DES-2934  
**Advanced Clinical Procedures**  
1 Credit  
Advanced Clinical Procedures is a lecture course that is a continuation of concepts and clinical procedures introduced in previous clinical courses. This course provides discussion of case-based studies and the application of specialized care treatment procedures. Students develop critical thinking skills based on the application of theory and advanced dental hygiene procedures. Topics include dietary surveys, recall systems and applied techniques with an emphasis on patients having specialized needs and unusual case factors that may complicate routine care.  
Prerequisites: DEH-1820C, DEH-2400  
Corequisites: DEH-2300, DEH-2804C  
Credit for this course does NOT apply to the Associate in Arts degree.

DIE-2000  
**Introduction to Dietetics**  
3 Credits  
This course provides an in-depth introductory study of dietetics, the normal nutritional principles and the application of these principles, the professional opportunities for registered dieticians, and the role of the American Dietetic Association in dietetics education and practice.

DIE-2129  
**Quality Control in Food and Nutrition**  
3 Credits  
Students will be introduced to quality assessment and control in foods and nutrition. Topics will include review of laws, regulations and standards relating to the practice of dietetics.

DIE-2401  
**Nutrition Education and Interviewing**  
3 Credits  
Provides information on the nutritional habits of various cultural groups, educational methods which have an impact on food purchases and interviewing techniques.

DIE-2419  
**Nutrition Education and Counseling Practicum**  
2 Credits  
Provides the student with a practical application of nutrition education counseling. Actual interviews and customer needs records will reinforce the theories taught and the development and planning of menus.

DSC-2033  
**Weapons of Mass Destruction**  
3 Credits  
This course introduces students to various types of weapons of mass destruction. The student will be introduced to basic principles of weapons of mass destruction, recognition, identification, decontamination, and treatment protocols. The student will understand the importance of personal protective equipment and its proper uses and understand the toxicology, physical and chemical properties associated with weapons of mass destruction.

EAP-0100  
**Speech/Listening I**  
3 Credits  
An introductory level listening and speaking course in which students develop the ability to understand and participate in brief conversations on familiar topics and begin to develop their pronunciation. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

EAP-0120  
**Reading I**  
3 Credits  
Introductory course for EAP students with emphasis on comprehension of limited written materials. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

EAP-0140  
**Writing I**  
3 Credits  
An introductory level writing course in which students develop the ability to write grammatically correct sentences and learn basic organizational skills for paragraph writing. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

EAP-0160  
**Grammar I**  
3 Credits  
Introductory grammar course for EAP students with emphasis on basic verb tenses and simple sentence patterns. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.

EAP-0200  
**Speech/Listening II**  
3 Credits  
A high-beginning/low-intermediate level listening and speaking course in which students continue to develop their ability to understand and participate in conversations and further develop their pronunciation skills. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.  
Prerequisite: EAP-0100

EAP-0220  
**Reading II**  
3 Credits  
A high introductory level reading course for EAP students with emphasis on developing reading skills and vocabulary. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.  
Prerequisite: EAP-0120
EAP-0240
Writing II
3 Credits
A high beginning to low intermediate level writing course in which students continue to develop writing skills in the context of guided discourse with an emphasis on logical organization and mechanics. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.
Prerequisite: EAP-0140

EAP-0260
Grammar II
3 Credits
A high introductory grammar course for EAP students with emphasis on basic grammatical structures and statement/question patterns. Students must obtain a grade of C or better in order to advance to the next level of EAP coursework.
Prerequisite: EAP-0160

EAP-0300
Speech/Listening III
3 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 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 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 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 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 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 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 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 Credits
Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note-taking.
Corequisite: EAP-1500L
Prerequisite: EAP-0400

EAP-1500L
Speech/Listening Lab V
1 Credit
Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note-taking.
Corequisite: EAP-1500
Prerequisite: EAP-0400

EAP-1520
Reading V
3 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 Credit
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 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 and EAP-0460
Corequisite: EAP-1540L

EAP-1540L
Writing Lab V
1 Credit
Advanced grammar lab for EAP students designed to comprehensively review and expand the grammatical structures necessary to write academic English.
Prerequisite: EAP-1540 and EAP-1540L
Corequisite: EAP-1640

EAP-1600
Speech/Listening VI
3 Credits
Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse.
Prerequisite: EAP-1500 and EAP-1500L
Corequisite: EAP-1600L

EAP-1600L
Speech/Listening Lab VI
1 Credit
Students further develop communication skills necessary for full participation in mainstream college classrooms, including comprehension of extensive discourse.
Prerequisite: EAP-1500 and EAP-1500L
Corequisite: EAP-1600

EAP-1620
Reading VI
3 Credits
An advanced level reading skills course in which students will further develop the skills necessary for the efficient processing of general academic texts.
Prerequisite: EAP-1520 and EAP-1520L
Corequisite: EAP-1620L

EAP-1620L
Reading Lab VI
1 Credit
An advanced College level reading skills lab designed to further increase the active and passive vocabulary of the student.
Prerequisite: EAP-1520 and EAP-1520L
Corequisite: EAP-1620

EAP-1640
Writing VI
3 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.
Prerequisite: EAP-1540 and EAP-1540L
Corequisite: EAP-1640L

EAP-1640L
Writing Lab VI
1 Credit
Advanced grammar lab for EAP students designed to comprehensively review and expand the grammatical structures necessary to write academic English.
Prerequisite: EAP-1540 and EAP-1540L
Corequisite: EAP-1640

ECO-1000
Introduction to Economics
3 Credits
Survey of economic principles including the analysis of production, costs, national income accounting, money and banking, supply and demand and market structures.
Prerequisites: College level reading and writing skills are required.
Credit for this course does NOT apply to the Associate in Arts degree.

ECO-2003
Principles of Macroeconomics
3 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 Credits
Offers a theoretical analysis of price determination of the product and factor markets.
Prerequisites: College level math skills are required.

EDF-1005
Introduction to Education
3 Credits
Students will develop an understanding of the methodology, structure and operation of educational systems and will be exposed to many of the issues facing American Education today. The course includes 37 hours of instruction and 15 hours of observation.
Prerequisites: College level reading and writing skills are required.

EDG-2701
Teaching Diverse Populations
3 Credits
A broad spectrum of the different ethnic groups in America and how their contributions to the American society will be presented. How multicultural content fits into a variety of subjects will also be analyzed. A 15 hour observation component in a multicultural school setting or community agency is required of each student.
Prerequisites: College level reading and writing skills are required.

EDP-2200
Educational Psychology
3 Credits
Focuses on the teaching-learning process, including the conditions and determinants necessary for efficiency and the application of related psychological principles.
Prerequisites: PSY-2012. College level reading and writing skills are required.
**EEC-1300  Planning Early Childhood Program**  
3 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 Credits
Covers the theory of specific teaching skills in languages, mathematics, social studies and problem solving.

**EEC-1311  Crafts in Early Childhood**  
3 Credits
Focuses on using crafts to promote physical and mental development, with an emphasis on clay, paint, chalk and crayons.

**EEC-1401  The Family & Early Childhood Education**  
3 Credits
Addresses professional responsibilities in working with parents, with an emphasis on sharing information, joint problem solving, home visits and parents meetings.

**EEC-1521  Operation of the Early Childhood Management**  
3 Credits
Covers the management and delivery of educational services, with an emphasis on planning, equipment, space, security, and educational goals.

**EEC-1721  Physical Development/Early Childhood Setting**  
3 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 Credits
Presents the opportunity to practice skills and translate theoretical knowledge into developmentally appropriate early childhood education experiences (240 clock hours).
Prerequisite: EEC-1521 or permission of instructor  
Corequisite: EEC-1260

**EEC-1943  Child Care Practicum II**  
3 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).
Prerequisite: EEC-1941

**EEC-2270  Meeting Special Needs of Children in Groups**  
3 Credits
Focuses on the special language and cultural needs of preschool 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 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 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 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.
Prerequisite: EET-1036C and MTB-1327

**EET-1083C  Electronics Orientation**  
3 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 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 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 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 Credits  
A coordinated work-study course involving classwork and field experience. Objectives determined by the student and teacher-coordinator will be used to evaluate the student.

**EET-2155C**  
**Linear Integrated Circuits**  
3 Credits  
Covers analog integrated circuits, operational amplifiers, power supply regulator feedback, wave-form 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 Credits  
Covers basic concepts and theory concerning electronic instruments used in testing situations, with an emphasis on practical applications of electronic measuring devices. A special fee will be charged for this course.  
Prerequisite: CET-2113C EET-1142C or permission of instructor

**EET-2326C**  
**Communications Systems I**  
3 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-2355C**  
**Data Communications**  
3 Credits  
Covers the basics of analog and digital telephone communication systems and the operation of modems. Also covered are the LAN and WAN layers with emphasis on the physical layer. Topics include equipment, devices, and interconnecting hardware and software requirements. Laboratory exercises are included. A special fee will be charged for this course.  
Prerequisite: EET-1155C and EET-2326C or permission of instructor

**EHD-1941**  
**Interpreting Practicum**  
2 Credits  
Provides the intermediate level interpreting student with an opportunity to observe the process of interpreting in various professional work situations and to gain knowledge of community agencies and resources which serve the deaf and hard-of-hearing population. Students will schedule regular observation hours, and according to their level of interpreting skill, assist agency staff in normal duties. A special fee will be charged for this course.  
Prerequisite: SPA-2614. College level reading and writing skills are required. Credit for this course does NOT apply to the Associate in Arts degree.

**EHD-2060**  
**Introduction to Interpreting Ethics**  
3 Credits  
Provides an introduction to the role of an interpreter; highlighting the application of the National Registry of Interpreters for the Deaf Code of Ethics in daily interaction with Deaf and Hearing consumers. Identifies alternative ethical behavior utilized in specific settings, such as Educational Interpreting.  
Prerequisite: SPA-1631. College level reading and writing skills are required.

**EHD-2402**  
**Educational Interpreting**  
2 Credits  
Focuses on sign systems and processes used in secondary and post-secondary settings, with an emphasis on the role and ethics of the institutional interpreter, related vocabulary, use of transliteration and interpreting in various situations.  
Prerequisites: College level reading and writing skills are required. Corequisite: EHD-2402L.

**EHD-2402L**  
**Educational Interpreting Laboratory**  
1 Credit  
Accompanies EHD 2402. Live models, video tapes and interaction with the deaf community will be used to improve expressive and receptive interpreting skills in specific settings.  
Prerequisites: College level reading and writing skills are required. Corequisite: EHD-2402

**EHD-2407L**  
**American Sign Language to Spoken English Interpreting**  
3 Credits  
Focuses on advanced skills in interpreting from a signed message to a voiced translation using videotapes and live voice, with an emphasis on more complex constructions in signed stories and dialogues.  
Prerequisites: College level reading and writing skills are required.
EHD-2410
Interactive Interpreting I

3 Credits
Provides an introduction to the basic theories, guidelines, principles, and practices of interpreting, including the role of the interpreter, professional behavior and the ethics of interpreting, and environmental considerations of interpreting situation.
Prerequisite: SPA-2614. College level reading and writing skills are required.
Corequisite: EHD-2410L
Credit for this course does NOT apply to the Associate in Arts degree.

EHD-2410L
Interactive Interpreting Laboratory I

2 Credits
Focuses on introductory cognitive, linguistic and motor skill development. Utilization of audio tape, video tape and CD-ROM materials will reinforce skill development. Live role play and modeling techniques permit students to experience a variety of interactive interpreting settings.
Prerequisites: SPA-2614. College level reading and writing skills are required.
Corequisite: EHD-2410
Credit for this course does NOT apply to the Associate in Arts degree.

EHD-2411L
Interactive Interpreting Laboratory II

3 Credits
A continuation of Interactive Interpreting I, this course focuses on advanced cognitive, linguistic, and motor skill development. Utilization of audio tape, video tape and CD-ROM materials will reinforce skill development. Live role play and modeling techniques permit students to experience a variety of interactive interpreting settings.
Prerequisites: EHD-2410L. College level reading and writing skills are required.
Credit for this course does NOT apply to the Associate in Arts degree

EHD-2412L
Interactive Transliterating Laboratory

2 Credits
Focuses on manually coded sign systems used primarily in educational settings with a focus on the unique role and ethics of an educational interpreter/transliterating techniques.
Prerequisites: SPA-2614. College level reading and writing skills are required.
Credit for this course does NOT apply to the Associate in Arts degree

EHD-2930
Interpreting Topics

2 Credits
Designed to be taken as an advanced level interpreting course during the second year of training. Special topics including business practices, marketing/entrepreneurship and interpreting in specialized situations (education, legal, medical, and mental health) will be taught. This course may be repeated for a total of six credits.
Prerequisite: EHD-2410
Credit for this course does NOT apply to the Associate in Arts degree.

EHD-2942
Interpreting Internship

3 Credits
Provides an opportunity to participate in the interpreting process in work situations and to assist with agency duties. Requires a minimum of 24 hours per week.
A special fee will be charged for this course.
Prerequisite: EHD-1941. College level reading and writing skills are required.

EME-2040
Introduction to Educational Technology

3 Credits
A survey course designed to introduce the use of microcomputer technology and telecommunications in augmenting the teaching and learning process. Upon completion of the course, students will be able to telecommunicate, critically evaluate educational software, conceptualize the uses of computers in the classroom in terms of computer-directed instruction, computer-enhanced instruction, and computer-managed instruction, learn the purpose of and acquire basic skills for using commercial courseware, generic applications software, disk operating systems and hardware.
Prerequisite: EDF-1005. College level reading and writing skills are required.

EMS-1119
Emergency Medical Technician

7 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.
Prerequisite: EMS-1431 and CPR certification
Corequisite: EMS-1119L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-1119L
Emergency Medical Technician Practicum

2 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.
A special fee will be charged for this course.
Prerequisite: EMS-1431 and CPR certification
Corequisite: EMS-1119
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-1431
Emergency Medical Technician Clinical

1 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 bloodborne pathogens is possible in patient care situations.
A special fee will be charged for this course.
Prerequisite: EMS-1119L and CPR certification
Corequisite: EMS-1119
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2311
Introduction to EMS Management

3 Credits
Cover basic supervision, management and operations of an EMS service, with an emphasis on regulations, budget, safety, inventory control, billing, and employee relations.
Prerequisite recommendation: EMT or paramedic certification
Credit for this course does NOT apply to the Associate in Arts degree
EMS-2331
Emergency Care in Flight

3 Credits
A study of the physiology of flight, effects of flight on persons with medical problems and emergency medical care during air transportation of patients.
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2375
Paramedic Proficiency Examination

1 Credit
Provides a review of the didactic and practical skills of the Paramedic certificate program followed by written and practical examinations.
Prerequisite: Completion of all required Paramedic College Credit Certification courses with a grade of C or better.
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2381C
Emergency Medical Technician Refresher

2 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.
Prerequisite: Florida EMT-B certification
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2522
Emergency Pharmacology

3 Credits
Provides instruction concerning intravenous fluids, electrolytes and emergency intravenous therapy. Includes pharmacology of drugs used in management of persons suffering both acute and chronic medical, behavioral and toxicological emergencies.
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2525
Electrocardiography

3 Credits
Provides instruction on the interpretation of the electrocardiograph, the basic components of the cardiac cycle and their relationship to the electrocardiograph. Emphasis is on the basic skills in dysrhythmia interpretation and advanced skills such as the 12-lead interpretation, infarct location determination, axis deviation and conduction defects.
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2551C
Advanced Cardiac Life Support

2 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.
Prerequisite: Current CPR certification required on the first class day
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2611
Preparatory

3 Credits
Provides knowledge and skills contained in Module 1, EMS systems/roles and responsibilities, well-being, injury and illness prevention, medical and legal issues, ethical issues, general principles of pathophysiology, pharmacology, venous access and medication administration, therapeutic communications and life span development in compliance with the U.S. D.O.T. curriculum (1998).
Corequisite: EMS-2611L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2611L
Preparatory Practicum

1 Credit
Provides skill development related to the theory of Module 1 of the U.S. D.O.T. paramedic curriculum (1998). Includes strenuous skills such as lifting and carrying techniques in actual patient care situations. Laboratory fees assessment is made for professional liability insurance.
A special fee will be charged for this course.
Corequisite: EMS-2611
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2612
Airway Management and Ventilations

1 Credit
Provides theory and skills of Module 2 of the U.S. D.O.T. Curriculum (1998). Includes a review of the anatomy and physiology of the respiratory system and pathophysiology of the airway obstruction. Airway management includes assessment, manual maneuvers, adjunctive equipment, and procedures. Other topics include translaryngeal cannula ventilation, cricothyrotomy, extubation, and considerations for special considerations for special situations.
Corequisite: EMS-2612L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2612L
Airway Management & Ventilation Practicum

1 Credit
Corequisite: EMS-2612
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2613
Patient Assessment

1 Credit
Provides the theory and skills of Module 3 of the D.O.T. Curriculum (1998). This module teaches a comprehensive approach to history taking and techniques of the physical exam with a review of specific anatomy and physiology. In addition, it provides a conceptual approach and process to conducting a patient assessment, the process of clinical decision-making, various components of the communications system and various uses of documentation.
Corequisite: EMS-2613L
Credit for this course does NOT apply to the Associate in Arts degree.
EMS-2613L
Patient Assessment Practicum
1 Credit
Provides skill development related to the theory of Module 3 of the U.S. D.O.T. paramedic curriculum (1998). Includes techniques and skills for history taking, the physical exam, patient assessment, communications, and documentation.
Corequisite: EMS-2613
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2614
Trauma Emergencies
2 Credits
Provide the theory and skills of Module 4 of the U.S. D.O.T. curriculum (1998), to include trauma systems & mechanism of injury, hemorrhage and shock, burns, head and facial trauma, spinal trauma, thoracic trauma, abdominal trauma, and musculoskeletal trauma.
Corequisite: EMS-2614L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2614L
Trauma Practicum
1 Credit
Provide skills of Module 4 of the U.S. D.O.T. curriculum (1998), to include trauma systems & mechanism of injury, hemorrhage and shock, burns, head and facial trauma, spinal trauma, thoracic trauma, abdominal trauma, and musculoskeletal trauma.
A special fee will be charged that will cover the cost of Trauma Life Support certification.
Credit for this course does NOT apply to the Associate in Arts degree.
Corequisite: EMS-2614

EMS-2616
Patients with Special Needs
3 Credits
Provides the theory and skills of Module 6 of the D.O.T. curriculum (1998), neonatology, pediatrics, geriatrics, abuse & assault, patients with special challenges and acute interventions for the chronic care patient. This course includes expanded curriculum for pediatric advanced life support emergencies.
Corequisite: EMS-2616L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2616L
Patients With Special Considerations Practicum
1 Credit
A special fee will be charged for this course.
Corequisite: EMS-2616
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2617C
Assessment-Based Management and Proficiency
2 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-2618
Ambulance and Rescue Operations
1 Credit
Provides the theory and skills of Module 8 of the U.S. D.O.T. paramedic curriculum, for medical incident command, rescue operations and awareness, basic water rescue, highway/vehicle rescue operations, hazardous materials awareness and operations, and crime scene awareness.
Corequisite: EMS-2618L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2618L
Operations and Rescue Practicum
1 Credit
A special fee will charged for this course.
Corequisite: EMS-2618
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2621
Paramedic Phase I
7 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.
Corequisite: EMS-2621L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2621L
Paramedic Phase I Practicum
4 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 Credits
Provides knowledge and skills contained in the most current department of transportation curriculum. Specific modules include module 4 - trauma, module 5 - medical emergencies.
Prerequisites: EMS-2621 and EMS-2621L
Corequisite: EMS-2622L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2622L
Paramedic Phase II Practicum
4 Credits
Provides knowledge and skills contained in the most current department of transportation curriculum. Specific modules include module 4 - trauma, module 5 - medical emergencies.
Prerequisite: EMS-2621 and EMS-2621L
Corequisite: EMS-2622
Credit for this course does NOT apply to the Associate in Arts degree.
EMS-223
**Paramedic Phase III**
6 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).
Prerequisite: EMS-2622 and EMS-2622L
Corequisite: EMS-2623L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-223L
**Paramedic Phase III Practicum**
2 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).
Prerequisite: EMS-2622 and EMS-2622L
Corequisite: EMS-2623
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-225
**Cardiac Emergencies I**
3 Credits
Part I of a two part sequence based on the theory and skills of the U.S. D.O.T. (1998) paramedic curriculum, Module 5, section B, cardiology. The course focuses on cardiac electrophysiology, EKG interpretation, and also includes 12 lead interpretation, infarct determination, axis deviation and includes clinical case presentations.
Corequisite: EMS-2625L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-225L
**Cardiac Emergencies Practicum I**
1 Credit
Part I of a two part sequence based on the theory and skills of the U.S. D.O.T. (1998) paramedic curriculum. Module 5 Section 5. The course focuses on cardiac electrophysiology, EKG interpretation, and also includes fundamentals of 12 lead interpretation, infarct determination, and axis deviation.
Corequisite: EMS-2625
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-226
**Cardiac Emergencies II**
3 Credits
Part two of a two-part sequence based on theory and skills of the U.S. D.O.T. 1998 paramedic curriculum, Module 5, Section B, cardiovascular emergencies and EKG interpretation. This course focuses on cardiac anatomy and physiology, assessment and management of cardiac emergencies. Additional content includes external cardiac pacemakers, automatic defibrillators, thrombolytic agents and application of advanced EKG interpretation.
Prerequisite: EMS-2625
Corequisite: EMS-2626L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-226L
**Cardiac Emergencies II Practicum**
1 Credit
Part 2 of a two-part sequence based on the theory and skills of U.S. D.O.T. 1986 paramedic curriculum. Module 5 Section 5. This course focuses on 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 compressions, and advanced airway management. Involves physically strenuous activity.
A special fee will be charged for this course.
Corequisite: EMS-2626
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-227
**Medical Emergencies**
3 Credits
Corequisite: EMS-2627L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-227L
**Medical Emergencies Practicum**
1 Credit
Provides skills development related to the theory of Module 5, Sections 1, 3-12 of the U.S. D.O.T. curriculum (1998). Includes strenuous skills such as lifting and carrying techniques in actual patient care situations. Laboratory fee assessment is made for professional liability insurance.
A special fee will be charged for this course.
Corequisite: EMS-2627
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-228
**OB/GYN Emergencies**
1 Credit
Provides theory and skills of the D.O.T. curriculum (1985), obstetric, gynecological, and neonatal emergencies, Module 5 section 13 and 14.
Corequisite: EMS-2628L
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-228L
**OB/GYN Emergencies Practicum**
1 Credit
Provides skill development related to the theory of Module 5 Section 13, 14, obstetrics, gynecological, and neonatal emergencies.
A special lab fee will be charged for this course.
Corequisite: EMS-2628
Credit for this course does NOT apply to the Associate in Arts degree.
EMS-2666
Paramedic Clinical I
3 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 Clinical II
3 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.
Prerequisite: EMS-2666
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2668
Paramedic Clinical III
3 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.
Prerequisite: EMS-2667
Credit for this course does NOT apply to the Associate in Arts degree.

EMS-2761
Introduction to EMS Instruction
3 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 Credit
Focuses on the discussion of current topics in the EMS field. Content may vary by section. This course may be taken five times for credit.
Credit for this course does NOT apply to the Associate in Arts degree.

ENC-0010C
College Preparatory Writing I
4 Credits
Designed to provide additional training in written communication skills. The CLAST skills of basic sentence structure, mechanics, and paragraph development are also introduced. Emphasis is also placed on how to express ideas in clear and logical standard English. This class does not satisfy General Education requirements and generates compensatory credit only.

ENC-0020
College Preparatory Writing II
4 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 class does not satisfy General Education requirements and generates compensatory credit only.
Prerequisite: ENC-0010C

ENC-0020C
College Prep Writing II
4 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.
Prerequisite: ENC-0010C

ENC-0090
CLAST Grammar Review
1 Credit
CLAST review emphasizing grammar. Previous number for this course was ENC 2090
Prerequisites: ENC-0020C, REA-0002C or ENC-1101. College level reading and writing skills are required.

ENC-0091
CLAST Essay Review
1 Credit
CLAST review emphasizing essay.
Prerequisites: ENC-0020C, REA-0002C or ENC-1101. College level reading and writing skills are required.

ENC-1101
Freshman English I
3 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.
Prerequisites: A satisfactory score on the HCC placement test or ENC 0020C with a minimum grade of C. College level reading and writing skills are required.

ENC-1101H
Honors Freshman English I
3 Credits
Same as ENC 1101 with honors content. Honors Institute permission required.
Prerequisites: College level reading and writing skills are required.
ENC-1102
Freshman English II
3 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. College level reading and writing skills are required.

ENC-1102H
Honors Freshman English II
3 Credits
Same as ENC 1102 with honors content. Honors Institute permission required.
Prerequisite: ENC 1101 with a minimum grade of C.

ENC-1151
Technical English I
3 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.
Prerequisites: ENC 0020C with a minimum grade of C or better, or satisfactory score on the HCC placement test. College level reading and writing skills are required.
Credit for this course does NOT apply to the Associate in Arts degree.

ENC-2210
Technical Writing
3 Credits
Focuses on writing and designing documents in technical and professional discourse communities. Students produce a number of technical genres - 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 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 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 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 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 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 Credits
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 Credits
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.
Prerequisite: EPI 0001

EPI-0003
Technology
3 Credits
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.
Prerequisite: EPI 0002

EPI-0004
The Teaching and Learning Process
3 Credits
This course prepares the student to research professional literature to seek best practices in teaching and to hone the craft of effective instruction.
Prerequisite: EPI 0003

EPI-0010
The Foundations of Research-Based Practices in Reading
3 Credits
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 reading research as a mechanism to inform instructional practice.
Prerequisite: EPI 0004
EPI-0020
Professional Foundations
3 Credits
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.
Prerequisite: EPI-0010

EPI-0030
Diversity
2 Credits
This course provides the student with an understanding of the variety of backgrounds and cultures that may be found in a typical classroom.
Corequisite: EPI-0020

EPI-0940
Field Experience – Module 3
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.
Corequisite: EPI-0020

EPI-0945
Field Experience – Module 4
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.
Corequisite: EPI-0030

ESC-1000
Earth Science
3 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.
Prerequisite: College level reading, writing and math skills are required.
Corequisite: ESC-1000L

ESC-1000H
Honors Earth Science
3 Credits
Same as ESC 1000 with honors content. Honors Institute permission required.
Prerequisite: College level reading and writing skills are required.
Corequisite: ESC-1000L

ESC-1000L
Earth Science Laboratory
1 Credit
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.
Prerequisite: College level reading, writing and math skills are required.
Corequisite: ESC-1000

EST-1436C
Biomedical Electronic Systems I
3 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.
Prerequisites: EST-1141C and CET-2113C
Credit for this course does NOT apply to the Associate in Arts degree.

EST-1603C
Introduction to Robotics
3 Credits
Covers robotic terminology, basic features of the manipulator, different types of mechanical drives, AC/DC motor controls and stepper motor theory and operation as related to robotics. Also covered are the operational aides used in teaching the robot to work independently and in a workstation. Laboratory exercises are included.
Prerequisites: EET-1141, CET-1122C and CET-2113C

EST-1607C
Advanced Robotics
3 Credits
Covers servo mechanism control, gears and linkages, interfacing to computers, end effectors, sensors, applications, growth and cost, cost justification and problems with worker displacement.
Prerequisite: EST-1603C

EST-2438C
Biomedical Electronics Systems II
3 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.
Prerequisite: EST-1436C
Credit for this course does NOT apply to the Associate in Arts degree.

EST-2439C
Biomedical Electronics Systems III
3 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.
Prerequisite: EST-2438C
Credit for this course does NOT apply to the Associate in Arts degree.

EST-2440C
Biomedical Electronics Systems IV
3 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.
Prerequisite: EST-2439C
Credit for this course does NOT apply to the Associate in Arts degree.

EST-2939
Biomedical Equipment Engineering Capstone
3 Credits
The capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to the degree core competencies and outcomes. The course is designed as a project based experience. The student's project requirements will be designed in concert with his/her area of curriculum emphasis.
Credit for this course does NOT apply to the Associate in Arts degree.
ETD-1030C  
Drafting Technology  
3 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 level reading skills are required.

ETI-1100  
Statistical Quality Control  
3 Credits  
A comprehensive study of the practical application of statistical methods to monitor and continuously improve individual manufacturing processes and equipment performance.

ETI-1181  
Quality Systems and Workplace Dynamics  
2 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 Credit  
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-1411C  
Advanced Manufacturing Processes  
3 Credits  
Explores a variety of advanced manufacturing processes including thin film deposition, chemical vapor deposition, photolithography, diode processing, and metal depositions.  
Completion of ETI-1840 is strongly recommended.

ETI-1701  
Process Safety and HazMat  
2 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-1810C  
Electronics & Electricity Technology I  
3 Credits  
Focuses on electronics technology, with an emphasis on AC and DC circuits, and circuits using magnetism, the structure of matter, functions of transformers and inductors, Ohm's law and Watt's law.  
Laboratory assignments are included.  
Prerequisites: College level reading and math skills are required.

ETI-1815  
Introduction to Electronics for Advanced Manufacturing Technology  
3 Credits  
Provides students with the basic concepts of AC and DC circuits and the essentials of electronic circuits and discrete logic concepts needed to deal with industrial process sensors, control elements, and motor interfaces as typically found in the advanced manufacturing systems.  
Completion of PHY-1025 is strongly recommended.

ETI-1840  
Vacuum Science  
3 Credits  
This course covers the fundamental concepts of vacuum science especially gas behavior necessary to understand and operate vacuum pumps, gages and vacuum related simple devices that are commonly found in manufacturing environments. Completion of PHY-1025 is strongly recommended. Taking ETI-1840L concurrently is strongly recommended.

ETI-1840L  
Vacuum Science Laboratory  
1 Credit  
Provides hands-on experience with vacuum equipment and systems to reinforce the fundamental concepts of vacuum environments. Completion of PHY-1025 is strongly recommended. Completion of or taking ETI-1840 concurrently is strongly recommended.

ETI-1844  
Vacuum Technology and Systems  
3 Credits  
Provides an introduction to complex vacuum systems, how gases behave therein, and how the systems are monitored. Additionally, this course explores some advanced manufacturing applications for vacuum systems including chemical vapor deposition, plasma etching, etc.  
Completion of ETI-1840 and ETI-1840L are strongly recommended.  
Taking ETI-1844L concurrently is strongly recommended.

ETI-1844L  
Vacuum Technology Lab  
1 Credit  
Provides hands-on exercises to reinforce basic principles of vacuum technology including the operation of pumps and gauges for simple but fundamental equipment and configurations. Completion of PHY-1025 is strongly recommended. Taking ETI-1844 concurrently is strongly recommended.

ETI-1949  
Manufacturing Internship  
2 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  
Advanced Manufacturing Technology  
3 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

ETM-2315  
Hydraulic and Pneumatic Systems  
3 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 and Pneumatic Laboratory  
1 Credit  
Provides hands-on experiences to reinforce the basic principles of hydraulics 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: Origins to Early Modern Europe  
3 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.  
Prerequisite: College level reading and writing skills are required.

EUH-1000H  
Honors The Western World: Origins to Early Modern Europe  
3 Credits  
Same as EUH 1000 with honors content. Honors Institute permission required.  
Prerequisite: College level reading and writing skills are required.

EUH-1001  
The Western World: Modern Europe  
3 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.  
Prerequisite: College level reading and writing skills are required.

EUH-1001H  
Honors The Western World: Modern Europe  
3 Credits  
Same as EUH 1001 with honors content. Honors Institute permission required.  
Prerequisite: College level reading and writing skills are required.

EVR-2040  
Advanced GIS with Environmental Applications  
4 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: GEO-2150

EVS-1001  
Introduction to Environmental Science  
3 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 solving environmental problems. The student will gain insight into the natural interactions among living things and physical aspects of the environment.  
Prerequisite: College level reading and math skills are required.

EVS-1026  
Chemistry & Biology of Natural Waters  
4 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 and MET-2010C

EVS-1042  
Water Resource with Applications in GIS  
4 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-1161  
Conventional & Pretreatment Water Technologies  
3 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.  
Corequisites: EVS-1163 and EVS-1165  
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-1163  
Intro to Water Treatment Systems  
3 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.  
Corequisites: EVS-1161 and EVS-1175  
Credit for this course does NOT apply to the Associate in Arts degree.
EVS-1165
Membrane Technologies
3 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.
Prerequisite: EVS-1163, EVS-1175 and EVS-1161
Corequisites: EVS-1166 and EVS-2167
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-1166
Membrane Tech II: Nanofilters/Reverse Osmosis
3 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 considerations and integration into water treatment systems are provided.
Prerequisites: EVS-1163, EVS-1175 and EVS-1161
Corequisites: EVS-1166 and EVS-2167
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-1175
Water Treatment Plant Equipment
3 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.
Corequisites: EVS-1163 and EVS-2170
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-1893
Comparative Sampling & Analysis Methods
3 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 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 and CHM-1025L

EVS-2160
Advanced Membrane Monitoring
3 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.
Prerequisites: EVS-1165, EVS-1166 and EVS-2167
Corequisites: EVS-2170 and EVS-2171
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2162
High Purity Water Technologies
3 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.
Prerequisites: EVS-2171, EVS-2170 and EVS-2160
Corequisites: EVS-2164 EVS-2939
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2164
Ion Exchange Technology
3 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.
Prerequisites: EVS-2170, EVS-2171 and EVS-2160
Corequisites: EVS-2162 and EVS-2939
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2167
Membrane Unit Monitor & Troubleshooting
3 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, nonfiltration, reverse osmosis, and electrodeionization units are covered.
Prerequisites: EVS-1163, EVS-1175 and EVS-1161
Corequisites: EVS-1165 and EVS-1166
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2170
Pretreatment Troubleshooting
3 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.
Prerequisites: EVS-1165, EVS-1166 and EVS-2167
Corequisites: EVS-2160 and EVS-2171
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2171
Water Analysis & Monitoring
3 Credits
This course covers the standard laboratory procedures and on-stream analysis for the measurement of silica, organic compounds, ions, particles, and microorganisms.
Prerequisites: EVS-1165, EVS-1166 and EVS-2167
Corequisites: EVS-2160 and EVS-2170
Credit for this course does NOT apply to the Associate in Arts degree.
EVS-2793
Sources & Effects of Air Pollution
4 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 of Water Resources
4 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.
Prerequisites: CHM-1025, CHM-1025L and MAC-1102

EVS-2893C
Environmental Sampling & Analysis I
5 Credits
Introduces the theory and methods of analysis of certain inorganic chemical substances and physical properties of water. 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 & Analysis II
5 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 & Analysis III
5 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 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.
Prerequisites: EVS-2171, EVS-2170 and EVS-2160
Corequisites: EVS-2164 and EVS-2162
Credit for this course does NOT apply to the Associate in Arts degree.

EVS-2942L
Environmental Technology Practicum
3 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 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 Laboratory Techniques
3 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 Credits
Focuses on the practical aspects of establishing a fish farm, setting up the ponds, maintaining environmental conditions, and harvesting the fish.
A special fee will be charged for this course.
Prerequisites: College level reading and writing skills are required.

FAS-2240C
Aquacultural Nutritional Techniques
3 Credits
Focuses on the nutritional aspects of fish. Fish digestive anatomy, nutrition requirements, metabolic rates, diets, and available food sources will be covered.
Prerequisites: College level reading and writing skills are required.

FAS-2253
Aquacultural Disease Processes
3 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 Processes Lab
1 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 Techniques
3 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 and writing skills are required.