Windows Server 2003 Network Infrastructure"); **Revised Catalog Course Description:** This course will provide the student with the knowledge and practical experience to administer, maintain, troubleshoot, and secure a complex Windows Server environment. Main topics include; managing physical and logical devices, managing and controlling resources, implementing group policies for security, and maximizing performance and responsiveness. This is a required course for Microsoft Windows Server 2008 Administration (MCITP) certification. (Lab Fee: TBD); **Revised Credit/Class (Lecture)/Lab Hours:** 4/2/2 (previously 4/4/0).

### **CET 2794 MS Windows Server 2003 Active Directory**

**Revised Course Number:** CET 2794C (previously CET 2794); **Revised Course Title:** Microsoft Windows Server Active Directory (previously "MS Windows Server 2003 Active Directory"); **Revised Catalog Course Description:** Course is designed to prepare students to troubleshoot and identify Microsoft Server Active Directory related issues. In addition, the student will be able to configure Group Policies to implement Security and Active Directory Services in a distributed environment. This is a required



course for Microsoft Certified IT Professional (MCITP) 2008 Server and Enterprise. (Special Fee: TBD); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/4/0).

#### **CET 2810 MS Exchange 2003 Server Implementation and Administration**

**Revised Course Number:** CET 2810C; **Revised Course Title:** Microsoft Exchange Server (previously “MS Exchange 2003 Server Implementation and Administration”); **Revised Catalog Course Description:** This course will focus on the deployment, configuration, and administration of the Exchange Server, the cornerstone of Microsoft’s Unified Communications solution. The student will gain practical experience in installing and managing various aspects of Exchange Server such as managing users, mailboxes, security policies, and databases as well as monitoring and troubleshooting Exchange Server. This course will prepare the student for exam 70-662: Configuring Microsoft Exchange Server which counts as credit toward the Microsoft Certified IT Professional (MCITP): Enterprise Messaging Administrator certification. (Special Fee: TBD); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2/ (previously 4/4/0).

#### **CET 2812 SQL Server 2000 System Administration**

**Revised Course Number:** CET 2812C (previously CET 2812); **Revised Course Title:** Microsoft SQL Server (previously “SQL Server 2000 System Administration”); **Revised Catalog Course Description:** This is a hands-on course designed to prepare students for the challenges of managing/administering Microsoft SQL Server. Main topics include; install, configure, and maintain SQL Server, SQL Server security, data management tasks, optimizing server performance, and implementing high availability. This course prepares the student for the Microsoft Certified Technology Specialist (MCTS): Microsoft SQL Server 2008, Implementation and Maintenance designation. (Lab Fee TBA); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/4/0).

#### **CET 2830C Information Assurance**

**Revised Prerequisites:** CET 2660C and CET 2792C (previously CET 2660C and CET 2722); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/2/2).

#### **CET 2880C Computer Forensics**

**Revised Prerequisites:** CET 2660C and CET 2792C (previously CET 2660C and CET 2722).

#### **CET 2890C Cyber Security**

**Revised Prerequisites:** CET 2830C and CET 1610C (previously CET 2660C and CET 2722); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/2/2).

#### **CET 2892C Advanced Cyber Security**

**Revised Prerequisites:** CET 2890C (previously CET 2890C and CET 1610C).

#### **CET 2894C Projects in Cyber Security: Capstone Course**

**Revised Prerequisites:** CET 2880C and CET 2892C or department approval (previously CET 2830C, CET 2880, and CET 2892C; or department approval; **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (previously 4/2/2).

**CET 2112C Digital Systems I**

**Revised Prerequisites:** MTB 1329C or MAC 1105 and EET 1214C (prev. MTB 1329C and EET 1214C or department approval).

**CET 2123C Fundamentals of Microprocessors**

**Revised Prerequisites:** CET 2112C (prev. CET 2113C or department approval); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/1 (prev. 3/2/2); **Revised Lab Fees:** \$58.00 (prev. \$64.00).

**EET 1036C Fundamentals of DC and AC Circuits**

**Revised Prerequisites:** MTB 1329C or MAC 1105 and EET 1214C (prev. MTB 1329C and EET 1214C or department approval).

**EET 1141C Semiconductor Devices and Circuits**

**Revised Prerequisites:** EET 1025C or EET 1036C (prev. EET 1025C or equivalent training in DC and AC electric circuits fundamentals); **Revised Lab Fees:** \$61.00 (prev. \$49.00).

**EST 1210 Introduction to Photonics**

**Revised Course Number:** EST 1210C (previously EST 1210); **Revised Catalog Course Description:** An introductory course exploring the fundamentals of Photonics theory, concepts, and applications. Contents include the nature and properties of light, light sources, human vision, and laser safety; basics of geometric and physical optics, and basic principles and applications of Holography. Laboratory experimentations will complement theoretical concepts of the course. (Special fee: \$57.00); **Revised Prerequisites:** MTB 1329C or MAC 1105 and EET 1214C (previously EET 1214C and MTB 1329C); **Revised Lab Fee:** \$57 (prev. \$35.00).

**EST 2220C Introduction to Fiber Optics**

**Revised Catalog Course Description:** Basic concepts of fiber optics, fiber hardware, and its applications are introduced. Topics include Light and its properties, Fiber Preparation, Handling, and Laser Alignment Procedures; Numerical Aperture measurement techniques, Types of Optical Fibers; Measurement of Optical Fiber attenuation and related practical problems; Property of Optical Fibers, Connectors and Splicing methods, Couplers, Power Budget Calculations, Misalignment Measurements and Techniques, Fiber Optics Communication System, Fiber Amplifiers, Fiber Lasers, and Fiber Gratings, Transmitters, Receivers, and splitters. (Special Fee \$59.00); **Revised Prerequisites:** MTB 1329C or MAC 1105 and EET 1214C (prev. EET 1214C and MTB 1329C or department approval); **Revised Lab Fee:** \$59.00 (prev. \$28.00).

**EST 2221C Introduction to Electro-Optical Devices**

**Revised Catalog Course Description:** An introduction to the principles of opto-electronics design to those with a background in general electronics design, circuit theory, electronic devices, and digital techniques. Students will become familiar with radiometric and photometric theory, basic optics, and opto-electronic devices and methods. Devices covered are opto-electronic sources, detectors, lasers, and laser diodes, optocouplers, and fiber optics devices. This course includes several laboratory experiences. (Special Fee \$57.00); **Revised Prerequisites:** EET 1025C or EET 1036C and EST 1210C (prev. EET 1025C or department approval); **Revised Credit/Class (Lecture)/Lab Hours:** 3/2/2 (prev. 3/3/0); **Revised Lab Fee:** \$57.00 (prev. \$32.00).

**EST 2230 Introduction to Lasers**

**Revised Course Number:** EST 2230C (prev. EST 2230); **Revised Catalog Course Description:** This course introduces students to the basic principles of laser operations, safety, and applications. Topics include: Elements and Operation of a Laser, Laser Safety, Emission and Absorption of light, Lasing Action, Optical Cavities and Modes of Oscillation, Temporal and Spatial Characteristics of Lasers, and Laser Classifications and Characteristics. Laboratory experimentations will complement and reinforce the theoretical concepts of lecture material. (Special Fee: \$54.00); **Revised Prerequisites:** EET 1025C or EET 1036C and EST 1210C (prev. EET 1025C and EET 2330); **Revised Lab Fee:** \$54.00 (prev. \$61.00).

**EST 2511C Electromechanical Systems**

**Revised Prerequisites:** EET 1025C or EET 1036C (prev. EET 1025C); **Revised Lab Fee:** \$53.00 (prev. \$25.00).

**CET 3383 Software Applications in Engineering Technology**

**Revised Prerequisites:** Min. grade of C in MAC 1105 (prev. MAC 2312 and PHY 2049C).

**CET 4333 Computer Architecture**

**Revised Prerequisites:** Minimum grade of C in CET 4126C (prev. "A minimum grade of C in CET 2123C and CET 3136C").

**CET 4382 Data Communication and Networking**

**Revised Prerequisites:** Min. grade of C in CET 4333 (prev. CET 3136C).

**EET 3320C Communications Systems**

**Revised Prerequisites:** Min. grade of C in EET 3086C (prev. EET 3086C and EST 3360).

**EET 3716 Linear Systems and Signals**

**Revised Prerequisites:** Min. grades of C in EET 3086C and CET 3383 (prev. CET 3383 and EST 3360).

**EET 4366 Biophotonics Technologies**

**Revised Catalog Course Description:** An overview of the field of biophotonics and the basic physics of light-biomatter interactions and tissue optics, light induced effects in bio-systems, diagnostic techniques and instrumentation, therapeutic instrumentation and applications, optical biosensors, imaging, and basics of optical tomography.

**EST 3140 Engineering Management and Ethics**

**Revised Prerequisites:** Min. grade of C in ENC 1101 (prev. ENC 1102).

**EST 3144 Engineering Documentation and Communication**

**Revised Prerequisites:** Min. grade of C in ENC 1101 (prev. ENC 1102).

**EST 3537 Quality Assurance and Testing Methods**

**Revised Catalog Course Description:** A broad understanding of the quality assurance and control of electronic products, covering all aspects of quality assurance for components used in electronic devices, improve product quality without increasing product cost. Apply Six Sigma process,

methodologies, and tools to develop robust engineering products, processes, and services; **Revised Prerequisites:** Minimum grade of C in EET 3086C (prev. EET 3086C and EST 3360).

**RET 1025C Principles of Respiratory Care**

**Revised Credit/Class (Lecture)/Lab Hours:** 6/4/6 (previously 6/3/4).

**RET 2714C Pediatric Respiratory Care**

**Revised Credit/Class (Lecture)/Lab Hours:** 4/3/3 (previously 4/3/1).

**BSC 1005 Biological Science**

**Revised Catalog Course Description:** An introduction to essential principles of biological science.

Topics include, but are not limited to, the nature of science and the scientific method, chemistry for biology, cell structure, metabolism, reproduction and genetics, organisms and ecology. This is a general education course for non-biology majors. It is also recommended for students who need preparation before enrolling in a biology course for Science majors.

**BSC 1005L Lab in Applied Biology**

**Revised Catalog Course Description:** Biology laboratory course that will satisfy the General Education Requirement for a laboratory science at many universities and may be taken concurrently with, or independently of, BSC 1005.

**COP 2805 Advanced Java Programming**

**Revised Catalog Course Description:** A continuation of COP 2800. Advanced topics in Java SE (Standard Edition), including Graphical User Interface using Swing, event handling, file input/output, collections, multi-threaded applications, and database connectivity. Object-oriented design and analysis is introduced using the Unified Modeling Language (UML).

**DEH 1130C General and Oral Histology**

**Revised Course Number:** DEH 1130 (prev. DEH 1130C); **Revised Course Title:** Oral Histology and Embryology (prev. General and Oral Histology); **Revised Catalog Course Description:** Detailed study of dental and oral tissues. Includes early embryonic development of the face and oral cavity; histology of the teeth; **Revised Credit/Class (Lecture)/Lab Hours:** 2/2/0 (prev. 2/1/3).

**DEH 2400 General and Oral Pathology**

**Revised Catalog Course Description:** Introduction to general pathology with consideration of common diseases affecting the human body; the oral systemic connection. Emphasis placed on the study of pathological conditions associated with the oral cavity.

**EMS 2603 Paramedic I**

**Revised Pre-requisite or Co-requisite** BSC 1084 as pre-requisite only, (previously as a both pre- and co-requisite).

**GRA 1933 Fundamentals of Creative Thinking**

**Revised Course Number:** GRA 1933C (previously GRA 1933); **Revised Catalog Course Description:** A course designed to encourage creative thinking and problem solving for students across disciplines

through group and individual activities. The course will include a study of characteristics of a creative mind, the creative process, creative problem solving, assessing and increasing growth of creative potential. **Revised Pre-requisite or Co-requisite:** Minimum grade of C in ART 1300C or GRA 1142C or departmental approval; **(Lecture)/Lab Hours:** 3/2/1 (previously 2/2/0).

#### **GRA 2141C Web Page Design**

**Revised Pre-requisite or Co-requisite** Minimum grade of C in GRA 2201 or GRA 1206C or DIG 2100C or departmental approval.

#### **HUN 2202 Essentials of Nutrition and Diet Therapy**

**Revised Catalog Course Description.** A study of general and clinical nutrition. Focuses on nutrients and their digestion, absorption, metabolism, transport and interactions. Students will learn how to select a meal plan for optimum health, nutrition throughout the life cycle and current issues and controversies in nutrition. The diet therapy feature is included for students entering health-care fields  
**Revised Pre-requisite or Co-requisite:** Satisfactory completion of all mandated courses in reading, mathematics, English and EAP; and a minimum grade of C in Honors high school biology or Advanced Placement biology AND Honors high school chemistry or Advanced Placement Chemistry; or BSC 1010C or BSC 2093C or BSC 2094C with a minimum grade of C.

#### **MUM 2606 Sound Recording II**

**Revised Course Number:** MUM 2606C (previously MUM 2606); **Revised Catalog Course Description:** This course explores advanced recording studio techniques, studio calibration, advanced mixing techniques, and principles of Mastering. (Special Fee: \$86.00) **Revised Prerequisites:** Minimum grade of C in MUM 2600C Sound Recording I and MUM 2634L The Digital Audio Workstation; **Revised Credit/Class (Lecture)/Lab Hours:** 4/2/4 (previously 4/3/3).

#### **MUM 2720 The Business of Music**

**Revised Official Course Title:** Business of Music (previously The Business of Music); **Credit/Class (Lecture)/Lab Hours:** 3/3/0 (previously 4/4/0); **Effective Date:** Fall 2011 (201210).

#### **MUM 2640 Post-Production Sound**

**Revised Course Number:** MUM 2640C (previously MUM 2640).

#### **SPN 1000 Conversational Spanish**

**Revised Catalog Course Description:**) Conversational Spanish is a communicative based course. Students will be introduced to basic conversation using speaking, listening, reading and writing skills. This course does not satisfy the college's foreign language requirements and is not open to native speakers.

#### **SPN 1340 Spanish for Heritage Speakers I**

**Revised Catalog Course Description:** This course is designed for heritage speakers of Spanish who have acquired oral proficiency in a non-academic environment. The activities in this course will improve several aspects of language learning: oral comprehension, speaking, reading comprehension and analysis, and writing skills. The emphasis will be on improving linguistic skills through specific grammatical and lexical studies designed to meet the particular needs of heritage speakers of Spanish. Special attention to Hispanic culture. A minimum grade of "C" is required if being used to satisfy the General Education Foreign Language Proficiency Requirement.

**SPN 1341 Spanish for Heritage Speakers II**

**Revised Catalog Course Description:** Spanish for Heritage speakers II is a continuation of SPN 1340. It is a course designed for to address the needs of Hispanic students whose heritage language is the target language and who have had some formal Spanish language instruction. They can communicate in Spanish but need to improve and master their reading, speaking and writing skills. This course addresses specific linguistic issues such as diction, orthography, and sentence structure. Special attention will be given to Hispanic culture. A minimum grade of “C” is required if being used to satisfy the General Education Foreign Language Proficiency Requirement.

**TPA 2292 Advanced Technical Production**

**Prerequisites:** TPA 1200, TPA 2220, TPA 2260, and TPA 2290 (previously [TPA 1200 or TPA 1210], TPA 2220, TPA 2260, and TPA 2290).

**EAP 0300 Low Intermediate Speech for Non-Native Speakers**

**Revised Course Number:** EAP 0300C (previously EAP 0300); **Revised Catalog Course Description :** Students develop basic speaking and listening skills necessary for participating in classroom discussions, with an introduction to oral presentation and listening skills. Competencies: 1) basic academic speaking skills; 2) introduction to listening and note taking strategies; 3) classroom interaction skills. Required lab work is a homework component of this course. Credit does not apply toward any associate degree. **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0320 Low Intermediate Reading for Non-Native Speakers**

**Revised Course Number:** EAP 0320C (previously EAP 0320); **Revised Catalog Course Description:** Students develop the ability to read text on familiar and basic academic topics with an emphasis on vocabulary. Competencies: 1) developing base-line English vocabulary, 2) locating key concepts, 3) reading and understanding, and 4) understanding and using information resources. Required lab work is a homework component of this course. A departmental final exam is required. Credit does not apply toward any associate degree. Minimum grade C required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0340 Low Intermediate Composition for Non-Native Speakers**

**Revised Course Number:** EAP 0340C (previously EAP 0340); **Revised Catalog Course Description:** Students develop the ability to use writing-related technology and plan, write, revise, and edit sentences and paragraphs at the low-intermediate level. Credit does not apply toward any associate degree. Minimum grade of C required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0360 Low Intermediate Structure for Non-Native Speakers**

**Revised Course Number:** EAP 0360C (previously EAP 0360); **Revised Catalog Course Description:** Students develop the ability to use low-intermediate grammatical structures, verb tenses, and parts of speech appropriate to writing and speaking. Credit does not apply toward any associate degree. Minimum grade of C required for successful completion. **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0400 Intermediate Speech for Non-Native Speakers**

**Revised Course Number:** EAP 0400C (previously EAP 0400); **Revised Catalog Course Description:** Students continue to develop speaking and listening skills necessary for participation in classroom discussions, with an emphasis on oral presentation. Competencies: 1) intermediate academic speaking skills with introduction to oral presentation; 2) listening comprehension and note taking strategies; 3) classroom interaction skills. Required lab work is a homework component of this course. In order to pass this course, students must earn C or above in course work. Credit does not apply to any associate degree. **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0420 Intermediate Reading for Non-Native Speakers**

**Revised Course Number:** EAP 0420C (previously EAP 0420); **Revised Catalog Course Description;** Students develop the ability to comprehend longer texts of limited length and difficulty on a variety of academically-related topics, they expand vocabulary knowledge, and begin to apply critical reading skills. Competencies: 1) improving English vocabulary, 2) locating key concepts, 3) reading and understanding, 4) understanding and using information resources, and 5) reading for personal enrichment. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better and a passing score on the Comprehensive Departmental Final Exam. **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0440 Intermediate Composition for Non-Native Speakers**

**Revised Course Number:** EAP 0440C (previously EAP 0440); **Revised Catalog Course Description:** Students develop the ability to use writing-related technology and plan, write, revise, and edit sentences and paragraphs and/or essays at the intermediate level. A departmental final exam is required. Credit does not apply toward any associate degree. Minimum grade of C required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 0460 Intermediate Structure for Non-Native Speakers**

**Revised Course Number:** EAP 0460C (previously EAP 0460); **Revised Catalog Course Description:** Students develop the ability to use intermediate level grammatical structures, verb tenses, and parts of speech appropriate to writing and speaking. A departmental final exam is required. Credit does not apply toward any associate degree. Minimum grade of C required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 1500 High Intermediate Speech for Non-Native Speakers**

**Revised Course Number:** EAP 1500C (previously EAP 1500); **Revised Catalog Course Description;** Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion, with an introduction to lecture note taking. Competencies: 1) speech preparation and delivery; 2) academic lecture comprehension and note taking; 3) general academic communication skills. Required lab work is a homework component of this course. In order to pass this course, students must earn a C or above in the course. **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

**EAP 1520 High Intermediate Reading for Non-Native Speakers**

**Revised Course Number:** EAP 1520C (previously EAP 1520); **Revised Catalog Course Description:** Students develop ability to comprehend longer texts on a variety of academically-related topics by applying appropriate reading strategies. Competencies: 1) improving English vocabulary, 2) locating

key concepts, 3) reading critically, 4) reading a variety of materials, such as texts, periodicals, journals, and electronic materials 5) reading to enhance personal life, and 6) developing effective study habits. Required lab work is a homework component of this course. In this course, a minimum grade of C is required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

#### **EAP 1540 High Intermediate Composition for Non-Native Speakers**

**Revised Course Number:** EAP 1540C (previously EAP 1540); **Revised Catalog Course Description:** Students develop the ability to use writing-related technology and plan, write, revise, and edit sentences, paragraphs, and essays at the high-intermediate level. Minimum grade of C required for successful completion; **Revised Co-requisite** none: (previously EAP 1560) **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

#### **EAP 1560 High Intermediate Structure for Non-Native Speakers**

**Revised Course Number:** EAP 1560C (previously EAP 1560); **Revised Catalog Course Description:** Students develop the ability to use high-intermediate grammatical structures, verb tenses, and parts of speech appropriate to writing and speaking. Minimum grade of C required for successful completion; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

#### **EAP 1620 Advanced Reading for Non-Native Speakers**

**Revised Course Number:** EAP 1620C (previously EAP 1620); **Revised Catalog Course Description:** Students develop ability to comprehend and interpret authentic college-level texts in content areas by applying appropriate reading strategies. Competencies: 1) improving English vocabulary, 2) locating key concepts, 3) reading critically, 4) reading for study and enjoyment, and 5) reading a variety of materials, such as texts, periodicals, journals, and electronic materials. Required lab work is a homework component of this course. Minimum grade of C and a passing score on the Comprehensive Departmental Final Exam required for successful completion of this course; **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0).

#### **EAP 1640 Advanced Composition for Non-Native Speakers**

**Revised Course Number:** EAP 1640C (previously EAP 1640); **Revised Catalog Course Description:** Students develop the ability to use writing-related technology and plan, write, revise, and edit sentences, paragraphs, and essays at the advanced level. A departmental final exam is required. Minimum grade of C required for successful completion; **Revised Pre-requisite or Co-requisite** EAP 1560 (previously none) **Revised Credit/Class (Lecture)/Lab Hours:** 3/3/1 (previously 3/3/0); **Effective Date:** Fall 2011 (201210).

#### **Various Courses Lab Fee Revisions (per attached Excel Spreadsheet)**

Previous and proposed lab fees were presented for approval.

#### **CET 2675 Voice Over IP**

**Revised Course Number:** CET 2675C (Previously: CET 2675); **Revised Credit/Class (Lecture)/Lab Hours:** 3/1.5/1.5 (Previously: 4/4/0).



**CET 4126C Microprocessor Programming**

**Revised Prerequisite:** CET 2113C and CET 2123C (Previously: CET 4333); **Revised Lab Fee:** \$32.00 (Previously: \$39.00); **Revised Catalog Course Description:** This course is designed to introduce the student to the hardware architecture and software architecture programming of the microprocessors. Main topics include microcomputer assembly programming, operating system environment, and the hardware characteristics of the microprocessor. A minimum grade of C is required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$32.00).

**EET 3086C Circuit Analysis**

**Revised Prerequisite:** EET 1025C or EET 1036C and a minimum grade of "C" in EST 3360 (Previously: EET 1025C and EST 3360); **Revised Lab Fee:** \$21.00 (Previously: \$49.00); **Revised Catalog Course Description:** An advanced course using differential and integral calculus and transform methods to analyze steady-state and transient responses of electrical networks in time and frequency domains. Circuit simulator and laboratory projects will provide an in-depth understanding and hands-on experience. A minimum grade of C is required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement. (Special Fee: \$21.00).

**EST 4880 Photovoltaic Technologies**

**Revised Prerequisite:** EET 1025C or EET 1036C and a minimum grade of "C" in EST 3360 (Previously: EET 1025C and EST 3360); **Revised Catalog Course Description:** Students will use PSpice and LabVIEW to analyze and simulate the performance of PV systems. Topics covered will be solar cell technological processes, PV systems engineering, characterization and testing methods, sizing procedures, economic analysis, and instrumentation. A minimum grade of C is required if used to satisfy Electrical and Computer Engineering Technology, B.S. Degree requirement.

**GEB 2930 Selected Topics in Business**

**Revised Catalog Course Description:** Selected topics in business is based on the needs and areas of the class and professor. May include significant research or fieldwork component as part of the class. May be repeated for a maximum of 6 credits provided different topic explored each time, but grade forgiveness cannot be applied; **Revised Credit/Class (Lecture)/Lab Hours:** 1-3/1-3/0 (Previously 3/3/0).

**GEB 2955 Immersion in Global Business**

**Revised Catalog Course Description:** The objective of this course is to immerse our students in foreign cultures, giving them the opportunity to witness business activities, economic changes and social/cultural impact due to globalization. Course may be repeated up to a maximum of 6 credits hours but grade forgiveness cannot be applied; **Revised Credit/Class (Lecture)/Lab Hours:** 1-3/1-3/0 (Previously 3/3/0).

**RET 1264C Principles of Mechanical Ventilation**

**Revised Prerequisites:** Completion of the following courses with a minimum grade of "C": RET 1275C and RET 1450C and RET 1295C (Previously: RET 1025C or department approval); **Revised Catalog Course Description:** Functions of advanced respiratory care equipment including: negative and positive pressure mechanical ventilators, indications, initiation, monitoring, management and

complications. Bedside assessment and evaluation prior to and during weaning from ventilator support (Special Fee \$31.00).

#### **RET 1275C Clinical Care Techniques**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1485C Cardiopulmonary Physiology and RET 1025C Principles of Respiratory Care. (Previously: BSC 2093C and RET 1025C).

#### **RET 1295C Chest Medicine**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1485C Cardiopulmonary Physiology and RET 1025C Principles of Respiratory Care. (Previously: BSC 2093C and RET 1025C).

#### **RET 1450C Basic Physiologic Monitoring**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1485C Cardiopulmonary Physiology and RET 1025C Principles of Respiratory Care. (Previously: BSC 2093C and RET 1025C).

#### **RET 1485C Cardiopulmonary Physiology**

**Revised Prerequisite:** Acceptance to Respiratory Care A.S. Degree Program. (Previously: BSC 2093C or department approval AND acceptance to Respiratory Care A.S. Degree Program).

#### **RET 1874L Clinical Practice I**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1275C and RET 1450C and RET 1295C. (Previously: RET 1275C).

#### **RET 1875L Clinical Practice II**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1874L Clinical Practice I and RET 1264C Principles of Mechanical Ventilation. (Previously: Both RET 1264C and RET 1874L or department approval).

#### **RET 2244C Life Support**

**Revised Prerequisite:** Completion of the following courses with a minimum grade of “C”: RET 1264C and RET 1874L. (Previously: RET 1450C and RET 1264C).

#### **RET 2876L Clinical Practice III**

**Revised Prerequisites:** Completion of the following courses with a minimum grade of “C”: RET 1875L Clinical Practice II and RET 2714C Pediatrics in Respiratory Care and RET 2244C Life Support.

(Previously: Both RET 1875L and RET 2714C or department approval); **Revised Catalog Course**

**Description:** Students are assigned clinical practice in critical care environments under the supervision of a staff respiratory therapist or clinical instructor. An emphasis on mechanical ventilation and hemodynamic monitoring in the adult, pediatric and neonatal population (Special Fee \$123.00).

#### **EMS SEV Various EMS Courses (see below)**

Add an “L” designation to the following clinical courses because they have a lab component, but no lecture hours: EMS 2666 – Paramedic I Clinical and EMS 2667 – Paramedic II Clinical and EMS 2668 –

Paramedic III Clinical and EMS 1431 – Emergency Medical Technician Clinical Practicum; **Revised Course Numbers:** EMS 2666L; EMS 2667L; EMS 2668L; and EMS 1431L.

**MUT 1011C Introduction to Music Theory**

**Revised Lab Fee:** None (previously \$35.00)

**EMS 1119 Fundamentals of Emergency Medical Technology**

**Revised Prerequisites:** Minimum PERT scores of 84 on reading, 90 on writing, and 96 on math or equivalent scores on other state-approved entry test (CPT); **OR** minimum grades of C in either REA 0007C or EAP 1520C, and in either ENC 0015C or EAP 1540C, and in MAT 0018C; **OR** a minimum PERT score of 96 or equivalent score on other state-approved entry test (CPT) or minimum grade of C in MAT 0018C, and a minimum LOEP score of 106. (previously, there were no prerequisites)

**RTE 4941L Practicum**

**Revised Prerequisites:** A minimum grade of C in specified concentration coursework: Quality Management - RTE 4474 and RTE 3205; or Magnetic Resonance Imaging - RTE 3591 and RTE 3592; or Computed Tomography - RTE 3590 and RTE 4474

**EMS Courses Approved for “C” Designation** – A proposal was presented and approved at the March 16, 2011 meeting to add the “C” designation to the following EMS courses:

EMS 1431 Emergency Medical Technician Clinical Practicum  
EMS 2666 Paramedic I Clinical  
EMS 2667 Paramedic II Clinical  
EMS 2668 Paramedic III Clinical

**Course Deletions**

MUT 1121 Musicianship I  
MUT 1122 Musicianship II  
MUT 2126 Musicianship III  
MUT 2127 Musicianship IV  
MUT 2231 Keyboard Harmony I  
MUT 2232 Keyboard Harmony II  
SUR 2402 Land Surveying and Descriptions  
AFR 1101 Air Force Today I  
AFR 1111 Air Force Today II  
AFR 2130 Development of Air Power I  
AFR 2131 Development of Air Power II  
CIS 1351 Cryptology  
CIS 2102 Systems Assurance – Quality and Testing  
CIS 2356 Firewall Configuration & Management  
COP 1650 Programming Wireless Applications  
CTS 1154 Remote Technical Support  
PEM 1012 Fitness for the Disabled

## TPA 2279 Advanced Audio Visual Technology

### Field Review Changes

#### Changes effective August 1, 2010

PGY 2410C, Photography II will become PGY 2404C

#### Changes effective August 1, 2011

COP 1006, Introduction to Programming Concepts, will become COP 1000

COP 2802, Java Language for Programmers, will be discontinued

MAT 0012C, Pre-Algebra will become MAT 0018C

MAT 0024C, Beginning Algebra will become MAT 0028C

MAT 0020C, Pre Math Intensive will become MAT 0022C

REA 0001, College Prep Reading I will become REA 0007C

REA 0002, College Prep Reading II will become REA 0017C

ENC 0010 College Prep English I will become ENC 0015C

ENC 0012 College Prep English II will become ENC 0025C

EET 2552C, Photovoltaic Systems, will become ETP 2402C

EST 1835, Intro. to Alternative and Renewable Energy, will become ETP 1501

### Information Items

**Theatre Course Changes** – Several new theatre courses were approved at the February CCC meeting – TPA 2600 Stage and Production Management; TPA 2290C Theatre Design Practicum; and TPA 2221 Intermediate State Lighting. It was noted by the department, prior to the February meeting, that two of these course numbers are already in use at Valencia for other courses. The State was contacted, and the following was determined:

- TPA 2290C (Theatre Design Practicum) will become TPA 2190C (State will make the change);
- TPA 2221 (Intermediate Stage Lighting) will retain the number the State assigned;
- TPA 2221 (currently our Advanced Stage Lighting course) will become TPA 2222. A course change at the State level and for Banner will be completed by us to effect this change.

### **ATC Programs with 3000 and/or 4000 Level Courses**

Two Advanced Technical Certificate (ATC) programs – Magnetic Resonance Imaging and Computed Tomography – were presented at the February 2011 meeting to approve a “re-leveling” of the courses from 1000/2000 to 3000/4000. Concerns were expressed about this being a possibility at the State level, so the proposals (1011-057 and 1011-058, respectively) were removed from the agenda so that this possible issue could be addressed.

It was found that the concerns were valid; Falecia Williams confirmed that, currently, the State student database prevents the submission of the proposed course number/program combination. It

is an issue that is being discussed at the statewide level. Falecia is taking the lead to continue to follow-up and work toward a resolution of this issue.

Note: Since the February meeting, it has been found that four courses – RTE 2571, RTE 2575, RTE 2576, and RTE 2762, were approved for 3000 re-leveling last year at the April CCC meeting. This presents a problem, since the course numbers have already been changed, but cannot be used in these two ATC programs.

The situation will be resolved by removing these two ATC programs from the Catalog, temporarily, until the department works on a resolution over the next few months. Then, a Credit Program Modification can be done and an exception will be made to put these back in the curriculum for the Fall Term, provided a satisfactory resolution can be found. Although they cannot be in the print Catalog, they will be able to be in the Online Catalog.

### **CIT Program Electives**

At the February, 2011, CCC meeting, a request was made and approved to remove “restricted” and “unrestricted” electives from the CIT program. In the new Catalog, there will simply be CIT Electives. However, in the Catalog, under the CIS 2943, Internship in Information Technology, the requirement is “. . . and 3 credits from the CIT Restricted Electives list.” An editorial change will be made to read, “. . . and 3 credit of CIT Electives.”