

DES 2934**Advanced Clinical Procedures**

1.00 Credits

Advanced Clinical Procedures is a lecture course that is a continuation of concepts and clinical procedures introduced in previous clinical courses. This course provides discussion of case based studies and the application of specialized care treatment procedures. Students develop critical thinking skills based on the application of theory and advanced dental hygiene procedures. Topics include dietary surveys, recall systems and applied techniques with an emphasis on patients having specialized needs and unusual case factors that may complicate routine care. Credit for this course does NOT apply to the Associate in Arts degree

Prerequisites: DEH 1802C, DEH 2400.

Corequisites: DEH 2300, DEH 2804C.

DIE 2000**Introduction to Dietetics**

3.00 Credits

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

DIE 2129**Quality Control in Food/Nutrition**

3.00 Credits

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

DIE 2270**Clinical Nutrition I**

3.00 Credits

This course provides an in depth introductory study of dietetics; in depth review of nutrition science; the normal nutritional principles and the application of these principles throughout the life cycle.

Prerequisites: HUN 2201, DIE 2000.

DIE 2271**Clinical Nutrition II**

3.00 Credits

This course provides and advanced study of dietetics and the application of the science of nutrition to various disease states.

Prerequisite: DIE 2270.

Corequisite: DIE 2533.

DIE 2401**Nutritional Education and Interviewing**

3.00 Credits

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

DIE 2419**Nutritional Education Counseling Practicum**

2.00 Credits

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

DIE 2533**Clinical Practicum**

2.00 Credits

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

Prerequisite: DIE 2270.

Corequisite: DIE 2271.

DSC 1002**Introduction to Terrorism**

3.00 Credits

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

DSC 1003**Introduction to Homeland Security**

3.00 Credits

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

DSC 2033**Weapons of Mass Destruction**

3.00 Credits

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

EAP 0100**Speech/Listening I**

3.00 Credits

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

EAP 0120**Reading I**

3.00 Credits

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

EAP 0140**Writing I**

3.00 Credits

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

EAP 0160**Grammar I**

3.00 Credits

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

EAP 0200**Speech/Listening II**

3.00 Credits

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

Prerequisite: EAP 0100.

EAP 0220**Reading II**

3.00 Credits

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

Prerequisite: EAP 0120.

EAP 0240**Writing II**

3.00 Credits

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

Prerequisite: EAP 0140.

EAP 0260**Grammar II**

3.00 Credits

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

Prerequisite: EAP 0160.

EAP 0300**Speech/Listening III**

3.00 Credits

An intermediate level listening/speaking course in which students continue to develop their ability to understand and participate in conversations and discussions, and further improve their pronunciation. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0200.

EAP 0320**Reading III**

3.00 Credits

An intermediate level reading course for EAP students with emphasis on vocabulary expansion and application of critical reading skills. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0220.

EAP 0340**Writing III**

3.00 Credits

An intermediate level writing course in which students continue to develop the writing skills necessary to produce organized paragraphs on a variety of academic topics. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0240.

EAP 0360**Grammar III**

3.00 Credits

Intermediate grammar course for EAP students with an emphasis on increasing the accuracy of grammatical structures appropriate to classroom discussion and the writing of academic paragraphs. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0260.

EAP 0400**Speech/Listening IV**

3.00 Credits

A high intermediate level listening/speaking course in which students continue to develop their ability to understand and participate in more complex classroom discussions. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0300.

EAP 0420**Reading IV**

3.00 Credits

A high intermediate reading course for EAP students with emphasis on extensive reading and the enhancement of critical reading skills. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0320.

EAP 0440**Writing IV**

3.00 Credits

A high intermediate writing course in which students further develop their writing skills by acquiring the ability to write more sophisticated structured academic paragraphs and essays. Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0340.

EAP 0460**Grammar IV**

3.00 Credits

A high intermediate grammar course for EAP students with emphasis on verb tenses and complex syntactic structures.

Students must obtain a grade of "C" or better in order to advance to the next level of EAP coursework.

Prerequisite: EAP 0360.

EAP 1500**Speech/Listening V**

3.00 Credits

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking.

Prerequisite: EAP 0400.

Corequisite: EAP 1500L.

EAP 1500L**Speech/Listening Lab V**

1.00 Credit

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking.

Prerequisites: EAP 0400.

Corequisites: EAP 1500.

EAP 1520**Reading V**

3.00 Credits

A high intermediate college level reading skills course in which students will be equipped with the skills necessary for the efficient processing of general academic texts.

Prerequisite: EAP 0420.

Corequisite: EAP 1520L.

EAP 1520L**Reading Lab V**

1.00 Credits

A high intermediate college level reading skills lab designed to increase students' active and passive vocabulary.

Prerequisite: EAP 0420.

Corequisite: EAP 1520.

EAP 1540**Writing V**

3.00 Credits

Advanced writing course for EAP students in which students begin to write basic, structured academic essays with an emphasis on accuracy and cohesiveness. Students also learn to execute other related writing tasks.

Prerequisites: EAP 0440, EAP 0460.

Corequisite: EAP 1540L.

EAP 1540L**Writing Lab V**

1.00 Credits

Advanced grammar lab for EAP students designed to comprehensively review and expand the grammatical structures necessary to write academic English.

Prerequisites: EAP 0440, EAP 0460.

Corequisite: EAP 1540.

EAP 1600**Speech/Listening VI**

3.00 Credits

Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse.

Prerequisites: EAP 1500, EAP 1500L.

Corequisite: EAP 1600L.

EAP 1600L**Speech/Listening Lab VI**

1.00 Credit

Students further develop communication skills necessary for full participation in mainstream college classrooms, including comprehension of extensive discourse.

Prerequisites: EAP 1500, EAP 1500L.

Corequisite: EAP 1600.

EAP 1620**Reading VI**

3.00 Credits

An advanced level reading skills course in which students will further develop the skills necessary for the efficient processing of general academic texts.

Prerequisites: EAP 1520, EAP 1520L.

Corequisite: EAP 1620L.

EAP 1620L**Reading Lab VI**

1.00 Credit

An advanced college level reading skills lab designed to further increase the active and passive vocabulary of the student.

Prerequisites: EAP 1520, EAP 1520L.

Corequisite: EAP 1620.

EAP 1640**Writing VI**

3.00 Credits

Advanced writing course for EAP students in which students develop the ability to write a variety of college level essays with sophistication, fluency, and accuracy and execute other academic writing tasks.

Prerequisites: EAP 1540, EAP 1540L.

Corequisite: EAP 1640L.

EAP 1640L**Writing Lab VI**

1.00 Credit

Advanced grammar lab for EAP students designed to comprehensively review and expand the grammatical structures necessary to write academic English.

Prerequisites: EAP 1540, EAP 1540L.

Corequisite: EAP 1640.

ECO 1000**Introduction to Economics**

3.00 Credits

Survey of economic principles including the analysis of production, costs, national income accounting, money and banking, supply and demand and market structures. Credit for this course does not apply to the Associate in Arts degree. College level math skills are required.

ECO 2013**Principles of Macroeconomics**

3.00 Credits

Introduction to the theory of national income determination with emphasis on fiscal and monetary policies. This course includes analysis of full employment, price stability and economic growth.

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

ECO 2023**Principles of Microeconomics**

3.00 Credits

Offers a theoretical analysis of price determination of the product and factor markets. College level math skills required.

Prerequisites: College level reading and writing skills are required.

EDF 1005**Introduction to the Teaching Profession**

3.00 Credits

This is a survey course including historical, sociological and philosophical foundations of education, governance and finance of education, education policies, legal, moral and ethical issues and the professionalism of teaching. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. Students are required to complete a minimum of 15 hours of field-based experience with children and youth in schools or similar settings and not via virtual modes of film or Internet.

Prerequisites: College level reading and writing skills are required.

EDF 2085**Introduction to Diversity for Educators**

3.00 Credits

Designed for the prospective educator, this course provides the opportunity to explore issues of diversity, including an understanding of the influence of exceptionalities, culture, family, gender, sexual orientation, and socioeconomic status, religion, languages of origin, ethnicity and age upon the education experience. Students will explore personal attitudes toward diversity and exceptionalities. Students will be provided information on the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies. A minimum of 15 hours of field-based experience working with diverse populations of children and youth in schools or similar settings is required. The field experience should not be via virtual modes of film or Internet. College level reading and writing skills are required.

Prerequisite: EDF 1005

EDP 2002**Educational Psychology**

3.00 Credits

Focuses on the teaching/learning process, including the conditions and determinants necessary for efficiency and the application of related psychological principles. College level reading and writing skills are required.

Prerequisite: PSY 2012.

EEC 1300**Planning Early Childhood Program**

3.00 Credits

Introduces planning strategies for creating significant learning experiences for children 3 to 5 years of age. Emphasis is on maturity levels, daily activities, assessment and development of personal teaching techniques.

EEC 1308**Enhancing Intellectual Development in Early Childhood**

3.00 Credits

Covers the theory of specific teaching skills in languages, mathematics, social studies and problem solving.

EEC 1311**Crafts in Early Childhood**

3.00 Credits

Focuses on using crafts to promote physical and mental development, with an emphasis on clay, paint, chalk and crayons.

EEC 1401**Family and Early Childhood Education**

3.00 Credits

Addresses professional responsibilities in working with parents, with an emphasis on sharing information, joint problem solving, home visits and parents meetings.

EEC 1521**Early Childhood Center Management**

3.00 Credits

Covers the management and delivery of educational services, with an emphasis on planning, equipment, space, security, and educational goals.

EEC 1721**Physical Development in the Early Childhood Setting**

3.00 Credits

Focuses on teaching techniques for helping students develop large and small motor coordination, and improve balance. Topics include maturational changes and growth patterns.

EEC 1941**Child Care Practicum I**

3.00 Credits

Presents the opportunity to practice skills and translate theoretical knowledge into developmentally appropriate early childhood education experiences (240 clock hours).

Prerequisite waiver by permission of instructor required.

Prerequisite: EEC 1521.

Corequisite: EEC 1300.

EEC 1943**Child Care Practicum II**

3.00 Credits

A continuation of EEC 1941; presents the opportunity to practice skills and translate theoretical knowledge into developmentally appropriate early childhood education experiences (240 clock hours).

Prerequisites: EEC 1941.

EEC 2270**Language/Cultural Needs**

3.00 Credits

Focuses on the special language and cultural needs of pre-school disadvantaged students. Emphasis is on the strategies for increasing communication between children and adults, communication as part of the socialization process, and the pros and cons of English as a second language.

EEC 2271**Children with Special Needs**

3.00 Credits

Focuses on identifying and understanding the needs of children with cultural differences, the handicapped, gifted and talented. Emphasis is on mainstreaming in the classroom setting.

EET 1036C**Basic AC and DC**

3.00 Credits

This course is for the student who has previously taken EET 1083C, Electronic Orientation, or is taking both classes in the same semester. It covers voltage, current, resistance, and power concepts in DC and AC circuits. It also includes problem solving in AC and DC circuits using Ohm's Law with an emphasis on constructing, measuring performance, troubleshooting, and repairing circuits. Laboratory exercises are included.

EET 1037C**Circuit Analysis**

3.00 Credits

Covers electronic filters, resonance, and RC and RL time constants concepts. Also covers AC and DC theorems used to analyze complex circuits. Laboratory activities such as constructing AC and DC circuits, verifying calculated circuit performance, and identifying and repairing circuit faults are included. Prerequisites: EET 1036C and MTB 1327.

EET 1083C**Electronics Orientation**

3.00 Credits

Provides an introduction to computer operating systems, and to computer programs used in the analysis of electronic circuits. Also covers the use of electronics laboratory equipment such as digital multi meters, oscilloscopes, function generators, breadboards and trainers used in the program. Basic soldering skills included. Laboratory exercises are included.

EET 1141C**Solid State Devices**

3.00 Credits

Covers the basic concepts of solid state devices used in electronics with an emphasis on semiconductor materials, diodes, transistors, (bipolar and FET), thyristors, basic operational amplifiers and related test equipment. Laboratory exercises are included.

Prerequisite: EET 1036C.

EET 1142C**Solid State Circuits**

3.00 Credits

Covers the basic concepts of analog circuits. Topics include multistage amplifiers, linear integrated circuits, basic power supplies and filters, audio amplifiers, oscillators, motor controls, cathode ray tubes, optoelectronic devices and related test equipment.

Prerequisite: EET 1141C.

EET 1525C**Industrial Controls I**

3.00 Credits

This course is for the student who is working in the industrial control field or has completed EET 1141C. It covers the basic theory and operation of electromechanical and industrial electronic devices. Topics such as relays, switches, transducers, SCRs, and ladder diagrams are included. Laboratory exercises are included.

Prerequisite: EET 1141C.

EET 1949**Electronics Internship**

3.00 Credits

A coordinated work study course involving class work and field experience. Objectives determined by the student and teacher coordinator will be used to evaluate the student.

EET 2155C**Linear Integrated Circuits**

3.00 Credits

Covers analog integrated circuits, operational amplifiers, power supply regulator feedback, waveform generators, special amplifiers and frequency response. Laboratory exercises are included. A special fee will be charged for this course.

Prerequisite: EET 1142C.

EET 2215L**Electronics Instruments**

3.00 Credits

Covers basic concepts and theory concerning electronic instruments used in testing situations, with an emphasis on practical applications of electronic measuring devices.

Prerequisite waiver by permission of instructor required.

A special fee will be charge for this course.

Prerequisites: CET 2113C, EET 1142C.

EET 2326C**Communications Systems I**

3.00 Credits

Provides an introduction to the communications field. Topics include AM, FM, television and single sideband multiplexing. Laboratory exercises are included. A special fee will be charged for this course

Prerequisite: EET 2155C.

EET 2526C**Industrial Controls II**

3.00 Credits

Covers the theory and operation of programmable logic controllers (PLC) and variable speed AC and DC motor drives. Laboratory exercises are included.

Prerequisite: EET 1525C or permission of instructor.

EET 2939**Electronics Engineering Capstone**

3.00 Credits

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

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

EGS 2122C**Geometric Dimension/Tolerance**

3.00 Credits

This course provides the fundamentals of geometric dimensioning and tolerancing (gd & t) as based on the American Society of Mechanical Engineers standard ASME Y14.5m 1994. The coverage of topics includes geometric tolerancing symbols and terms, the rules of geometric dimensioning and tolerancing, datums, material condition symbols, tolerances of form, profile, orientation and runout, and location tolerances.

Prerequisite: ETI 1403.

EME 2040**Introduction to Technology for Educators**

3.00 Credits

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

Prerequisite: EDF 1005.

EMS 1119**Emergency Medical Technician**

7.00 Credits

Provides the lecture, theory and discussion in compliance with the U.S. Department of Transportation (D.O.T) curriculum for the EMT Basic (1994). Also includes additional content related to esophageal intubation, intravenous fluid maintenance, automated defibrillation, and pneumatic anti shock garments. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisites: EMS 1119L, EMS 1431, HSC 1220.

EMS 1119L**EMT Practicum**

2.00 Credits

Provides the competency based practice and testing of skills presented in the companion lecture course. Those skills include all the required skills of the EMT basic national curriculum plus the additional skills of esophageal intubation, intravenous maintenance, automated defibrillation and pneumatic anti shock garments. Includes strenuous skills such as lifting and patient carrying. Credit for this course does NOT apply to the Associate in Arts degree. A special fee will be charged for this course.-Corequisites: EMS 1119, EMS 1431, HSC 1220.

EMS 1431**EMT Clinical**

1.00 Credit

Provides the field experience and hospital clinical portions of the U.S. Dept. of Transportation curriculum (1994) for the EMT Basic. Includes strenuous skills such as lifting and carrying techniques in actual patient care situations. Exposure to blood and blood borne pathogens is possible in patient care situations. Credit for this course does NOT apply to the Associate in Arts degree. A special fee will be charged for this course. An additional cost for a criminal background check is required. Drug testing is required.

Corequisites: EMS 1119, EMS 1119L, HSC 1220.

EMS 2381C**EMT Refresher**

2.00 Credits

Reviews the basic life support training and skills needed by the EMT B personnel who have successfully completed the basic training program. These skills and knowledge are used in the immediate pre hospital care of the acutely ill or injured patient. A special fee will be charged for this course. This course may be taken unlimited times for credit. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: Florida EMT B certification

EMS 2551C**Advanced Cardiac Life Support**

2.00 Credits

The American Heart Association's Advanced Cardiac Life Support Provider course is designed to provide instruction and skill testing of specific therapies for various cardiac emergencies. The target population for this course is the practicing physician, paramedic or critical care nurse. Includes strenuous skills such as lifting and carrying techniques in actual patient care situations. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: Current CPR certification required on the first class day

EMS 2617C**Assessment Based Management & Proficiency**

2.00 Credits

Provides a review of the didactic and practical skills of the paramedic certificate program followed by written and practical examinations. Credit for this course does NOT apply to the Associate in Arts degree.

EMS 2621**Paramedic Phase I**

7.00 Credits

Provides knowledge and skills contained in Division 1, of the 1998 DOT curriculum, Module 1 Preparatory, Module 2 Airway, Module 3 – Patient Assessment, Module 8 Ambulance Operations, in compliance with the most current DOT curriculum. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisite: EMS 2621L.

EMS 2621L**Paramedic Phase I Practicum**

4.00 Credits

Provides knowledge and skills contained in division 1, of the 1998 DOT curriculum, module 1 preparatory, module 2 airway, module 3 – patient assessment, module 8 ambulance operations, in compliance with the most current DOT curriculum. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisite: EMS 2621.

EMS 2622**Paramedic Phase II**

8.00 Credits

Provides knowledge and skills contained in the most current department of transportation curriculum. Specific modules include Module 4 Trauma, Module 5 Medical Emergencies. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EMS 2621, EMS 2621L.

Corequisite: EMS 2622L.

EMS 2622L**Paramedic Phase II Practicum**

4.00 Credits

Provides knowledge and skills contained in the most current department of transportation curriculum. Specific modules include Module 4 Trauma, Module 5 Medical Emergencies. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EMS 2621, EMS 2621L.

Corequisite: EMS 2622.

EMS 2623**Paramedic Phase III**

6.00 Credits

Provides knowledge and skills contained in the most current department of transportation curriculum for paramedic. Specific modules include Module 6 Special Considerations, Module 5 Medical Emergencies (Cardiac Emergencies Management and Advanced Life Support). Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EMS 2622, EMS 2622L.

Corequisite: EMS 2623L.

EMS 2623L**Paramedic Phase III Practicum**

2.00 Credits

Provides knowledge and skills contained in the most current department of transportation curriculum for paramedic. Specific modules include module 6 special considerations, module 5 medical emergencies (cardiac emergencies management and advanced life support). Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EMS 2622 and EMS 2622L.

Corequisites: EMS 2623.

EMS 2666**Paramedic Clinical I**

3.00 Credits

Focuses on the demonstration of EMT and basic paramedic skills in actual patient care situations, with an emphasis on initial assessment and management of airway management, intravenous and medication administration, and patient and stretcher handling in field and hospital settings. Includes physically strenuous activity. Laboratory fee assessment is made for professional liability insurance. A special fee will be charged for this course. Prerequisite: Admission to Paramedic program. Credit for this course does NOT apply to the Associate in Arts degree.

EMS 2667**Paramedic Clinic II**

3.00 Credits

Focuses on the demonstration of skills of the primary provider of patient care in actual situations. Topics include advanced assessment and evaluation, EKG monitoring and rhythm interpretation, defibrillation and cardioversion, chest decompression, and advanced airway management. Involves physically strenuous activity. A special fee will be charged for this course. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: EMS 2666

EMS 2668**Paramedic Clinic III**

3.00 Credits

An advanced clinical experience focusing on decision making and direct patient care that stresses the completion of competencies introduced in previous courses and includes a field preceptor transition program. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: EMS 2667

EMS 2761**Introduction EMS Instruction**

3.00 Credits

An introductory course for EMS instructors or training officers focusing on program design, teaching methods, student objectives and basic testing / measurement techniques as they apply to EMS training. Simulated patient care and use of Modern EMS equipment are emphasized. Experiences as an EMT, paramedic, registered nurse or physician is mandatory. Credit for this course does NOT apply to the Associate in Arts degree.

EMS 2930**EMS Seminar**

1.00 Credits

Focuses on the discussion of current topics in the EMS field. Content may vary by section. This course may be taken five (5) times for credit. Credit for this course does NOT apply to the Associate in Arts degree.

ENC 0010**College Prep Writing I**

4.00 Credits

Designed to provide additional training in written communication skills. The CLAST skills of basic sentence structure, mechanics, and word choice are introduced. Emphasis is placed on learning to express ideas in clear, logical standard English and on paragraph development. This class does not satisfy General Education requirements and generates compensatory credit only.

ENC 0010C**College Prep Writing I**

4.00 Credits

Designed to provide additional training in written communication skills. The CLAST skills of basic sentence structure, mechanics, and word choice are introduced. Emphasis is placed on learning to express ideas in clear, logical standard English and on paragraph development. This class does not satisfy General Education

ENC 0020**College Prep Writing II**

4.00 Credits

Designed to emphasize CLAST skills, including modifiers, parallel structure, compound and complex sentences, coordination advanced mechanics, and word use. Basic paragraph organization and essay structure are also addressed. This class does not satisfy General Education requirements and generates compensatory credit only. Prerequisites: College level writing skills required.

ENC 0020C**College Prep Writing II**

4.00 Credits

Emphasizes CLAST skills, including modifiers, parallel structure, and embedding features of compound and complex sentences, mechanics, and word use. Paragraphs and the basic essay structure are also addressed. This course does not satisfy General Education requirements and generates compensatory credit only. College level writing skills are required.

ENC 0021**College Prep Writing III**

2.00 Credits

Designed for students who have previously taken ENC 0020 or ENC 0020C and have mastered the course objectives but have not earned a passing grade on the writing portion of the exit examination. Special attention will be paid to the elements of sentence construction, paragraph development and essay organization. The class does not satisfy general education requirements and generates compensatory credit only. Prerequisites: College level writing skills are required with a minimum grade D or N.

ENC 0090**CLAST Grammar Review**

1.00 Credit

CLAST review emphasizing grammar.

Prerequisites: College level reading and writing skills are required.

ENC 0091**CLAST Essay Review**

1.00 Credits

CLAST (College Level Academic Skills Test) review emphasizing essay.

Prerequisites: College level reading and writing skills are required.

ENC 1101**English Composition I**

3.00 Credits

Focuses on the writing process of various expository methods with consideration of the writer's purpose, limitations of time, and audience. Students must write unified, coherent essays that include theses and introduction, body, and conclusion paragraphs. Students must demonstrate effective sentence structure, and observe conventions of standard English grammar and usage. Prerequisite requirements: A satisfactory score on the HCC placement test or ENC 0020C with a minimum grade of "C".

ENC 1101H**Honors English Composition I**

3.00 Credits

Same as ENC 1101 with honors content. Honors Institute permission required.

Prerequisites: College level reading and writing skills are required.

ENC 1102**English Composition II**

3.00 Credits

A continuation of ENC 1101. Instruction is persuasive and literary based critical and evaluative skills in English composition. Documented research paper required.

Prerequisites: ENC 1101 with a minimum grade of C or S.

ENC 1102H**Honors English Composition II**

3.00 Credits

Same as ENC 1102 with honors content. Honors Institute permission required. College level reading and writing skills are required.

Prerequisites: College level reading and writing skills are required with a minimum grade of C.

ENC 1151**Technical English I**

3.00 Credits

Designed to help vocational oriented students improve writing, reading and speaking skills. Focuses on basic English skills such as dictionary work, developing paragraphs and writing themes. Prerequisite ENC 0020C with a minimum grade of "C" or better, or satisfactory score on the HCC placement test. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: College level reading and writing skills are required.

ENC 2210**Technical Writing**

3.00 Credits

Focuses on writing and designing documents in technical and professional discourse communities. Students produce a number of technical genres including correspondence, reports, a proposal, and instructions for various technical and lay audiences. Assignments are intended to create a real world situation and present a set of rhetorical considerations and restraints.

Prerequisite: ENC 1101.

ENG 2100**Introduction to Film**

3.00 Credits

Presents film as an art form, with an emphasis on analysis and evaluation. Topics include vocabulary, techniques, story, script, cinematography, sound, directing, acting, historical perspective, cultural settings and comparative status among other films.

Prerequisite: ENC 1101.

ENL 2012**British Literature to 1800**

3.00 Credits

Focuses on selected British writers, with an emphasis on major periods and trends, such as Anglo Saxon, Middle Ages, neo classicism and pre romanticism.

Prerequisites: College level reading and writing skills are required.

ENL 2012H**Honors British Literature to 1800**

3.00 Credits

Same as ENL 2012 with honors content. Honors Institute permission required.

Prerequisites: College level reading and writing skills are required.

ENL 2022**British Literature: 1800 to Present**

3.00 Credits

Focuses on 19th and 20th century writers from the romantics to the present.

Prerequisites: College level reading and writing skills are required.

ENL 2022H**Honors British Literature: 1800 to Present**

3.00 Credits

Same as ENL 2022 with honors content. Honors Institute permission required.

Prerequisites: College level reading and writing skills are required.

EPI 0001**Classroom Management**

3.00 Credit Hours

This course prepares the student to set up a classroom; employ classroom management techniques; express an understanding of school safety; integrate sunshine state standards into lesson development; create lesson plans; establish and maintain cooperative relations with parents; develop and administer various forms of assessment describe the implications of FCAT and other standardized tests; and demonstrate an understanding of the ethical and legal obligations of the teaching profession.

EPI 0002**Instructional Strategies**

3.00 Credit Hours

This course prepares the student to identify different learning styles, recognize Bloom's Taxonomy prepare lesson plans, use various styles on presentations, employ varied teaching strategies, explain cooperative, group, contextual, and project based learning, apply behavioral management strategies, and discuss accommodations for exceptional students.

EPI 0003**Classroom Technology**

3.00 Credit Hours

This course prepares the student to develop computer based record keeping, to identify additional application software productivity tools prepare multimedia presentations, describe content area instructional strategies, identify Internet resources, describe WebQuests, demonstrate knowledge of webpage development and computer aided instruction integrate technology into the learning process, and describe copyright and fair use guidelines.

EPI 0004**Teaching and Learning Process**

3.00 Credit Hours

This course prepares the student to research professional literature to seek best practices in teaching and to hone the craft of effective instruction.

EPI 0010**Foundations of Language and Cognition**

3.00 Credit Hours

This course prepares the student to describe language structure and function, cognition of phonemic awareness, phonics, fluency, vocabulary and comprehension. The student will learn the integration of the reading components. Instruction is grounded in scientifically based research as a mechanism to inform instructional practice.

EPI 0020**Professional Foundations**

2.00 Credit Hours

This course provides the foundation for the student to become a productive member of the teaching profession. Students will gain an understanding of the organization and administration of the public school, the laws governing teachers, the code of ethics, and the purpose of schools. Students will attain a professional perspective as well as a sense of grounding in the profession of teaching.

EPI 0030**Diversity**

2.00 Credit Hours

This course provides the student with an understanding of the variety of backgrounds and cultures that may be found in a typical classroom.

EPI 0940**Field Experience**

1.00 Credit Hour

Participants will complete a field experience in a public, charter, or private school. These field experiences will provide the opportunity to gain insight into the instructional process.

Those participants who are teaching will be required to complete the field experiences in the schools where they are assigned.

EPI 0945**Field Experience**

1.00 Credit Hour

This course provides the student with a field experience in the classroom to give a broader view of the social aspects of diversity and cause the participant to re evaluate personal beliefs and prejudices that may adversely affect the learning process.

ESC 1000**Earth Science**

3.00 Credits

Focuses on geology, meteorology, and astronomy. Topics include the earth's atmosphere and weather systems, earthquakes, volcanoes, plate tectonics, the solar system and the universe; intended for non science majors.

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

Corequisites: ESC 1000L.

ESC 1000H**Honors Earth Science**

3.00 Credits

Same as ESC 1000 with honors content. Honors Institute permission required.

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

Corequisites: ESC 1000L.

ESC 1000L**Earth Science Lab**

1.00 Credits

The focus of this course is to familiarize the student with science laboratory techniques and procedures including collecting and recording data, performing calculations, analyzing data, and interpreting results. This is accomplished through experiments and exercises related to topics in earth science. A special fee will be charged for this course.

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

Corequisite: ESC 1000.

EST 1436C**Biomedical Electronic Systems I**

3.00 Credits

Designed to cover selected topics as outlined by the Florida Curriculum Frameworks for Biomedical Equipment Engineering Technology. Topics covered include: pneumatic systems, optical systems and treatment devices. Lab work will be assigned for all major topics. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EET 1141C, CET 2113C.

EST 1535**Automated Process Control**

3.00 Credits

Introduces modern control theory and the use of sensors, actuators and controllers. The student will be introduced to state of the art control systems used in industry and the elements that comprise a closed loop network.

EST 1540**Using Programmable Logic Controllers and Robotics**

3.00 Credits

Provides basic operational concepts common for the control of multi station industrial robotic systems. Topics include the role of programmable controllers, interface of analog and digital components in robotic systems and writing ladder diagram programs.

EST 1542**Introduction to Programmable Logic Controllers**

3.00 Credits

Provides basic operational concepts common to programmable controllers, focusing on PLC principles, programming and the fundamentals needed for simple process control.

EST 2438C**Biomedical Electronics Systems II**

3.00 Credits

Covers topics from the Florida Curriculum Frameworks for Biomedical Equipment Engineering Technology that are not covered by previous course. Topics include: electrosurgical generators and equipment, and electrical device hazards. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: EST 1436C.

EST 2439C**Biomedical Electronics Systems III**

3.00 Credits

Covers topics from the Florida Curriculum Frameworks for Biomedical Equipment

Engineering Technology that are not covered by previous courses. Topics

include diagnostic devices and equipment, testers and analyzers, electrosurgical generators and equipment, and electrical device hazards. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: EST 2438C.

EST 2440C**Biomedical Electronics Systems IV**

3.00 Credits

Covers topics from the Florida Curriculum Frameworks for Biomedical Equipment Engineering Technology that are not covered by previous courses. Continuation of Biomedical Electronics Systems III. Topics include electrosurgical generators and equipment and electrical device hazards. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisite: EST 2439C.

EST 2939**Biomedical Equipment Engineering Capstone**

3.00 Credits

The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project based experience. The student's project requirements will be designed in concert with his/her area of curriculum emphasis. Credit for this course does NOT apply to the Associate in Arts degree.

ETD 1110C**Drafting Technology**

3.00 Credits

Focuses on drafting technology, with an emphasis on instruments, processes and technical skills. Topics include orthographic, pictorial, auxiliary, sectional and computer aided design drawings.

Prerequisites: College reading skills are required.

ETD 1340C**Computer-Aided Drafting for Engineering**

3.00 Credits

This course uses the major features of computer aided design software (AutoCAD) to make graphic displays, including basic geometric figures, orthographic views of three dimensional objects, production of mechanical drawings, and pictorial drawings of various three dimensional applications. Major topics include drawing, file handling, text and text editing, dimensioning and plotting.

ETI 1110**Introduction to Quality**

3.00 Credits

A survey course addressing quality management, quality systems, quality assurance, quality control and total quality management topics. The student will become familiar with ISO 9000, Pareto charts, and other quality techniques and tools.

ETI 1181**Quality Systems & Workplace Dynamics**

2.00 Credits

Provides the basic concepts and protocols of modern quality systems found in advanced manufacturing facilities. Topics include relevant Total Quality Management (TQM) and the International Standards Organization (ISO) standards for system quality and environmental quality management such as control, statistical process control, manufacturing methodologies.

ETI 1403**Introduction to Advanced Manufacturing Technology**

1.00 Credits

Presents an overview of various advanced manufacturing industries and typical career opportunities of these industries to include circuit board manufacturing, semiconductor manufacturing, thin film and optical component production as well as others. Additionally, this course will orientate the student to the college advanced manufacturing facilities and the course of study.

ETI 1420**Manufacturing Processes and Materials**

3.00 Credits

This course is an introduction to modern manufacturing materials, processes and systems, which are the basic building blocks of manufacturing and are best taught together. The student will learn to identify and distinguish appropriate materials processing selections given general performance needs and production rates. Material physical and mechanical properties are covered, along with equipment and processing methods used in manufacturing.

ETI 1622**Concepts of Lean and Six Sigma**

3.00 Credits

This course provides a comprehensive overview of the Lean and Six Sigma methodologies including: define, measure, analyze, improve and control (DMAIC) process improvement paradigm, techniques, tools and metrics that are critical for process improvement success. This course will include demonstration and use of Lean and Six Sigma tools.

Prerequisite: ETI 1110.

ETI 1644**Production and Inventory Control**

3.00 Credits

A survey course in production planning and inventory control, including the topics of scheduling, MRP and capacity planning.

ETI 1701**Industrial Safety**

3.00 Credits

Covers practical and operational health and safety procedures and practices as defined by OSHA regulations that are applicable to advanced manufacturing facilities. Handling and disposal of hazardous materials will also be emphasized.

ETI 1843**Motors and Controls**

3.00 Credits

This course explores the theory and application of ac and dc motors. It covers how different types of motors operate and how electronic motor control systems are designed and can be used to improve efficiency in a wide range of applications.

ETI 1931**Special Topics in Modern Manufacturing**

3.00 Credits

This course is designed to allow flexibility for presenting a variety of topics related to high performance manufacturing principles and applications.

ETI 1949**Manufacturing Internship**

2.00 Credits

This course is a structured and supervised internship for students in the Manufacturing Technology program of study. On the job experience will be integrated with regular biweekly class meetings to review and compare experiences with respect to workplace skills and technical expectations.

ETI 2151C**Process Metrology**

3.00 Credits

This course covers the principles, techniques, and devices of metrology as applied to the procedures and concepts of the quality process. The uses and applications of measurement with various types of instruments and measuring machines are also covered in the laboratory.

Prerequisite: ETI 1403.

ETI 2950**Engineering Technology Capstone**

3.00 Credits

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

ETM 1010C**Mechanical Measurement and Instrumentation**

3.00 Credits

This course provides a basic foundation for mechanical measurement techniques used in manufacturing environments. The course will integrate the concepts, principles and techniques of mechanical measurement with the use of various types of instruments, including micrometers, calipers, height gauges and other types of measuring equipment.

ETM 2315**Hydraulic & Pneumatic Systems**

3.00 Credits

Introduces the students to the basic hydraulic and pneumatic systems and devices commonly found in advanced manufacturing facilities. The underlying scientific principles will be covered and their practical applications. Completion of PHY 1025 is strongly recommended. Taking ETM 2315L concurrently is strongly recommended.

ETM 2315L**Hydraulic & Pneumatic Lab**

1.00 Credit

Provides hands on experiences to reinforce the basic principles of hydraulic and pneumatic systems and the operation of pumps and flow monitoring devices for simple but fundamental systems. Completion of PHY 1025 is strongly recommended. Taking ETM 2315 concurrently is strongly recommended.

EUH 1000**Western World: Early Modern Europe**

3.00 Credits

Presents a study of cultural, economic and political developments of Western civilization from prehistoric times through the Reformation and the European Renaissance, with an emphasis on geographic references.

Prerequisites: College level reading and writing skills required.

EUH 1000H**Honors Western World: Early Modern Europe**

3.00 Credits

Same as EUH 1000 with honors content. Honors Institute permission required.

Prerequisites: College level reading and writing skills required.

EUH 1001**Western World: Modern Europe**

3.00 Credits

Presents a study of the economic, social and political development of the world from 1648 to the present, with an emphasis on geographic references.

Prerequisites: College level reading and writing skills required.

EUH 1001H**Honors Western World: Modern Europe**

3.00 Credits

Same as EUH 1001 with honors content. Honors Institute permission required.

Prerequisites: College level reading and writing skills required.

EVR 1041**Natural Resource Management with Applications in GIS**

4.00 Credits

An introduction to the appropriate use and potential applications of geographic information systems (GIS) in natural resource management with emphasis on forest management and operations planning. Students will be presented with lectures and exercises that cover a wide range of GIS and GIS related topics and issues.

EVR 1328**Natural Resource Conservation and Ecology**

3.00 Credits

An introduction to the ecology and conservation of natural resources of native lands, concentrating on Florida ecosystems. Emphasis will be given toward interactive networks and ecosystems on which species depend, techniques for insuring biological diversity and human conservation interactions. Topics include: ecosystems, diversity, threats to habitat, the value of natural resources, conservation practices and conservation and human society.

Prerequisite: College level reading and math skills required.

Prerequisites: BSC 1005C, EVS 1001.

EVR 2040**Advanced GIS with Environmental Applications**

4.00 Credits

This course provides advanced instruction using GIS software. Special emphasis will be given to environmental applications. Designed for students who have taken GEO 2150 or who have had previous experience with GIS software.

Prerequisite: GIS 2040.

EVR 2858**Environmental Law**

4.00 Credits

This course will introduce the basic legal concepts and statutory principles of environmental law with a focus on pollution control. It will also provide an opportunity for applying these concepts and principles through a service project.

EVS 1001**Introduction to Environmental Science**

3.00 Credits

Provides the student with an overview of current environmental concerns and their management. Emphasis is on the application of biological, physical and chemical methods to the understanding of and solutions to environmental problems. The student will gain insight into the natural interactions among living things and physical aspects of the environment. Prerequisites: College level reading and math skills required.

EVS 1026**Chemistry and Biology of Natural Waters**

4.00 Credits

Provides an introduction to the chemistry of water treatment systems of natural water. Emphasizes the unit operations and analysis of water treatment. Attention is also given on assessing local bodies of water with regard to water quality and appropriate assessment techniques. Prerequisite: CHM 1025.

EVS 1042**Water Resources with Applications in GIS**

4.00 Credits

This course is an introduction to water resources with applications in geographic information systems software. Prior GIS experience is not required, but familiarity with Windows is. In this course students will learn the basics of water resource science and management as well as the basics of GIS software. Topics to be studied include the basics of: GIS software; hydrologic science; and global, regional, and local water resource management issues. Special emphasis will be placed on the water resources of Florida.

EVS 1181**Conventional & Pretreatment Water Technologies**

3.00 Credits

This course covers the technologies required to produce safe drinking water as well as the pretreated water required for advanced technologies. Technologies covered include clarification, media filtration, cartridge filtration, bag filtration, membrane filtration, silt dispersants, biocides, acids, scale inhibitors, sulfite compounds, ultraviolet irradiation, and softening. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisites: EVS 1183, EVS 1190.

EVS 1183**Introduction to Water Treatment Systems**

3.00 Credits

This course serves to introduce the student to a career field in advanced water treatment and prepares students to work safely in an advanced water treatment laboratory and water plant. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisites: EVS 1190, EVS 1181.

EVS 1185**Membrane Technologies I**

3.00 Credits

This course covers the theory, process and equipment of common membrane water treatment technologies. This course covers the microfiltration, ultrafiltration, electrodialysis, and electrodeionization membrane technologies. Some system design consideration and integration into water treatment systems are provided. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1183, EVS 1190, EVS 1181.

Corequisites: EVS 1186, EVS 2187.

EVS 1186**Membrane Technologies II: Filters and Reverse Osmosis**

3.00 Credits

This course covers the theory, process and equipment of common membrane water treatment technologies. This course covers the nonfiltration and reverse osmosis membrane water treatment. Some system design consideration and integration into water treatment systems are provided. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1181, EVS 1183, EVS 1190.

Corequisites: EVS 1185, EVS 2187.

EVS 1190**Water Treatment Plant Equipment**

3.00 Credits

This course covers basic hand tools, equipment, chemical injections, safety and troubleshooting of water treatment systems. Students will also gain an understanding of piping and instrumentation diagrams. Hands on experience with pumps, valves, gauges and meters is provided. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisites: EVS 1183, EVS 1181.

EVS 1893**Comparative and Sampling Analysis Methods**

3.00 Credits

Provides an overview of sampling and analysis techniques which are commonly used in the environmental and materials testing fields. The course deals with the skills and knowledge necessary to understand sampling and analysis concepts and to conduct basic sampling procedures.

EVS 2005C**Treatment of Water & Wastewater**

4.00 Credits

Examines the chemical, physical and biological treatment of water and wastewater. Emphasizes unit operations analysis of water treatment systems, and field evaluation of their operation.

Prerequisites: CHM 1025, CHM 1025L.

EVS 2179**Water Analysis & Monitoring**

3.00 Credits

This course covers the standard laboratory procedures and on stream analysis for the measurement of silica, organic compounds, ions, particles, and microorganisms. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1185, EVS 1186, EVS 2187.

Corequisites: EVS 2180, EVS 2188.

EVS 2180**Advanced Membrane Monitoring**

3.00 Credits

This course covers the advanced troubleshooting procedures and techniques required for identifying and correcting common membrane unit problems, including probing, profiling, element replacements, element autopsies, chemical cleaning, and using mathematical calculations and/or computer software programs for trend analysis. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1185, EVS 1186, EVS 2187.

Corequisites: EVS 2188, EVS 2179.

EVS 2182**High Purity Water Technologies**

3.00 Credits

This course covers the principles and operation of post ion exchange equipment including ultraviolet irradiation units, distillation units, final filters, and storage and distribution, as well as the minimization of dead legs and periodic disinfection of high purity water piping. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 2179, EVS 2188, EVS 2180.

Corequisites: EVS 2184, EVS 2939.

EVS 2184**Ion Exchange Technology**

3.00 Credits

This course covers the characteristics of feed water contaminants and the fundamental principles of water purification using ion exchange technology. Strong acid cation, strong base anion, weak acid cation, and weak base anion resins are covered as well as single bed units, dual bed units, mixed bed exchange units, full train units and electrodeionization. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 2188, EVS 2179, EVS 2180.

Corequisites: EVS 2939, EVS 2182.

EVS 2187**Membrane Unit Monitor/Troubleshooting**

3.00 Credits

This course covers the initial monitoring and troubleshooting skills required to effectively operate and maintain a membrane water treatment system and to identify when scaling, fouling, chemical attack or other problem is occurring. Monitoring and troubleshooting of microfiltration, ultrafiltration, nonofiltration, reverse osmosis, and electrodeionization units are covered. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1183, EVS 1190, EVS 1181.

Corequisites: EVS 1185, EVS 1186.

EVS 2188**Pretreatment Troubleshooting**

3.00 Credits

This course covers the operation, monitoring and troubleshooting of membrane pretreatment equipment including multimedia filters and activated carbon beds, as well as how to prevent the common scaling, fouling, and chemical attack problems which membrane units may experience. This advanced pretreatment course builds on information previously learned. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: EVS 1185, EVS 1186, EVS 2187.

Corequisites: EVS 2180, EVS 2179.

EVS 2793**Sources and Effects of Air Pollution**

4.00 Credits

Examines the common sources of air pollution and the effect of this pollution on human and ecosystem health, with an emphasis on how pollutants are produced and transported. The engineering aspects of combustion and transportation related emissions and the basic principles of air pollution meteorology will also be examined.

Prerequisite: EVS 1001.

EVS 2891**Hydrology Quality Water Resources**

4.00 Credits

A comprehensive survey of water resources considering both quantity and quality. Emphasis is on the standard techniques of sampling and monitoring especially for ground water. The hydraulic characteristics of water are also discussed. Analytical procedures used in field investigations and modeling studies are covered. A separate laboratory time is provided for on campus and field activities.

EVS 2893C**Environmental Sampling and Analysis I**

5.00 Credits

Introduces the theory and methods of analysis of certain inorganic chemical substance and physical properties of soil. Techniques of sampling preparation for testing, and testing and analysis will be covered. Approved standards for analysis will be examined and utilized for laboratory testing. Laboratory exercises will include sample collection, testing and analysis.

EVS 2894C**Environmental Sampling and Analysis II**

5.00 Credits

Introduces the theory and methods of analysis of inorganic chemical substances of water. Techniques of sampling, preparation for testing, testing and analysis will be covered. Federal and state approved standards for analysis will be examined and utilized for laboratory testing. Laboratory exercises will include sample collection, testing and analysis.

EVS 2895C**Environmental Sampling and Analysis III**

5.00 Credits

Introduces the theory and methods of analysis of metals, organic load and biological test methods associated with water and wastewater. Techniques of sampling, preparation for testing and analysis will be covered. Quality control methods are also covered. Laboratory exercises will include sample collection, testing and analysis.

Prerequisite: EVS 2894C.

EVS 2939**Water Treatment Capstone Course**

3.00 Credits

This course is the final preparation for students to pass state certification exams if the student chooses to work at a municipal drinking water facility. Drinking water laws are covered as well as all of the reviews necessary to prepare the student for obtaining a job in the industrial or municipal sectors. Many case studies, process flows and problem solving workshops are provided. Credit for this course does NOT apply to the Associate in Arts degree.

Corequisites: EVS 2184, EVS 2182.

EVS 2942L**Environmental Technology Practicum**

3.00 Credits

Focuses on hands on experience in environmental sampling and analysis methods by assigning students to agencies or businesses for 24 hours per week. Emphasis will be to gain practical experience in protocols, methods and use of equipment in an applied setting; includes the possibility of outdoor work and mildly strenuous skills such as carrying and lifting. Prerequisite: EVS 2893C.

FAS 1012C**Aquacultural Organisms**

3.00 Credits

The field of aquaculture uses a variety of organisms to culture from fresh water fish, to marine fish, plants, shrimp, lobster, and many others. In this course, the students will learn about the variety of organisms that can be cultured and the methods learned to do so.

Prerequisites: College level reading and writing skills are required.

FAS 1401L**Aquacultural Lab Techniques**

3.00 Credits

The field of aquaculture uses a number of laboratory techniques to assist the technician in the treatment of fish, identification of fish, breeding techniques, raising of fish, feeding, and a whole host of controls on the artificial environment of the aquarium. This laboratory teaches the techniques used in the field. A special fee will be charged for this course.

Prerequisites: College level reading and writing skills are required.

FAS 1404C**Aquacultural Field Techniques**

3.00 Credits

Focuses on the practical aspects of establishing a fish farm, setting up the ponds, maintaining environmental conditions, and harvesting the fish. College level reading and writing skills are required. A special fee will be charged for this course.

Prerequisites: College level reading and writing skills are required.

FAS 2240C**Aquacultural Nutritional Tech**

3.00 Credits

Focuses on the nutritional aspects of fish. Fish digestive anatomy, nutrition requirements, metabolic rates, diets, and available food sources will be covered. College level reading and writing skills are required.

Prerequisites: College level reading and writing skills are required.

FAS 2253**Aquacultural Disease Processes**

3.00 Credits

Studies the disease processes that affect fish that includes bacterial diseases, infections, viruses, fungi, parasites, immune diseases, nutritional diseases and environmental diseases.

Prerequisites: College level reading and writing skills are required.

Corequisite: FAS 2253L.

FAS 2253L**Aquacultural Disease Process Lab**

1.00 Credit

Designed to teach laboratory techniques to identify disease causing organisms and to use some of the treatment methodologies. A special fee will be charged for this course.

Prerequisites: College level reading and writing skills are required.

Corequisite: FAS 2253.

FAS 2263C**Aquacultural Reproductive Technology**

3.00 Credits

Focuses on the principles of reproductive biology for the aquaculture industry. The primary emphasis will be on freshwater fish reproduction, however, other aquaculture organisms will be discussed.

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

FAS 2353C**Aquacultural Management Practices**

3.00 Credits

Aquaculture operations are businesses. This course teaches the basic operations of the business side, showing profit and loss statements, marketing, how to manage people, and the general principles of how to manage an aquaculture establishment. In addition, decision making tools for the manager will be presented that include the use of computers and records management. College level reading and writing skills are required.

Prerequisites: College level reading and writing skills are required.

FAS 2941L**Aquaculture Field Experience I**

3.00 Credits

Focuses on the hands on experience that can be gained from being in the field at aquaculture facilities in Hillsborough County. Students rotate through a variety of aquaculture operations to gain a broad spectrum of experiences that can only be gained from actual field work. This is the first of the four field experience courses.

Prerequisites: College level reading and writing skills required.

FAS 2942L**Aquaculture Field Experience II**

3.00 Credits

Focuses on the hands on experience that can be gained from being in the field at aquaculture facilities in Hillsborough County. Students rotate through a variety of aquaculture operations to gain a broad spectrum of experiences that can only be gained from actual field work. This is the second of the four field experience courses.

Prerequisite: FAS 2941L.

FAS 2943L**Aquaculture Field Experience III**

3.00 Credits

Focuses on the hands on experience that can be gained from being in the field at aquaculture facilities in Hillsborough County. Students rotate through a variety of aquaculture operations to gain a broad spectrum of experiences that can only be gained from actual field work. This is the third of the four field experience courses.

Prerequisite: FAS 2942L.