

# COLLEGE CATALOG | 2016



DELAWARE  
TECHNICAL  COMMUNITY  
COLLEGE

SPRING 2016

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## An Equal Opportunity Institution

### STATEMENT OF NONDISCRIMINATION POLICY

It is the policy of the College that no person shall, on the basis of race, color, creed, religion, sex, national origin, age, disability, genetic information, marital status, veteran status, sexual orientation, gender orientation, gender identity, or pregnancy be subjected to any discrimination prohibited by the Civil Rights Act of 1964, as amended; the Age Discrimination in Employment Act, as amended; Americans with Disabilities Act, as amended; Section 504 of the Rehabilitation Act of 1973; Title IX of the Educational Amendments of 1972; the Genetic Information Nondiscrimination Act of 2008 and other applicable laws, regulations and Executive Orders. This policy applies to recruitment, employment and subsequent placement, training, promotion, compensation, continuation, probation, discharge and other terms and conditions of employment over which the College has jurisdiction as well as to all educational programs and activities.

The College has designated a Civil Rights Coordinator, who serves as the College's Title IX Coordinator and the College's ADA/Section 504 Coordinator, to carry out its commitment to equal opportunity and nondiscrimination. Inquiries or complaints by students or employees regarding the College's nondiscrimination policies may be addressed to:

#### **Dr. Valencia 'Lynn' Beaty**

Assistant Vice President for Civil Rights &  
Title IX Coordinator  
Office of the Assistant Vice President for Civil Rights  
400 Stanton-Christiana Road  
Newark, DE 19713  
(302) 857-1903  
[civilrights@dtcc.edu](mailto:civilrights@dtcc.edu)

### POLICY STATEMENT ON SEXUAL HARASSMENT

All students have a right to attend the College in an environment that is free of discrimination and sexual harassment. Therefore, it is the policy of the College that no student may sexually harass another member of the College community while present on any property owned or controlled by the College or while participating in any College-related activity or event.

Unwelcome sexual advances, requests for sexual favors, and other verbal, written, or physical conduct of

a sexual nature constitute sexual harassment when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's education; or
2. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions affecting that individual; or
3. If non-physical, such conduct is so severe, pervasive, and objectively offensive that the victim is effectively denied equal access to the College's resources and opportunities.

Sexual harassment may involve individuals of the same or different gender. Sexual harassment is most frequently associated with those situations in which a power differential exists between persons involved; however, it also may occur between individuals of the same College status, i.e., student-student.

The College is also committed to the principles of free expression and academic freedom. Delaware Tech encourages academic exploration and recognizes that our campuses contribute to the marketplace of ideas. Consistent with the College's academic mission, this Student Sexual Harassment Policy is not intended to restrict student speech protected by the First Amendment to the Constitution in the academic setting. However, non-physical expressive activity that is so severe, pervasive, and objectively offensive that the victim is effectively denied equal access to the College's resources and opportunities is not legally protected and does not promote free inquiry on our campuses.

Examples of severe and pervasive non-physical conduct, which may constitute sexual harassment when such expression is so objectively offensive that it denies the victim equal access to the College's resources and opportunities include, but are not limited to:

1. Unwelcome sexual advances, requests for sexual favors, or other non-physical conduct of a sexual nature;
2. Sexually explicit statements, comments, questions, pictures, objects, jokes, or anecdotes;
3. Unwelcome use of the electronic mail or telephone communication system to communicate prohibited conduct or activities; or
4. Graphic comments about a person's clothing or body.

However, physical conduct, such as unwelcome touching, patting, hugging, and sexual assault, is not protected under free speech principles and need not be repeated in order to constitute sexual harassment. Thus, physical conduct of a sexual nature results in sexual harassment when it is unwelcome, intentional, and so severe and/or pervasive that it denies the victim equal access to the College's resources and opportunities under the circumstances

presented.

Sexual harassment is a violation of the Student Rights and Standards of Student Conduct Policy and will not be tolerated by the College. Sexual harassment complaints involving a student will be resolved according to the Procedure for the Resolution of Student Sexual Harassment Complaints as contained in the Student Handbook.

Any student that violates this Policy will be subject to disciplinary action including, but not limited to, dismissal from the College. In addition, the College reserves the right to notify law enforcement authorities of incidents of sexual harassment alleged to have occurred on any property owned or controlled by the College or during any College-related activity or event upon reasonable belief that such incidents rise to the level of criminal activity.

## **PROCEDURE FOR THE RESOLUTION OF STUDENT SEXUAL HARASSMENT COMPLAINTS**

It is the policy of the College that no student may sexually harass another member of the College community while present on any property owned or controlled by the College or while participating in any College-related activity or event. The College does not tolerate sexual harassment and is firmly committed to resolving sexual harassment complaints in a prompt and equitable manner.

As a result, the College has adopted the following procedures to provide an internal mechanism to resolve sexual harassment complaints. These procedures shall be utilized whenever a student is accused of sexual harassment by another student, employee, or third party in violation of the College's Policy Statement on Student Sexual Harassment. Employees who are accused of sexually harassment by a student shall be subject to the Procedure for the Resolution of Sexual Harassment Complaints Against An Employee as contained in Section XIII of the College's Personal Policy Manual.

No individual shall be subject to retaliation at any time for making a claim of sexual harassment or for participating in these procedures. It is a violation of College policy for any member of the College community to retaliate against the Complainant, any individual who participates in any sexual harassment investigation or proceeding, or against the Respondent who has been accused of engaging in sexual harassment. While all sexual harassment allegations will be reviewed in accordance with these procedures,

the College Community is advised that a claim of sexual harassment is not proof of prohibited conduct. Anyone who believes that he/she has been subject to retaliation arising from sexual harassment allegations is encouraged to report such behavior to a College official as set forth below. Students accused of engaging in retaliatory conduct shall be subject to the College's Student Rights and Standards of Student Conduct Policy and the disciplinary action set forth therein, up to and including dismissal from the College.

Making a false or malicious accusation of sexual harassment and/or retaliation is also prohibited by the College. A student who is found to have made an allegation of sexual harassment against another student or employee that is intentionally false, or made in reckless indifference or disregard for the truth, shall be subject to the College's Student Rights and Standards of Student Conduct Policy and the disciplinary action set forth therein, up to and including dismissal from the College.

Additionally, at any stage of these procedures, the Dean of Student Affairs at the campus where the alleged sexual harassment and/or retaliation is alleged to have occurred (hereinafter the "Dean") shall have the authority to take any and all reasonable steps necessary to protect all parties involved under these procedures from harassment and retaliation. The occurrence or non-occurrence of any protective measure initiated by the Dean is neither an indicia of guilt nor innocence under these procedures. Any such steps taken by the Dean to protect members of the College community from harassment and retaliation shall be final pending the resolution of the allegation as set forth under these procedures.

Furthermore, these procedures, and all aspects thereof, will be kept confidential to the maximum extent provided by state and federal law, including, but not limited to, the Family Educational Rights and Privacy Act ("FERPA"). The College will take all reasonable steps to investigate and respond to complaints in a confidential manner. Complainants, however, are advised that the College's ability to investigate and to respond to complaints may be limited in circumstances where the Complainant does not wish to disclose his or her identity. The College reserves the right to notify law enforcement authorities about allegations of sexual harassment upon reasonable belief that such incidents rise to the level of criminal activity. The use of these procedures does not preclude a Complainant from seeking recourse through the appropriate state or federal criminal law enforcement agencies at any time. College personnel will assist the Complainant in notifying these authorities in the event that the Complainant requests such assistance.

### **Reporting Procedures**

The College encourages any student who believes that

he/she has been a victim of sexual harassment at the College to report the offensive conduct to a College official as soon as possible. For purposes of these procedures, a College official shall include any faculty member, academic counselor, administrator, or Public Safety Officer on the campus where the conduct is alleged to have occurred. Students may also contact the College's Civil Rights Coordinator to report incidents of alleged sexual harassment.

The College's Civil Rights Coordinator shall be notified of all claims of sexual harassment involving a student as soon as reasonably practical. The Civil Rights Coordinator shall promptly appoint a Sexual Harassment Review Officer ("Review Officer") from the campus where the conduct is alleged to have occurred to investigate the claim. The Review Officer shall advise the alleged offender that a complaint of sexual harassment has been filed against him/her and explain the College's prohibition against retaliation. The Review Officer shall document receipt of the complaint by letter or other written communication to the alleged offender and to the Complainant, a copy of which shall also be provided to the Dean and to the College's Civil Rights Coordinator. The Review Officer shall investigate the complaint to determine whether or not there are sufficient grounds to support a charge of sexual harassment as set forth in the College's Policy Statement on Student Sexual Harassment. The Review Officer shall encourage and/or assist the Complainant to reduce his/her claims to writing, which shall serve as the basis for the complaint of sexual harassment. Whenever possible, the investigation shall include interviews with both parties involved in the complaint and/or may include interviews with individuals who may have observed the alleged conduct or may have relevant knowledge of the incident. The Review Officer shall also have access to such written documents in the possession of the College, including student records, that he/she believes may contain relevant information or which may lead to the discovery of relevant information.

The Review Officer shall make a written determination regarding whether or not sufficient evidence exists which, if true, would constitute sexual harassment. All evidence shall be viewed by the Review Officer in the light most favorable to the Complainant when making the determination of whether or not a claim has been stated or substantiated. The determination shall be made within ten (10) working days following the Review Officer's appointment, include the grounds and findings upon which the determination was based, and be delivered to the parties, the Dean, and the College's Civil Rights Coordinator. In extenuating circumstances, including but not limited to those incidents that require evidence gathering by law enforcement officials, the Review Officer may extend the ten (10) working day deadline to make the determination. The parties, as well as the Civil Rights Coordinator, shall be notified in writing by the Review Officer about the reasons for the

delay and the time frame in which the determination shall be made.

The Complainant may appeal a determination that insufficient evidence exists to support a claim of sexual harassment to the Civil Rights Coordinator. An appeal must be submitted in writing within ten (10) working days following the date of the Review Officer's determination. The decision of the Civil Rights Coordinator regarding the sufficiency of the allegations, or the evidence in support thereof, shall be final.

In the event the Civil Rights Coordinator determines that further proceedings are warranted, the Complainant shall be offered the opportunity to mediate the claim or to have the matter submitted to the Dean for a Sexual Harassment Review Committee Hearing.

*Note: Mediation is not required to resolve a sexual harassment complaint. The Complainant may end mediation at any time in favor of a Sexual Harassment Review Committee Hearing. In addition, mediation is not available to resolve claims involving allegations of sexual violence as defined by state and/or federal law.*

### **Mediation**

Mediation is an informal and confidential way for the parties to resolve the complaint with the help of the Review Officer. The Review Officer will not decide who is right or wrong or issue a decision. Instead, the Review Officer will help the parties work out their own voluntary solution to the complaint.

Mediation should begin as soon as reasonably practical following an election by the Complainant but in no event greater than 10 working days absent agreement by the Complainant or extenuating circumstances that make commencement of the process impractical within the 10 day limit. Except as limited by the foregoing, in the event efforts to mediate do not begin within 10 working days, then the matter shall proceed to a Sexual Harassment Review Committee Hearing. Examples of such mediated options include, but are not limited to:

**A.** One or more meetings between the Complainant and the Respondent, mediated by the Review Officer, to discuss and resolve the alleged sexual harassment to the satisfaction of both parties.

**B.** In the event that the Complainant does not wish to confront the Respondent, one or more meetings in which the Review Officer meets separately with the Complainant and the Respondent to discuss options to resolve the matter. The Review Officer shall notify the parties in writing if a settlement is reached, and shall attach a proposed form of agreement for signature. The failure or refusal of a party to execute the agreement within a reasonable time shall result in the matter

proceeding to a Sexual Harassment Review Committee Hearing.

**C.** An agreement between the parties and delivered in writing to the Review Officer containing: 1) a statement describing the alleged sexual harassment and requesting that such alleged conduct stop, signed by the Complainant; and 2) and acknowledgement of the complaint without admission of guilt and affirmation that the Complainant will not be the subject of sexual harassment in the future, signed by the Respondent.

Mediation may be discontinued: at any time by the Complainant; by the Review Officer, when he/she feels that further efforts will be non-productive; or when a voluntary agreement has been reached. The Review Officer shall prepare a written report documenting the success or failure of mediation to the Civil Rights Coordinator, the Dean, and the parties. If the mediation results in a voluntary settlement, a copy of the agreement, signed by the parties, shall be included, together with a statement that the College considers the matter to be closed. In the event that mediation resolves the matter, all documentation arising out of the allegation of sexual harassment, including the mediation agreement shall be separated from the student's educational file. In the event mediation is unsuccessful, the matter shall proceed to a Sexual Harassment Review Committee Hearing.

### **Sexual Harassment Review Committee Hearing**

A Sexual Harassment Review Committee shall hear and determine claims of sexual harassment against a student in situations where mediation is not available, unsuccessful, or declined by the Complainant. The Committee shall consist of the Civil Rights Coordinator, who shall serve as the Committee Chairperson, one Sexual Harassment Review Officer on the campus who was not involved in the investigation of the allegation; and the Dean.

The College Civil Rights Coordinator shall provide written notice to the parties of the date, time, and place for the Sexual Harassment Review Committee hearing. Such notice shall also include the following:

1. A copy of the complaint or a summary of the allegations;
2. A copy of the Review Officer's report; and
3. A summary of the rules that will govern how the hearing will be conducted.

Absent extenuating circumstances, or an agreement by the parties, the hearing shall take place within ten (10) working days following receipt of notification from the Review Officer that mediation was unsuccessful, unavailable or declined by the Complainant. The role of the Committee shall be to hear and consider testimony and other relevant, reliable evidence and make findings of fact related thereto. In addition, the Committee shall

be charged with determining by a preponderance of the evidence whether or not a violation of the College's Policy Statement on Student Sexual Harassment has occurred.

The Committee shall submit a written report to the parties setting forth the findings of fact and its determination as to whether a violation of the College's Policy Statement on Student Sexual Harassment has occurred within five (5) working days following the conclusion of the hearing. In the event a violation is found to have occurred, the report shall also include a recommendation of appropriate relief and/or disciplinary action, up to and including dismissal from the College.

The Committee's decision may be appealed by either party to the Vice President and Campus Director at the campus where the conduct is alleged to have occurred (hereinafter the "Campus Director"). The Committee's decision shall be final unless a timely appeal is made by one or both parties. A recommendation that the Respondent be dismissed from the College shall automatically be reviewed by the Campus Director.

Either party may appeal the Committee's decision, or any recommended relief and/or disciplinary action contained therein. All appeals shall be made in writing and delivered to the Civil Rights Coordinator within ten (10) working days following the date of the Committee's decision. The Campus Director's decision to affirm, deny, or modify the Committee's recommendations and determinations shall be based upon the record of the proceedings made by the Review Committee. All such decisions by the Campus Director are final and shall be delivered in writing to the parties within ten (10) working days following receipt of the appeal.

In the event that a violation of the College's Policy Statement on Student Sexual Harassment is determined through this hearing process, all documentation arising out of the allegation of sexual harassment, including any and all resulting disciplinary action imposed to resolve the matter, shall be maintained in the student's educational file.

## **GUIDE TO REQUESTING ACADEMIC ACCOMMODATIONS AND/OR AUXILIARY AIDS**

### **GETTING STARTED**

Delaware Technical and Community College is committed to providing reasonable academic adjustments for students with disabilities which may include auxiliary aids and/or accommodations that do not alter a fundamental requirement of our academic programs. Since every disability manifests itself



differently in each individual, every attempt will be made to tailor all academic adjustments to meet individual needs. Students with disabilities who wish to request academic adjustments must see the campus ADA contact. The campus ADA contact will evaluate the request and engage in an interactive process to determine what, if any, academic adjustments are warranted. Students seeking academic adjustments must request the same at least 4 weeks prior to the start of each semester for which academic adjustments are sought. Academic adjustments requested by students who fail to follow these procedures may be denied or may not be available prior to the start of classes.

### **CAMPUS ADA CONTACTS**

The following individuals are the ADA contacts for their respective campuses. They will assist you in fulfilling the requirements to obtain reasonable and necessary academic adjustments.

#### **Dover**

Charles Mundell  
(302) 857-1349  
[cmundell@dtcc.edu](mailto:cmundell@dtcc.edu)

#### **Georgetown**

Carla Tingle  
(302) 259-6045  
[ctingle3@dtcc.edu](mailto:ctingle3@dtcc.edu)

#### **Stanton**

Heather M. Statler  
(302) 454-3927  
[hstatler@dtcc.edu](mailto:hstatler@dtcc.edu)

#### **Wilmington**

Victoria Chang  
(302) 434-5553  
[vchang1@dtcc.edu](mailto:vchang1@dtcc.edu)

In addition, inquiries or complaints pertaining to this Guide may be addressed to the College's Civil Rights Coordinator, who serves as the College's ADA/Section 504 Coordinator, at the following:

#### **Dr. Valencia 'Lynn' Beaty**

Assistant Vice President for Civil Rights  
Office of the President  
P.O. Box 897  
Dover, DE 19903  
(302) 857-1903  
[civilrights@dtcc.edu](mailto:civilrights@dtcc.edu)

### **DOCUMENTATION**

Students should provide the campus ADA contact with documentation of their disability. This information may include diagnosis of disability, functional limitations, psycho-education testing results, most recent IEP (if

available), and any other information that may provide insight, clarification or support of the student's condition and how that may impact the student's ability to perform in an academic setting. Since many types of disability remain unchanged over the course of a student's lifetime, information may be accepted in cases where the campus ADA contact determines in his or her sole discretion that a meaningful interactive process can occur and reasonable adjustments can be approved. In some instances, discussion between the student and the campus ADA contact may be sufficient to determine the appropriate assistance. In other situations, a professional evaluation will be necessary to enable the campus ADA contact to understand how the disability impacts the student's ability to function in a college setting. If documentation is necessary, the student must sign a release authorizing the information to be given to the campus ADA contact. **PROVIDING THIS DOCUMENTATION IS THE OBLIGATION OF THE STUDENT, AT THE STUDENT'S SOLE EXPENSE.**

The student and the campus ADA contact (together with such other parties as may be designated by the Campus ADA Contact) will discuss which academic adjustments are appropriate for the student's individual situation and coursework.

### **CONFIDENTIALITY**

The ADA campus contact will maintain appropriate confidentiality of records or communication, except when disclosure is authorized by the student or by law.

### **EXAMPLES OF ACADEMIC ADJUSTMENTS PROVIDED BY THE COLLEGE**

In providing academic adjustments, we do not lower or effect substantial modifications to essential technology requirements nor do we make modifications that would fundamentally alter the nature of a program.

Examples of the types of academic adjustments which may be provided are as follows:

**Accessible Furniture:** Providing classroom furniture, which is most appropriate for the student in light of their disability.

**Assistive Listening Device:** An amplification system designed to help the student hear better by minimizing background sounds and amplifying desired sound.

**Clear View/Lip-Reading:** The process of viewing the speaker's lips to facilitate communication (requires unobstructed view of the speaker).

**Course Reductions which do not fundamentally alter the nature of the program:** Students may elect

to attend on a part-time basis. Part-time study may impact the length of time to complete program requirements and/or financial aid.

**Course Substitutions** will be considered so long as the modification does not fundamentally alter the nature of a program.

**Early Access to Course Syllabus:** Providing the student with a course syllabus prior to the beginning of the term. A student who needs class material in alternate format or who requires additional time to complete reading or writing assignments will benefit from having early access to course requirements. Early access to the course syllabus allows the accommodation process to begin early and reduces chances of delays in services.

**Large Print Handouts:** Enlarging written material on standard photocopier or word processor to facilitate reading for a student with various processing or sensory impairments.

**Note taker/Scribe:** Individual assigned to assist a student by recording class lecture notes of instructor's spoken words. The scribe may also assist student to record in-class assignments.

**Priority Seating:** Allowing the student to choose the class seating arrangement which is most appropriate in light of the disability.

**Sign Language Interpreter(s):** A person who translates spoken English into American Sign Language (ASL) and vice versa for students with significant hearing loss or deafness. A student using an Interpreter should be allowed to choose classroom seating which is most appropriate for that student's particular need. The college will provide the interpreter; it is not reasonable to expect the College will pay for an interpreter you have used before or currently use on a daily basis.

**Tape Recording/Transcribing Lectures:** Recording spoken material presented in the classroom using a tape recorder.

**Visual Media:** Using graphics or other visual methods, such as PowerPoint slides or handouts, to supplement class lecture and spoken information.

**The following is a list of testing adjustments which may be made, depending upon the course and the needs of the student:**

**Alternative Test Design:** Changing test format or design to allow the student to demonstrate mastery of course material while minimizing the interference of their disability. For example, one might use a multiple-choice design instead of an essay design.

**Alternative Test Location:** The student is assigned to

take an exam in a mutually agreeable location. Arranged and coordinated by the ADA campus contact.

**Computer Usage:** Use of a personal computer during testing allowing the student to use a spellchecker, word processing capabilities, or special assistive software required for their specific disability needs.

**Distraction - Free Environment:** An environment free from noise and other distractions (classroom activities, phones, loud talking, operating machinery) that might interfere with the testing process.

**Electronic Speller/Dictionary:** An electronic speller is a portable device, which assists the student in spelling correctly.

**Extended Time:** Additional time given to complete a test. Length of extension varies according to the student's needs and documented disability. The standard time extension is "time and a half."

**Individual Test Proctor:** Individual assigned to personally administer a test to the student.

**Large Print Test:** Enlarging tests to provide the student with visual access to the test.

**Oral Test:** Administering test orally to the student and allowing the student to provide oral responses.

**Reader:** Individual assigned to read test directions and/or test questions to the student with a disability.

**Scribe:** Individual assigned to record test responses of the student with a disability but who does not offer assistance with content of test responses.

**Sign Language Interpreter(s):** A person who translates directions and/or information given during test administration from English into American Sign Language (ASL). It may also include allowing the student to ask questions for further clarification using his/her ASL interpreter during test questions.

**Test on Tape:** Tape recording test questions so the students can listen to the questions. This might include allowing the student to tape record the answers.

**Voice Calculator:** A calculator that provides voice output of mathematical data and mathematical processes.

## **EXAMPLES OF REQUESTS WHICH ARE NOT REASONABLE**

The following is a list of services that the college will not provide. This is not an exhaustive list, but rather provides examples of unreasonable requests. The ADA campus contact may be able to provide community

referrals to these services, if appropriate.

1. Providing personal attendants (aides)
2. Feeding students
3. Administering and storing of medications
4. Assisting with personal hygiene (catheter bags, etc.)
5. Writing and proofreading papers
6. Tutoring (will be referred to campus tutorial support)
7. Psychological counseling
8. Storage of medical supplies and equipment (oxygen tanks, wheelchairs, etc.)
9. Diagnosis of disability condition
10. Providing care for service animals

### **COMMUNICATION WITH FACULTY**

The ADA campus contact will send notification to faculty and campus offices of the academic adjustments that will be provided. Students are encouraged to discuss their academic adjustment (s) with their instructors; however, students are NOT obligated to self-disclose the nature of their disability to the instructors. Students are responsible for communicating the effectiveness of the academic adjustment(s) with the instructors and the campus ADA contacts.

### **GRIEVANCE PROCEDURE**

If a student is not satisfied with the academic adjustment(s) that, after discussion with all parties, has been determined to be appropriate by the campus ADA contact, then s/he may use the following grievance procedure.

Students who are unsatisfied with the academic adjustments approved by the campus ADA contact or otherwise feel they have been the subject of discrimination on the basis of disability shall state their concerns in writing to the appropriate Dean of Student Affairs. The inquiry shall be made as soon as reasonably possible after the action occurs but in no case later than 10 working days after such occurrence. The time for filing a grievance can be waived for good cause at the discretion of the Dean of Student Affairs.

The Dean of Student Affairs, or designee, shall conduct a thorough investigation of the grievance, affording all interested persons and their representatives an opportunity to submit relevant information. The Dean of Student Affairs shall consult with the College's Civil Rights Coordinator, or designee, and shall issue a written response, with a description of the resolution, if any, to the grievant and other appropriate persons within 15 working days of receipt of the complaint.

The decision of the Dean of Student Affairs shall be final.

Nothing in this procedure prevents any individual who believes he or she may have been discriminated against from pursuing any and all legal remedies.

### **RETURNING STUDENTS**

Accommodation(s) plans are NOT carried over from semester to semester. A new request for academic adjustments must be made for each semester that adjustments are desired. Once a request is made, students must allow the campus ADA contact up to four weeks to facilitate appropriate academic adjustments.

## **PROCEDURE FOR THE RESOLUTION OF DISCRIMINATION COMPLAINTS AGAINST A STUDENT**

### **Introduction**

It is the policy of the College that no student shall be subject to unlawful discrimination in the educational programs and activities over which the College has jurisdiction. The College does not tolerate discriminatory conduct and is firmly committed to resolving complaints of discrimination in a prompt and equitable manner.

As a result, the College has adopted the following procedures to provide an internal mechanism to resolve complaints of discrimination. These procedures shall be utilized whenever a student is accused of engaging in discriminatory conduct in violation of the College's Statement of Nondiscrimination Policy. However, complaints against another student or employee for violating the College's Policy Statement on Student Sexual Harassment or the College's Policy on Employee Sexual Harassment, respectively, shall be reviewed under those procedures. In addition, student complaints pertaining to academic accommodations shall be reviewed under the College's Guide to Requesting Academic Accommodations and/or Auxiliary Aids. Furthermore, complaints made against an employee who is accused of violating the College's Statement of Nondiscrimination Policy shall be reviewed under the Procedure for the Resolution of Discrimination Complaints Against an Employee as contained in Section XIII of the College's Personal Policy Manual.

No individual shall be subject to retaliation at any time for making a complaint of discrimination or for participating in these procedures. It is a violation of College policy for any member of the College community to retaliate against the Complainant, any individual who participates in any discrimination investigation or proceeding, or against the Respondent who has been accused of engaging in discrimination. While all discrimination allegations will

be reviewed in accordance with these procedures, the College community is advised that a claim of discrimination is not proof of prohibited conduct. Anyone who believes that he/she has been subject to retaliation arising from discrimination allegations is encouraged to report such behavior to a College official as set forth below. Accusations of retaliatory conduct are subject to disciplinary action, up to and including dismissal from the College.

Making a false or malicious accusation of discrimination and/or retaliation is also prohibited by the College. A student who is found to have made an allegation of discrimination against another student or employee that is intentionally false, or made in reckless indifference or disregard for the truth, shall be subject to disciplinary action, up to the College's Student Rights and Standards of Student Conduct Policy and the disciplinary action set forth therein, up to and including dismissal from the College.

Additionally, at any stage of these procedures, the Dean of Student Affairs at the campus where the alleged discrimination and/or retaliation is alleged to have occurred (hereinafter the "Dean") shall have the authority to take any and all reasonable steps necessary to protect all parties involved under these procedures from further discriminatory conduct and/or retaliation. The occurrence or non-occurrence of any protective measure initiated by the Dean is neither an indicia of guilt nor innocence under these procedures. Any such steps taken by the Dean to protect members of the College community from further discriminatory conduct and/or retaliation shall be final pending the resolution of the allegation as set forth under these procedures.

Furthermore, these procedures, and all aspects thereof, will be kept confidential to the maximum extent provided by state and federal law, including, but not limited to, the Family Educational Rights and Privacy Act ("FERPA"). The College will take all reasonable steps to investigate and respond to complaints in a confidential manner. Complainants, however, are advised that the College's ability to investigate and to respond to complaints may be limited in circumstances where the Complainant does not wish to disclose his or her identity. The College reserves the right to notify law enforcement authorities about allegations of discrimination upon reasonable belief that such incidents rise to the level of criminal activity. The use of these procedures does not preclude a Complainant from seeking recourse through the appropriate state or federal criminal law enforcement agencies at any time.

### **Reporting Procedures**

The College encourages any student who believes that he/she has been subjected to discrimination to report the offensive conduct to a College official as soon as possible. For purposes of these procedures, a College

official shall include any faculty member, academic counselor, administrator, or Public Safety Officer on the campus where the conduct is alleged to have occurred. Students may also contact the College's Civil Rights Coordinator to report incidents of alleged discrimination.

The College's Civil Rights Coordinator shall be notified of all claims of discrimination as soon as reasonably practical. The Civil Rights Coordinator shall promptly appoint a Civil Rights Review Officer ("Review Officer") from the campus where the conduct is alleged to have occurred to investigate the claim. The Review Officer shall advise the alleged offender that a complaint of discrimination has been filed against him/her and explain the College's prohibition against retaliation. The Review Officer shall document receipt of the complaint by letter or other written communication to the alleged offender and to the Complainant, a copy of which shall also be provided to the Dean and to the College's Civil Rights Coordinator. The Review Officer shall investigate the complaint to determine whether or not there are sufficient grounds to support a charge of discrimination as set forth in the College's Statement of Nondiscrimination Policy. The Review Officer shall encourage and/or assist the Complainant to reduce his/her claims to writing, which shall serve as the basis for the complaint of discrimination. Whenever possible, the investigation shall include interviews with both parties involved in the complaint and/or may include interviews with individuals who may have observed the alleged conduct or may have relevant knowledge of the incident. The Review Officer shall also have access to such written documents in the possession of the College, including student records, that he/she believes may contain relevant information or which may lead to the discovery of relevant information.

The Review Officer shall make a written determination regarding whether or not sufficient evidence exists which, if true, would constitute discriminatory conduct in violation of the College's Statement of Nondiscrimination Policy. All evidence shall be viewed by the Review Officer in the light most favorable to the Complainant when making the determination of whether or not a claim has been stated or substantiated. The determination shall be made within ten (10) working days following the Review Officer's appointment, include the grounds and findings upon which the determination was based, and be delivered to the parties, the Dean, and to the College's Civil Rights Coordinator. In extenuating circumstances, including but not limited to those incidents that require evidence gathering by law enforcement officials, the Review Officer may extend the ten (10) working day deadline to make the determination. The parties, as well as the Civil Rights Coordinator, shall be notified in writing by the Review Officer about the reasons for the delay and the time frame in which the determination shall be made.

The Complainant may appeal a determination that insufficient evidence exists to support a claim of discrimination to the Civil Rights Coordinator. An appeal must be submitted in writing within ten (10) working days following the date of the Review Officer's determination. The decision of the Civil Rights Coordinator regarding the sufficiency of the allegations, or the evidence in support thereof, shall be final.

In the event the Civil Rights Coordinator determines that further proceedings are warranted, the Complainant shall be offered the opportunity to mediate the claim or to have the matter submitted to the Discrimination Review Committee for a hearing.

*Note: Mediation is not required to resolve a complaint of discrimination. The Complainant may end mediation at any time in favor of a hearing before the Discrimination Review Committee.*

### **Mediation**

Mediation is an informal and confidential way for the parties to resolve the complaint with the help of the Review Officer. The Review Officer will not decide who is right or wrong or issue a decision. Instead, the Review Officer will help the parties work out their own voluntary solution to the complaint.

Mediation should begin as soon as reasonably practical following an election by the Complainant but in no event greater than 10 working days absent agreement by the Complainant or extenuating circumstances that make commencement of the process impractical within the 10 day limit. Except as limited by the foregoing, in the event efforts to mediate do not begin within 10 working days, then the matter shall proceed to a hearing before the Discrimination Review Committee. Examples of such mediated options include, but are not limited to:

- A.** One or more meetings between the Complainant and the Respondent, mediated by the Review Officer, to discuss and resolve the complaint of discrimination to the satisfaction of both parties.
- B.** In the event that the Complainant does not wish to confront the Respondent, one or more meetings in which the Review Officer meets separately with the Complainant and the Respondent to discuss options to resolve the matter. The Review Officer shall notify the parties in writing if a settlement is reached, and shall attach a proposed form of agreement for signature. The failure or refusal of a party to execute the agreement within a reasonable time shall result in the matter proceeding to a hearing before the Discrimination Review Committee.
- C.** An agreement between the parties and delivered in writing to the Review Officer containing: 1) a statement describing the allegation of discrimination

and requesting that such alleged conduct stop, signed by the Complainant; and 2) and acknowledgement of the complaint without admission of guilt and affirmation that the Complainant will not be subjected to discriminatory conduct in the future, signed by the Respondent.

Mediation may be discontinued: at any time by the Complainant; by the Review Officer, when he/she feels that further efforts will be non-productive; or when a voluntary agreement has been reached. The Review Officer shall prepare a written report documenting the success or failure of mediation to the Civil Rights Coordinator, the Dean, and the parties. If the mediation results in a voluntary settlement, a copy of the agreement, signed by the parties, shall be included, together with a statement that the College considers the matter to be closed. In the event that mediation resolves the matter, all documentation arising out of the allegation of discrimination, including the mediation agreement shall be separated from the student's educational file. In the event mediation is unsuccessful, the matter shall proceed to a hearing before the Discrimination Review Committee.

### **Discrimination Review Committee Hearing**

A Discrimination Review Committee shall hear and determine claims of discrimination against a student in situations where mediation is not available, unsuccessful, or declined by the Complainant. The Committee shall consist of the Civil Rights Coordinator, who shall serve as the Committee Chairperson, one Civil Rights Review Officer who was not involved in the investigation of the allegation, and the Dean. The College Civil Rights Coordinator shall provide written notice to the parties of the date, time and place for the hearing before the Discrimination Review Committee. Such notice shall also include the following:

1. A copy of the complaint or a summary of the allegations;
2. A copy of the Review Officer's report; and
3. A summary of the rules that will govern how the hearing will be conducted.

Absent extenuating circumstances, or an agreement by the parties, the hearing shall take place within ten (10) working days following receipt of notification from the Review Officer that mediation was unsuccessful, unavailable or declined by the Complainant. The role of the Committee shall be to hear and consider testimony and other relevant, reliable evidence and make findings of fact related thereto. In addition, the Committee shall be charged with determining by a preponderance of the evidence whether or not a violation of the College's Statement of Nondiscrimination Policy has occurred.

The Committee shall submit a written report to the parties setting forth its findings of fact and its determination as to whether a violation of the College's

Statement of Nondiscrimination Policy has occurred within five (5) working days following the conclusion of the hearing. In the event a violation is found to have occurred, the report shall also include a recommendation of appropriate relief and/or disciplinary action, up to and including dismissal from the College.

The Committee's decision may be appealed by either party to the Vice President and Campus Director at the campus where the conduct is alleged to have occurred (hereinafter the "Campus Director"). The Committee's decision shall be final unless a timely appeal is made by one or both parties. A recommendation that the Respondent be dismissed from the College shall automatically be reviewed by the Campus Director.

Either party may appeal the Committee's decision, or any recommended relief and/or disciplinary action contained therein. All appeals shall be made in writing and delivered to the Civil Rights Coordinator within ten (10) working days following the date of the Committee's decision. The Campus Director's decision to affirm, deny, or modify the Committee's recommendations and determinations shall be based upon the record of the proceedings made by the Discrimination Review Committee. All such decisions by the Campus Director are final and shall be delivered in writing to the parties within ten (10) working days following receipt of the appeal.

In the event that a violation of the College's Statement of Nondiscrimination Policy is determined through the hearing process, all documentation arising out of the allegation of discrimination, including any and all resulting disciplinary action imposed to resolve the matter, shall be maintained in the student's educational file.

## A Message From the President

Welcome to Delaware Technical Community College! As a former graduate of Delaware Tech and now as its president, I know the difference Delaware Tech can make in the lives of students. I invite you to explore our website and learn about the many high-quality, educational programs that can prepare you to achieve your academic and career goals!

As you search our site, you'll find career-focused degrees, certificates, diplomas and courses that prepare you for immediate entry into the workforce or enhance your existing professional skills...connecting Delawareans with jobs is our top priority.

To ensure our graduates are job-ready on Day 1, Delaware Tech offers rigorous nationally-accredited programs taught by high-quality faculty members, many of whom have years of experience in their field. As a student, you'll learn in a "hands-on" environment using the same cutting-edge technology that you'll find in the workplace. The College has strong relationships with business and industry throughout the state and region; if Delaware Tech is offering a program, you can feel confident that local employers have a need for highly-skilled professionals in that field.

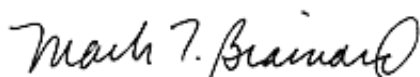
And we deliver high quality programs at a great value. Delaware Tech has one of the lowest tuition rates in the region; 70% of our graduates walk across the stage at commencement debt-free! That's why so many of our graduates begin their higher education careers at Delaware Tech and then seamlessly transfer to a four-year university through one of our 150+ connected degree programs.

No matter which path you choose at Delaware Tech, our caring and dedicated faculty and staff will be there to help you succeed. Our advisement and support services are designed to help you every step of the way, and we offer countless opportunities for our students to engage in campus clubs, athletics and work experiences that will enhance your professional skills and your resume.

In addition to our career-focused programs, the College offers many community-based programs including summer youth camps, adult education for those looking to complete a GED®, continuing education classes for those with specific interests and workforce development for business and industry training needs. Community is not just part of our name, it's at the heart of our mission.

Call us, visit our campuses, talk with our staff and faculty. Contact us today, and let us know how we can help you reach your goals! We're waiting for you!

Sincerely,  
Mark T. Brainard



*Mark T. Brainard*  
President

[WATCH DR. BRAINARD'S WELCOME VIDEO](#)

## Board of Trustees

The Board of Trustees of Delaware Technical Community College is the governing body of the institution. All members are appointed by the Governor of the State of Delaware with the consent of a majority of the State Senate. Six members are appointed for three-year terms - one from the City of Wilmington, one from New Castle County outside of the City of Wilmington, one from Kent County and one from Sussex County, with the remaining two from anywhere in the State. The seventh member, the Chairperson, is appointed by and serves at the pleasure of, the Governor. No more than four members may be of the same political party. The Board of Trustees sets policy for the College and is responsible for ensuring that the institutional mission is carried out. Among its numerous responsibilities, the Board approves the College plan, is responsible for the management and control of the institution, has the power to appoint administrative and teaching staff, sets the tuition rate, and approves fees. The Board also reviews fiscal matters and approves budgets.

### Board of Trustees



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B.S., University of Delaware  
M.S., University of Delaware

### President Emeritus



**Dr. Orlando J. George, Jr.**  
**President Emeritus**

B.A., University of Delaware  
M.Ed., University of Delaware  
Ed.D., University of Delaware



## **PRESIDENT'S OFFICE**

The President's Office maintains an administrative staff to provide Collegewide leadership and perform specialized administrative and service roles for the Institution. These roles include strategic planning, institutional research, institutional effectiveness, marketing and public relations, human resources, legal affairs, college relations, computer services, academic affairs, curriculum development, student affairs, workforce development and community education, international education, purchasing, financial planning, and accounting. In addition, each campus has its own administration with leadership provided by the Vice President and Campus Director.

## **ACCREDITATION STATEMENT**

The College and its campuses are accredited by the Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104. (267-284-5000). The Middle States Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation. In addition, several curricula have earned program-based accreditation by various professional organizations.

## **THE DELAWARE TECHNICAL COMMUNITY COLLEGE EDUCATIONAL FOUNDATION**

The College exists to improve the quality of life for all Delawareans through education and training. In order to fulfill its mission, the College requires private support to maintain excellence in its offerings. Established in 1968, Delaware Technical Community College's Educational Foundation provides funding for student scholarships, staff development projects, and specialized equipment. Gifts may be given to the Foundation and designated for specific purposes. The Educational Foundation provides an opportunity for members of the community, College employees, alumni, students, and corporations to actively participate in the continued development of Delaware Technical Community College.

## **General Information**

### **DELAWARE TECHNICAL COMMUNITY COLLEGE**

Delaware Tech, the state's only community college, is guided by the values of providing access, opportunity, excellence, and hope for each student. Delaware Tech is an open admission institution that offers credit and non-credit education and training opportunities including more than 100 associate degree, diploma, and certificate programs. Programs are offered in fields

such as energy management, engineering technology, business, computer information systems, nursing, allied health, education, criminal justice, and human services. Sixty-four of the associate degree programs at the Campuses have earned program accreditation by their state or national accrediting agency, demonstrating the College's full commitment to meeting industry standards of excellence. Delaware Tech also has 141 articulation agreements with four-year institutions, providing seamless pathways for graduates seeking a bachelor's degree. In the area of continuing education, offerings are provided in career training, customized training, personal enrichment, and youth programs.

In addition to traditional classroom instruction, Delaware Tech offers courses in multiple locations and formats that enable students to select the course type and delivery method that best fits their educational goals and objectives. Most on-campus courses and every distance learning course uses Blackboard, an industry-leading learning management system. In addition to Blackboard, faculty also have access to distance learning classrooms which feature state-of-the-art video conferencing and learning technologies, synchronous communication tools, as well as other course-specific interactive elements and applications.

Since 1967, when the College was founded, thousands of graduates have entered the workforce with the knowledge and skills they need to be successful. Leaders in business, industry, government, education, and health serve on College advisory committees, providing guidance to Delaware Tech as it develops and evaluates curricula to ensure its programs are up to date and relevant in the modern workplace.

Delaware Tech has earned its place as an educational leader in the State. The College is respected and trusted at the state and national levels because of its responsiveness to the needs of business and industry, commitment to quality and vision that supports economic development and educational needs of Delawareans.

## **HISTORY**

The Delaware General Assembly created Delaware Technical Community College in 1966, when it approved House Bill 529, signed into law by then-Governor Charles L. Terry, Jr. A Board of Trustees was appointed to oversee development of the statewide institution. The Board Chairman was E. Hall Downes; members were William A. Carter, Edward W. Comings, William C. Kay, Clement J. Lemon, John H. Long, and Charles L. Simms.

The studies and reports of the original Board were used to create the Southern Campus which opened in September 1967, near Georgetown in Sussex County,

with 367 students enrolled. The name was changed to the Jack F. Owens Campus in May 1995. A temporary Northern Campus opened in New Castle County in 1968. The Northern location was replaced by two campuses-Stanton in the fall of 1973 and Wilmington in the spring of 1974. The Terry Campus opened in 1972 and moved to its current location north of Dover in 1974.

The President's Office, located adjacent to the Terry Campus, functions as a central office by providing collegewide leadership and a variety of services in support of the campuses. Students of all ages, backgrounds, and walks of life have benefited from the training and education that Delaware Tech has provided. It is estimated that one-fourth of Delaware's population has taken courses at Delaware Technical Community College during its short history.

## MISSION STATEMENT

Delaware Technical Community College is a statewide multi-campus community college committed to providing affordable, open admission, post-secondary education that is relevant and responsive to labor market and community needs. The College offers comprehensive educational opportunities that contribute to the economic vitality of the State, including career, general, developmental, and transfer education; workforce development; and lifelong learning. The College respects its students as individuals and as members of diverse groups and is committed to fostering student success in higher education as a means to economic and personal advancement.

Effective October 13, 2015

## GOALS

The College will achieve its mission through the goals listed below:

1. Academic programs will prepare students with knowledge and skills needed for employment in their career field of study and/or for transfer to a senior institution.
2. Developmental education will prepare students in mathematics, reading, and writing to be successful in entry-level College courses and workforce development programs.
3. Academic and workforce development programs will prepare and support a competitive workforce across a range of occupational levels.
4. Personal enrichment programs and events will support lifelong learning in the community.
5. The College will provide an inclusive

environment that promotes respect for diverse cultures, abilities, and points of view.

6. Programs, activities, and services will cultivate student learning and success.
7. Public and private resources and partnerships will be identified, obtained, and utilized to advance the College Mission and Goals.

Effective October 13, 2015

## INSTITUTIONAL EFFECTIVENESS

The College has established an institutional effectiveness structure that demonstrates effectiveness through the assessment and improvement of mission goal outcomes at the institutional level, student learning outcomes at the program level and educational support outcomes at the unit level. Outcomes assessment information relevant to potential students is available from the specific academic program and may include performance indicators such as national examination pass rates, internship or clinical performance ratings, portfolio or capstone project assessment, job placement rates, etc. Students interested in this information should talk with the academic program chairperson.

## ADVISORY COMMITTEES

The College uses advisory committees to guide development and maintenance of educational programs. The committees are composed of public-spirited, knowledgeable citizens with expertise in business, industry, government, education, and health-related fields relevant to the education programs. Committee members meet periodically with department chairpersons, instructors, and deans. Advisory committees review curricula, arrange internships for students, and help the staff to assure that graduates will be prepared for entry into career fields.

## Services for Students

The Division of Student Affairs is a partner in the student-centered learning community at Delaware Technical Community College. The Division provides programs, activities and services that promote student learning, engagement, development and achievement of goals. Students are respected as individuals and supported in their aspirations for a better life.

## ADMISSIONS

Delaware Technical Community College has an open-door admissions policy limited only by the following criteria: a student must be a high school graduate or the equivalent, **or** at least eighteen years of age and able to benefit from instruction.

Before enrollment in credit courses, award-seeking students are required to submit proof of high school or equivalent graduation **or** demonstrate through approved means the ability to benefit from the College's instructional programs.

### High School Graduation And Ability To Benefit

Proof of high school graduation is required for award-seeking students who are applying for financial aid, the Student Success Equals Degree (SEED) Scholarship, and/or admission to academic programs with selective admission criteria (including competitive and wait list processes). The following proof of high school graduation is acceptable:

- High school transcript;
- Copy of high school graduation diploma or GED® credential;
- Letter from school district or state department of education attesting to high school graduation or attainment of GED® credential; or
- Secondary school completion credential for home school or proof of having completed a secondary school education in a home school setting that qualifies as an exemption from State compulsory attendance requirements.

As an alternative to providing proof of high school graduation or the equivalent (as described above), award -seeking students who are *not* applying for financial aid, the Student Success Equals Degree (SEED) Scholarship, and/or admission to academic programs with selective admission criteria may demonstrate the ability to benefit from the College's instructional programs by earning at least the minimum score set by Delaware Tech for the College Board Accuplacer test or the Scholastic Aptitude Test, that is required to place the student in the College's developmental education courses. Continued enrollment is contingent on the student earning grades as required by the Academic Standing Policy and the Academic Standing Policy for Developmental Education.

The College's open-door college admissions policy does not mean that every academic program/curriculum is open-door. Students must meet course pre-requisites before enrollment and program/curriculum specific criteria for program admission.

Admission requirements for non-award seeking students (high school students, visiting college students, and adults who want to enroll in credit courses for personal enrichment and lifelong learning) are delineated in separate policies.

### Operational Information

A high school diploma or GED® credential is one of the eligibility requirements for Federal financial aid. The College's Adult Basic Education program prepares students for GED® testing and/or to strengthen academic skills in preparation for college course placement.

Reasonable academic adjustments for testing are available for students with disabilities, which may include auxiliary aids and/or accommodations that do not alter a fundamental requirement of demonstrating college readiness.

## COLLEGE ADMISSIONS PROCEDURE

For admission to the College and for full access to services, applicants should plan to complete the admissions process at least 30 days before the first day of class. Applicants should review their selected program as shown in the College Catalog to determine if there are additional admission requirements related to their specific program of study. The following procedures for admission to any campus should be followed.

1. Submit an Application to the College. Applicants can apply on-line (<http://www.dtcc.edu/admissions-financial-aid/apply/admissions>), download a paper application (<http://www.dtcc.edu/admissions-financial-aid/apply/admissions>), or contact any campus for a paper application.
2. Request that your high school and/or college transcript or GED® certificate be sent immediately to the Admissions Office on the campus to which you are applying. Submit Advanced Placement Test scores from your high school, as well as Tech Prep verification, CLEP or DANTES scores. (See information above about this requirement.)
3. Demonstrate College readiness in one of the following ways:
  - a. Take the Accuplacer test for writing, reading, and math.
  - b. Provide a copy of your SAT test scores.

### Academic Program Admission Information

Delaware Tech is an open access college, but students must demonstrate academic readiness for college courses, satisfy course pre-requisites, and additionally be selected for admission into some academic programs that have limited seats and specific program admission criteria and requirements. Selection for admission is not guaranteed into these programs, which currently include Nursing, Allied Health, and several others such as Aviation Maintenance.

The academic programs with specific admission criteria, requirements and limited seats offer admission to qualified students through either a **Competitive Process** or a **Wait List Process**.

In the **Competitive Process**, qualified students are ranked on the basis of their performance in meeting admission criteria and completing admission requirements. Performance measures may include but not be limited to grades, course pass attempts, scores on national and college specific examinations, etc. Ranking is conducted each time program admission is open so a student's chances of admission change in relationship to the performance of other student applicants. In this process, program admission is not guaranteed to any student.

In the **Wait List Process**, qualified students are placed on a wait list for program admission after they meet all admission criteria and requirements at the minimal prescribed level. In this process, all qualified students who meet the admission criteria and requirements are eventually offered a seat in the program.

Additional typical requirements for program admission and for employment include the following: satisfactory criminal background check, possession of a valid social security number and legal status to work, satisfactory physical examination, the ability to perform physical tasks, negative drug testing, and no record of abuse.

Academic programs with competitive or wait list admission procedures provide this information on their specific web page.

Programs with limited seats and specific program admission criteria and requirements may afford preference to residents of the State of Delaware. Delaware residency is determined in accordance with the requirements contained in the College's Residency policy.

The President of Delaware Technical Community College is authorized to establish enrollment quotas for qualified candidates by county for these programs which are offered in one or two counties and not offered in the other county or counties. At no time shall the quota for the campus offering the program be less than two-thirds of the entering enrollment.

## ADVISORY STATEMENT

Delaware Technical Community College is an open admissions institution with degree, diploma, and certificate programs that require completion of courses, internships, practicums, clinical, and field work assignments and other experiential learning requirements. Approval of a student's placement in settings, such as health care facilities, schools and human services agencies, which provide these experiences is the prerogative of the organization providing the setting and not the College. Although requirements vary by organization and are constantly evolving, common criteria include:

- the lack of a criminal history including a review of the adult abuse and child protection registries;
- a satisfactory health exam including proof of immunizations and drug screenings;
- a valid Social Security number and proof of legal residency;
- and other applicable licensing/credentialing requirements.

Legal residency is required to work. Students should be aware that these requirements could limit or prevent their ability to complete an academic program or to find employment in the field. Students are responsible for all arrangements and costs associated with these requirements.

It is the student's responsibility to inquire about conditions and acceptance into courses and programs that may have special requirements. A student may seek the assistance of an Academic Counselor, Program Advisor or academic program Department Chairperson in identifying conditions of acceptance and enrollment in all programs and courses at Delaware Technical Community College.

Conditions of employment are established by potential employers and not by Delaware Technical Community College and such conditions of employment may include or exceed any or all of the above requirements.

## DEGREE-SEEKING STUDENT

Students who have completed the admission process and are enrolled in an associate degree, diploma or academic certificate program. This group includes students who intend to earn an award, but have an undeclared major. Award-seeking students must demonstrate college readiness or complete designated developmental education courses.

## NON-AWARD SEEKING STUDENT

A *non-award seeking student* is one who has not matriculated and enrolled in a Delaware Tech degree, diploma or credit certificate program, but is enrolling in credit courses. Non-Award Seeking includes visiting college and high school students, and students taking courses for their own enjoyment or professional enhancement. Visiting college students are assumed to be college ready. High school students must demonstrate college readiness through approved means. Non-award seeking students who are enrolling in courses for personal or professional enrichment do not have to demonstrate college readiness if they enroll in Listener status.

## **VISITING STUDENTS**

### **COLLEGE**

Students pursuing a degree program at another college or university who want to take Delaware Tech courses to transfer back to their home institution. This includes University of Delaware Associate in Arts students.

Students are not required to demonstrate college readiness because their advisement derives from their home institution. It is the visiting student's responsibility to obtain authorization from the home institution regarding the transferability and applicability of the Delaware Tech course to their curriculum.

### **HIGH SCHOOL**

High school rising junior or senior students may enroll in Delaware Tech courses with permission from their high school counselor/principal and their parents. Completion of the Early Enrollment form is required. In order to assure high school students are prepared to succeed at the college level, students must provide evidence of college readiness through the means approved by Delaware Tech prior to registration.

## **HIGH SCHOOL STUDENTS EARLY ADMISSIONS AND ENROLLMENT PROGRAMS**

Rising junior or senior high school students may enroll at Delaware Technical Community College while concurrently enrolled in high school. Students must complete the admission procedures and a Request for Early Admission/Enrollment form which verifies the approval of the parent/guardian and the high school principal or counselor.

The approval of the campus Dean of Student Affairs is required prior to acceptance into the College and course registration. Students must be college-ready for enrollment in college level courses and meet course pre-requisites. Students may enroll in developmental

courses with appropriate test scores for placement.

Students must register for the Delaware Tech course(s) and pay tuition and appropriate fees. Students must satisfy program specific requirements applicable to each selected college course.

### **Early Admissions**

A rising senior high school student can be admitted and enroll in a degree or diploma program at Delaware Technical Community College on a full or part-time basis.

### **Early Enrollment**

A rising junior high school student may enroll in up to two credit courses per semester at Delaware Technical Community College on a part-time basis. Specific programs, including over-subscribed programs, may be exempt from this policy.

## **INTERNATIONAL STUDENTS**

Delaware Tech welcomes members of the international community. Prospective "F-1" applicants who intend to apply for a student visa must obtain the "Guidelines for Prospective F-1 Students" packet from the Admissions Office. This packet contains information regarding eligibility for admission. Non-native English speakers must also demonstrate proficiency in English and/or be placed in appropriate English as a Second Language or developmental education courses. For more information, please visit the college web site at <https://www.dtcc.edu/admissions-financial-aid/apply/international-student>

## **PLACEMENT IN COLLEGE LEVEL COURSES**

Applicants seeking degrees, diplomas or credit certificates must provide evidence of readiness for college level courses. A variety of means are accepted including Accuplacer SAT, AP, TOEFL, IELTS, CLEP or DANTES scores; transfer of college credit for required courses, in reading, writing and mathematics; or possession of an associate or higher degree. Placement cut-off scores are available from the Campus Admissions Office.

The College Board's Accuplacer is a standardized test used for placement purposes only. Applicants are tested in reading, writing and mathematics. Results of the test are used to determine the level of courses at which students will begin. All students who are placed into a developmental education course are required to complete the course, SSC 100 First Year Seminar.

Applicants who have earned college credit for English or mathematics courses are exempt from part of or the

entire placement test. Exemption of placement testing will be based upon evaluation of an unofficial or official college transcript as described below:

(a) Transfer credit approved for a developmental reading, writing or math course waives the relevant Accuplacer test.

(b) Completion of a college level English course with a grade of "C" or better waives the Accuplacer Sentence Skills and Reading tests.

(c) Completion of a college level mathematics course with a grade of "C" or better waives the Accuplacer Arithmetic test.

(d) Completion of a college level algebra course with a grade of "C" or better waives the Accuplacer Algebra test only if the course is currently listed on the Delaware Technical Community College transfer matrix or permission to waive Algebra Accuplacer test is approved by the mathematics department chair.\*

\*While completion of college level courses provides evidence of college readiness, it does not guarantee transfer of credit. In addition, course pre-requisites must be observed. In order to evaluate transfer credit, an official transcript must be submitted.

New students are eligible to retake each portion/subject of the Accuplacer test one time, regardless of whether they have had developmental education instruction at the College. Readmitted students who have not demonstrated college readiness are allowed to take the Accuplacer once, as any new student would. They may also re-take it one time. The length of time between re-takes is the student's prerogative, but students should be strongly encouraged to prepare for the re-take attempt. The Dean of Student Affairs may approve additional re-take attempts in exceptional circumstances he/she believes warrants a re-take opportunity.

## ACADEMIC ADVISING

At Delaware Tech, academic advising is an essential part of the student's learning experience and a critical component of student success. Academic advising teaches the student to navigate the college experience, identify goals, understand program and course options, connect to campus resources and activities, and develop and implement strategies to successfully achieve the student's goals.

Faculty and staff throughout the College community collaborate to provide comprehensive academic advising. Initial advising is provided in the advising center. In addition, the student is assigned a program advisor based on the selected program of study. Together, the advisors and student develop a Student

Educational Plan focused on achieving the student's educational, professional, and life goals.

### *Advising Center*

The advising center provides general advisement by appointment and walk-in hours.

At the advising center, Academic Counselors work with the student to begin the Student Educational Plan.

The Academic Counselors guide the student in navigating the steps to enrollment, exploring career options, selecting a program of study, learning to access MyDTCC, selecting first semester courses, and identifying opportunities for engagement and strategies for success. The student is encouraged to visit an advisement center throughout the educational experience to clarify goals, answer questions, seek referrals, and discuss additional opportunities for success.

### *Program Advisor*

The program advisor provides ongoing advising specific to the student's area of study and collaborates with the student to continue to develop the Student Educational Plan. The program advisor mentors the student in evaluating career options, understanding program requirements, making effective decisions about course enrollment, developing professional behaviors, and reviewing progress towards goal achievement. Regular, ongoing meetings with the advisor are essential in helping the student achieve goals in a timely manner.

### *Student Educational Plan*

The Student Educational Plan (SEP) is an electronic tool that enables consistent communication between the College and the student to identify goals and develop comprehensive strategies to achieve them. The SEP is created at the initial meeting with an advisor. Each student is required to meet with a program advisor to continue developing the SEP before enrolling for a second semester. The student is expected to work with a program advisor on an ongoing basis to update the SEP. The SEP is accessible through Self-Service Banner.

### *Registering for Courses*

After selecting courses for the upcoming semester(s), the student must complete the registration process to enroll in the courses. Students may register online through Self-Service Banner or at the Registrar's Office. Designated registration periods for each semester are posted on the Academic Calendar. **Early registration is recommended for greater course availability.**

## REGISTRATION

*Registration* is the period of time set aside each semester during which students select and enroll in courses for the following semester(s). Students are encouraged to meet with their assigned program advisor as early as possible after admission, but must

meet with their program advisor to develop their individual Student Educational Plan prior to second semester enrollment. Students may obtain walk-in assistance from campus advisement centers. Students must have the signature of both the advisor and department chairperson to register for more than 21 credits per semester. Students are encouraged to register as early as possible to ensure course availability. Students may register in-person or via the College's website at [www.dtcc.edu/register](http://www.dtcc.edu/register).

## **FACILITIES AND SERVICES FOR STUDENTS WITH DISABILITIES**

Delaware Technical Community College is committed to complying with the Americans with Disabilities Act of 1992. The College provides students with disabilities, resources and support to assist in their academic success by engaging in an interactive process with each student. Each campus has a professional staff member assigned to provide necessary resources and services to students who have unique needs due to their disabilities. Faculty and staff work cooperatively to assist students with special needs in their educational endeavors and adjustment to the campus community. Each of the campuses is architecturally accessible to disabled students. Barrier-free restroom, telephone and eating facilities are provided at all campuses. Automatic doors and elevators are installed in appropriate areas. Reasonable academic accommodations will be provided for students needing specific assistance. Students are urged to request resources and services prior to the beginning of the semester. The College requires appropriate documentation of the need for assistance. Prospective students are encouraged to visit the campus to become familiar with the campus and meet the support staff prior to making their decision to apply and enroll.

Information for requesting reasonable accommodations and building a plan of academic support can be found on the College web page at <http://www.dtcc.edu/student-resources/learning-support/disability-services>

## **CAREER PLANNING AND PLACEMENT**

Career planning and placement information is available to help students plan for the future. The Career Center is a useful resource for students who are trying to decide upon a major, find a job or internship, write a resume or improve interviewing skills.

Students may use a computer based career planning program that includes information concerning job duties and responsibilities, opportunities for growth and advancement, and salary structures in career fields of their interest. In addition, students may review catalogs

of area institutions, view videos on interviewing techniques, receive information regarding resume and cover letter development and protocol, and participate in mock job interviews with the career counselors. For more information, students may visit the campus Career Center or the web site at <http://www.dtcc.edu/student-resources/career-services>

## **HOUSING & PARKING**

The College does not maintain student housing of any type; therefore, the College cannot accept responsibility for students housed locally. Parking facilities are available at each campus on a first-come first-serve basis. Parking for students with disabilities is also provided.

## **CAMPUS PUBLIC SAFETY**

Delaware Technical and Community College encourages each member of the campus community to report any crimes or criminal activity to the Public Safety Department. The Campus Public Safety officers are empowered with the authority and responsibility to provide immediate assistance with safety and security issues. The Public Safety Department has a close working relationship with local law enforcement agencies. The local and state police will be called for assistance when needed.

## **NOTICE OF AVAILABILITY OF ANNUAL SECURITY REPORT**

Delaware Technical Community College maintains an annual security report as required by the Clery Act. The College's annual Clery Act report contains information on campus security and personal safety, including crime prevention, the law enforcement authority of College public safety officers, crime reporting policies, certain specific College policies, and other important matters about security on campus. The report also contains statistics for the three previous calendar years on crimes that were reported to have occurred on campus, in certain off-campus buildings or property owned or controlled by the College, and on public property within or immediately adjacent to and accessible from the campus.

The College's annual Clery Act report is available on the Delaware Tech website at <https://www.dtcc.edu/about/public-safety/campus-crime-statistics>. A printed report may also be obtained free of charge from the Office of Public Safety at each campus upon your request.

## CONDUCT

Members of the College community have an obligation to participate in the life of the College in a responsible manner. Students are citizens as well as members of the College community. As citizens, they have the rights that other citizens have such as freedom of speech, peaceful assembly and petition. As members of the College community, students remain citizens with responsibilities and duties commensurate with their rights and privileges. Further information regarding the Board of Trustees' policy on student conduct and student rights may be found in the Student Handbook. The Student Handbook is available online at [www.dtcc.edu/handbook/](http://www.dtcc.edu/handbook/)

## DRUG-FREE SCHOOL AND WORKPLACE POLICY

Delaware Technical Community College believes that illegal drugs and abuse of alcohol have no place in the College environment. Congress passed the Drug-Free Workplace Act of 1988, requiring the certification of federal grantees of a drug-free workplace; and the Drug-Free Schools and Communities Act Amendments of 1989, mandating the certification of adoption and implementation of programs to prevent unlawful possession, use or distribution of illicit drugs and alcohol by students and employees. The College supports these Acts.

For these reasons, the College has adopted the following regulations:

(a) The unauthorized and/or unlawful manufacture, distribution, dispensing, possession or use of a controlled substance or alcohol is strictly prohibited in all facilities of the College, in all places where its employees/students work/attend, including all State-owned vehicles, and as any part of the College's activities. A controlled substance is one which appears in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812). As a condition of employment/enrollment, all employees/students shall abide by this prohibition and notify the College of any criminal drug or alcohol statute conviction for a violation of this Policy as provided by paragraph (b) below. Violation of such prohibition shall result in action against the employee/student, as set out in section (g) below, which shall include action up to and including termination/expulsion, and/or satisfactory participation in an approved drug or alcohol abuse assistance or rehabilitation program. Participation in such a program shall not be paid for by the College, but may be covered by a(n) employee's/student's health insurance policy. [Appendix A](#) contains a description of Federal trafficking (distribution) penalties for substances covered by the Controlled Substances Act. [Appendix B](#) contains examples of State penalties for the unlawful use,

possession, or distribution of drugs or alcohol.

All violations of this Policy shall be reported to the College President, or his/her designee, who shall report the violation to the appropriate law enforcement authority. Action shall be taken in all cases of a chargeable offense under the provisions of the applicable State law or comparable Federal law; however, a conviction of the charged offense shall not be necessary to take action against the employee/student for a violation of this Policy. The employee/student against whom such an action is taken shall be entitled to due process through the rules and regulations of Delaware Technical Community College.

(b) All employees/students shall notify the College President in writing of any criminal drug or alcohol statute conviction for a violation occurring in any facility or on the property of the College, or at any College activity, no later than five days after such conviction. Failure of the employee/student to make such a notification shall lead to termination/expulsion from the College. Within ten days of receiving notice of any employee convicted as described above, the College shall notify the federal agencies providing grants to and through the College in accordance with the Drug-Free Workplace Act of 1988.

(c) Within thirty days of receiving notice of any employee/student convicted as described in section (b), the College will:

1. Take appropriate action against such a(n) employee/student, up to and including termination/expulsion; or
2. Request such employee/student to participate satisfactorily in a drug or alcohol abuse assistance or rehabilitation program approved for such purposes by a federal, State, or local health, law enforcement, or other appropriate agency.

Such action may be taken by the College prior to conviction.

(d) The College shall give each employee/student a copy of the statement set out in the sections (a), (b) and (c) above, and post it prominently throughout the College. To meet requirements of the Drug-Free Workplace Act of 1988, each employee shall sign a copy of the statement; said copy shall be placed in the employee's payroll file in the Office of the President.

(e) Each campus of the College will develop and implement a program to inform employees/students of:

1. The dangers of drug abuse or alcohol consumption;
2. The College's policy of maintaining a drug- and alcohol-free environment;



3. Any available drug or alcohol abuse counseling, rehabilitation, and employee assistance programs; and
4. The penalties that may be imposed upon employees/students for drug or alcohol violations occurring in any facility or on the property of the College, or at any College activity.

(f) The College shall make a good faith effort to continue to maintain a drug- and alcohol-free environment through the implementation of this Policy, and ensuring that all new employees/students are informed of the Policy through the measures set out in sections (d) and (e).

(g) Delaware Technical Community College employees/students who violate this Policy shall be subject, at a minimum, to the following penalties:

4. Third offense of violations of Policy 2 Termination.  
Employee: Termination.  
Student: Expulsion

5. Unlawful possession of a controlled substance or a counterfeit controlled substance, in an amount which is beyond that typical for immediate personal use.  
Employee: One month suspension without pay and mandatory participation in drug abuse program.  
Student: One month suspension from classes and mandatory participation in drug abuse program.

6. Unlawful delivery or distribution of a hypodermic syringe.  
Employee: One month suspension without pay and mandatory participation in drug abuse program.  
Student: One month suspension from classes and mandatory participation in drug abuse program.

7. Unlawful delivery, distribution, or manufacture of drug paraphernalia.  
Employee: One month suspension without pay and mandatory participation to drug abuse program.  
Student: One month suspension from classes and mandatory participation in drug abuse program.

8. Unlawful delivery or distribution of a controlled substance, of a counterfeit controlled substance or of a noncontrolled substance under the representation that the substance is a narcotic or non-narcotic controlled substance in an amount that is typical for immediate personal use.  
Employee: One month suspension without pay and mandatory participation in drug abuse program.  
Student: One month suspension from classes and mandatory participation in drug abuse program.

Violation

Minimum Penalties

1. Unlawful possession, use or consumption of a controlled substance or a counterfeit controlled substance, in an amount that is typical of immediate personal use.

Employee: Three days suspension without pay and/or participation in drug abuse program.  
Student: Three days suspension from classes and/or rehabilitative referral to a drug abuse program

2. Unlawful possession or use of a hypodermic syringe or of drug paraphernalia.

Employee: Three days suspension without pay and/or participation in drug abuse program.  
Student: Three days suspension from classes and/or rehabilitative referral to a drug abuse program

3. Second offense of violation 1 or 2 above.

Employee: One month suspension without pay and mandatory participation in drug abuse program.  
Student: One month suspension from classes and mandatory participation in drug abuse program.

<p>9. Unlawful delivery or distribution of a counterfeit substance, of a counterfeit controlled substance and a noncontrolled substance under the representation that the substance is a narcotic or nonnarcotic controlled substance in an amount that which is typical for immediate use.</p>	<p>Employee: Termination Student: Suspension without pay and/or participation in drug abuse program. Student: Three hours suspension from classes and mandatory participation in drug abuse program.</p>	<p>15. Unauthorized and/or unlawful sale or other transfer of intoxicating beverages.</p>	<p>Employee: Up to five days suspension without pay and/or participation in alcohol self-help program. Subsequent violations may result in termination. Student: Up to five days suspension from classes and/or rehabilitative referral. Subsequent violations may result in expulsion.</p>
<p>10. Second offense of violations 5 through 9.</p>	<p>Employee: Termination. Student: Expulsion.</p>	<p>16. Unauthorized and/or unlawful sale or other transfer of intoxicating beverages.</p>	<p>Employee: Up to five days suspension without pay and/or participation in alcohol self-help program. Subsequent violations may result in termination. Student: Up to five days suspension from classes and/or rehabilitative referral. Subsequent violations may result in expulsion.</p>
<p>11. Unlawful delivery or distribution to a minor of a hypodermic syringe, of drug paraphernalia, or of any amount of a controlled substance, a counterfeit controlled substance, or a noncontrolled substance under the representation that the substance is a narcotic or nonnarcotic controlled substance.</p>	<p>Employee: Termination Student: Expulsion</p>	<p>(h) A description of the health risks associated with the use of illicit drugs is outlined in <a href="#">Appendix C</a>. A description of the health risks associated with the abuse of alcohol is as follows:</p>	
<p>12. Aggravated Possession or Trafficking as defined under state or federal law.</p>	<p>Employee: Termination Student: Expulsion</p>	<p>Alcohol consumption causes a number of marked changes in behavior. Even low doses significantly impair the judgment and coordination required to drive a car safely, increasing the likelihood that the driver will be involved in an accident. Low to moderate doses of alcohol also increase the incidence of a variety of aggressive acts, including spouse and child abuse. Moderate to high doses of alcohol cause marked impairments in higher mental functions, severely altering a person's ability to learn and remember information. Very high doses cause respiratory depression and death. If combined with other depressants of the central nervous system, much lower doses of alcohol will produce the effects just described.</p>	
<p>13. Failure to report conviction pursuant to section (b) of this Policy.</p>	<p>Employee: Termination Student: Expulsion</p>	<p>Repeated use of alcohol can lead to dependence. Sudden cessation of alcohol intake is likely to produce withdrawal symptoms, including severe anxiety, tremors, hallucinations, and convulsions. Alcohol withdrawal can be life threatening. Long-term consumption of large quantities of alcohol, particularly when combined with poor nutrition, can also lead to permanent damage to vital organs such as the brain and the liver.</p>	
<p>14. Intoxication from use of alcohol.</p>	<p>Employee: Up to five days suspension without pay and/or participation in alcohol self-help program. Subsequent violations may result in termination. Student: Up to five days suspension from classes and/or rehabilitative referral. Subsequent violations may result in expulsion.</p>	<p>Mothers who drink alcohol during pregnancy may give birth to infants with fetal alcohol syndrome. These infants have irreversible physical and mental</p>	

abnormalities. In addition, research indicates that children of alcoholic parents are at greater risk than other youngsters of becoming alcoholics.

(i) Employees and students are encouraged to review [Appendix D](#) for a listing of providers offering drug or alcohol counseling, treatment, or rehabilitation services. In addition, employees enrolled with the State of Delaware's health care provider are eligible to receive drug or alcohol treatment services through the Employee Assistance Program. Employees may contact the Human Resources Division within the Office of the President for more information regarding the Employee Assistance Program.

- [Appendix A](#)
- [Appendix B](#)
- [Appendix C](#)
- [Appendix D](#)

## TOBACCO-FREE POLICY

In order to ensure a safe, healthy environment, all Delaware Tech facilities are tobacco free for employees, students, and visitors effective January 1, 2011. The use of all tobacco products is prohibited within the boundaries of all College locations including all buildings, facilities, indoor and outdoor spaces and grounds owned, rented, operated, and/or licensed by the College. This policy applies to parking lots, walkways, sidewalks, sports venues, State vehicles and private vehicles parked or operated on College property. For the purposes of this policy, tobacco is defined as any type of tobacco product including, but not limited to: cigarettes, cigars, cigarillos, electronic cigarettes, pipes, bidis, hookahs, smokeless or spit tobacco or snuff.

The enforcement of this policy is intended to be educational, but repeat violators will be subject to disciplinary action as outlined in the Personnel Policy Manual, Section XII, Conduct and Corrective or Disciplinary Action.  
(Board of Trustees, 9/14/10)

## HEALTH SERVICES

Health services are limited to basic first aid and early critical care such as CPR and use of an AED. Emergency Medical Services (911) will be called for assistance when the injury or illness is of a serious nature. If the injured/ill student has provided a designated emergency contact, the College will attempt to contact that person upon the request of the student or if the student is unable to make a request.

## STUDENT ACTIVITIES

Delaware Technical Community College provides a balanced student activities program which contributes significantly to the total educational experiences of its students. The Student Activities program is designed to foster the intellectual, social, emotional and physical development of students through participation in educational, cultural, recreational and athletic activities. These activities are planned by the Student Activities Coordinator and/or student organizations with funds provided by the Student Services fees and individual club fundraisers. Student activities provide opportunities for development of leadership skills, social interaction, relaxation, and improved physical fitness.

The general administrative responsibility for the Student Activities program rests with the Dean of Student Affairs at each campus. Details regarding specific activities may be found in the campus Student Handbook. The Student Handbook is available online at [www.dtcc.edu/handbook/](http://www.dtcc.edu/handbook/)

## ATHLETIC PROGRAM

Delaware Technical Community College is a member of the National Junior College Athletic Association (NJCAA). Eligibility rules, codes of conduct, substance abuse policies as well as gender equity policies are mandated or suggested by the NJCAA.

Eligibility is reviewed both on the national and regional level. Problems with eligibility or ethical behavior are brought before the Regional Standards and Ethics Committee.

All high school graduates are eligible for intercollegiate competition. Once a student begins taking college courses, his/her eligibility is determined by the number of college credit hours attempted and the grades earned in those courses. Transfer students from other colleges must produce a college transcript to determine eligibility.

Any additional information concerning athletic matters (forms, scholarships, eligibility, etc.) should be referred to the Campus Athletic Director.

## JOB PLACEMENT FOR GRADUATES

Delaware Technical Community College measures its success in large part by the success of its graduates' successful entry into career field employment. Graduate job placement is a "critical effectiveness indicator" that is annually assessed by the College. Academic programs are developed and maintained in consultation with advisory committees that include employers.

Academic counselors and faculty meet with business and industry representatives to stay abreast of job opportunities and refer students to potential employers. They also prepare students for job seeking by assisting with skills such as interview techniques and resume preparation. Annual placement reports document graduates' employment.

## TRANSCRIPTS

A transcript is an official historical academic record of all courses for which a student has registered. A copy of this record may be obtained from the Registrar's Office.

Requests for Delaware Technical Community College Official Transcripts should be made on a Transcript Request Form or by personal letter to the Registrar. *Telephone requests will not be honored.* Normal time for processing transcript requests is two working days or less. Every effort will be made to accommodate verifiable emergency requests that day except during peak registration days, end of term grade processing and graduation. The Registrar's Office cannot issue transcripts from other colleges or high schools.

## TRANSFER OUT AND ARTICULATED PROGRAMS

The College has articulation agreements with universities and colleges in specific programs. These agreements enable a student to transfer to the senior institution as a junior, provided the required courses have been completed and the appropriate Cumulative Grade Point Average (CUM GPA) has been achieved as required by the receiving institution. The student must apply to the senior institution and complete all required admissions processes. Students need to see their advisor for information on articulation agreements called "Connected Degree Programs." Connected Degree Sheets which summarize these program articulation opportunities are available on campus and on the college website at [www.dtcc.edu/connecteddegree/](http://www.dtcc.edu/connecteddegree/)

The Student Affairs Division will assist students in making transfer inquiries, obtaining information, and completing applications to other colleges and universities.

A transfer matrix outlining pre-approved specific course by course transfers with Delaware and a variety of out-of-state institutions is available on the College's website.

## FAMILY EDUCATIONAL RIGHTS AND

## PRIVACY ACT OF 1974, AS AMENDED

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the College receives a request for access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The College official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

A student who wishes to ask the College to amend a record should write the College official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed.

If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the College discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent. Some, but not all, of the exceptions are explained in this notice.

The College discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic or research, or support staff position (including campus public safety personnel and health staff, if any); a person or company with whom the College has contracted as its agent to provide a

service instead of using College employees or officials (such as National Student Clearinghouse, an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. Upon request, the College also discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the College.

FERPA also allows the College to disclose appropriately designated "directory information" without written consent, unless the student has advised the College to the contrary in accordance with the procedures set forth in this notice. The primary purpose of directory information is to allow the College to include this type of information from your education records in certain school publications. Examples include:

A playbill, showing a student's role in a drama production;  
The annual yearbook;  
Honor roll or other recognition lists;  
Graduation programs; and  
Sports activity sheets showing weight and height of team members.

Directory information, which is information that is generally not considered harmful or an invasion of privacy if released, can also be disclosed to outside organizations without a student's prior written consent. If a student does not want the College to disclose directory information from the student's education records without prior written consent, the student must notify the Registrar of the campus in writing within 30 days of the issuance of this notice.

Delaware Technical Community College defines directory information as follows:

- Name
- Address
- College E-mail Address
- Field of Study
- Full- or Part-time Enrollment Status
- Dates of Attendance
- Degrees and Awards
- Honors (President's List, Dean's List, Academic Recognition, and Honor Societies)
- Participation in Officially Recognized

Activities and

- Sports
- Date of Birth
- Most Recent Previous High School Attended
- Weight and Height of Athletes
- Photograph\*

\*Use of Student Photographs: Photographers employed or contracted by the College regularly take photographs of students to illustrate or describe various aspects of the College and campus life. These photographs will be taken at public venues such as athletic events, concerts and graduation, and/or in other organized campus photo shoots where the subjects will have given verbal consent to be photographed. Individuals who are photographed while attending a public event or who verbally agree to participate in a photo shoot will be understood to have authorized Delaware Technical Community College to use their likeness in print and electronic materials to promote the College. The College will retain the usage rights to the photographs in perpetuity.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-5901

## TUTORING

Tutoring is a service designed to help students master a subject, prepare for tests, and sharpen their skills in order to become independent learners. Tutoring services are free for all students and are provided to the extent of campus resources.

Some departments recommend students to work as Peer Tutors to provide extra help for students in various courses. Advanced students work with individuals or small groups to increase understanding of course material.

Comprehensive tutoring services are available during the fall and spring semesters. Students generally receive up to one hour of tutoring per course each week, as necessary. Limited tutorial services may be provided during the summer sessions.

## PRIORITY OF SERVICE POLICY FOR VETERANS AND ELIGIBLE SPOUSES

The U.S. Department of Labor (USDOL) provides certain funds to Delaware Technical Community College to provide employment and training services to eligible residents and workers. As a condition to receiving those funds, priority of service (POS) shall be given to veterans and eligible spouses in training and placement services. In accordance with the implementation of the Veterans' Priority Provisions of the "Jobs for Veterans Act" (PL107-288), qualified veterans and eligible spouses will receive priority referral to services over non-veterans as determined by each program's mandatory eligibility criteria, if any. Veterans and eligible spouses must meet all eligibility and program requirements for participation in order to receive priority for a program.

The veteran or eligible spouse shall be identified at the point of entry, whether in person or virtual, so that the priority of service may be implemented over the full range of services available including, but not limited to registration, training and placement. Veterans shall be asked to self-identify upon application.

Priority of service means that a covered person receives access to the service or resource earlier in time than a non-covered person or if the service or resource is limited, the covered person receives access instead of or before a non-veteran.

### Eligibility

For purposes of this policy only, the following definitions will apply.

Veteran: a person who served in the active military, naval, or air service, and who was discharged or released therefrom under conditions other than dishonorable, as specified in 38 U.S.C. 101(2). Active service includes full-time duty in the National Guard or a Reserve component, other than full-time duty for training purposes.

Eligible Spouse: The spouse of any of the following:

- (1) Any veteran who died of a service-connected disability;
- (2) Any member of the Armed Forces serving on active duty who, at the time of application for the priority, is listed in one or more of the following categories and has been so listed for a total of more than 90 days:
  - (i) Missing in action;
  - (ii) Captured in line of duty by a hostile force; or
  - (iii) Forcibly detained or interned in line of duty by a foreign government or power;

(3) Any veteran who has a total disability resulting from a service-connected disability, as evaluated by the Department of Veterans Affairs;

(4) Any veteran who died while a disability, as indicated in (3) above, was in existence.

The status of a veteran or an eligible spouse can be verified by referring a variety of official documents, including, but not limited to:

- A DD 214 (issued following separation from active duty);
- An official notice issued by the Department of Veterans Affairs that establishes entitlement to a disability rating or award of compensation to a qualified dependent;
- An official notice issued by the Department of Defense that documents the eligibility of an individual, based on the missing or detained status of that individual's active duty spouse; or
- An official notice issued by a State veterans' service agency that documents veteran status or spousal rights, provided that the State veterans' service agency requires Federal documentation of that information.

### Implementation

Priority of service shall be provided in course registration and in acceptance into selective admission programs with waiting list and competitive ranking admission procedures.

Admission - Veterans and eligible spouses will be asked to self-identify on the application to the College. The academic counselor who provides ancillary services to veterans will contact the veteran/spouse to discuss priority of service and request documents to verify eligibility, if applicable.

Course Registration - Online and in-person registration shall open one day earlier for eligible veterans and spouses than for other students.

Admission into Programs with Waiting Lists - Eligible veterans and spouses who have met all the program admission requirements shall be placed at the top of the waiting list and admitted in the next program cohort offered seats.

Admission into Programs with Competitive Ranking - Each program shall establish and publish the program admission minimum score/requirements for eligible veterans and spouses to be admitted to the program, independent of the regular competitive ranking admission process. The minimum score/requirements shall be determined based on the program's student

success data. As expectations for the workforce and curriculum requirements change, changes may be made to the minimum score/requirements established for priority of service. Eligible veterans and spouses who meet that minimum shall be admitted.

## Financial Information

### TUITION

#### (for the 2015-2016 academic year)

**In-State Students** (Day and Evening) \$135.75 per credit hour per semester for all catalog courses. Maximum tuition for full-time students--\$1,629 per semester, 12 credits or more.

**Out-of-State Students** (Day and Evening) \$339.50 per credit hour per semester for all catalog courses. Maximum tuition for full-time students--\$4,074 per semester, 12 credits or more.

Students registered for 12 credit hours per semester or the equivalent are considered "full-time" for purposes of tuition payments.

This policy applies equally to students who take courses on more than one campus.

Tuition for non-credit courses will be charged on a per course basis as stated in the Workforce Development and Community Education Division brochure or other literature describing the course.

A student may pay tuition at any of the campuses.

All tuition and fees are accepted pending final audit by the Business Office.

All tuition and fees are subject to revision by the Board of Trustees of the College.

The tuition and fees paid by any student, other than a non-immigrant alien within the meaning of paragraph(15) of subsection (a) of Section 1101 of Title 8 of the U. S. Code, who meets all the following requirements shall be paid at a rate or charge no greater than that imposed for students who are Delaware residents if such student:

- a. Attended a high school located within the State of Delaware for two or more years; and
- b. Graduated from a high school located in the State of Delaware or received a General Equivalency Diploma issued within the State of Delaware and
- c. Has applied for attendance within five years of receiving a high school diploma or General Equivalency Diploma.

A student without lawful immigration status shall also

be required to file an affidavit stating that the student has filed an application to legalize his or her immigration status, or will file such an application as soon as he or she is eligible to do so.

Members of the United States Armed Forces readmitted under 34 C.F.R. §668.18, or any superseding regulation, into the same program the student was admitted at the time of entry into military service shall be charged the tuition and fees that were in effect when the student left to serve, unless any increase of the prior amount is covered by the student's service member educational benefits. Members of the United States Armed Forces readmitted under 34 C.F.R. §668.18, or any superseding regulation, into a different program than that which the student was previously admitted shall not be charged tuition and fees in excess of what the College charges other students for the same program. The tuition benefits provided herein shall only apply for the first academic year after readmission. All terms in this Policy shall be construed as set forth by federal law.

### SENIOR CITIZEN TUITION POLICY

Residents of the State of Delaware who are 60 years old or older may enroll at Delaware Tech tuition free, in any catalog course, technical or related studies, day or evening. Delaware Tech/University of Delaware AA Program credit courses are also included. Special interest courses are excluded. Persons eligible for this privilege are not required to pay course registration or other related fees. They shall pay the cost of all books, supplies, laboratory/ material fees, and shop fees. The Student Services fee is waived. This privilege may be limited or denied in courses for which selective admissions criteria have been established. This privilege is granted on a space-available basis.

### RESIDENCY POLICY

1. Residency status is determined when a student first registers at the College and when reentering after an absence. Students whose in-state status (see items 3. and 4. below) changes will be charged out-of-state tuition when they re-register at the College.
2. A student may have his/her residency status changed for a future semester's registration period if the student provides documentation that he/she has met the requirements in items 3. and 4. below.
3. Students 18 years old or older are considered to be Delaware residents if one of the following conditions are met immediately prior to registration:
  - Delaware has been their domicile and continuous residence for at least six (6)

months.

- They have been employed (full-time) at least 30 hours per week in Delaware for at least six (6) consecutive months, or
- They were dependents of their parents or guardians, who met the Delaware residency requirements above. The student must have been a dependent, as defined by the Internal Revenue Service, in the tax year immediately preceding the current College fiscal year. A copy of IRS Form 1040 or Form 1040A, or a state income tax return showing the student is a dependent, is the only acceptable documentation.

4. Students who are minors (under 18 years old) are considered to be Delaware residents if their parent or guardian meet one of the following conditions immediately prior to registration:

- Delaware has been their domicile and continuous residence for at least six (6) months, or
- They have been employed full-time in Delaware for at least six (6) consecutive month

5. Conditions for foreign students:

- Students who are permanent or temporary resident aliens are considered to be Delaware residents if they meet the residency requirements in items 3. and 4. above. The six-month period of domicile and continuous residence commences when the student has received an INS Form I-797 indicating receipt of an application for such immigration status.
- A student who has sought the protection of the United States by applying for refugee, asylee, parolee or temporary protected status may be entitled to in-state status if such student otherwise qualifies for in-state tuition based on six months domicile and continuous residence in Delaware from the date of the applicable INS Form I-797 or at least six (6) consecutive month's full-time employment in Delaware immediately prior to registration.
- A student who is present in the United States and has an immigration status that does not require such student to maintain a foreign domicile as a condition of immigration status may acquire in-state status if such student otherwise meets the six (6) month domicile and continuous residence and/or six (6) consecutive month full-time employment in Delaware requirement immediately prior to registration.

- A student with an F, J or M visa or who otherwise must not abandon or has no intention of abandoning his or her residence in a foreign country will not be afforded in-state status.

6. Documentation establishing residency or Delaware employment shall be required for all new or reactivated students.

A. Documentation of residency shall require one of the following:

- Delaware driver's license or Delaware identification card dated at least six months prior registration.
- A copy of a Delaware Resident Income Tax Form in the name of the student or the student's parent, legal guardian or spouse with whom the student resides listing a date of residency at least six (6) months prior to registration.
- Copies of utility bills in the name of the student or the student's parent, legal guardian or spouse with whom the student resides for six (6) consecutive months prior to registration.
- A copy of a fully executed lease, HUD-1 settlement statement or deed in the name of the student or the student's parent, legal guardian or spouse with whom the student resides dated at least six (6) months prior to registration.
- Copies of bank statements in the name of the student or the student's parent, legal guardian or spouse with whom the student resides for six (6) consecutive months prior to registration and bearing a Delaware address (other than a post office box.)
- Copies of official documents confirming the receipt of any type of social service assistance from the State of Delaware or any political subdivision thereof (i.e. WIC benefits, food stamps, Medicaid, etc.) in the name of the student or the student's parent, legal guardian or spouse with whom the student resides for six (6) consecutive months prior to registration.

B. Documentation of Delaware employment shall require all of the following:

- Pay stubs or other official written confirmation from an employer demonstrating that the student or the student's parent, legal guardian or spouse with whom student resides has worked an average of at least 30 hours per week during the six (6) consecutive months prior to registration. A letter from the employer on the employer's letterhead shall be sufficient.



- IRS Form W-2 showing payment of Delaware income taxes or a copy of any state income tax return for the immediately preceding tax year showing the payment of income taxes to the State of Delaware.
7. Residency status shall be determined by the Registrar's Office at the student's home campus. Chief Legal Counsel may approve the payment of in-state tuition based upon documentation that is not listed in paragraph 6. when he or she determines that such documentation is authentic and represents proof of Delaware residency or employment.
  8. This policy is primarily for tuition payment purposes and is not applicable for determination of student financial aid eligibility.
  9. Implementation details for this policy may be specified in the College's Manual of Procedural Guidelines.
  10. Active duty military personnel and their dependents stationed in the State of Delaware are exempt from the six (6) month residency requirement and are considered in-state residents for tuition purposes.

In addition, military, civilian and contractor personnel and their dependents that are reassigned to Aberdeen Proving Ground, Maryland from Ft. Monmouth, New Jersey on or before September 15, 2011, and chose to reside in Delaware shall be exempt from the six (6) month residency requirement and shall be considered in-state residents for purposes of tuition.

11. Veterans or related individuals are exempt from the six (6) month residency requirement above and are considered in-state residents for tuition purposes so long as the student:
  - Has a residence in Delaware (regardless of duration); and
  - Receives Montgomery and post 9/11 GI Bill educational assistance; and
    - Enrolls within 3 years of student's discharge after student serving 90 days or more on active duty; or
    - Enrolls, using transferred entitlement, within 3 years of the transferor's discharge after transferor serving 90 days or more on active duty; or
    - Enrolls within 3 years of an active duty Service member's death in the line of duty after serving 90 days or more in the case of Surviving Spouses or Children under the Fry Scholarship; or
    - Remains continuously enrolled after initially meeting the requirements of this subparagraph and is using assistance provided under Chapter 30 or 33 of Title 38 of the United States Code.

- The foregoing is adopted to comply with Section 702 of the Veterans Access, Choice and Accountability Act of 2014 in order to prevent disapproval of courses by the Secretary of the United States Department of Veterans Affairs.

12. Contracts written with businesses or other groups sending their employees or members to the College may include a provision for the contracting party to be charged in-state tuition.

## INSTALLMENT PAYMENT PLAN

### Fall and Spring Semesters:

Students may use the College's Installment Payment Plan. The amount of the first payment is equal to one-third of the total tuition and course fees. The second installment payment is equal to one-half of the remaining account balance, and it is due four (4) weeks from the beginning of the semester. The third and final installment payment is due eight (8) weeks from the beginning of the semester, and it is equal to the remaining account balance.

### Summer Semester:

Students may use the College's Summer Installment Payment Plan. The first installment payment is due at the time of registration. The amount of this payment is equal to one-third of the total tuition and course fees. The second installment payment is equal to one-half of the remaining account balance, and it is due three (3) weeks from the beginning of the semester. The third and final installment payment is due six (6) weeks from the beginning of the semester, and it is equal to the remaining account balance.

**Important:** Final payment must be made prior to the first day of registration for the following semester. A data hold will be placed on any student account that has a past due balance, and delinquent accounts are referred to a third party collections agency.

## TUITION/FEE ADJUSTMENT POLICY COURSE OR SEMESTER WITHDRAWAL

To receive an adjustment for a course drop, the student must first officially drop the course. See Course Drop procedure or Registrar for details on officially dropping a course. To receive an adjustment for a semester withdrawal, the student must first officially withdraw from all courses. Students will not be charged any tuition or refundable fees (lab, technology support and

telecourse) for courses dropped during the first week of the session. Students will be responsible for 50% of the assessed tuition and refundable fees for courses dropped during the second week of the session. After the second week, any courses dropped are not refundable. The following fees are non-refundable: registration, late registration, student services, credit by examination, and evaluation of work experience. The official drop/add/withdrawal period for each session is listed on the academic calendar.

## EARNED TITLE IV FINANCIAL AID

Students who receive federal financial aid are eligible for payment according to their enrollment status and attendance. Students who attend more than 60 percent of a semester (approximately 9.6 weeks of a 16 week semester) are eligible to receive 100 percent of their payment. Students who attend 60 percent or less of a semester are eligible to receive a percentage of their payment, depending on the date of withdrawal from all classes. This percentage payment is done according to the Return of Title IV Funds Regulations. (34 CFR 668.22)

1. If the amount of earned federal financial aid is not adequate to pay institutional charges, the student is liable for any outstanding debt the student may owe the college. In addition, the student may be responsible for repaying a portion of his/her federal financial aid to the federal government.
2. Earnings from the Federal Work Study Program are not used in this calculation. The student is paid what he/she earns.
3. Students receiving loans must maintain half-time enrollment (at least 6 credits) in order to receive payment of the loan.
4. Basic-level courses (courses beginning with 00) do not count toward enrollment status for Title IV Funds.

This policy applies to federal financial aid money only and will be the policy applied to students who withdraw from all classes.

The date of withdrawal from all classes that will be used in the calculation is the date that the Registrar's Office processes the official College Withdrawal Form used by students who wish to withdraw from all their classes during the semester. Students must contact the Registrar's Office to obtain this form. The withdrawal date for students who drop all their classes without using the official College Withdrawal Form will be the last documented dates of attendance or the mid-point (50% point) of the semester without documentation. Withdrawing from the College may affect a student's eligibility for

future financial aid funding. Federal law requires that students who receive federal financial aid must attend the classes for which they register in order to receive financial aid payment. Students who never attend a class will not receive any federal financial aid relating to that class, even if an official drop/withdrawal procedure is completed. The complete policy and additional information about financial aid are available on the Delaware Tech Web page, [www.dtcc.edu/financialaid](http://www.dtcc.edu/financialaid), that provides ongoing updates to all financial aid opportunities and the College's refund policies.

## BOOKS & SUPPLIES

Books and supplies vary in cost according to course requirements. Instructors will inform students about texts, supplies and materials required in each course. This information is also available on the College's website.

## MALPRACTICE INSURANCE

Students enrolled in allied health and nursing programs are required to purchase malpractice insurance through Delaware Technical Community College.

## STUDENT SERVICE FEE

For students taking credit courses, a nonrefundable fee of \$20 per semester for full-time students and \$10 per semester for part-time students will be charged by each campus. Senior citizens are exempt from paying this fee. The Delaware Tech/University of Delaware Associates in Arts Degree Program student service fee is the same.

## LAB FEES

Fees vary -- \$12 per lab hour up to a maximum of 6 hours or \$72 per course. There are program specified exceptions wherein the lab fees may be less or more, depending on program needs. Industrial education course lab fees are determined by the specialized equipment utilized in the course.

## REGISTRATION FEE

All students who register for fall, spring, and summer sessions will be assessed a \$15.00 Registration Fee per

session for credit courses only. Students can make registration changes without an additional fee being charged. The Registration Fee is non-refundable.

## TECHNOLOGY SUPPORT FEE

\$9.00 per credit hour per semester to support cost of technology, instructional/course materials, and Internet e-mail/access for all credits taken.

## LATE REGISTRATION FEE

Students registering on or after the first day of the session, will be charged a late registration fee of \$25. The fee may be waived by the campus Dean of Student Affairs for the following reasons: (1) a disabling accident, certified by a physician; (2) a serious illness, certified by a physician; or, (3) campus or College functions that are beyond the control of the student, such as campus closings or problems with administrative systems.

The late registration fee is to apply only to credit courses and other courses listed in the College catalog. The fee will not apply to students who register during the open registration period and find a need to add courses afterward.

## EVALUATION OF PRIOR LEARNING/WORK EXPERIENCE FEE

For students seeking College credit through the evaluation of prior learning or work experience, a fee equivalent to tuition for a one-credit course will be charged for each course in which a student requests credit, effective with the fall semester 1993.

## OTHER FEES AND CHARGES

- Credit by Examination Fee
- Graduation Fee - \$25
- Additional fees or changes to existing fees are subject to action by the Board of Trustees.

All fees listed above are non-refundable. All tuition and fees are accepted for payment of student accounts, pending final audit of those accounts by the Business Office.

Students will be responsible for reimbursing the College for payments made to third parties on their behalf for charges such as online access for distance education courses, telecourse rental fees, student malpractice insurance, etc. These "pass through" charges are

non-refundable.

## FINANCIAL AID STUDENT FINANCIAL ASSISTANCE PROGRAMS

The College offers financial assistance to students through federal, state, institutional and scholarship programs. Financial aid information is available on the Delaware Tech Web site at <https://www.dtcc.edu/admissions-financial-aid/financial-aid-scholarships>. Students are encouraged to use these resources.

The Free Application for Federal Student Aid (FAFSA) and scholarship applications may be obtained from the Financial Aid Office at each campus or on the Web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). Follow the instructions included with the application(s) to apply for any type of financial assistance. All students are encouraged to apply for financial aid as early as possible - before the start of a new academic year. It is important to ask questions, read all information carefully, keep copies of everything, and answer all questions on the application(s) accurately. The Financial Aid Office makes all decisions regarding financial aid eligibility.

For more information call:

<b>Owens</b>	(302) 259-6080
<b>Stanton</b>	(302) 454-3997
<b>Terry</b>	(302) 857-1040
<b>Wilmington</b>	(302) 434-5552

## GENERAL STUDENT ELIGIBILITY REQUIREMENTS FOR ALL FINANCIAL AID PROGRAMS

The applicant must:

1. Be a U.S. citizen or eligible non-citizen.
2. Have a high school diploma, a GED®, or demonstrate the ability to benefit from instruction by passing an approved test.
3. Have a valid Social Security number.
4. Be enrolled as a regular student in an eligible program of study leading to a degree or diploma. New students must apply for admission in order to select a major/program. Undeclared or nondegree seeking students (students with program designation UND or NASNAD) are not eligible for financial aid.
5. Maintain satisfactory academic progress as defined by the College's Academic Standing Policy for financial aid recipients.
6. Not be in default on a previous student loan nor owe a refund on any federal grant received at Delaware Tech or any other institution the applicant may have attended.
7. Demonstrate financial need based on federal or

institutional policies.

8. Comply with all procedures for verification.
9. Meet any other legal requirements passed into law and regulation at any time by the federal government, or any policy change made by the College or any other applicable entity, and any procedure required by the Financial Aid Office in order to ensure that a proper financial aid decision can be made.

## APPLYING FOR FINANCIAL AID

The College will attempt to assist any student seeking financial aid. Financial aid eligibility decisions for all financial aid programs are made by each individual campus.

A student seeking financial aid must apply to the campus he/she will attend.

The steps for applying for financial aid are as follows:

1. Apply each academic year.
2. Students are encouraged to apply online at FAFSA.ED.GOV or mail the application in the envelope provided.
3. Obtain the financial aid application (the Free Application for Federal Student Aid-FAFSA) from any campus. This application is appropriate for applying for all types of federal, state and institutional aid. Scholarship programs require a separate application.
4. Complete the FAFSA using the appropriate federal 1040 income tax form, as filed by the students and parents, and any other supporting documents such as W-2 forms, state tax returns and Social Security, welfare, bank and investment statements.
5. Complete all institutional forms and supporting documentation as requested by the campus.
6. The campus will receive an electronic Institutional Student Information Record, which will be used to determine eligibility for financial aid. Students will receive an electronic or a paper Student Aid Report.

A student must file the FAFSA, complete a Master Promissory Note and complete Loan Counseling to be considered for a Stafford Loan. Stafford Loans are available through the Federal Family Educational Loan Program (FFELP).

## SCHOLARSHIPS

Various scholarships are offered at all campuses. A student should contact the Financial Aid Office, at the campus where he/she is enrolled, for a list of

scholarships offered at that campus. Scholarship information is also available on the College's website.

## VETERANS, SERVICE MEMBERS AND DEPENDENTS OF DECEASED/DISABLED VETERANS AND SERVICE MEMBERS

Delaware Technical Community College is approved for the educational training of veterans, qualified spouses, and dependents of deceased/ disabled veterans under Public Law 89-358. Veterans and dependents of deceased/disabled veterans interested in obtaining information and applying for benefits should contact the Office of Veterans Affairs at the campus they plan to attend.

<b>Owens</b>	(302) 259-6058
<b>Stanton</b>	(302) 454-3926
<b>Terry</b>	(302) 857-1056
<b>Wilmington</b>	(302) 571-5307

Veterans seeking educational VA benefits for the first time must submit a copy of their Service Discharge Form DD-214, DD-215 or DD Form 2384-1 to the Office of Veterans Affairs and complete a VA Form 22-1990, Application for VA Educational Benefits. Dependents of deceased/disabled veterans seeking educational VA benefits for the first time must complete and submit a VA Form 22-5490, Application for Survivors' and Dependents' Educational Assistance. These forms are available in the Office of Veterans Affairs.

The Department of Veterans Affairs issue a Certificate of Eligibility to the applicant as verification of entitlement. All veterans and dependents of deceased/disabled veterans must complete the College admission process before educational benefits can be received.

For information about the Priority of Service Policy for Veterans and Eligible Service Members, visit the Priority of Service Policy ([Student Handbook](#), [College Catalog](#)).

## OTHER MILITARY PERSONNEL

Active military, National Guard and Military Reserve personnel may be eligible for educational benefits related to their service category. Information concerning these benefits is available from the Educational Office of each service category. The College will verify enrollment for students so that benefits may be accurately processed.

## VOCATIONAL REHABILITATION

The Delaware Division of Vocational Rehabilitation and

the Vocational Rehabilitation Education Division of the Veteran's Administration have funds available for students with physical disabilities. Applications for these services should be made to the appropriate Rehabilitation Office.

## Academic Policies and Procedures

### ADVANCED STANDING

Students are encouraged to pursue advanced standing during the admissions process. Credits earned through advanced standing will be entered on the student transcript by the Registrar as they are received from the Dean of Instruction. Types of advanced standing are explained below.

#### CLEP and DANTES

Students who have taken CLEP (College-Level Examination Program) or DANTES (Defense Activity for Non-Traditional Education Support) tests may request CLEP or DANTES to forward the results to Delaware Tech for evaluation for credit for courses. Specific CLEP or DANTES tests which apply to the student's academic program may be granted corresponding Delaware Tech credit.

#### Credit by Examination

A student may receive credit for courses offered at Delaware Technical Community College by taking a competency evaluation administered by the department chairperson or his/her designee. The exact nature of the evaluation will be determined by the evaluator. In order to apply for credit by examination, the student must have completed the admissions process and request approval in writing for the course in which he/she wishes to receive credit by examination. In addition, the student must not have received prior instruction at Delaware Tech in the course in which he/she is seeking credit by examination.

Since no instruction has taken place, a grade will not be assigned to credits awarded by examination. Successful completion of a course by examination will appear on the student's transcript as "Advanced Credits." Credits earned by way of examination may not be applied toward the residency requirement of the College. A fee equivalent to tuition for one credit hour will be assessed for each course which a student attempts to complete by examination.

Advanced standing credits will appear on the transcript of a declared student only upon completion of at least one term of instruction and provided the student is in satisfactory academic standing.

#### Credit for Advanced Placement Tests

The College recognizes the Advanced Placement Program offered through the College Board of the Educational Testing Service and grants credit, upon documentation, for Advanced Placement Test scores of three or higher. In order to obtain Advanced Placement credit, the student must submit official test scores to the Admissions Office for review by the appropriate chairperson.

#### Credits from Foreign Institutions

College-level credits earned at institutions outside the United States may be evaluated for transfer. Students will be required to submit transcripts with an official English translation by a professional foreign educational credentials evaluation service such as Worldwide Educational Service, North American Educational Group, AACRAO International Education Services, or International Education Research Foundation, if the original language for the institution is not English.

#### Age Limits on Courses

Delaware Tech does not apply blanket age limits to courses for the purpose of transfer in, meeting selective admissions programs' ranking/entrance procedures, or meeting program requirements in award completion. Age limits on courses for any of these purposes must be recommended by the relevant department chairpersons and approved by Academic Affairs administrators. Approved age limits on courses will be related to the competency(ies) students/graduates must demonstrate in the field, employment and other measures such as certification exams.

Approved time limits on applicability of courses to program admission and completion is available in program admission documents and on program web pages.

#### Evaluation of Transfer Credits

Credits from postsecondary institutions that are accredited by a U.S. Department of Education approved regional accrediting association will be accepted, if they apply to the established curricula of Delaware Technical Community College (Delaware Tech) and meet other requirements listed below.

#### **Transfer Credit Evaluation Process:**

- The student must request and arrange for an official transcript from transferring institution to be sent to Delaware Tech.
- The student must be admitted to Delaware Tech

before transfer credits will be evaluated or posted to the student's academic history/transcript.

- The Delaware Tech department chairperson who has oversight for the subject will evaluate course(s) for equivalent learning outcomes to a Delaware Tech course(s) when the following criteria is met:
  - The student earned a grade of "C" or better in the course being evaluated for transfer;
  - The course is applicable to a Delaware Tech major;
  - The course is eligible for transfer consideration based on the Age Limits on Courses Policy. Approval of transfer credit for a course does not mean the transfer credit will satisfy selective programs' admission requirements or will apply to academic program requirements.

applicability of transfer courses to program admission and completion. Information is also available in program admission documents and in program web pages.

- Transfer credits for developmental courses will be accepted if the Delaware Tech department chairperson responsible for the developmental course(s) approves the transfer course as equivalent to the Delaware Tech course(s). Transfer credit for a developmental course exempts relevant portions of the Accuplacer test.
- Students transferring to Delaware Tech with a previously awarded associate, baccalaureate, master, or doctoral degree from a postsecondary institution accredited by a U.S. Department of Education approved regional accrediting association will receive advanced standing (transfer) credit for Critical Thinking and Academic Writing (ENG101) and Composition and Research (ENG102).

#### APPROVED AGE LIMITS FOR TRANSFER IN OF COURSES

DELAWARE TECH PROGRAM AND COURSES	YR. LIMIT (date approved by Deans)
CIS - Computer Information Systems	5 years (9/14)
CNE - Computer Network Engineering Technology	5 years (9/14)
CSC - Computing & Information Systems	5 years (9/14)
ISY - Information Security	5 years (9/14)
MLT-Medical Laboratory Technician	5 years (10/14)
WIS - Web Information Systems	5 years (9/14)

- Students requesting transfer credit may be required to provide supporting materials such as the course description(s) from the institution's catalog and/or course syllabus (syllabi) to complete the transcript evaluation.
- Once evaluation of the course(s) is complete, Delaware Tech will post all transferred courses to the student's Delaware Tech academic history/transcript.
- Notification of accepted and/or declined courses will be sent to students via the Delaware Tech email system.
  - Students may inquire with the appropriate department chairperson about declined transfer courses.
- Transfer credits may not be applied toward the residency requirements of the College.
- Students may check with their department chairperson regarding time limits and

#### Inter-Campus Transfer of Advanced Standing Credits

Advanced standing credits approved by a Delaware Tech campus department chairperson and dean of instruction become a part of the student's permanent record and will not be suppressed or negated by any other campus of Delaware Technical Community College.

#### Internal Career Education Pathways Guidelines

Internal Career Education Pathways Guidelines provide a bridge for completion of Workforce Development and Community Education (WDCE) non-credit programs/courses to advanced standing in designated Instructional Division credit programs/courses. A list of these approved opportunities is available from the campus WDCE office, the campus Registrar and academic counselors. To receive advanced standing, the student must:

- Successfully complete the approved WDCE course(s) and demonstrate mastery of course objectives as required for advanced standing.
- Request to receive advanced standing within the credit program's time frame for credit course transfer.
- Be admitted into the credit program.

Advanced standing for a non-credit course(s) does not exempt students from demonstrating college readiness. If the student's Accuplacer scores indicate they need developmental course work the completed non-credit course(s) does not exempt them from the required developmental courses.

### Military Credits

Credits earned through military training and service with a grade of "C" or better may be evaluated for transfer if the courses were taken at a regionally accredited college or university. Courses must meet time limit guidelines, be applicable to a Delaware Tech major, and have equivalent learning outcomes to a Delaware Tech course. The American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Services is used in the evaluation of military training and experience for academic credit.

### Prior Learning/Work Experience Assessment

Students seeking college credit through evaluation of non-credit prior learning or work experience must complete the competency based evaluation form to initiate an application for Prior Learning/Work Experience evaluation by the Department Chairperson. Students must be accepted in a program to apply for the evaluation process. Upon acceptance for the process, the student will pay a fee equivalent to tuition for a one-credit course.

Once the department chairperson accepts the student for the evaluation process, the chairperson or his/her faculty designee will guide the student to submit documentation to complete the evaluation process.

### Transfer-Back Policy

Students who have transferred from Delaware Tech without earning an associate degree, diploma, or credit certificate may complete program requirements by transferring back courses that have been earned at other institutions and are approved as relevant to the award requirements of the major at Delaware Tech. If the student attended Delaware Tech within two calendar years, the transfer-back course(s) would be entered upon the student's record when the courses are accepted by Delaware Tech. If the student has not been enrolled in Delaware Tech for any of six consecutive terms, including summer sessions (two calendar years), the student must follow the readmission process and current curricular requirements for graduation. Time limits on completed Delaware Tech courses, as well as courses being transferred back, must meet departmental guidelines. The student must satisfy all requirements for graduation, including credits in residence.

### Appeals Process

To appeal the evaluation or transferability of a course or prior learning/work experience evaluation, the student must submit a written request to the department chairperson responsible for the course for re-evaluation of advanced standing credit. The appeal must be made within 60 days of the notification of the

declined course(s) and must include documentation for re-evaluation. Upon receipt of the appeal, the department chairperson will submit a copy of the appeal to the dean of instruction. The department chairperson will inform the student in writing within 14 working days if additional documentation for further evaluation is needed. The department chairperson will inform the student in writing of the final transfer credit decision.

## **ATTENDANCE**

Each student is expected to attend class regularly in order to achieve maximum benefit from instruction. Course requirements and evaluation measures are specified in writing and distributed at the beginning of the course. Attendance per se is not an approved evaluation measure. However, evaluation measures may necessitate attendance in order to demonstrate mastery of course objectives.

Faculty must maintain attendance records to comply with requirements related to veterans' and service members' benefits, social security benefits, and financial aid and scholarship programs, etc.(Rev. 6/29/12)

## **CONTRACT FOR ACADEMIC PROGRAM COMPLETION**

The courses required for completion of each academic program are listed in the *College Catalog* and on the program sequence sheet. When a student is admitted and enrolled at the College, the course requirements in effect at that time are considered the academic program contract for the student. When a student changes his/her major or requires College readmission, the student's academic program contract is updated to the one currently in effect. Program requirements for completion are periodically updated. To take advantage of curriculum updates, a student may request approval from his/her department chairperson to change his/her academic program contract to reflect current requirements. A student may not change to a contract that was in effect prior to his or her initial enrollment in the academic program.

## **CURRICULUM CHANGES**

A student may change his/her curriculum by consulting with a faculty advisor or counselor. Signatures are required from the advisor and counselor of the department from which the student is withdrawing, as well as from the advisor and counselor of the department to which the student seeks to be admitted. A completed Change of Program/Status Form must be

returned to the Registrar's Office for the change of curriculum to become official.

## **COURSE DROP PROCEDURE**

Students may choose to drop a course(s) by submitting a completed drop form to the Registrar or by completing the online drop procedure in Self-Service Banner. (The day the completed form is received by the Registrar's Office determines the official date of the course drop.) No approvals are required for students to drop a course(s) within the established time frames explained below. The following guidelines apply.

Courses dropped during the first two weeks of the semester (including the first two weeks of sessions 1, 2 and 3) will not show on the student's transcript and no grade will be recorded. Students will not be charged any tuition or refundable fees (lab, technology support and distance learning) for courses dropped during the first week of the semester (including week one of sessions 1, 2 and 3). Students will be responsible for 50% of the assessed tuition and refundable fees for courses dropped during the second week of the semester (including week two of sessions 1, 2 and 3). The following fees are non-refundable: registration, late registration, student service, credit by examination and evaluation of work experience. (See Tuition/Fee Adjustment Policy for detailed rules.) If a student drops a course and still maintains full-time load status, then he/she will not receive a refund.

From the third week through the tenth week of the semester (session 1), students may drop a course(s) and receive a "W" grade on their transcript. The "W" grade does not impact cumulative GPA, but it may negatively impact "time to completion" under the Financial Aid Satisfactory Academic Progress policy.

After the tenth week, courses may not be dropped. Student requests to drop a course(s) after the tenth week, with a grade of "W" for the course, will be considered only under extraordinary circumstances, which must be documented and approved by the Dean of Instruction or the Dean's designee.

The above timeframes for dropping a course(s) will be adjusted for academic sessions shorter than sixteen weeks.

Students who do not officially drop a course(s) according to these guidelines, but stop attending the course will receive an Unofficial Withdrawal grade (U) for the course. An Unofficial Withdrawal grade is calculated in the cumulative index as 0 quality points. An Unofficial Withdrawal grade in a course may affect financial aid or veterans' service members' benefits eligibility. The College is required by law to submit attendance reports on students who are funded by veterans' service members' benefits, social security

payments and other state, federal and private financial aid and scholarship programs.

Students considering a course drop or withdrawal should weigh the impact on completion of their educational goals. Students should also check with the Financial Aid Office regarding the impact of dropping or withdrawing from courses on their financial aid eligibility and responsibility for costs. Instructions for dropping courses are available on the College's website.

## **WITHDRAWAL FROM THE COLLEGE**

Students who wish to drop all of their courses should notify their department chairperson or program advisor. The chairperson or advisor will provide information to the student to help him/her consider the implications of the withdrawal and inform him or her of any college services and programs that may help him or her remain enrolled. The student's decision will be recorded in his/her Student Educational Plan. Students who decide to officially withdraw from the College with no plans to return within two years (six semester timeframe) should complete an Official Withdrawal form. Students are advised that Official Withdrawal will result in the requirement for re-admission, should the student decide to return in the future. In that event, the student will be required to complete the academic program requirements in effect at the time of readmission.

## **COURSE ADD PROCEDURE**

Students may add a course or switch course sections by submitting a completed add form to the Registrar or by completing the online add procedure in Self-Service Banner. (The day the completed form is received by the Registrar's Office determines the official date the course is added/section is changed.) The following guidelines apply for session 1, 2 and 3 courses.

During week one of the semester (including sessions 1, 2 and 3), students may add a course(s) or change sections if a seat is available. No approval signatures are required except under circumstances in which the course is part of a program with a selective admission process. In those cases, the signature of the Department Chairperson/designee responsible for the course is required.

During week two of the semester (including sessions 1, 2 and 3), students may add a course(s) or change sections if a seat is available and they obtain the approval of (1) the instructor and (2) their program advisor or the chairperson of the department that offers the course.

During week three of the semester, students may add a course(s) or change sections if a seat is available and



they obtain the approval of (1) the instructor, (2) their program advisor or the chairperson of the department that offers the course, and (3) the dean of instruction or designee for the campus where the course is offered.

The above timeframes for adding a course(s) will be adjusted for academic sessions shorter than eight weeks.

Students should check with the Financial Aid Office regarding the impact that adding courses may have on their financial aid eligibility and responsibility for costs.

## READMISSION TO THE COLLEGE

Students who have previously attended Delaware Technical Community College must follow the readmission process when they have not been enrolled at Delaware Tech for six consecutive terms including summer sessions (two calendar years). Readmitted students will be responsible for the current requirements of the program they are entering. Readmitted students will have a new contract year to reflect the current graduation requirements of the program. (Rev. 4/30/14)

## VETERANS AND SERVICE MEMBERS READMISSIONS POLICY

### I. Readmission Eligibility Requirements

Delaware Technical Community College students who interrupt their studies to perform service in the United States military are subject to separate readmissions procedures. Students who withdraw, take a leave of absence, or otherwise leave their studies at Delaware Tech on or after August 14, 2008, in order to serve in the U.S. Military, are subject to these readmission procedures if they meet the following conditions:

1. The student served in the U.S. military for a period of more than thirty (30) consecutive days and provides appropriate documentation to prove such service to the Veterans and Service Members Counselor at his or her campus of enrollment.
2. The student gave advance written or oral notice to the Veterans and Service Members Counselor at his or her campus of enrollment. A student is not required to indicate whether he or she intends to return to Delaware Tech upon completion of military service in the advance notice. Furthermore, the advance notice need not come directly from the student, but rather, can be provided by an appropriate officer of the

United States Armed Forces or official of the United States Department of Defense. Advance notice is not required if it is precluded by military necessity. In such cases, the requirement for advance notice can be fulfilled by the student's filing of an attestation that the student performed military service at the time the student seeks readmission.

3. The student's cumulative length of absence from Delaware Tech to perform U.S. military service, including all previous absences to perform U.S. military service and only the time the student spent actually performing military service did not exceed five (5) years. The five-year length of absence period does not include any service:

- i) That was required, beyond five (5) years to complete an initial period of obligated service; or
- ii) During which the student was unable to obtain orders releasing the student from a period of service in the U.S. military before the expiration of the five-year period through no fault of the student; or
- iii) That the student was ordered to or retained on active duty.

4. The student must have notified the Veterans and Service Members Counselor at the campus within three (3) years of the end of the U.S. military service of his or her intention to return to Delaware Tech. However, a student who is hospitalized or recovering from an illness or injury incurred in or aggravated during the U.S. military service must have notified the Veterans and Service Members Counselor within two (2) years after recovering from the illness or injury of his or her intent to return to Delaware Tech.
5. The student did not receive a dishonorable or bad conduct discharge or have been sentenced in U.S. court-martial proceedings.

Students should contact the Veterans and Service Members Counselor at the campus of their enrollment to determine their eligibility for readmission under this Policy.

### II. Readmission Procedures

Students who meet all of the above conditions ("eligible students") shall be *promptly readmitted* to Delaware Tech at the *same academic status* as the student had prior to leaving for military service.

#### A. Promptly Readmitted

Promptly readmitted means that the College will readmit the eligible students into the next class or classes in the service member's program beginning

after the service member provides notice of his or her intent to reenroll, unless the service member requests a later date of readmission in writing to the Coordinator of Veterans and Service Members (not to exceed the time frame outlined in section I.3). A later date of admission may also be imposed on the service member for unusual circumstances, such as the time period required to prepare the service member to resume his or her course of study at the College.

#### B. Same Academic Status

Same academic status means that the College readmits the service member:

1. To the same program to which he or she was last admitted by the College unless the student requests or agrees to a different program. In the event that the program to which the student was last admitted is no longer offered, the College will readmit the veteran to a course of study that is most similar to the program that was discontinued.
2. At the same enrollment status that the student last held at the College, unless the student requests admission at a previous enrollment status.
3. With the same number of credit or clock hours completed by the student, unless the student is readmitted to a different program to which the credit or clock hours are not transferable.
4. With the same academic standing (e.g. with the same satisfactory academic progress status) the student had at the College immediately prior to leaving for military duty.

College placement test fees and placement test policies may be waived upon a review of the veteran's previous test(s) and submittal of military service documentation submittal to the campus Veterans and Service Members Counselor.

#### C. Tuition and Fee Responsibilities

For the *first academic year* in which the eligible student veteran returns to Delaware Tech, that student who is readmitted to the *same academic program* must also be readmitted with the same tuition and fee charges the student was or would have been assessed for the academic year in which the student left for military duty unless any increase of the prior amount is covered by the student's service member educational benefits. Should that veteran be *readmitted to a different academic program in his/her first academic year upon return*, the student may be charged the same tuition and fees as others in that academic program. Likewise, in *all subsequent academic years* and *for any program* in which the student was readmitted, the member of the armed forces may be charged the same tuition and fees as the others in the student's program.

If the veteran has an outstanding balance from previous year(s), the veteran must pay the balance by the end of the first semester s/he returns. If the balance is not paid by the end of the returning semester, then the College's business office will place a hold on his/her account (and s/he will therefore be blocked from class registration) until the debt is paid.

#### D. Program Preparation

Should the eligible student's academic department determine that the member of the armed forces is not prepared to resume the program with the "*same academic status*" at the point where the student left off, or will not be able to complete the program, the College will make reasonable efforts at no extra cost to the student to help the student become prepared or to enable the student to complete the program including, but not limited to, providing refresher courses or placement testing at no charge to the veteran. If a veteran requests reinstatement preparation, then student will be referred to his/her program advisor who will discuss available options and route the student to the appropriate academic department for possible program preparation actions. The determination of possible program preparation actions is decided by the academic department which offers the course. If program preparation is not deemed necessary by the academic department, but the veteran feels preparations are necessary, then the veteran bears any financial burden preparation necessitates.

The veteran will be awarded any program preparation at no extra cost for those eligible students who require such preparation as determined by the relevant academic department. This includes any additional fees (supplies and or books) that may be required for program. In the event that program preparation is completed through a course, the veteran should return to the Veterans and Service Members Counselor to coordinate costless course registration and book/supply purchasing with the business office and with the Delaware Tech bookstore. The veteran will not be charged a registration fee if the program preparation course is the only course the veteran registers for during that semester. If the program preparation is completed through a course and the veteran is receiving VA benefits, the course will be certified through the VA for reimbursement. If the veteran is receiving VA benefits but is not awarded VA benefits which cover 100% of the tuition and fees, the veteran will not be responsible for the remainder of the bill. The veteran may request that the course not be certified through the VA for reimbursement. In such cases, the student will not be charged for the course.

Once the veteran has met with his/her program advisor, the advisor will update the veteran's Student Educational Plan (SEP). If program preparation is deemed necessary by an academic department, the academic department will note this in the veteran's

SEP. The notation should include how the preparation will take form, evaluation of preparation results, and any dates by which preparation must be complete.

If the student does not complete the program preparation adequately within the amount of time designated by the academic department, then the veteran is then responsible for completing such program preparation without financial assistance from the College. This may delay timely reentry into the student's program.

#### E. Denial of Readmission

Veterans who do not meet the eligibility requirements set forth in the above are not entitled to be readmitted pursuant to this Policy. In addition, the College is not required to ultimately readmit the eligible student veteran on his or her return if:

1. After reasonable efforts by Delaware Tech, the College determines that the student is not prepared to resume the program at the point where he or she left off.
2. After reasonable efforts by Delaware Tech, the College determines that the student is unable to complete the program; or
3. The College determines that there are no reasonable efforts the College can take to prepare the student to resume the program at the point where he or she left off or to enable the student to complete the program.

### AGE LIMITS FOR COURSES APPLIED TO GRADUATION

(Approved 4/30/14) Students may apply all approved transfer in and Delaware Tech completed courses toward certificate, diploma and degree requirements as long as they meet program specific requirements for technical relevance to the career field as measured by external outcomes such as licensure or certification exams. Program specific age limits on major or major support courses that may be applied to completion requirements are collegewide decisions approved by the academic program Chairperson(s), Deans of Instruction, and Associate Vice President for Academic Affairs/Vice President for Academic Affairs. These decisions are not subject to appeal. The list of approved age limits on major or major support courses which can be applied to program completion are below and can be found on the Delaware Tech Academic Programs web pages.

### APPROVED AGE LIMIT FOR COURSES APPLIED TO GRADUATION

DEPARTMENT	DELAWARE TECH YR. LIMIT COURSES
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Human Services	HMS244	10 (June 25, 2014)
Drug and Alcohol Counseling	DAC244	10 (June 25, 2014)
Nursing	BIO120, BIO121, BIO125, MAT129, CHEM100	10 (Aug. 10, 2014)
Computer Information Systems - CIS	Computer Information Systems Courses*	5 years (9/14)
Computer Network Engineering Technology - CNE	Computer Network Engineering Technology*	5 years (9/14)
Computing and Information Science - CSC	Computing and Information Science*	5 years (9/14)
Information Security - ISY	Information Security*	5 years (9/14)
Medical Laboratory Technician - MLT	Medical Laboratory Technician*	5 years (10/14)
Web Information Systems - WIS	Web Information Systems*	5 years (9/14)

\*Courses completed more than five years ago will not be approved for transfer in to Delaware Tech. Courses completed at Delaware Tech or transferred in more than five years ago may only be applied to graduation requirements for students who have remained in active status (taking courses at least once every 6 semesters and not requiring readmission).

### GRADE POINT SYSTEM (4.00)

The grade point average (GPA) for each student is based upon the scale of grade point values, and it is weighted for each course by its credit value. Cumulative grade point averages (CUM) are also based on the grade point values, and these have been maintained for all students enrolled since the fall of 1977. Effective fall 2012, the following grading policy is in effect:

#### Grading Policy

**A** 92-100

**B** 83-91

**C** 75-82

**F** 0-74

**Note:** From fall 1991 until fall 2012 a "R" grade was used instead of an "F."

The following is the College's grading interpretation:

#### Grading Interpretation

**A** Student meets the measurable objectives in an outstanding manner

**B** Student meets the measurable objectives in an above-average manner

**C** Student meets the measurable objectives

**F** Student has not met the measurable objectives and

must repeat the course

**L** Listener/Auditor (with approval only)

**I** Incomplete

**S** Continuing Satisfactory (used only in courses with numbers under 100)

**W** Withdrawal with approval from College

**U** Withdrawal without approval from College

The following grades are included in the GPA calculation:

**A** 4.0 grade point value

**B** 3.0 grade point value

**C** 2.0 grade point value

**F** 0.0 grade point value

**U** 0.0 grade point value

The CUM includes the inactive grades "D" (Distinctive) and "P" (Proficient), which became inactive in the Fall Quarter of 1978.

**D** 4.0 grade point value

**P** 2.5 grade point value

*Note: Students who receive an "S" grade and are receiving veterans Administration educational benefits will be paid for the course during the first term of enrollment only. If the student reregisters for the course, the course cannot be included in the total Veterans Administrations credit hours reported for benefits.*

*All students who receive an "S" grade must re-enroll in the course within the succeeding term in order to improve his/her grade unless exception is made by the Dean of Instruction or his/her designee.*

The following grades are excluded from the GPA calculation:

**I** Incomplete

**L** Listener/Auditor

**W** Withdrawal with approval from the College

The following grades are given in Basic and Pre-Tech courses and are excluded in the GPA calculation:

**AE** Meets measurable objectives in an outstanding manner

**BE** Meets measurable objectives in an above average manner

**CE** Meets the measurable objectives

**FE** Has not met the measurable objectives and must repeat course

**SE** Continuing satisfactory

Definition of Terms:

#### **Grade Point Value**

is the value assigned to grades "A", "B", "C", "F" and "U". The inactive grades of "R," "D" and "P" will continue to carry grade point value historically.

#### **Quality Point**

is the product of the grade point value multiplied by the quality hours of the course.

#### **Quality Hours**

are the credit-hour value of those courses which are used in the calculation of the grade point average.

#### **The Term GPA**

is the total quality points earned during the term divided by the total quality hours attempted. Pre-tech and Basic courses will not be included in the calculation of term GPA. Term GPA will not be recalculated unless one of the two following conditions occurs: (1) an "I" grade is resolved or (2) a grade change is authorized.

#### **Cumulative GPA**

is the total cumulative quality points earned divided by the total cumulative quality hours attempted. The cumulative GPA is an historic index of all work taken at Delaware Tech and is not recalculated when a student changes majors. Work taken at other institutions is not included in the calculation of the cumulative GPA. Pre-tech and basic courses are no longer included in the cumulative GPA. The cumulative GPA at the end of each term will not be recalculated unless one of the two following conditions occur: (1) an "I" grade is resolved or (2) a grade change is authorized.

### **ACADEMIC AMNESTY PROCEDURE**

The following criteria and application has been created to aid currently enrolled students who began their studies at Delaware Technical Community College prior to the conversion to a Semester system in the Fall of 1993 (94-1). To qualify, a student must complete The Petition for Academic Amnesty form and submit the form to the Dean of Instruction or his/her designee.

The following conditions apply:

1. Any student who has a non-completion grade (R, U) in a course prior to the Fall of 1993 (94-1) or has an enrollment date prior to 94-1 and has successfully repeated the course(s) (A, B, C grade) or the semester equivalent may petition the Dean of Instruction or his/her designee to eliminate the non-completion grade from the CUM grade point average calculation. Each non-completion grade in the same course will be eliminated from the CUM GPA calculation.
2. The student must submit a written application for Academic Amnesty to the Dean of Instruction or his/her designee.
3. If the request for Academic Amnesty is approved, the non-completion grade (R, U) will be replaced with an administrative grade (AR, AU). The administrative grade (AR, AU) will not be included in the students new CUM Grade Point Average.

4. All students are cautioned that many undergraduate professional programs, graduate and professional schools consider all grades listed on a transcript when considering applications for admission and scholarship.
5. Academic Amnesty does not change accumulated Financial Aid history. Accumulated term and award limits include all terms of enrollment.

## **TRANSFER CREDIT EFFECT ON CUMULATIVE GRADE POINT AVERAGE**

Students who have received approval for the transfer credit for courses previously completed at Delaware Tech with grades of "R," "F" or "U" may request that the effect of the "R," "F" or "U" grade be removed from their cumulative grade point average by submitting a request to the Registrar's Office with a copy of their unofficial transcript. All grades and courses remain on the student's transcript.

## **GRADE POINT AVERAGE ADDENDUM**

When a student repeats a course, the first passing grade will be calculated in the cumulative grade point average (CUM GPA). A student can request that a higher grade (for coursework 1994-01 forward) be included in the CUM GPA by submitting a request to the Registrar's Office for coursework that was repeated spring 2007 forward. All courses taken and grades received will remain on the student's transcript, even though some will not be used to determine GPA. Selective admissions processes, scholarships and academic award decisions at other colleges and universities may take into consideration the complete academic record of the student.

## **FRESH START POLICY**

Any student who has not attended Delaware Tech for a minimum of five full semesters (not including summer) upon readmission and who completes a minimum of 12 college-level credits with at least a 2.00 GPA may request that the Dean of Instruction or designee exclude the course grades received prior to the readmission term from the cumulative GPA calculation.

Courses that were passed prior to the readmission term and that fulfill graduation requirements in the major in which the student is currently enrolled will not be excluded. Although the GPA will be recalculated once

the Fresh Start is applied, all attempted hours, grades, and courses will remain on the student's transcript. Fresh Start is granted only one time per student and is irreversible.

## **INCOMPLETE "I" STUDENT EVALUATION**

### **Incomplete ("I") Student Evaluation**

An Incomplete "I" evaluation may be awarded by an instructor in situations where extenuating circumstances prevent the student from completing the course work. The following conditions must be met:

1. The extenuating circumstances must occur after the drop/withdraw period has ended.
2. The student must be making satisfactory progress in the course.
3. It must be reasonable to complete the remaining course work and objectives under "I" circumstances (i.e., outside of the regular course format).
4. Prior to an instructor agreeing to give or post an "I" grade, approval for an "I" grade must be given by the department chairperson and Dean of Instruction responsible for the course.

Students who receive an incomplete course evaluation must complete the requirements for the course within the time frame specified by the instructor or by the end of the semester following the term in which the "I" is received if no time frame is specified. Otherwise the incomplete grade will be changed to a "F" grade, and the student must register for the course in a future term. For "I" grades earned at the end of the spring semester, the student will have until the end of the fall semester to complete the requirement, unless a shorter time period is specified by the instructor. The student and instructor determine how the incomplete portion of the course will be completed. If an instructor deems it essential that an incomplete be extended beyond the deadline, a request in writing should be sent to his/her chairperson for endorsement and then to the Dean of Instruction for approval. The request should include a projected date of completion and the reason for the requested extension. A student who receives an incomplete grade does not re-register for the course.

## **SATISFACTORY "S" STUDENT EVALUATION**

The "S" evaluation is used only in courses with numbers under 100 where the student has progressed satisfactorily. This grade can be received only one time per course. The student must re-enroll in the course within the succeeding term in order to improve his/ her grade, unless an exception is made by the Dean of

Instruction or his/her designee.

Note: Students who receive an "S" grade and are receiving Veterans Administration educational benefits will be paid for the course during the first term of enrollment only. If the student reregisters for the course, the course cannot be included in the total Veterans Administrations credit hours reported for benefits.

## LISTENER/AUDIT "L" EVALUATION

Students who wish to change from credit to Listener status must change their registration status prior to the end of the "add" period and will receive an evaluation of "L" at the end of the semester.

Students may change from Listener to credit status under the following conditions:

- The request must be made prior to the end of the "add" period;
- The student must meet all admission requirements for the College Instructional Division credit programs; and,
- Must have instructor, department chair and Dean of Instruction approval

## ACADEMIC RECOGNITION

### President's List

To be eligible for the President's List, a student must:

1. Earn 12 or more credit hours in courses at the 100 level or above in one term.
2. Have a term GPA of at least 3.8.
3. Have no "I" or "S" grades. If "I" grades are later changed to passing grades, thereby affecting President's List eligibility, the student may request a letter noting President's List recognition. This letter may be used for employment, college transfer or other personal purposes.
4. Receive an "A," "B," "C," or "W" in all courses of enrollment below the 100 level.

### Dean's List - Full-Time Students

To be eligible for the Dean's List, a student must:

1. Earn 12 or more credit hours in courses at the 100 level or above in one term.
2. Have a term GPA of at least 3.25.
3. Have no "I" or "S" grades. If "I" grades are later

changed to passing grades, thereby affecting Dean's List eligibility, the student may request a letter noting Dean's List recognition. This letter may be used for employment, college transfer, or other personal purposes.

4. Receive an "A," "B," "C," or "W" in all courses of enrollment below the 100 level.

## PART-TIME STUDENTS

A student will receive a letter of recognition, signed by the Dean of Instruction and Dean of Student Affairs, if the student has earned at least 6 credit hours but less than 12 credit hours in courses in one term at the 100 level or above, has a term GPA of at least 3.25, and meets requirement 3 of the Dean's List criteria.

## GRADUATION HONORS

Students earning a Cumulative Grade Point Average between 3.25 and 3.49 will graduate *cum laude*. Those earning a CUM GPA between 3.5 and 3.79 will graduate *magna cum laude*. Those earning a CUM GPA between 3.8 and 4.0 will graduate *summa cum laude*. The Graduation Honors are printed on the graduation program and the student's final transcript.

## COLLEGE POLICY ON ACADEMIC INTEGRITY

### College Policy On Academic Integrity

The students and staff of Delaware Technical Community College have an obligation to participate in the academic life of the college in a responsible and intellectually honest manner. As members of the Delaware Tech community, students have responsibilities and duties commensurate with their rights and privileges. One of these responsibilities is to be honest and forthright in their academic work. To falsify the results of one's work, to steal the words or ideas of another, or to cheat on an examination corrupts the academic process.

The College Policy on Academic Integrity defines academic dishonesty and outlines sanctions when academic integrity is breached. Academic dishonesty, in any form, is not tolerated; therefore, the College has the right and the responsibility to apply the sanctions outlined in this policy in order to safeguard the ideals of scholarship and character.

### Forms of Academic Dishonesty

#### Cheating

Cheating is an act of deception by which a student misrepresents that he or she has mastered information on an academic exercise that he or she has not mastered. Examples of cheating include but are not limited to:

- A. Using and/or copying from another student's work such as test paper, project, or computer program.
- B. Allowing another student to copy one's work.
- C. Using unauthorized materials such as a textbook, notebook, cell phone or other technology/materials during testing or competency performance without permission.
- D. Collaborating during a test or competency performance with any other person by attempting to request or receive or by actually requesting or receiving information verbally, in writing, or electronically without permission.
- E. Using specifically prepared materials that are not permitted during a test (e.g. notes, formula lists, notes written on the student's clothing or person, etc.).

### **Academic Misconduct**

Academic misconduct is the intentional violation of college policies by tampering with grades, taking part in obtaining or distributing any part of a learning tool (such as quiz, test, paper, presentation, etc.), or submitting the same work in more than one class without permission. Examples of academic misconduct include but are not limited to:

- A. Stealing, buying, selling, or otherwise obtaining all or part of a learning measurement tool.
- B. Selling or giving away all or part of a learning measurement tool, including answers to a learning measurement tool.
- C. Bribing or coercing any other person to obtain or attempt to obtain a learning measurement tool or any information about the tool.
- D. Changing or attempting to change a grade in a grade book, computer system, on a test, or on other work for which a grade has been given.
- E. Changing, altering, or being an accessory to the changing or altering of a grade in a grade book, on a test, on a "change of grade" form, in an electronic system or in other official College academic records that relate to grades.
- F. Obtaining or attempting to obtain a learning measurement tool.
- G. Submitting written work to fulfill the requirements of

more than one course without the explicit permission of both instructors.

### **Fabrication**

Fabrication is the intentional use of invented information or the falsification of research or other findings with the intent to deceive. Examples of fabrication include but are not limited to:

- A. Citation of information not taken from the source indicated.
- B. Listing sources in a bibliography or other report not used in the academic exercise.
- C. Inventing data or source information for research or other academic exercise including but not limited to fabrication of log entries or internship hours.
- D. Submitting as your own any academic exercise prepared totally or in part by another.
- E. Taking a test for someone else or the student permitting someone else to take a test on one's behalf.

### **Plagiarism**

Plagiarism is the inclusion of someone else's words, ideas, or data as one's own work. When a student submits work for credit that includes the words, ideas, or data of others, the source of that information must be acknowledged through complete, accurate, and specific references and citations, and if verbatim statements are included, through quotation marks as well. By placing his or her name on work submitted for credit, the student certifies the originality of all work not otherwise identified by appropriate acknowledgment. The student will avoid being charged with plagiarism if academic citations have been used accurately:

- A. Whenever quoting another person's words.
- B. Whenever using another person's idea, opinion or theory, even if it is completely paraphrased in the student's own words.
- C. Whenever borrowing facts, statistics, computer programs, or other illustrative materials-unless the information is common knowledge.

### **Informing Students about Academic Integrity**

The College informs students about the importance of academic integrity - including its relationship to professional integrity and success in the workplace and in higher education - and its role in protecting the public trust through the College Catalog and the Student Handbook, at New Student Orientation, in First Year Seminar (SSC 100), and on the portal.

## Procedures for Adjudication of Alleged Academic Dishonesty

1. The instructor/designee must investigate an alleged attempted or apparent act of academic dishonesty and review the evidence and incident to ensure it is sufficient to warrant a charge of academic dishonesty. This investigation should include a documented discussion with the student prior to the submission of an Academic Dishonesty Report. If the investigation has not been completed prior to the grade due date, the instructor must submit an "I" (incomplete) grade and notify the assistant dean of instruction (hereafter referred to as "assistant dean").
2. If the instructor/designee believes that academic dishonesty has occurred, he or she must complete an Academic Dishonesty Report providing a complete description of the incident, documented evidence of a meeting with the student, and evidence supporting the allegation. The instructor/designee must forward a copy of the Academic Dishonesty Report and copies of all evidence to his or her department chairperson and the assistant dean to notify them of the alleged infraction. The report must be completed and forwarded to the individuals listed above within five (5) working days of becoming aware of the alleged academic dishonesty. (The instructor or designee must keep the original assignment, test/examination, or other evidence as well as a copy of the Academic Dishonesty Report.)

An instructor may not assign a disciplinary grade such as "F" or zero to an assignment, test, or other coursework as a sanction for admitted or suspected dishonesty in lieu of following the Academic Integrity Policy.

3. Upon receipt and review of the Academic Dishonesty Report and evidence submitted, the assistant dean must notify the student in writing at the address of record regarding the alleged academic dishonesty and must forward to the student a copy of the Academic Dishonesty Report and a copy of the evidence. The assistant dean will notify the student that he or she may not drop the course. (Note: In this policy, when responsibility is assigned to the assistant dean, it may include his or her designee.)

The assistant dean will make every attempt to schedule a joint meeting with the student, the instructor/designee, and the department chairperson within ten (10) working days of receiving the Academic Dishonesty Report. When necessary, the meeting may be conducted by video-conference.

During this meeting, every effort will be made to preserve a productive instructor/designee-student relationship. The student will be given the opportunity to ask questions about all written documents and to respond to the allegation. The student will be given the opportunity to accept responsibility for the infraction or to refute the charges.

At the meeting, the student will be asked to sign the Academic Dishonesty Report, thereby acknowledging that he or she is aware of the alleged infraction, accepts responsibility for the infraction or intends to refute the charges, and understands the possible sanctions.

If the student chooses to refute the charges, the assistant dean will request that the student produce additional evidence/information relevant to the incident. The assistant dean may also attempt to acquire additional information, depending on the nature of the discrepancies. The student has five (5) working days to submit additional evidence. The assistant dean will review the additional evidence within five (5) working days of receipt.

The student may not withdraw from the class in which the alleged infraction occurred and is expected to complete coursework until the alleged infraction has been resolved. If the alleged infraction has not been resolved by the time grades are due, the instructor must assign the student an "I" (Incomplete) grade. This grade will remain until the alleged infraction is adjudicated. If under any circumstance the student stops attending the course, a "U" (Unofficial Withdrawal) grade with a last date of attendance will be assigned.

4. If the assistant dean determines there was not an infraction of the Academic Integrity Policy, the instructor will clarify the standards of the assignment/test/examination/project with the student. In circumstances in which the assignment was not completed, an opportunity for the student to complete the assignment will be provided. In this case, the assistant dean will document the outcome on the Academic Dishonesty Report and maintain the document in the Office of Instruction.



If the assistant dean determines that the student violated the Academic Integrity Policy or if the student accepts responsibility for the infraction, the assistant dean will determine the appropriate sanction(s) in keeping with the adjudication procedures listed in this Academic Integrity Policy and will note such sanction(s) on the Academic Integrity Report.

The assistant dean will formally notify the student, the instructor/designee and the department chair that the student has been found responsible for a violation of the Academic Integrity Policy and communicate the sanction(s). This communication to the student will be sent by both email and certified letter with return receipt requested within five (5) working days of reaching a determination that an infraction of the policy has occurred.

5. A student may appeal the decision by requesting a due process hearing with the Campus (for first and second infractions) or the College (for third infraction) Academic Integrity Appeal Committee. If the student chooses to exercise his or her right to a hearing, he or she must notify the assistant dean in writing within ten (10) working days of receipt of the letter informing him or her of the decision and sanction. Upon receipt of this notification, all imposed sanctions are suspended until the appeal process is completed.

The student must advise the assistant dean in writing if he or she will exercise his or her right to bring an advisor or attorney to the hearing. The assistant dean will notify the chairperson of the Campus or College Academic Integrity Appeal Committee (depending on the infraction) of the student's request for a hearing.

6. Final decisions regarding the academic integrity infraction will be documented in the College's student conduct database.

## Sanctions for Academic Dishonesty

### First Infraction

The assistant dean may impose an "F" grade for the course or a lesser sanction if warranted by the circumstances.

When an "F" grade for the course is imposed, the student will be required to complete an academic integrity tutorial within a timeframe set by the assistant

dean. The assistant dean could also require a student to successfully complete an information literacy tutorial within a set timeframe. If either or both tutorials are not completed by the specified date, a dean's hold will be placed on the student's record until the tutorials are successfully completed.

An alternative sanction to the "F" grade may be imposed in situations in which the assistant dean determines, after reviewing the evidence and discussing the situation with the student, instructor/designee and department chairperson, that the student did not understand his or her actions were a form of academic dishonesty and there was no intention to be dishonest. An example of this may be plagiarism by completely paraphrasing in one's own words another person's idea, opinion, or theory without giving credit.

Additionally, in circumstances that do not justify an "F" grade for the course, a zero grade may be assigned for the assignment/test/examination/project in which the infraction occurred. In this case, the student will be required to retake or redo the assignment/test/examination/project to demonstrate mastery of the learning objective or to demonstrate mastery through an alternative means determined by the instructor/designee and approved by the department chairperson. The zero and the new grade will be averaged and factored into the final grade for the course, in accordance with the weight approved for the specific course evaluation measure within the overall evaluation measures approved for the course, which could still result in failure of the course depending on the weight of the assignment in the overall course grade.

### Second Infraction

If the assistant dean determines that a second infraction of academic integrity has occurred in either the same or another course, the student will be assigned an automatic "F" in the course in which the second infraction occurred. The student will be required to complete an academic integrity tutorial, even if completed previously, by a date determined by the assistant dean. If the tutorial is not completed by the specified date, a dean's hold will be placed on the student's record until the tutorial(s) is successfully completed.

### Third Infraction

If the assistant dean determines that a third infraction of academic integrity has occurred in either the same or another course, the student will be dismissed from the College. Dismissal from the College means that the student cannot continue in any course in which he/she is enrolled. The student will receive an "F" grade for the course in which the infraction occurred and a "W" (Withdrawal) for any other course in which the student is enrolled.

## Appeals

The Campus Academic Integrity Appeal (Committee) will hear appeals of first and second infractions. The committee is composed of the dean of instruction, a faculty member appointed by the campus director, and the dean of student affairs. The dean of instruction will chair the committee.

The College Academic Integrity Appeal Committee will hear appeals of third infractions. The Committee is composed of the dean of instruction from another campus, the associate vice president for academic affairs, and the assistant vice president for student affairs. The associate vice president for academic affairs will chair the committee.

The Campus or College Academic Integrity Appeal Committee will conduct their proceedings as follows.

At the hearing, which is closed to the public, the chair of the Committee will introduce the written appeal to the Committee. The Committee will discuss issues, hear testimony, question witnesses, and consider available evidence pertaining to the appeal hearing. The Committee may call upon the instructor/designee, department chairperson, and anyone else who may provide relevant information. The student will have the opportunity to present statements, testimony, evidence, and witnesses; refute evidence brought forth to the Committee and present any relevant evidence in his or her defense; question witnesses; and respond to questions by the members of the Committee. The student may bring an advisor or attorney to the due process hearing but must advise the assistant dean in advance of the hearing, and the assistant dean will notify the chair of the appropriate appeal committee.

The written findings of facts and the sanction(s) will be submitted by the Committee to the campus director and to the dean of instruction of the campus where the alleged infraction took place within three (3) working days of the hearing, unless this time is extended for good cause by the Committee. The Committee's decision will be final and will be sent via certified mail with return receipt requested within three (3) working days of the hearing to the student. A copy will also be sent to the instructor/designee and the department chair. The dean of instruction will authorize the registrar to record/change any grade.

The written findings of the facts and the sanction(s) will be kept in a confidential file in the office of the Committee chairperson (campus dean of instruction or College associate vice president for academic affairs) and made available to the student for at least five (5) years.

## ACADEMIC STANDING POLICY

### 1. Academic Standing

A student's Cumulative Grade Point Average (CUM GPA) for total credits attempted must be equal to or greater than that indicated on the "Minimum Cum GPA for Satisfactory Academic Standing Table" (below) in order to be in Satisfactory Academic Standing at Delaware Tech.

The table below represents the Minimum Cumulative Grade Point Average for total credits attempted needed to be in Satisfactory Academic Standing at Delaware Tech. Official withdrawal from courses (W grades) are not counted in the GPA calculation.

<u>Credits</u>	<u>Credits</u>
1 - 15	≥ 1.5
16 - 30	≥ 1.6
31 - 45	≥ 1.8
46+	≥ 2.0

### 2. Academic Warning

The first semester a student does not earn the minimum CUM GPA required for Satisfactory Academic Standing, the student will be placed on Academic Warning and restricted to a maximum of 13 credits in the next semester of attendance.

A student who pre-registers for more than 13 credits in the next semester and is classified as in Academic Warning status after grades are processed, must make the necessary course credit load adjustment. If a student does not reduce his/her credit load to 13 or less, he/she will have their course load reduced by the program advisor. The program advisor will contact the student to provide advisement and assistance to make the credit load reduction. If the student cannot be reached or not follow-up as agreed, the student will be informed in writing, either by letter or email, before the program advisor reduces the student's credits to 13.

### 3. Academic Probation

A student will be placed on Academic Probation if in two successive semesters he/she does not earn the minimum CUM GPA required for Satisfactory Academic Standing for the number of credits attempted.

A student on Academic Probation is restricted to a maximum of 9 credits. A student who pre-registers for more than 9 credits in the next semester and is classified as in Academic Probation status after grades are processed,

must make the necessary course credit load adjustment. If a student does not reduce his/her credit load to 9 or less, he/she will have their course load reduced by the program advisor. (The same procedure applies (explained above) as when a student must reduce his/her credit load to 13.)

#### 4. **Status after Readmission**

A student who withdraws from the College while on Academic Warning or Probation will retain that status when readmitted until he/she earns the minimum CUM GPA required for Satisfactory Academic Standing.

#### 5. **Appeal of Credit Load Restriction**

A student on Academic Warning or Probation may appeal the credit restriction by completing the Academic Plan form and presenting it in person to the program advisor and Dean of Instruction/designee for approval to register for more credits than Academic Warning and Academic Probation status allow.

#### 6. **Successive Academic Probation**

A student in Academic Probation status who does not earn the minimum CUM GPA required for Satisfactory Academic Standing or a semester GPA of at least 2.0 in the next or subsequent semesters will not be allowed to register for the next semester unless the student establishes an Academic Plan with his advisor that is approved by the advisor and the Dean of Instruction/designee. The program advisor and Dean may approve any number of credits for registration including none for that semester.

A student who preregisters and is in the above situation after grades are processed, but does not establish an approved Academic Plan will have his/her registration deleted by the program advisor. The program advisor will contact the student to provide advisement and assistance to establish an Academic Plan. If the student cannot be reached or does not follow-up as agreed, the student will be informed in writing, either by letter or email, before the program advisor reduces the student's credits to 0.

#### 7. **Academic Suspension**

Academic Suspension status is eliminated at the conclusion of summer semester 2011 (2012-53.) Students who would have been in Academic Suspension status under the previous policy will be treated as students who have been on Academic Probation for more than one semester.

**Note:** Satisfactory Academic Standing is just one of the three components required for "Financial Aid Satisfactory Academic Progress." The other two components are meeting "Maximum Timeframe" requirements and "Percentage of Courses Completed" requirements. See the Financial Aid Satisfactory Academic Progress Policy.

## **ACADEMIC STANDING POLICY FOR DEVELOPMENTAL EDUCATION**

The Academic Standing Policy for Developmental Education serves to identify students enrolled in developmental education (courses below the 100 level) who are at risk for continuing academic failure and in need of academic advisement to support their future success and retention. The non-completion course grades listed below will trigger the following academic standing actions.

- 1 FE, RE or UE grade in the same developmental course = Academic Warning (13 credit limit) plus Data Hold on registration. The program advisor's approval signature is required to register.
- 2 FE, RE or UE grades in the same developmental course = Probation 1 (9 credit limit) and Data Hold on registration. The program advisor's approval signature is required to register. Students must complete an Academic Plan with their program advisor.
- 3 FE, RE or UE grades in the same developmental course = Continuing probation status. Student must have an Academic Plan and the approval of the program advisor and the Dean of Instruction to register for courses. The Dean may disapprove registration and recommend other courses of action the student must implement before subsequent registration is allowed. The Dean's decision is final.
- After completion of developmental course in subject area with a grade of CE or better, satisfactory academic standing would be restored.

In cases in which a student is enrolled in college level credit and developmental courses, the lowest level of academic standing will take precedence. Students may initiate the academic standing review procedure to request approval to exceed credit limits imposed by academic warning and probation.

## **FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS**

Effective July 1, 2011, financial aid recipients at the

College are required to maintain Financial Aid Satisfactory Academic Progress (FASAP) in accordance with this policy. This policy supersedes all previous satisfactory academic progress eligibility requirements. Federal financial aid regulations require the College to consider the student's entire academic history, including any periods of enrollment in which the student did not receive federal/state financial aid, under this FASAP policy.

FASAP includes Cumulative Grade Point Average (CGPA), completion rate, and maximum time frame requirements, as set forth below, that a student must meet in order to be eligible to receive federal/state financial aid. FASAP is just one of the financial aid award conditions that must be met. Students should see <http://www.dtcc.edu/financialaid/> for a complete list of financial aid eligibility requirements. This FASAP policy is limited to the determination of federal/state financial aid eligibility and is separate from and in addition to the Delaware Tech Academic Standing Policy and any other academic policy at the College.

The College's Financial Aid Office shall review academic progress at the end of the fall, spring and summer semesters, each of which is financial aid payment period.

As a condition of receiving federal/state financial aid, each student at the College must make satisfactory academic progress toward the attainment of his or her degree according to the following three requirements that comprise FASAP. (Other award requirements also apply.)

#### **Minimum Cumulative Grade Point Average:**

The table below represents the minimum CGPA needed to be eligible for federal/state financial aid. Official withdrawal grades are not calculated in this CGPA calculation. The CGPA is calculated using all courses taken.

Credits Attempted	CGPA
1 - 15	>1.5
16 - 30	>1.6
31 - 45	>1.8
46+	>2.0

#### **Completion Rate:**

Students at the College must successfully complete, on a cumulative basis, 67 percent of all credits attempted. All non-completion grades ("W," "U," "R," "F" and "I") are used in the calculation of completion rates.

#### **Maximum Time Frame for a Degree/Diploma or Previous Associate Degree:**

A financial aid recipient is restricted to a maximum number of credits for which he/she can receive financial aid. The maximum time frame (MTF) credit allowance is 150% of the published length of the eligible educational program in which the student is currently enrolled. For example, if 60 credits are required for a specific degree,

the MTF for the degree program would be 90 credits (60 x 150% = 90). The published program lengths are available on the College web site and in the Catalog.

In addition, the credits from a previous diploma or degree program earned at Delaware Tech or elsewhere that are applied to a new degree program at Delaware Tech will be counted toward the MTF for the new degree program.

#### **Maximum Time Frame for Remedial Courses:**

Basic and Pre-technical classes are considered remedial courses. Basic classes are not eligible for federal financial aid payment, but are used in calculating the remedial MTF.

The MTF for a student enrolled in remedial courses is 30 semester hours. This MTF value is separate from the degree or diploma MTF value. No extension is permitted for a student who exceeds the 30-credit remedial limit.

#### **Repeat Coursework:**

Repeating failed coursework may be funded by financial aid. In addition, one repetition of previously passed coursework is eligible for federal financial aid. However, a previously passed course is not eligible for financial aid if it is being repeated because the student failed other coursework (e.g., must repeat the course again because of co-requisite requirements).

Repeating a course may improve CGPA, but each attempt impacts the completion rate and maximum time frame.

#### **Transfer Students:**

Coursework completed at another institution that is officially accepted as transfer credit by the College counts toward MTF and the cumulative completion rate. However, the grades from other institutions do not transfer to the College and are not considered under the minimum CGPA component of FASAP.

#### **FASAP Process**

##### ***End of Semester Review***

The Financial Aid Office will review the academic record of each financial aid recipient at the end of each semester to determine if she/he is making satisfactory academic progress for program completion. Students who do not meet one or more of the CGPA, completion rate, or MTF requirements listed above are not considered to be making satisfactory academic progress and are subject to the following:

##### ***Financial Aid Warning***

Beginning with the Fall 2011 semester, the first time the student has not met the CGPA or the completion rate, the student will be notified that he/she has been placed on *Financial Aid Warning status*. A *Financial Aid Warning* allows a student to continue to receive financial aid for only the next semester. A Financial Aid

Warning will be assigned automatically and does not require an appeal or other action by the student. At the end of the *Financial Aid Warning* semester, the student who does not meet the FASAP requirements is ineligible to receive further federal/state financial aid unless the student makes a successful *Financial Aid Appeal* as described below. In the absence of a successful Financial Aid Appeal, the student may only regain eligibility for federal/state financial aid by meeting the College's FASAP requirements at his or her own expense.

A student who exceeds MTF requirements is not eligible to be placed on *Financial Aid Warning* status. Instead, beginning with the Fall 2011 semester, the first time the student has not met MTF the student must make a successful *Financial Aid Appeal* in order to be eligible for further federal/state financial aid.

### **Financial Aid Appeal and Probation**

A student who does not meet FASAP requirements after the *Financial Aid Warning* semester, or a student who exceeds MTF for the first time, may appeal to have financial aid eligibility reinstated if extenuating circumstances prevented the student from meeting FASAP. Such circumstances include:

- Medical condition, illness or injury, to the student or an immediate family member (*Provide documentation*)
- Death of an immediate family member (*Provide documentation*)
- Change or loss of employment for you or an immediate family member (*Provide documentation*)
- Other special circumstance (*Be Specific*)

The *Financial Aid Appeal* process requires the student to complete a Delaware Tech Financial Aid Appeal Form. The student must explain on the Appeal Form the reason(s) the student failed to make FASAP and what has changed in the student's situation that would allow the student to make FASAP at the next evaluation. Relevant documentation must be attached.

In addition, the *Financial Aid Appeal* process requires the student to submit an academic plan signed by a program advisor with the completed Financial Aid Appeal Form to the Financial Aid Office by the appeal deadline for that semester. The academic plan sets forth the requirements the student must meet to make FASAP. The academic plan must include the maximum number of credits recommended by the program advisor for the time period of the academic plan. Please note that if a student registers for additional credits beyond the number approved in the academic plan, then the student is responsible for the cost of those additional credits. However, a student *may* receive financial aid for additional credits beyond those approved in the academic plan only if a new academic

plan signed by a Program Advisor and Dean of Instruction authorizing these additional credits is submitted by the student to the Financial Aid Office by the appeal deadline for that semester.

The Financial Aid Office will respond in writing with the results of the appeal and explain what the student must do to reestablish eligibility for federal/state financial aid. Submitting an appeal does not guarantee that the student will regain financial aid eligibility. The decision of the Financial Aid Office regarding the *Financial Aid Appeal* is final.

If a FASAP appeal is not approved, then the student is ineligible for financial aid until satisfactory academic progress is achieved at his/her own expense.

If the appeal is approved by the Financial Aid Office, the student is then placed on Financial Aid Probation. A student placed on Financial Aid Probation may receive federal/state financial aid as long as the student is satisfying the requirements of an approved academic plan.

### **Financial Aid Probation**

If after the one semester of *Financial Aid Probation*, the College determines that the student achieved FASAP, he/she will have his/her financial aid eligibility reinstated for the next semester of attendance. Thereafter, such student's academic progress will be evaluated in accordance with this FASAP policy.

If after the one semester of *Financial Aid Probation*, the College determines that the student met all the requirements of his/her academic plan, but did not achieve FASAP, he/she will be permitted to continue to receive financial aid for the next semester and subsequent semesters of attendance provided that the student continues to meet all of the requirements of the academic plan.

If after the one semester of *Financial Aid Probation*, the College determines that the student did not meet all the requirements of the academic plan nor successfully achieved FASAP, the student will lose financial aid eligibility until the student achieves FASAP at his or her own expense. Students may make another appeal for financial aid eligibility by submitting a new Financial Aid Appeal Form and providing a new academic plan. However, students are advised that Financial Aid Appeals for academic plan deficiencies will only be approved for changes to the student's major and required courses - or in the most extenuating of circumstances- as determined by the Financial Aid Office.

*All information is subject to change based on revisions to federal laws, regulations, or college policies and procedures. Students are required to abide by any such revision*

## CREDIT HOURS

Students registered for 12 or more credit hours (or equivalent) are considered full-time. A student registered for less than 12 credit hours per semester is considered to be part-time. The class hours, laboratory hours, and total credits are printed in the College Catalog following each course description. The total credits, class hours and laboratory hours are printed.

*Example: (4:3:3)*

## CREDITS IN RESIDENCE

Candidates for the associate degree must complete a minimum of twenty-four (24) credits of course work at Delaware Technical Community College. At least twelve (12) credits of the residence requirement must be major courses from the program in which the degree is awarded. Candidates for the diploma must complete twelve (12) credits of the residence requirement with six (6) credits in major courses. Candidates for the certificate must complete 50% of credits required for the certificate at Delaware Tech. Credits earned under the Advanced Standing Policy may not be applied toward the residency requirements of the College. Exceptions to this policy may be made with the approval of the Deans of Instruction, Associate Vice President for Academic Affairs and Vice President for Academic Affairs.

## CREDITS IN RESIDENCE FOR ACTIVE-DUTY SERVICE

Academic residence for all degrees for active-duty service members is limited to no more than twenty-five percent of the degree requirements. Of the twenty-five percent, at least twelve credits of the residence requirement must be in major courses from the program in which the degree is awarded. Academic residence can be completed at any time while active-duty service members are enrolled. Reservist and National Guardsmen on active-duty are covered in the same manner.

## GRADUATION POLICY

A student is eligible for graduation when the following requirements have been met: (1) The student has satisfactorily completed courses specified for a degree or diploma in his/her program/major area as certified by the department chairperson and the Dean of Instruction and verified by the Registrar; (2) The student has filed an official application for graduation with the Office of the Dean of Student Affairs; (3) The student has satisfied all financial obligations owed the College; (4) The graduation fee has been paid; and (5) The Credits

in Residence requirements have been met. No Delaware Technical Community College diploma or degree is to be awarded or the student allowed to participate in official graduation ceremonies unless that student has completed all requirements for said diploma or degree. Exceptions to this policy may be made by the Vice Presidents/Campus Directors and/or the Vice President of Academic Affairs.

## Campuses

### SUSSEX COUNTY LOCATION

**JACK F. OWENS CAMPUS**  
**21179 College Drive**  
**Georgetown, Delaware 19947**  
**(302) 259-6000**

The Owens Campus, named for the College's first Vice President and Campus Director, is the county hub for higher education. The 146-acre campus provides Sussex County with comprehensive educational opportunities, including degree programs, skill development, pre-college youth programs, and community outreach. This optimum level of programming enables the campus to serve 16,000 people each year.

The College is accredited by the Middle States Commission on Higher Education. In addition, 13 programs have earned national program accreditation by their professional accrediting organization. This status ensures that the educational processes at the campus are of the highest quality, meeting rigorous national standards. Each program has a community-based advisory board of employers that enables programs to be up-to-date and to produce work-ready graduates.

The complex of buildings includes: the Jason Technology Center (classrooms, engineering, computer and medical labs, educational technology labs, faculty offices, bookstore); the Arts & Science Center (health programs, the Learning Center, theatre, art gallery); Student Services Center (admissions, registration, business, financial aid, counseling services, student activities, dining hall); Stephen J. Betze Library; Child Development Center; Trades & Industry Building; Environmental Training Center; the Center for Language and Culture; and the William A. Carter Partnership Center, which features partnerships between the College and the county's public schools and senior institutions of higher education.

Through its partnerships with Delaware State University, Wilmington University, and the University of Delaware, Delaware Technical Community College graduates have the opportunity to pursue selected bachelors, masters, and doctoral degree programs at the Owens Campus.

Other facilities on campus are the horticulture center and a recreational complex. Off-campus sites include a facility for Commercial Transportation training located at the county industrial airpark, and the John & Elsie Williams Conference Center in Millsboro.

To broaden and strengthen the educational opportunities for its students, Delaware Technical Community College has "connected degrees" with colleges/universities in Delaware, Maryland, and Pennsylvania. Following an established curriculum for a connected degree, students earn the associate degree at Delaware Technical Community College and then take specific courses to complete the bachelor's degree with the partner institution.

Reinforcing its commitment to community service, the Owens Campus has established educational partnerships with Cape Henlopen School District, Gumboro Community Center, and Bethany/Fenwick Chamber of Commerce. These partnerships enable residents to seek higher education or pursue non-credit offerings at a convenient local site.

#### **STEPHEN J. BETZE LIBRARY**

The Stephen J. Betze Library holds over 60,000 physical items, including print and recorded books, journals, newspapers, and DVDs. Borrowers can have additional items delivered free of charge through the statewide Delaware Library Catalog. Students also have access to continuously updated online databases for electronic research.

Equipment and facilities available to students include networked desktop computers, printer/photocopiers, scanner, fax machine, and group and individual study areas. Additional information is available on the Delaware Tech libraries' webpage at <https://www.dtcc.edu/student-resources/libraries>.

#### **INSTRUCTIONAL COMPUTER**

Twenty instructional computer labs are located in the Jason Technology Center. Each lab contains a total of 20 student workstations and one instructor's workstation that is connected to an overhead video projection unit for student viewing. The labs also contain a VCR and a high speed laser printer.

The Open Lab, available to all students during the day and evening, has 60 computers with CD-RW drives that contain the same software utilized in the classroom labs. Specialized software offers additional support to students in their areas of study. The Open Lab also contains transcription machines, workstations, scanners, laser and color printers.

The Learning Center offers peer and instructor tutoring, computer assistance, and course related software programs. The programs and services of the Learning Center are available to all students at Delaware Technical Community College, Owens Campus.

#### **CAREER PLANNING & PLACEMENT**

The Career Services Center is the point of contact for students and alumni who want to learn about career opportunities.

The Career Services Center is the central location for reference books, online college catalogs, and resume critique services. The Center offers a variety of services including an internet-based career planning program, interviewing techniques, job search strategies, occupational information, career building workshops, an electronic employment data bank that offers employers, students, and alumni an exclusive opportunity to post jobs and resumes, as well as college transfer information and internet access.

#### **ATHLETICS/RECREATION**

##### **Intercollegiate Athletics**

The Owens Campus competes in Region 19 of the National Junior College Athletic Association (NJCAA) in three sports: baseball, softball and golf. Athletic eligibility is certified through the Athletic Director's Office and verified on the regional and national level by the NJCAA.

##### **Recreation Facilities**

As a community focal point, recreational activities are planned for both student and community use. Outdoor amenities include a Life Course, picnic pavilion, baseball and softball fields, regulation horseshoe pits, a marked walking track, and volleyball courts. Indoor facilities available for students include basketball, volleyball, table tennis, a fitness and wellness center.

#### **NEW CASTLE COUNTY LOCATIONS**

***Delaware Technical Community College's Stanton/George Campus has two locations in New Castle County. The Stanton Campus location is in a suburban area of the county, and the George Campus location is about seven miles away in downtown Wilmington. Free shuttle bus services run between the two locations during daytime hours.***

##### **Stanton/George Campus**

***STANTON:  
400 Stanton-Christiana Road  
Newark, Delaware 19713  
(302) 454-3900***

Situated on a hundred acres of rolling countryside, the suburban Stanton Campus site is located just off Exit 4 of Interstate 95. The campus' convenient location allows easy access from all parts of New Castle County. Instructional facilities at Stanton include nursing, computer, science, and engineering technology laboratories, a culinary arts kitchen and demonstration dining room, automotive programs and laboratories, a

newly renovated library and career center, and computer labs. The campus has a spacious and modern cafeteria and bookstore, a conference center which holds up to 250 people, and instructional television classrooms. Instructional television classrooms are equipped with state-of-the-art distance learning technology; both fiber optic and satellite equipment are utilized. The Industrial Training Facility houses the industrial training programs in areas such as employee development and environmental health and safety.

Stanton Campus enrolls more than 11,000 students in day and evening credit courses and non-credit corporate and community program courses.

Programs offered include science and engineering technologies, nursing, criminal justice, and culinary arts.

**GEORGE:**  
**300 N. Orange Street**  
**Wilmington, DE 19801**  
**(302) 571-5300**

Located in the Christina Gateway section of downtown Wilmington, the campus consists of three modern education buildings. The East Building houses the cafeteria, bookstore, classrooms, career center and laboratories for instructional purposes. The West Building contains instructional classrooms and laboratories, and the library. A 450-car capacity garage and surface parking facilities are adjacent to the Campus. The Southeast building includes classrooms, labs, offices, a dental clinic, an amphitheater with seating for 100, and an instructional television studio.

Credit and non-credit enrollment at the Wilmington location totals over 6,000 students yearly. Academic programs offered include allied health, public service and business/computer-related programs.

An extensive English as a Second Language program and federal and state-funded job training programs offered by the Workforce Development and Community Education Division are also available at the Wilmington campus site.

#### **STANTON/GEORGE CAMPUS LIBRARIES**

The Stanton/George Campus has library collections which are tailored to the technologies offered at each location. The library databases provide numerous articles from journals, technical magazines, other periodicals, and reference works. The Delaware Library Catalog provides information on the book, audiovisual, magazine, and journal holdings of both campus sites as well as the holdings of the public and some academic libraries in Delaware. The combined library collections have over 69,000 volumes/items and 600 periodicals on general and technical topics. Daily courier service transports books and other materials from one campus site to the other and to other libraries in the state.

Both libraries offer a number of desktop and laptop computers for in-house use. Listening and viewing equipment is available along with scanners, and copy machines. Group study rooms, individual study carrels, study tables, and comfortable lounge seating are provided as well. Additional information about the libraries is available on the "Libraries" page of the College website.

Stanton/George Campus Libraries have a Web presence at <https://www.dtcc.edu/student-resources/libraries>.

#### **MICROCOMPUTER LABS**

Both campuses have several computer classrooms as well as a designated open lab that students can use outside of class hours. Lab personnel are always available to offer assistance.

All students taking credit classes will receive an Internet e-mail account after registration. The account will remain active as long as the student continues to register for each semester without interruption. The Internet is used in many classes for research as well as communication with the instructor. All computer labs and libraries on campus have Internet access. Limited remote access allows students with suitable home computer equipment to check their e-mail from home.

#### **CAREER PLANNING & PLACEMENT**

The Career/Placement Centers offer career assistance to students and members of the community. Services include DISCOVER (a computerized career planning program), individual and group counseling, interest and skills assessment, job search strategies, and college and transfer information. The centers hold career and job information in the forms of publications, slides, films, videos and books. Students receive assistance in the total job-hunting process including interview preparation, resume writing and job-search techniques. A list of up-to-date full-time and part-time jobs is also available for students.

#### **ATHLETICS/RECREATION**

##### **Intercollegiate Athletics**

The Stanton/George Campus competes in intercollegiate athletics as a member of the National Junior College Athletic Association (NJCAA), which includes schools in New Jersey, Southeastern Pennsylvania and Delaware. The women's volleyball team has been consistent Region 19 Champions, and many campus athletes from all sports have been named to All-American teams.

Athletic eligibility is certified through the Athletic Director's Office and verified on the regional and national level by the NJCAA. Students from either campus compete in: women's volleyball, men's soccer, men's basketball, and women's softball. The campuses have also sponsored students with outstanding success in individual sports (for example, golf, tennis, cross country, wrestling) in NJCAA regional and national



events.

### **Recreational Facilities**

The Stanton/George Campus has a variety of recreational facilities for student use. A multipurpose gymnasium and athletic fields accommodating a wide range of recreational, intramural and collegiate sporting events are located at the Stanton Campus site. Racquetball and basketball courts are available at Wilmington. Both locations contain Fitness Centers housing Nautilus and other fitness-related equipment. Activity Coordinators organize intramural sport programs throughout the school year.

## **KENT COUNTY LOCATION**

**CHARLES L. TERRY CAMPUS**  
**100 Campus Drive**  
**Dover, Delaware 19904-1383**  
**(302) 857-1000**

Named in honor of the late Governor Charles L. Terry, Jr., the Terry Campus is located in the northern part of Dover, Delaware's capital city. The Campus serves as a higher education resource located in central Delaware. The Terry Campus prides itself on the personal attention it provides its students. Each matriculated student is assigned both a counselor and an advisor to help guide them through their chosen academic program. More than 4,000 full-time and part-time students enroll each year in diversified associate degree programs, diploma and certificate programs and special interest offerings.

All degree, diploma and credit certificate programs have published competencies students will master upon program completion. Program areas include energy management, engineering technology, health care, surgical technology, business, and public services. The Campus' Workforce Development and Community Education Division provides an additional resource for individuals and employers with customized training and retraining services.

The Campus' learning environment offers on-campus and distance education courses to meet students' educational needs. Classes meet in the Terry Building, Science and Engineering Technology Center, Conference and Training Center, Center for Energy Education and Training, and Education & Technology Building. Classroom instruction is supplemented by individualized resource learning labs. The lab facilities provide students with flexible and varied opportunities to master course objectives and curriculum competencies.

Classes are conducted year-round with day, evening and weekend offerings. Applicants are accepted for each of the academic semesters, as well as the summer session. Financial aid and scholarships are available to

qualified applicants. The Conference Center provides WiFi capability, Voice and Video over Internet Protocol (VoIP) technology that enhances distance learning in the classroom, and seating for up to 600 people, which can be divided to accommodate simultaneous programs.

### **TERRY CAMPUS LIBRARY**

The Terry Campus library is located in the Terry Building, on the first floor, directly behind the receptionist desk. Library hours are posted and online at our College wide Library web site for each library at <https://www.dtcc.edu/student-resources/libraries>. The Terry library provides academic support to students and faculty of Delaware Tech through a variety of services. A technical lending library of resources is available through the Delaware Library Catalog and college specific databases are available through the Blackboard portal.

A Delaware Tech I. D. is required to register as a library patron and to utilize the library services.

Terry Library offers a number of desktop computers for in-house use. Group study rooms are also provided.

Terry Library has a Web presence at <https://www.dtcc.edu/student-resources/libraries>

### **RECREATION FACILITIES**

The Terry Campus has a Wellness Center that houses a variety of strength training and cardiovascular equipment. The programs provide regular exercise, health/wellness education and recreational workouts for the benefit of the students and employees. Cardio-Kinetics, Inc. has a full-time Exercise Physiologist who manages and operates the Wellness Center Monday through Friday. The professionally staffed facility is open daily to all students and employees who present a current Delaware Tech ID card. Outdoor facilities include tennis, volleyball and basketball courts, athletic fields, walking trails, and a picnic pavilion.

## **Programs of Study**

**At Delaware Technical Community College students may be accepted in associate degree, diploma or certificate programs.**

## **ASSOCIATE DEGREE PROGRAMS**

The Associate in Applied Science degree curricula prepare students for immediate employment and provide a balance between the studies necessary to earn a livelihood and those needed for understanding and participating in social, political, and cultural activities. The Associate of Arts in Teaching Degree

curriculum prepares students to transfer to a senior institution in order to complete a baccalaureate degree in teaching. Classes are scheduled in the early morning, late afternoon, evening and/or weekends to meet the students' demands. Distance Education classes are also available. The College provides quality instructors, experienced Academic counselors, and other support staff to all students.

If you plan to transfer to another college after completing an associate degree at Delaware Technical Community College, consult with your program advisor to determine whether your associate degree program is articulated with a senior institution. These connected degree programs ([www.dtcc.edu/connecteddegree/](http://www.dtcc.edu/connecteddegree/)) have transfer provisions you need to know. For other transfers, consult the College catalog or the Admissions Office of the institution which you plan to attend as soon as possible. Transferability of courses and programs is determined solely by the institution to which the student transfers.

## **DIPLOMA & CERTIFICATE PROGRAMS**

Diploma and certificate programs and courses prepare students for specific employment. All programs are tailored to meet the needs and abilities of the individual and to provide a marketable skill which will enable him/her to compete successfully in the job market. Additional information may be obtained by calling the Admissions Office at your nearest campus.

## **STUDY ABROAD OPPORTUNITIES**

Delaware Technical Community College is currently offering short-term study abroad courses. These credit courses with an integrated study abroad component are generally offered during the summer semester lasting approximately ten to twenty-one days. Many of these courses can/will be accepted as an elective to curriculum programs. For a list of current study abroad opportunities, contact your International Education Coordinator at your home campus or visit the International Education webpage at: <http://www.dtcc.edu/future/international>.

## **COOPERATIVE EDUCATION/INTERNSHIP PROGRAMS**

Cooperative Education/Internship is a partnership between the student, business, industry, government, or service agencies, and the College. This work experience is available in selected academic programs and may be scheduled for one or two semesters. The College classroom exposes the students to facts, theories, and principles; the student applies those

principles and theories in an actual job environment. A student on a co-op/internship can receive training and experience in a professional environment that supplements learning in a campus lab, classroom, or library.

## **ENGLISH AS A SECOND LANGUAGE**

The ESL program serves the varied needs of persons for whom English is not a native language. Participants can develop communication skills which will enable them to succeed in the United States. English skills will be developed so that students can prepare themselves to participate more independently in American society and, if they desire, pursue a college degree.

## **SPECIALIZED OCCUPATIONS**

The Specialized Occupations program was established to meet the special training needs of Delaware business, industry, and professions. The objectives are twofold:

1. To satisfy the educational needs of employers and employees in areas where employment opportunities are too limited to justify establishment of formal education programs.
2. To prepare employees for new or increased responsibilities at their present place of employment through a combination of college-level studies and appropriate on-the-job experience.

## **WORKFORCE DEVELOPMENT AND COMMUNITY EDUCATION**

The Workforce Development and Community Education (WDCE) Division provides a broad range of education and training geared to meet specific workforce development and community education needs. The Division serves its constituency through programs in four main areas: Conferences & Seminars, Community & Continuing Education, Corporate & Contract Training, and Workforce Training. The Workforce Development and Community Education Division is the outreach arm of the College, encompassing special projects not available through other instructional areas.

## **DISTANCE EDUCATION**

**Delaware Technical Community College offers The Center for Creative Instruction and Technology**

## **(CCIT)**

### **Mission**

The mission of the Center for Creative Instruction and Technology at Delaware Technical Community College is to assist and inspire educational creativity and excellence.

The CCIT staff pledges to enable, educate, and support our academic partners as they combine their subject matter expertise with our understanding of instructional design and state of the art educational technology applications. Together, we will strive to design experiences that increase student performance, satisfaction, and demonstrate innovation in both face-to-face and virtual learning environments.

### **Services**

The CCIT staff is available to provide the following services.

- Instructional Design and Technology Consulting and Services
- Administration of the Instructional Design and Technology Certificate Program
- Multimedia Consulting, Training and Production
- Foundational Technology Consulting, Training and Support
- Research Assistance and Support
- Special Projects

## **Blackboard 9**

### **Overview**

Blackboard 9 features a streamlined navigation system and improved course setup process. The latest version of Blackboard offers new and improved social learning tools such as blogs and journals, easier navigation, and other Web 2.0 technologies that allow for greater interactivity and collaboration. Blackboard 9 uses a Web 2.0 interface that allows users to drag and drop items that appear on the screen, select from drop down menus, and access contextual help.

### **Interface**

Course content creation and editing tools are embedded throughout the course and no longer require the instructors to access the Control Panel. Instructors click on the Edit Mode switch in the top right corner of any Blackboard page.

All options in the Control Panel are available from the main Course Menu. Instructors have direct access to edit and organize the Course Menu and may use the drag and drop feature to change the order of menu items. Course Menu items that do not contain any content are automatically hidden from student view but are visible to the instructor while in Edit Mode.

In addition, Bb 9 has eliminated the separate receipt page that the user sees every time they successfully perform an action. Confirmations now appear on the

same page on which the user is working.

### **File Collection and Exchange**

The Digital Drop Box has been replaced by the Assignments Tool. This tool allows instructors to download all of the student files for a particular assignment in a single zip file. Blackboard automatically renames each student's file to include the name of the assignment, the student's username, and the filename the student originally submitted. There is a Group File Exchange that works like the old Digital Drop Box, for Groups only.

### **Blogging and Journal Tools**

Blackboard 9 has a built in private Blog and Journal tools that allow students to create and share ideas with their instructors or other students enrolled in the same class. Both of these tools may not be viewed outside Blackboard.

Individual journals allow students to record what they are learning. These thoughts can be private between a student and instructor or shared with others in the course. The author and the instructor can add comments. Group journals allow groups of students to reflect collaboratively and comment on group member's finding.

Individual blogs provide each student in a course with their own area to share thoughts and work with others in the course. Students are able to receive comments and feedback on their individual blog from others in the course. Course blogs allow users in a particular course to share thoughts and work in a common area where all the students in the same course can read and add comments. Group blogs allow groups of students in a course to collaboratively post thoughts and comments on each other's work while everyone else in the course can view and comment on the groups' entries.

### **Groups**

Instructors can now create any number of groups at once. Students can randomly be assigned to groups, manually assigned by the instructor, or asked to sign-up for a group themselves. Students can create their own self-enrollment groups, although instructors have the option of modifying or restricting access to the student created groups.

Redesigned Grade Center (formerly the Grade Book) Instructors can enter results, scores, percentages, and other forms of grading directly into the Grade Center spreadsheet. This inline editing process is similar to Microsoft Excel. Each grade entered into the Grade Center is automatically saved.

The Grade Center automatically records each grade's history. If an instructor or TA changes a grade, the grade history will show the new grade, the old grade(s), when the grade(s) was changes and who made the changes. Instructors can create "Smart Views" that categorize students based on selected criteria. This is helpful for courses that have been combined as

instructors are now able to view students by section. It also works well for instructors who use TA's and want to divide the management of student grades between those TA's. The Grade Center supports average grade and minimum/maximum grade calculations. Instructors are now able to drop the lowest score easily. Instructors have the ability to create and print grade reports.

**Blackboard Technical Support**

To speak with a support analyst, call toll free 1-855-836-3517 weekdays 8:00 am to midnight and anytime on the weekends. Delaware Tech Blackboard Support Chat is always available, 24x7, 365 days a year by visiting <https://chat.perceptis.com/c/dtcc>.

**DELAWARE TECHNICAL COMMUNITY  
COLLEGE/UNIVERSITY OF DELAWARE  
ASSOCIATE IN ARTS DEGREE PROGRAM**

**Owens, Terry and Wilmington Campuses**

The Delaware Technical Community College/ University of Delaware Associate in Arts Degree Program is a liberal arts program primarily for students interested in areas of study offered by the University of Delaware's Colleges of Arts and Sciences, Business and Economics, Education, Agriculture and Human Resources. The program consists of University courses taught by University faculty.

A student may earn a University of Delaware associate degree by completing 60 credit hours of instruction in his/her area of concentration. A bachelor's degree is awarded by the University of Delaware to a student who continues at the University, completing a minimum of 124 credits, including general University requirements, group and major requirements. (Minimum credits may be higher in certain majors.) Admissions decisions consider the student's academic record, Scholastic Aptitude Test scores, and recommendations from their high school. A student is offered admission and provided with an evaluation of total qualifications that indicate potential for success.

Financial aid is available to assist qualified students. Applicants must complete the College Scholarship Service Financial Aid Form. Application is made through the University of Delaware Admissions Office. Applications are available at Delaware Technical Community College, the University, or at any Delaware high school guidance office.

Please visit the Delaware Technical Community College or University of Delaware Web sites at [www.udel.edu](http://www.udel.edu) or [www.dtcc.edu](http://www.dtcc.edu) for more information.

## DELAWARE TECHNICAL COMMUNITY COLLEGE ACCREDITATIONS AND CERTIFICATIONS

<u>CAMPUS</u>	<u>TECHNOLOGY</u>	<u>AGENCY</u>
Owens	Aviation Maintenance Technology  General Airframe Maintenance Certificate, General Powerplant Maintenance Certificate	Federal Aviation Administration (FAA)
Owens	Architectural Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ETAC of ABET)
Owens	Automotive Technology	National Automotive Technicians Education Foundation (NATEF) for Automotive Service Excellence (ASE)
Owens	Business Accounting, General Business, Management, Marketing	Association of Collegiate Business Schools and Programs (ACBSP)
Owens	Civil Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ETAC of ABET).
Owens	Commercial Transportation (Tractor Trailer Driver Training)	Professional Truck Driver Institute, Inc.
Owens	Design Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ETAC of ABET).
Owens	Diagnostic Medical Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP) Delaware Department of Education
Owens	Early Childhood Education Early Care and Education (Birth to Second Grade)	Delaware Department of Education
Owens	Early Childhood Education Early Childhood Development Education*	Delaware Department of Education
Owens	Math Secondary Education Education*	Delaware Department of Education
Owens	Elementary Education Option Education*	Delaware Department of Education
Owens	Paraeducator Human Services	Council for Standards in Human Service Education (CSHSE)
Owens	Medical Laboratory	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
Owens	Nursing	Accreditation Commission for Education in Nursing
Owens	Occupational Therapist Assistant	Accreditation Council for Occupational Therapy Education (ACOTE)
Owens	Office Administration	Association of Collegiate Business Schools and Programs
Owens	Paralegal	American Bar Association Standing Committee on Paralegals Approval

Owens	Physical Therapist Assistant	Commission on Accreditation in Physical Therapy Education (CAPTE)
Owens	Radiologic Technology	Joint Review Committee on Education in Radiologic Technology (JRCERT)
Owens	Refrigeration, Heating, & Air-Conditioning	Partnership for Heating, Ventilation, Air-Conditioning, Refrigeration Accreditation (PAHRA)
Owens	Respiratory Care	Committee on Accreditation of Respiratory Care (COARC)
Owens	Veterinary Technology	American Veterinary Medical Association
Stanton	Associate Degree Nursing	Accreditation Commission for Education in Nursing (ACEN)
Stanton	Automotive Technology	National Automotive Technicians Education Foundation (NATEF) for Automotive Service Excellence (ASE)
Stanton	Computer Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ETAC of ABET)
Stanton	Culinary Arts	American Culinary Federation, Foundation Inc.'s Accrediting Commission
Stanton	Electronics Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ETAC of ABET)
Stanton	Food Service Management	American Culinary Federation, Foundation Inc.'s Accrediting Commission
Stanton	Mechanical Engineering Technology	Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (ETAC of ABET)
Terry	Business Accounting, General Business, Hospitality Management, Management, Marketing	Association of Collegiate Business Schools and Programs (ACBSP)
Terry	Culinary Arts	American Culinary Federation Education Foundation
Terry	Early Childhood Education Early Care and Education (Birth to Second Grade)	Delaware Department of Education
Terry	Early Childhood Education Early Childhood Development	Delaware Department of Education
Terry	Education*	Delaware Department of Education
Terry	Math Secondary Education Education*	Delaware Department of Education
Terry	Elementary Education Option Education*	Delaware Department of Education
Terry	Paraeducator Human Services	Council for Standards in Human Services Education (CSHSE)
Terry	Associate Degree Nursing	Accreditation Commission for Education in Nursing (ACEN)
Terry	Paralegal	American Bar Association Standing

		Committee on Paralegals Approval Commission
Terry	Paramedic	Commission on Accreditation of Allied Health Education Programs (CAAHEP) Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)
Terry	Practical Nursing	Accreditation Commission for Education in Nursing (ACEN)
Terry	Surgical Technology	Commission on Accreditation of Allied Health Education Programs (CAAHEP) Committee on American College of Surgeons (ACS) and Association of Surgical Technologist (AST)
Wilmington	Business Accounting, General Business, Management, Marketing, Hospitality Management	Association of Collegiate Business Schools and Programs (ACBSP)
Wilmington	Cardiovascular Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Wilmington (Terry/Owens Extension)	Dental Hygiene Dental Hygiene	American Dental Association, Commission on Dental Accreditation American Dental Association, Commission on Dental Accreditation
Wilmington	Diagnostic Medical Sonography, General Concentration	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Wilmington	Human Services	Council for Standards in Human Service Education (CSHSE)
Wilmington	Early Childhood Education	Delaware Department of Education
Wilmington	Early Childhood Education: Early Care and Education (Birth to Second Grade)	Delaware Department of Education
Wilmington	Early Childhood Education: Early Childhood Development Education*	Delaware Department of Education
Wilmington	Math Secondary Education Education*	Delaware Department of Education
Wilmington	Elementary Education Option Education*	Delaware Department of Education
Wilmington	Paraeducator	
Wilmington	Early Childhood Education, Child Development Center	National Association for the Education of Young Children (NAEYC)
Wilmington	Histotechnology	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
Wilmington	Human Services	Council for Standards in Human Service Education (CSHSE)
Wilmington	Health Information Management	Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)

Wilmington	Medical Assistant	Commission on Accreditation of Allied Health Education Programs (CAAHEP) Curriculum Review Board of American Association of Medical Assistants' Endowment (AAMAE)
Wilmington	Nuclear Medicine	Joint Review Committee on Education Programs in Nuclear Medicine Technology (JRCNMT)
Wilmington	Occupational Therapy Assistant	The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association (ACOTE)
Wilmington	Physical Therapist Assistant	Commission on Accreditation in Physical Therapy Education (CAPTE)
Wilmington	Radiologic Technology	Joint Review Committee on Education in Radiologic Technology (JRCERT)
Wilmington	Respiratory Care	Committee on Accreditation of Respiratory Care (COARC)

\* *Provisional approval is granted to institutions until a larger number of graduates are produced.*



## Course Descriptions

### Course Descriptions

*This section includes a list of courses offered at the College. Not all courses are offered each semester, and not all courses are offered on all campuses. The College reserves the right to cancel any course in the semester schedule for which an insufficient number of students register.*

ACC Accounting  
 ACE Academic Challenge English  
 ACM Academic Challenge Mathematics  
 ACR Air Conditioning & Refrigeration  
 AET Architectural Engineering  
 AGS Applied Agricultural  
 AID Interior Design  
 AMT Airframe Maintenance Technology  
 ASL American Sign Language  
 AUT Automotive  
 AVI Aviation Maintenance Technology  
 BIO Biology  
 BIT Biotechnology  
 BUS Business Administration  
 CEN Computer Engineering  
 CET Civil Engineering  
 CHM Chemistry  
 CIS Computer Information Systems  
 CLT Cultural  
 CMT Construction Management  
 CNE Computer Network Engineering  
 COD Medical Coding  
 COM Communications  
 CPO Chemical Process Operator  
 CRJ Criminal Justice  
 CSA CISCO Academy  
 CSC Computing and Information Science  
 CSM Customer Service Management  
 CTS Commercial Transportation  
 CUL Culinary Arts  
 CVS Cardiovascular Sonography  
 CWE Cooperative Education  
 DAC Drug & Alcohol Counseling  
 DHY Dental Hygiene  
 DMS Diagnostic Medical Sonography  
 EBZ E-Business  
 ECE Early Childhood Education  
 ECH Echocardiography  
 ECO Economics  
 EDC Education  
 EDD Computer-Aided Engineering Drafting & Design  
 EDT Engineering Drafting  
 ELC Electronics/Electrical Engineering  
 ELM Electromechanical Engineering  
 EMT Emergency Medical Technician (Paramedic)  
 ENG English  
 ENT Entrepreneur  
 ENV Environmental  
 ESL English as a Second Language  
 ESM Emergency Services Management

EXS Exercise Science  
 FET Fire Protection Engineering  
 FIN Finance  
 FSM Food Service Management  
 FSY Food Safety  
 GET Engineering (General)  
 GIS Geographic Information System  
 HIM Health Information Management  
 HIS History  
 HIT Health Information  
 HLH Allied Health  
 HMS Human Services  
 HRI Hotel, Restaurant, & Institutional Management  
 HRM Human Resource Management  
 HTT Histotechnician  
 HVA HVAC Design Engineering  
 IDT Instructional Design & Technology  
 IET Industrial Engineering  
 IMT Industrial Maintenance  
 INT Sign Language Interpreting  
 ISY Information Security  
 LAS Laser & Optic Studies  
 LOM Logistic/Supply Chain/Operation Management  
 MAT Mathematics  
 MEA Medical Assistant  
 MET Mechanical Engineering  
 MGT Management  
 MIS Management Information Systems  
 MKT Marketing  
 MLT Medical Laboratory  
 NCJ Non-Curriculum Credit Courses Joint-Campus  
 NCN Non-Curriculum Credit Courses - Stanton  
 NCS Non-Curriculum Credit Courses - Owens  
 NCT Non-Curriculum Credit Courses - Terry  
 NCW Non-Curriculum Credit Courses - Wilmington  
 NMT Nuclear Medicine  
 NRG Energy  
 NUR Nursing  
 OAT Office Administration  
 OTA Occupational Therapy Assistant  
 PHY Physics  
 PLG Paralegal  
 POL Political Science  
 POS Poultry Science  
 PSY Psychology  
 PTA Physical Therapist Assistant  
 RAD Radiologic Technologist  
 RCT Respiratory Care Therapist  
 SGT Surgical Technology  
 SMT Safety Management  
 SOC Sociology  
 SPA Spanish  
 SSC Student Success Courses  
 SSS Student Services  
 VAS Vascular Sonography  
 VET Veterinary Science  
 VSC Visual Communications

**ACC100 Introduction to Accounting**

This course introduces the principles and procedures of accounting, emphasizing the role of accounting in making business decisions, understanding the meaning of accounting information, how it is compiled, how it can be used, and its limitations. The focus is on the bookkeeping aspects of accounting, including basic business transactions, payroll, special journals, and the preparation of simple financial statements and worksheets.

Pre-requisite: (Test score or ENG 006 or ENG 007 or higher) and (Test score or MAT 005 or higher)

Credit: 3

Lecture: 2

Lab: 2

**ACC101 Accounting I**

This course introduces principles and concepts of financial accounting with emphasis on accounting for sole proprietorships. Areas covered include accounting for service and merchandising businesses, cash, receivables, inventory, plant assets and liabilities. Balance sheet and Income statement preparation and analysis are included.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAhigher) and (Test Scores or MAT 015 or higher)

Credit: 4

Lecture: 3

Lab: 2

**ACC112 Accounting II**

This course continues principles and procedures of accounting from Accounting I. Topics include accounting for partnerships, corporations, bonds, retained earnings, corporate securities, and cash flow statements. The course also includes an introduction to managerial accounting and covers job order costing, cost-volume-profit (CVP) and incremental analysis, responsibility accounting, budgets, and standard costing.

Prerequisite: ACC 101

Credit: 4

Lecture: 3

Lab: 2

**ACC162 Computerized Accounting**

This course prepares students with the workplace skills necessary for the utilization of automated accounting software to include data entry by interpreting accounting information, creation of financial statements and other financial reports, creation of payroll and the related payroll reporting requirements and creation and management of customer invoices and vendors' bills. This course will reinforce the concepts learned in Accounting I and apply these concepts to computer software that can be used to make business decisions. Prerequisites: ACC 101 and CIS 107

Credit: 3

Lecture: 2

Lab: 2

**ACC211 Tax Accounting I**

This course covers a review of the federal income tax structure. Major topics include determination of gross income, adjustments, itemized deductions, the standard deduction, personal and dependency exemptions, tax liability, and tax credits; theory and return preparation are emphasized. Prerequisites: (Test Scores or ENG 102 or higher) and (Test Scores or MAT 140 or higher) and ACC 101

Credit: 3

Lecture: 3

Lab: 1

**ACC221 Cost Accounting**

A study of the cost concepts, the cost accounting information system, and the role of the cost accountant. Topics covered include the elements of cost, job order costing, process costing, by-products, joint products, inventory control in a just-in-time environment and quality control procedures. Prerequisites: (Test scores or ENG 102 or higher) and ACC 112 and CIS 107

Credit: 3

Lecture: 3

Lab: 1

**ACC231 Intermediate Accounting I**

This course examines the principles and procedures emphasized in the preparation and interpretation of the statements of income, retained earnings, cash flow, and balance sheets. The time value of money, receivables, inventories, and fixed assets are covered in depth. Prerequisites: (Test scores or ENG 102 or higher) and (Test scores or MAT 140 or higher) and ACC 112

Credit: 3      Lecture: 3      Lab: 1

**ACC232      Intermediate Accounting II**

This course is a continuation of the in-depth examination of principles and procedures emphasizing the following topics: current and long-term liabilities, stockholder's equity, investments, leases, pensions, income measurement, and analysis of financial statements with full disclosures. Prerequisites: ACC 231

Credit: 3      Lecture: 3      Lab: 1

**ACC240      Advanced Accounting**

This course emphasizes accounting concepts and procedures beyond the intermediate accounting level. Topics covered include consolidated financial statements, intercompany transactions, the international accounting environment, partnership accounting, and governmental and not-for-profit accounting. Prerequisites: ACC 231 and ACC 221 and ACC 211 and ECO 122.

Credit: 3      Lecture: 3      Lab: 1

**ACC251      Auditing**

A study of external audit process, including ethical and legal environment, audit planning, control risk assessment, substantive testing, and audit report. Prerequisites: (ACC 201 or BUS 203) and ACC 211 and ACC 221 and ACC 231 and MAT 255 and (CIS 112 or OAT 152).

Credit: 3      Lecture: 3      Lab: 1

**ACC291      Intermediate Accounting Honors**

Principles and procedures emphasizing the preparation and interpretation of the statements of income, retained earnings, cash flow, and balance sheet. The time value of money, receivables, inventories, and fixed assets are covered in depth. In addition to the course outline of ACC 231, Intermediate Accounting Honors includes an appropriate approved project. Prerequisites: (Test scores or ENG 102 or higher) and ACC 112

Credit: 3      Lecture: 3      Lab: 1

**ACE026      Writing Research& Presentation**

In this course, students learn the fundamentals of writing, research, and presentation with emphasis on public speaking, writing informative and explanatory essays, writing for an audience, using technology, and conducting a short research project. This course emphasizes the use of information-based texts. Pre-requisite: ACE 025

Credit: 2.25      Lecture: 2.25      Lab: 0

**ACE033      World Literature**

In this course, students study world literature, with emphasis on evaluating speakers' points of view, writing arguments to support claims, gathering and using information from many sources, citing evidence to support analysis, analyzing authors' uses of text, and evaluating claims in a text. This course uses both literary and informational texts. Pre-requisite: ACE 026

Credit: 2.25      Lecture: 2.25      Lab: 0

**ACE034      British Literature**

In this course, students study British literature with emphasis on integrating multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, or orally); writing informative/explanatory texts; gathering relevant information from multiple authoritative print and digital sources; analyzing how complex characters develop over the course of a text; analyzing multiple interpretations of a story, drama, or poem; and analyzing documents of historical and literary significance.

Pre-requisite: ACE 033

Credit: 2.25

Lecture: 2.25

Lab: 0

#### ACE035 American Literature

In this course, students study American literature with emphasis on developing and strengthening writing as needed by planning, revising, editing, and rewriting; using technology, including the Internet, to produce, publish, and update individual or shared writing products; drawing evidence from literary or informational texts to support analysis, reflection, and research; analyzing an author's choices concerning how to structure specific parts of a text; and determining two or more central ideas and analyzing their development over the course of the text.

Pre-requisite: ACE 034.

Credit: 2.25

Lecture: 2.25

Lab: 0

#### ACE040 Writing & Research

In this course, students continue to develop and use skills learned in previous courses and apply them to produce a literary research paper. The goal of the course is to prepare students to write at a level and depth appropriate for introductory collegiate composition courses.

Pre-requisite: ACE 035

Credit: 2.25

Lecture: 2.25

Lab: 0

#### ACM012 Algebra II

This course builds on topics explored in ACM 011, including linear equations, inequalities, graphs, matrices, polynomials and radical expressions, quadratic equations, functions, exponential and logarithmic expressions, sequences, and series.

Prerequisite: ACM 011

Credit: 2.25

Lecture: 2.25

Lab: 0

#### ACM021 Geometry

This course focuses on an in-depth analysis of plane, solid, and coordinate geometry, including postulates and definitions, development of deductive reasoning through direct and indirect proofs, geometric inequalities, perpendicularity, parallelism, congruence, similarity, circles, constructions, polygons, and solids.

Prerequisite: ACM 012

Credit: 2.25

Lecture: 2.25

Lab: 0

#### ACM023 Trigonometry & Pre-Calculus B

This course integrates intermediate algebra, analytic geometry, and trigonometry with other college algebra topics through a functional approach as preparation for calculus.

Pre-requisite: ACM 032

Credit: 2.25

Lecture: 2.25

Lab:

**ACM024            Functions, Statistics & Trig**

This course is designed to integrate intermediate algebra, statistics, and trigonometry with other college algebra topics through a functional approach as preparation for pre-calculus.

Prerequisite: ACM 021

Credit: 2.25

Lecture: 2.25

Lab:

**ACM031            Probability and Statistics**

Data presentation with central tendency and variability analyses. Probability and counting rules, sampling, estimation hypothesis testing; Chi-square and analysis of variance; simple regression and correlation. Prerequisites: (ACM 021 (grade of CE) and ACM 022 (grade of BE)) or (ACM 021 (grade of BE) and ACM 022 (grade of CE)).

Credit: 3

Lecture: 3

Lab: 0

**ACM032            Pre-Calculus**

This course is designed to integrate intermediate algebra, analytic geometry, and trigonometry with other college algebra topics through a functional approach as preparation for calculus.

Prerequisite: ACM 024

Credit: 2.25

Lecture: 2.25

Lab: 0

**ACR101            HVAC Electricity**

This course is designed to familiarize the student with electric fundamentals as applied to heating, ventilating, and air conditioning. Basic circuits, Ohm's law, meters, motor theory, and circuit control are covered. Emphasis is placed on wiring components and reading schematics. Hands-on training is provided with emphasis placed on mastery of skills and competency of assigned tasks.

Prerequisite: (Test scores or ENG 006 or ENG 007 or higher) and (Test score or MAT 005 or higher)

Credit: 5

Lecture: 4

Lab: 4

**ACR102            Fundamentals of Refrigeration**

This course is an introduction to the refrigerant cycle with emphasis on laws of physics for refrigerant gases, characteristics of heat transfer, design, operation, and service. Emphasis is placed on calculating system pressures and operating temperatures. Hands-on training is provided with emphasis placed on mastery of skills and competency of assigned tasks. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 005 or higher)

Credit: 5

Lecture: 4

Lab: 4

**ACR104            Residential Climate Control**

This course introduces students to residential air conditioning and heat pump systems. Design characteristics, components, operation, and service are covered. Emphasis is placed on proper installation and troubleshooting procedures. Hands-on training is provided with emphasis placed on mastery of skills and competency in assigned tasks. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and ACR 101 and ACR 102

Credit: 5

Lecture: 4

Lab: 4

**ACR105            Residential Heating I**

This course covers the basic understanding of different types of oil and gas furnaces used in residential homes. Standard efficiency to high efficiency systems are covered, with emphasis on sequence of operation, repair, and adjusting to manufacturers' specifications. Hands-on training with emphasis placed on mastery of skills and competency of assigned tasks is provided. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and ACR 101

Credit: 5      Lecture: 4      Lab: 4

**ACR114      EPA Seminar and Exam**

This course prepares students to take the Environmental Protection Agency (EPA) Section 608 Technician Certification for stationary equipment.

Prerequisite: ACR 102 or concurrent

Credit: 1      Lecture: 1      Lab: 0

**ACR115      Air Distribution & Balancing**

This course provides background needed to estimate, design, and select equipment for residential heating and air conditioning systems. Heat loss/gain load calculations and design duct systems to conform to industry standards are covered. Air balancing instruments are introduced.

Prerequisite: ACR 104

Credit: 3      Lecture: 3      Lab: 1

**ACR120      Employee Development Seminar**

This course explores career opportunities in the heating, ventilation, and air conditioning field. Customer relations, safety, and environmental concerns are discussed. Refrigerant transition and recovery certification training is provided. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 2      Lecture: 2      Lab: 1

**ACR121      HVAC Energy Systems**

This course covers the fundamental theoretical principles and practical descriptions of the various heating, ventilation, and air conditioning (HVAC) equipment and systems used in residential/commercial buildings. Topics include basic thermodynamics, heat transfer, fluid flow dynamics, heating and cooling load calculations, psychrometrics, fan laws, and air/water properties. Efficiency analysis of equipment and systems and estimating annual energy use of buildings are covered. Prerequisites: NRG 101 and (Test scores or MAT 140 or MAT 153 or MAT 181 or MAT 185).

Credit: 3      Lecture: 3      Lab: 1

**ACR150      Industry Competency Exam I**

This course prepares students to take the Industry Competency Exam (ICE) for Residential Oil and Gas Heating. The ICE measures standards of basic competency developed, supported, and validated by major industry associations.

Pre-requisite: ACR 105 or concurrent

Credit: 1      Lecture: 1      Lab: 0

**ACR151      Industry Competency Exam II**

This course prepares students to take the Industry Competency Exam (ICE) for Air Conditioning and Heat Pump. The ICE measures standards of basic competency developed, supported, and validated by major industry associations.

Pre-requisite: ACR 104 or concurrent

Credit: 1      Lecture: 1      Lab: 0

**ACR202      Commercial Refrigeration**

This course introduces the student to refrigeration systems used in light commercial applications. It includes low temperature systems, water cooled equipment, piping, and servicing restaurant equipment.  
 Prerequisite: ACR 101 and ACR 102 and ACR 120 and ENG 101 and (MAT 150 or MAT 140)

Credit: 3      Lecture: 2      Lab: 4

**ACR204      Residential Heating II**

This course covers heat loss estimation, design, and install for hydronic heating systems. Hot water baseboard heating systems are discussed with emphasis placed on methods of construction, balancing, and boiler designs.  
 Prerequisites: ACR 105 and (MAT 150 or MAT 140) and ENG 102 or concurrent

Credit: 3      Lecture: 2      Lab: 2

**ACR222      Commercial HVAC Energy Analysis**

This is an in-depth course on heating, ventilation and air conditioning systems. The student will identify and analyze the energy consumption of the various HVAC equipment and systems used in commercial buildings. The student will learn how to program and deploy data loggers to gather energy information such as temperature, humidity and current draw on various systems and components. This course will use the fundamentals of psychometrics, fan laws and air/water properties to analyze energy usage and select strategies for improvement. The student will analyze alternatives to predict energy and cost savings for these strategies. Prerequisites: ACR 121 and (MAT 140 or MAT 181 or MAT 182 or MAT 185 or MAT 281).

Credit: 2      Lecture: 2      Lab: 1

**AET111      Constr Blueprint Reading**

This course will demonstrate fundamentals of reading and interpreting of residential and light commercial building construction drawings. Subject areas covered will include projections, drawing views, reading elevation drawings, floor plans, scale and dimensioning practices. Reading drawings for structural information, reading detail drawings and plot plans, and reading blueprints for trade information will also be covered. Pre-requisites: (Test scores or ENG 090 or higher) and (Test scores or MAT 012 or higher)

Credit: 4      Lecture: 4      Lab: 0

**AET123      Arch Drafting/Design I**

This course provides training and experience in modern drafting room procedure, practice and principles. Course covers the basic skills and techniques of drafting including freehand orthographic and pictorial sketching, geometric construction, multi-view projections, sectional views, auxiliary views, line types, lettering, dimensioning, notation, and use of drafting equipment and Computer Aided Design (CAD). Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 4      Lecture: 3      Lab: 3

**AET125      Arch Drafting/Design II**

This course presents basic architectural design, drafting, and documentation techniques. This is accomplished through the drawing of plot, floor, and elevation plans that contains sections, details, and schedules as used in residential construction documents. Quality line work, dimensioning, and drawing accuracy will be emphasized for traditional techniques, as well as, Computer Aided Design (CAD). Prerequisites: AET 123 and EDD 171 and (AET 135 or AET 135 concurrently).

Credit: 4      Lecture: 3      Lab: 3

**AET135      Construction Materials/Methods**

This course will study construction materials and methods of use as they relate to the overall building industry. The major emphasis will be on the subject areas of soils, concrete, brick, masonry, steel, non-ferrous metals, lumber, timber, and plastics. Materials and methods are discussed in the context of their application in design, construction, building codes, zoning ordinances, and building loads. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 3

Lecture: 2

Lab: 2

**AET232 Contracts/Specifications**

This course presents principles and procedures related to project manuals with an emphasis on construction specification writing that incorporates the standards of the Construction Specifications Institute (CSI) Masterformat. Also included is the study of bidding requirements, construction contracts, and project delivery. Prerequisites: (Test score or ENG 102 or higher) and (AET 135 or CET 135)

Credit: 3

Lecture: 3

Lab: 0

**AET236 Building Service Systems**

This course introduces the theory and practice involved in the design and construction of mechanical systems, to include heating and air conditioning, plumbing, and electrical systems. Prerequisites: (Test scores or ENG 101 or higher) and ((MAT 181 and AET 135 and (AET 125 or CET 125)) or ((MAT 125 or MAT 150) and ACR 101) or (EDD 142 and EDD 271))

Credit: 3

Lecture: 2

Lab: 2

**AET250 Arch Drafting/Design III**

This is a Computer Aided Design (CAD) based course with a focus on commercial building design, documentation, building placement, and site analysis and development, including use of surveying equipment, field notes and calculations. Projects will demonstrate an understanding of building codes, structural systems and building components in construction documents. Prerequisites: (Test scores or ENG 101 or higher) and MAT 181 and AET 125 and AET 264

Credit: 4

Lecture: 3

Lab: 3

**AET264 Architectural CAD Applications**

This course introduces three-dimensional (3D) parametric architectural computer aided design (CAD) software to develop building models used to produce drawing documents, including site plans, floor plans, elevations, sections, and schedules. Creation of 3D pictorial representations of interiors and exteriors, including materials, lighting, rendering, and animation are covered.

Prerequisite: AET 123 or CET 125 or (NRG 111 or concurrent)

Credit: 3

Lecture: 2

Lab: 2

**AET270 Arch Drafting/Design IV**

This is a capstone course using multiple Computer Aided Design (CAD) software platforms in which students develop architectural projects utilizing a collaborative team approach. Emphasis is on research, building codes, building systems, sustainability and innovative industry practices. Prerequisites: AET 236 and AET 250 and AET 275.

Credit: 4

Lecture: 3

Lab: 3

**AET275 Arch Dsgn:Foundation Studies I**

This course is an introduction to the design process using abstract and applied projects in three-dimensional form to investigate the relationship between scale, context, and building elements. It includes the impact of function, materials and structure on the design process in creating architecture. Prerequisites: AET 125 and AET 264.



Credit: 4      Lecture: 3      Lab: 3

**AGS101      Soil Science**

This course covers elements of soil science and management as they relate to production agriculture, horticulture, and turf sciences. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 2      Lab: 2

**AGS102      Agricultural Science**

This course introduces principles of scientific agriculture. Topics include an overview of the relationship of agriculture to human survival; interactions of society and the environment; and the roles of soil, plants, animals, history, and technology in agriculture. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3      Lecture: 3      Lab: 0

**AGS104      Intro to Agribusiness Managemt**

This course covers the role and organization of agribusiness, the function and operation of an agribusiness, and the skills necessary to become a valued employee or entrepreneur. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher) and BUS 101

Credit: 3      Lecture: 3      Lab: 0

**AGS105      Prin of Plant Growth**

This course introduces plant structure and function with practical applications to horticulture, turf, and agricultural plants. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 2      Lab: 2

**AGS106      Vegetable Crop Production**

This course examines general production principles associated with commercial vegetable production. Topics of discussion will include fertilization and harvesting practices. Home vegetable gardening and greenhouse crop production. Pesticide use and handling along with storage. Students will be introduced to Delaware's safe handling practices for vegetable production and sales. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and AGS 101 and AGS 105

Credit: 3      Lecture: 3      Lab: 0

**AGS123      Trfgrss Maintenance Practices**

This course is an introduction to identification, cultivation and maintenance of turfgrasses. Students will be introduced to practices used in the maintenance of golf courses, school facilities, parks, and athletic fields. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 2      Lab: 2

**AGS136      Turf Equipment Operations**

This course covers the operation and maintenance of turf equipment; mower units, top dressers, core aerators, slit seeders, and miscellaneous turf equipment. Safety and proper handling of each is essential. An understanding of equipment costs and shop area organization will be practiced. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 2      Lab: 2

**AGS202 Agronomic Crops**

This course covers principles and production for major agronomic crops, including fertilization and tillage practices. Economics of production is also included. Prerequisites: (Test scores or MAT 012 or higher) and AGS 101

Credit: 3

Lecture: 3

Lab: 0

**AGS203 Plant Identification**

This course introduces principles of identification, cultivation, and maintenance of woody and herbaceous landscape plant materials. Prerequisites: AGS 101 and AGS 105

Credit: 3

Lecture: 2

Lab: 2

**AGS204 Animal Science**

This course introduces the types, breeds, and classes of livestock with emphasis on practical application in selection, breeding, feeding of various farm animals. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and AGS 102

Credit: 3

Lecture: 2

Lab: 2

**AGS209 Farm Records & Accounts**

This course examines record keeping and accounting procedures as they apply to the production and marketing of agricultural products. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 3

Lecture: 3

Lab: 0

**AGS212 Intro to Agribusiness Marketng**

This course introduces agriculture marketing required to deliver the commodity to the consumer. Topics include the structure and function of the marketing system, supply and demand, and research and development. Prerequisites: AGS 102 and AGS 104 and AGS 209

Credit: 3

Lecture: 3

Lab: 0

**AGS215 Agriculture Leadership**

This course introduces students to the concept of leadership. Emphasis is on the application of acquired knowledge to practical problems in agriculture. Prerequisites: AGS 102 and AGS 104 and AGS 209

Credit: 3

Lecture: 3

Lab: 0

**AGS224 Turf & Athletic Fld Maintenanc**

This course introduces specific sports field design, installation, and maintenance. Topics include baseball, softball, soccer, and football fields. Upon completion, students are able to perform specific tasks in layout, field marking, and preparing for tournament play. Prerequisites: AGS 101 and AGS 123 and AGS 136

Credit: 3

Lecture: 2

Lab: 2

**AGS225 Agriculture Seminar**

This course facilitates the successful transition of potential graduates into a professional career or transfer to a bachelor's degree program in the field of agriculture. This course covers the processes of researching employment opportunities within their career field by conducting independent reading and research, preparing resource documents to help with agribusiness employment and ownership, and obtaining information on current agriculture related topics. Prerequisites: AGS 102 and AGS 104 and AGS 209

Credit: 3      Lecture: 3      Lab: 0

**AGS226      Agribusiness Management Co-op**

The cooperative provides an opportunity for students to apply classroom and laboratory skills to actual work experiences. Supervised work experience enhances knowledge and provides experience within the agriculture industry.

Prerequisites: AGS 102 and AGS 104 and AGS 209

Credit: 3      Lecture: 1      Lab: 6

**AGS230      Production Agriculture Co-op**

This course provides an opportunity to apply classroom and laboratory knowledge to actual work experiences. Supervises work experiences enhance knowledge and provide experience within the production agriculture industry.

Prerequisites: AGS 101 and AGS 102 and AGS 104 and AGS 105

Credit: 3      Lecture: 1      Lab: 6

**AGS231      Turfgrass Mgt. Co-op Education**

This course provides an opportunity for students to apply and combine classroom and laboratory knowledge to actual work experiences that focuses on a supervised work experience for students to gain knowledge and experience with the turf industry. Prerequisites: AGS 101 and AGS 104 and AGS 105 and AGS 123 and AGS 136

Credit: 3      Lecture: 1      Lab: 6

**AGS232      Horticulture Cooperative**

This course provides an opportunity for students to apply and combine classroom and laboratory knowledge to actual work experiences. Its focus is a supervised work experience for students to gain knowledge and experience with the horticulture industry. Prerequisites: AGS 101 and AGS 104 and AGS 105

Credit: 3      Lecture: 1      Lab: 6

**AGS240      Hydroponics Production**

This course introduces principles and techniques of hydroponic systems. Topics include preparation of greenhouses, production of transplants, planting, cultural practices, maintenance, and harvesting.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and AGS 105

Credit: 3      Lecture: 2      Lab: 2

**AGS241      Turfgrass Wds Insts/Disease Ctrl**

This course covers detection and prevention of turf grass pests with the emphasis on methods of control or eradication. Topics will include weed, insects, and disease. The course also covers the use of pesticides, application procedures and total costs involved in the control programs. Upon completion, the student will be able to identify turf grass pests, select proper pesticides, and develop pest control programs. Prerequisites: AGS 123 and SCI 240

Credit: 3      Lecture: 3      Lab:

**AGS242      Golf Course Operation & Maint**

This course covers a comprehensive study of the day to day and seasonal maintenance, and overall management programs of golf courses. Topics covered include calculations used in maintaining golf courses and buildings and grounds. Students will gain knowledge of golf course design and construction, materials handling equipment and storage of chemicals and fertilizers. The planning of daily work schedules and budget planning is also discussed. Prerequisites: AGS 123 and AGS 136

Credit: 3

Lecture: 2

Lab: 2

**AGS243 Golf & Turf Irrigation**

This course introduces students to basic irrigation and drainage principles, uses of irrigation and irrigation system design for landscape use. Prerequisites: AGS 101 and AGS 105

Credit: 3

Lecture: 2

Lab: 2

**AGS244 Landscape Plans & Construction**

This course provides an introduction to problems in landscape planning including use of plant materials and elements of design, using computerized programs of design. Students are instructed in interpreting landscape designs, identifying landscape plants, and planting/maintaining trees and shrubs. Landscape construction is emphasized in the areas of grading and drainage, paver installation and the use/maintenance of landscape equipment. Current topic discussions provide students an understanding of careers and the employability skills needed to enter the landscape industry. Prerequisites: CIS 107 and AGS 101 and AGS 105

Credit: 3

Lecture: 2

Lab: 2

**AGS245 Turf Management**

This course will teach students about the lawn care industry with an emphasis placed on the maintenance of a variety of turf sites, including chemical selections, pest control, and safe equipment usage. This course will include hands-on identification, cultivation and maintenance practices used on turfgrasses. Prerequisites: AGS 101 and AGS 105

Credit: 3

Lecture: 2

Lab: 2

**AGS250 Greenhouse Crop Production**

The basic concepts of plant growth, development, photosynthesis, floral production, greenhouse structures, and equipment to monitor the environment are discussed and practiced in a lab setting. Propagation and cultivation techniques of commercial flower/foilage crops are studied and applied. Preparation of soil and amended media incorporating the use of fertilizers and plant growth regulators will be discussed and managed. Nutrient management of plants and environmental impacts of run-off are applied and discussed. Pesticide application and safety are practiced and studied. Proper pest identification techniques are practiced. Prerequisites: AGS 101 and AGS 105

Credit: 3

Lecture: 2

Lab: 2

**ASL102 American Sign Language II**

This course broadens students' conversational skills, including talking about themselves, other people, activities, giving directions, and making requests. Students continue to develop communicative skills as well as increase their understanding about the deaf culture and community. Prerequisite: ASL 101

Credit: 3

Lecture: 3

Lab: 0

**ASL103 Fingerspelling/Nmbr Use in ASL**

This course develops the students' communicative competence using fingerspelling and numbering skills. All practice is in the context of authentic communication in American Sign Language. Conversational usages of fingerspelling and numbers are presented to illustrate the importance of these skills in American deaf culture.

Prerequisite: ASL 102

Credit: 3

Lecture: 3

Lab: 0

#### ASL201 American Sign Language III

This course broadens the students' range of communication skills moving from discussion of their own experiences to more abstract concepts of the language in conversational dialogues and short narratives. Students learn appropriate cultural behaviors to direct, maintain, and control the pace of conversation with interruptions. Information about deaf culture is included.

Prerequisite: ASL 102

Credit: 3

Lecture: 3

Lab: 0

#### ASL202 American Sign Language IV

A continuation of the fundamentals of American Sign Language III, this course will broaden students' range of conversational skills, moving from discussion of their immediate experiences (home, family, etc.) to communication about more abstract concepts of the language in longer conversational dialogues. Both expressive and receptive skills will be enhanced. Prerequisites: ASL 201

Credit: 3

Lecture: 3

Lab: 0

#### ASL204 Structure-Amer. Sign Language

An introduction to the structure of American Sign Language, this course has a dual focus: one on ASL linguistics and the other on grammar. Students will use a variety of media to learn to construct accurate sentences in American Sign Language. Areas of grammar study include topic comment, rhetorical, conditionals, and others. Prerequisites: ASL 102

Credit: 3

Lecture: 3

Lab: 0

#### AUT114 Intro to Automotive Technology

This course is designed to provide the student an overview of the automotive repair field. Students are introduced to basic automotive maintenance and repair procedures as well as tools, measuring devices and diagnostic equipment.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 3

Lecture: 2

Lab: 2

#### AUT116 Automotive Electrical

This course introduces various automotive electrical and electronic components, operations, and service procedures to test, diagnose, and repair automotive electrical systems and components. Laboratory experiences include building and analyzing electrical circuits, applying Ohms Law, and using electrical test equipment properly to test, evaluate, diagnosis, and repair vehicle accessories and chassis wiring.

Prerequisites: Test scores or ENG 090 or ENG 091 and test scores or MAT 012 and AUT 114 or concurrent

Credit: 5

Lecture: 4

Lab: 4

#### AUT118 Auto Steering & Suspension

This course introduces automotive suspension systems, components, and service procedures. Laboratory experiences include suspension and steering service, wheel alignment, and tire and wheel service.

Prerequisites: AUT 114 and AUT 116

Credit: 3

Lecture: 2

Lab: 3

**AUT119 Automotive Brake Systems**

This course introduces automotive brake systems, components, and service procedures. Laboratory experiences include hydraulic service, drum and rotor service, disc brake service, drum brake service, power brake service, and anti-lock brake service.

Prerequisite: AUT 114 and AUT 116 or concurrent

Credit: 3

Lecture: 2

Lab: 3

**AUT122 Auto Air Conditioning/Heating**

This course introduces automotive heating and air-conditioning systems' components, operations, and service procedures. Laboratory experience includes system evaluation, diagnosis, and repair.

Prerequisites: AUT 114 and AUT 116

Credit: 3

Lecture: 2

Lab: 3

**AUT123 Work Experience Co-op I**

This course requires students to work in the automotive/ light truck service field, to reinforce first year classroom and laboratory instruction. Diagnostic skills and repair knowledge are applied in a sponsoring service facility.

Prerequisites: AUT 118 or concurrent, and AUT 119, and AUT 122 or concurrent

Credit: 3

Lecture: 0

Lab: 9

**AUT124 Intro to Automotive Svc Career**

This course introduces the automotive service profession including aspects of the career opportunities, work characteristics, and employment requirements for the individual interested in an automotive service career. Application of arithmetic, basic geometry, and metric conversions required in the automotive service field are incorporated.

Pre-requisites: (Test Scores or ENG 006 or ENG 007 or higher) and (Test Score or MAT005 or higher)

Credit: 2

Lecture: 2

Lab:

**AUT126 Work Experience Lab I**

This course requires students to work in a simulated automotive service facility on campus to reinforce first year classroom and laboratory instruction. Diagnostic skills and repair knowledge are applied on instructor assigned tasks.

Pre-requisites: AUT 118 or concurrent and AUT 119 and AUT 122 or concurrent

Credit: 3

Lecture: 0

Lab: 9

**AUT202 Automotive Engine Repair**

This course introduces the student to various automotive engines and related components, their operations and service and repair procedures. Laboratory activities include hands-on exercises on trainer/dead engines relating to the operation, servicing and repair of the engines as well as related engine systems: cooling, lubrication, exhaust, and related systems. Students also perform live engine evaluation and diagnosis.

Pre-requisites: AUT 123 or AUT 126

Credit: 3

Lecture: 2

Lab: 4

**AUT203 Automotive Engine Performance**

This course prepares the student to diagnose, repair, and service automotive electronic systems and components. Laboratory exercises include diagnosis, disassembly, and repair of electronic components such as computerized engine controls, electronic ignition, electronic fuel injection, and other accessories. Prerequisites: AUT 202

Credit: 6

Lecture: 3

Lab: 9

**AUT205 Manual Transmissions/Transaxle**

This course introduces the student to various manual transmissions and transaxles and related components, including their operations and service and repair procedures. Laboratory activities include hands-on exercises on transmissions and transaxles as well as related systems and components.

Prerequisites: AUT 123 or AUT 126

Credit: 3

Lecture: 2

Lab: 4

**AUT208 Automatic Transmissions**

This course introduces the student to various automatic transmissions and transaxles and related components, including their operations and service and repair procedures. Laboratory activities include hands-on exercises on transmissions and transaxles as well as related systems and components.

Prerequisites: AUT 123 or AUT 126

Credit: 3

Lecture: 2

Lab: 4

**AUT223 Work Experience Co-op II**

This course requires students to work in the automotive/light truck service field to reinforce second-year classroom and laboratory instruction. Diagnostic skills and repair knowledge are applied in a sponsoring service facility.

Pre-requisites: AUT 123 or AUT 126

Credit: 3

Lecture: 0

Lab: 9

**AUT226 Work Experience Lab II**

This course requires students to work in a simulated automotive service facility on campus to reinforce classroom and laboratory instruction. Diagnostic skills and repair knowledge are applied on instructor assigned tasks.

Pre-requisites: AUT 123 or AUT 126

Credit: 3

Lecture: 0

Lab: 9

**AUT253 Automotive Practicum II**

In this course, the students will work in the automotive/light truck service field, reinforcing second year classroom and laboratory instruction. At the student's sponsoring service facility, student's newly acquired diagnostic skills and repair knowledge are utilized in a hands-on application manner. Prerequisites: (AUT 123 or AUT 153) and AUT 202 and AUT 203 and AUT 205 and AUT 208.

Credit: 4

Lecture: 0

Lab: 12

**AVI110 Airframe Maintenance - General**

The General section of the Airframe Maintenance program introduces students to the fundamentals of aircraft maintenance. The units of study are: mechanic privileges and limitations, aircraft physics, aircraft drawings, maintenance forms and records, maintenance publications, materials and processes, fluid lines and fittings, cleaning and corrosion, and weight and balance.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 12      Lecture: 8      Lab: 12**

**AVI120      Airframe Maint - AF Section I**

The Airframe Maintenance section I of the Aviation Maintenance program introduces students to the fundamentals of aircraft maintenance. The units of study are: ground operation and servicing, welding, aircraft non-metallic structures, aircraft sheetmetal structures, and wood structures, coverings, and finishes.

Prerequisites: AVI 110 and MAT 112

**Credit: 11      Lecture: 7      Lab: 13**

**AVI210      Airframe Maint AF - Section II**

The Airframe Maintenance section II of the Aviation Maintenance program introduces students to the fundamentals of aircraft maintenance. The units of study are: assembly and rigging, position and warning systems, aircraft electrical systems, hydraulic and pneumatic power systems, and aircraft landing gear systems.

Prerequisites: AVI 120 and ELC 102

**Credit: 12      Lecture: 8      Lab: 12**

**AVI220      Airframe Maint AF-Section III**

The Airframe Maintenance section III of the Aviation Maintenance program introduces students to the fundamentals of aircraft maintenance. The units of study are: aircraft fuel systems, communication and navigation systems, instrument systems, cabin atmosphere control systems, ice and rain control systems, fire protection systems, and airframe inspection.

Prerequisite: AVI210 or concurrent

**Credit: 11      Lecture: 7      Lab: 13**

**AVI230      Powerplant Maint - Section I**

This course introduces students to the fundamentals of powerplant maintenance. The units of study are reciprocating engine theory, reciprocating engine overhaul, reciprocating engine systems, reciprocating engine ignition and starting systems, reciprocating engine induction systems I, reciprocating engine induction systems II, reciprocating engine inspection, and troubleshooting.

Prerequisites: (AVI 110 and MAT 112 and (ELC 102 or concurrent)) or possesses a FAA Airframe License

**Credit: 14      Lecture: 9      Lab: 14**

**AVI240      Powerplant Maint - Section II**

This course introduces students to the fundamentals of powerplant maintenance. The units of study are propeller systems, turbine engine theory, turbine engine maintenance, turbine engine systems, turbine ignition and starting systems, turbine engine induction systems, turbine inspection and troubleshooting. Prerequisite: AVI 230

**Credit: 13      Lecture: 8      Lab: 15**

**BIO100      Medical Terminology**

This course introduces terms that comprise the language of medicine. Topics include Greek and Latin prefixes, suffixes, and roots, and abbreviations as well as terms related to disease and surgical, laboratory, imaging, and clinical procedures. Emphasis is placed on defining, pronouncing, and appropriately using the terms in written and oral communication.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)



**Credit: 3      Lecture: 3      Lab: 0**

**BIO101      Advanced Medical Terminology**

The course is designed for individuals who wish to continue the study of advanced medical terminology as it relates to clinical medicine, surgery, laboratory medicine, pharmacology, radiology, and pathology. It includes the use of medical references and other resources for research and practice. Prerequisites: BIO 100

**Credit: 3      Lecture: 3      Lab: 0**

**BIO106      Basic Nutrition Concepts**

This class is designed to teach basic nutrition concepts that can be applied to everyday life in order to maintain a healthy lifestyle and well-being. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 1      Lecture: 1      Lab: 0**

**BIO108      Basic Pharmacology**

This course introduces pharmacology for healthcare students. Topics include basic drugs as related to diseases, effects of drugs on different systems of the body, interactions of drugs, side effects, contraindications, and effectiveness in relation to dosages.

Prerequisites: (BIO 100, ENG 090 or 091 or test scores, MAT 012 or higher)

**Credit: 2      Lecture: 2      Lab:**

**BIO110      Essentials-Anatomy & Physiology**

This course includes structure and function of the human body with an emphasis on gross anatomy as well as all organ systems and their relationship to homeostasis. Coordinated laboratory activities are an integral part of this course.

Prerequisite: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 4      Lecture: 3      Lab: 2**

**BIO115      Nutrition**

This course covers the basic principles of nutrition and their application to health and well-being of humans throughout the life cycle. The role of diet therapy in the prevention and treatment of disease is included.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**BIO120      Anatomy and Physiology I**

This course studies the anatomy and physiology of humans; including the structure and function of cells, tissues, integumentary, skeletal, muscular, nervous, and endocrine systems. Coordinated laboratory experiments are an integral part of this course. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 5      Lecture: 4      Lab: 2**

**BIO121      Anatomy and Physiology II**

This course covers the structure and function of the cardiovascular, respiratory, digestive, urinary, and reproductive systems of humans; metabolism; fluid and acid-base balance; and genetics. Coordinated laboratory experiments are an integral part of this course. Prerequisites: BIO 120 and (CHM 100 or CHM 110 or high school chemistry within last 5 years).

Credit: 5      Lecture: 4      Lab: 2

**BIO123      Clinical Functional Anatomy**

This course reinforces the muscular, skeletal and nervous systems of the human body by focusing on the structure and function associated with various physical therapy and occupational therapy techniques. Prerequisite: BIO 121

Credit: 3      Lecture: 2      Lab: 2

**BIO124      Review of Physiology**

The course reviews the physiology of the endocrine system and the autonomic nervous system, neurophysiology, cardiophysiology, respiratory and renal physiology, as well as fluid, electrolyte and acid-base balance. Prerequisite: BIO 121

Credit: 2      Lecture: 2      Lab: 0

**BIO125      Introductory Microbiology**

This course introduces microbiology designed for individuals in the health sciences. It explores the morphology, physiology, cultivation, and control of microorganisms, a survey of human pathogens, and the fundamental concepts of immunity. Laboratory experiments are an integral part of this course. Prerequisite: BIO 120 or VET 102.

Credit: 4      Lecture: 3      Lab: 2

**BIO127      Environmental Microbiology**

Study of the microbiological organisms important in environmental ecology, pollution control, and waste treatment, including bacteria, algae, fungi, and protozoa. Explores the morphology, physiology, pathogenicity, and environmental importance of these organisms. Laboratory includes microscopic morphological studies, culture techniques, stains, and various environmental tests such as coliform analysis. Prerequisites: ENV 110

Credit: 4      Lecture: 3      Lab: 2

**BIO130      Disease Proc/Pathophysiology**

This course includes the study of the physiologic and biologic manifestations of disease and the adaptations that the body makes to the changes produced by the disease process. Prerequisites: BIO 120

Credit: 3      Lecture: 3      Lab: 0

**BIO140      General Biology**

This course discusses biological concepts, including basic cellular chemistry, cell structure and function, life processes, genetics, biodiversity of organisms, evolution and natural selection, human reproduction and development, and interaction of organisms with their environment. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 4      Lecture: 3      Lab: 2

**BIO150      Biology I**

This course introduces the cell as the basis of life. Topics include an introduction to the chemistry of life, cell structure and function, cellular metabolism, cell division, evolution, molecular genetics, and patterns of inheritance. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 4      Lecture: 3      Lab: 2

**BIO151      Biology II**

This course includes a survey of biodiversity with an emphasis on evolutionary taxonomic trends, the structure and function of plants and animals, and ecology. Particular emphasis is placed on comparative anatomy and physiology of animals. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 4                  Lecture: 3                  Lab: 2

**BIO250                  Principles of Microbiology**

This course covers microbial structure, metabolism, growth, and control. Microbial genetics, virology, and fundamentals of the immune system are also included. Laboratory experiments are an integral part of this course. Prerequisites: (BIO 120 or BIO 150 or VET 102) and (CHM 100 or CHM 110 or CHM 150).

Credit: 4                  Lecture: 3                  Lab: 3

**BIT260                  Biotechnology I**

This course will discuss topics in the major areas of biotechnology including molecular biology, microbiology, separation technology, immunology, and plant biotechnology. Coordinated laboratory experiments will be an integral part of this course. Prerequisites: BIO 250 and CHM 151.

Credit: 4                  Lecture: 3                  Lab: 4

**BIT261                  Biotechnology II**

This course is a continuation of BIT 260 - Biotechnology II investigates components of biomanufacturing such as upstream and downstream processing, protein structure, and laboratory regulations. Additional topics include current research and techniques such as bioinformatics, micro-propagation of plants, and microarrays. Laboratory work, including related experiments and current techniques, is an integral part of this course. Prerequisites: BIT 260

Credit: 4                  Lecture: 3                  Lab: 4

**BIT265                  Bioinformatics**

This course studies the organization and analysis of biological information, involving the use of computers related to databases, retrieval mechanisms, and data analysis tools, especially in the fields of molecular biology, structural biology, and genetics. Included are sequence alignment, gene finding, genome assembly, protein structure alignment, protein structure prediction, the human DNA system and the Human Genome Project. Coordinated laboratory experiments are an ingegral part of this course. Prerequisites: (BIO 140 or BIO 150) and CIS 107.

Credit: 3                  Lecture: 2                  Lab: 2

**BIT270                  Honors Biotechnlgy Internship**

Upon recommendation by the instructor, the student placed in this honors internship will gain experience working as a laboratory technician in research, industrial, service, manufacturing or other facility in the biology, biotechnology or related field. Prerequisites: BIT 260

Credit: 2                  Lecture: 0                  Lab: 7

**BUS101                  Introduction to Business**

This course is a survey of business functions including forms of business ownership, business environments, ethics, management, production, marketing, financial markets, and accounting. Prerequisite: (Test score or ENG 090 or concurrent or ENG 091 or concurrent or EAP 093 or concurrent or higher)

Credit: 3                  Lecture: 3                  Lab: 0

**BUS203                  Business Law**

A survey course, which takes a general view of the United States' legal system and topics such as tort, criminal, and constitutional law, before focusing on the area of Business Law. Business Law topics include contract formation and terminations, issues that affect contract enforceability, and breach of contract damages, as well as the Uniform Commercial Code. Related topics include: commercial paper, agency, and property law. Prerequisites: (Test scores or ENG 102 or higher) and BUS 101

Credit: 3      Lecture: 3      Lab: 0

**BUS275      Portfolio/Experiential Lrning**

Credit: 3      Lecture: 3      Lab: 1

**CEN100      Intro Elec & Computer Eng Tech**

This course introduces the practice of electronic engineering technology concepts. Career opportunities, professional ethics, working in teams, introduction to engineering problem solving, and use of calculators and computers as tools for problem solving are covered. Prerequisites: (Test Score or MAT 012 or higher) and ((Test Sscore or ENG 051 or concurrent or higher) and (Test Score or RDG 051 or concurrent or higher)) or (Test Score or ENG 099 or concurrent or higher)).

Credit: 3      Lecture: 2      Lab: 2

**CEN120      PC Telecommunications**

An overview of basic telecommunication's principles as applied to personal computer communications. Topics include installing modem software, electronic mail systems, file archiving and transmission techniques, network basics, telephone line installation and operation, FAX communications, RS 232 interface, and modem installation and operation. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 4      Lecture: 3      Lab: 2

**CEN126      Industrial Networks**

This course introduces students to the network devices, standards, protocols, and security requirements used to connect industry and medical field devices together. Prerequisites: (Test scores or MAT 012 or higher) and (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 2      Lab: 2

**CEN150      Computer Assembly/Maint**

This course provides the fundamentals of supporting and troubleshooting computer hardware and software. Topics include installing and replacing major hardware components; designing and constructing complete systems; and installing, configuring, and troubleshooting various operating systems. Prerequisites: (Test score or ENG 051 or higher) and (Test score or RDG 051 or higher) or Test score or (ENG 090 or ENG 090 concurrent) or (ENG 091 or ENG 091 concurrent) or higher.

Credit: 4      Lecture: 3      Lab: 2

**CEN180      C/C++ Language Intro**

This course introduces object-oriented programming using electronics and computer technology related examples. Topics include algorithms, arrays, documentation, flowcharting, input/output functions, loops, pointers, structures, testing and debugging, and programming techniques. Prerequisites: ELC 125 or ELC 125 concurrent

Credit: 4      Lecture: 3      Lab: 2

**CEN200 Introduction to MATLAB**

This course provides an introduction to the basic principles of programming and implementation of mathematical and electrical engineering technology concepts using MATLAB. Prerequisites: (CEN 180 or CIS 120 or CSC 114) and (ELC 225 or ELC 266 or concurrent) and (MAT 190 or higher)

Credit: 2

Lecture: 1

Lab: 2

**CEN220 Digital Data Comm w/ Networks**

A study of computer interfacing and networking. Interface techniques such as RS 232, RS 422, etc. will be covered. UARTs and advanced modem operation are presented. Networking through simulations and observation are included with telephone switching systems. Prerequisites: CEN 120

Credit: 4

Lecture: 3

Lab: 2

**CEN222 Windows Operating System**

This course is designed to teach the student about the installation, configuration, and maintenance of Windows, both the workstation and server versions. It will cover Windows peer-to-peer networking capabilities and its integration with other network environments, including the World Wide Web. Prerequisites: CEN 120

Credit: 4

Lecture: 3

Lab: 2

**CEN223 Unix Operating System & Networks**

A complete coverage of the UNIX operating system, including shells, utilities, x-windows, and networking. Prerequisites: CEN 222

Credit: 4

Lecture: 3

Lab: 2

**CEN224 Computer Networks**

Students will learn basic networking concepts, features and functions of network components. Students will install, configure and troubleshoot basic network hardware, peripherals and protocols, Server 2003, Unix/Linux, and wireless networks. This course covers CompTIA Network+ certification objectives. Prerequisites: CEN 150 and (ELC 118 or ELC 120 or ELC 124).

Credit: 4

Lecture: 3

Lab: 2

**CEN290 Internship**

Applied experience through a supervised work situation such as a campus repair shop, computer store or related business and industry. Prerequisites: CEN 223 and CEN 220.

Credit: 4

Lecture: 1

Lab: 9

**CET125 Civil & Env'l Drafting & Design**

This course is an introduction to drawing and design problems encountered in the area of civil and environmental engineering. Topics include site analysis, site layout, grading and drainage, utility layout and profiles, erosion control, and sustainable site design. Students design and develop a commercial site design and produce the drawing set to include existing features plan, record plan, grading plan, and erosion control plan.

Prerequisites: (Test scores or ENG 101 or concurrent or higher) and (Test scores or MAT 140 or higher)

Credit: 4

Lecture: 2

Lab: 5

**CET135 Engineering Materials**

This course is an introduction to the nature, origin, properties, and use of construction materials encountered in the area of civil and environmental engineering. Materials covered include wood, timber, steel, non-ferrous metals, stone, brick, Portland cement, Portland cement concrete, asphalt, and asphalt paving products. Laboratory testing and investigation of the materials are included.

Prerequisites: (Test scores or ENG 101 or concurrent or higher) and (Test scores or MAT 140 or higher)

Credit: 3

Lecture: 2

Lab: 2

#### CET144 Surveying Principles

This course examines theory and practice of plane surveying, including the use of tapes, levels, transits, and theodolites. Problems in triangulation, traverses, mapping, computation of areas, proper field procedures, and field book entries are covered.

Prerequisites: (CET 125 or (GIS 101 and GIS 110)) and (MAT 181 or higher) and (Test scores or ENG 101 or higher)

Credit: 4

Lecture: 3

Lab: 3

#### CET225 Civil CAD Applications

This course provides advanced computer aided drafting and design (CADD) practices encountered in the civil engineering field. Topics include topographic survey and analysis, residential lot layout, street layout, profiles and sections, utility layout and profiles, and grading and structural applications. Students receive a working knowledge in civil CADD site modeling and surveying applications.

Prerequisites: (Test scores or ENG 101 or higher) and CET 125 and (CET 144 or concurrent) and EDD 171 and (MAT 181 or higher)

Credit: 3

Lecture: 2

Lab: 3

#### CET236 Soils

This course examines the principles of soils engineering including the study of physical and mechanical properties of soils, design considerations, and construction applications. Emphasis is placed on field conditions and problems that are encountered on the construction job sites and how they are resolved. Prerequisites: (Test score or ENG 102 or higher) and (MAT 181 or higher) and CET 135

Credit: 3

Lecture: 2

Lab: 2

#### CET240 Hydraulics and Hydrology

This course applies the basic principles of hydraulics as related to the design of pipe distribution systems. Topics include the sizing and selection of pumps, open channel flow, flow through hydraulic structures, the elements of hydrology, rainfall runoff analysis, drainage design, and flood flow analysis. Prerequisites: (Test scores or ENG 102 or higher) and (MAT 181 or higher) and CET 125 and CET 144

Credit: 4

Lecture: 3

Lab: 3

#### CET244 Principles of Site Development

The course covers the fundamental concepts of site and subdivision planning. Consideration is given to zoning and subdivision ordinances and governmental regulations. Site design project will include design calculations and complete construction drawings for a small subdivision. Prerequisites: (Test scores or ENG 102 or higher) and (MAT 180 or higher) and (CET 144 and CET 240 and (CET 225 or CET 220 or concurrent))

Credit: 4

Lecture: 3

Lab: 3

#### CET245 Advanced Surveying Principles

This course covers the methods and computations of advanced surveying. Surveying techniques based on the Global Positioning System (GPS), including static and kinematic surveying are demonstrated. Additional topics covered include control surveys and geodetic reductions, state plane coordinates, surveys of public lands, photogrammetry, and an introduction to geographic information systems (GIS).

Prerequisites: (Test scores or ENG 102 or higher) and (MAT 181 or higher) and (CET 125 or (GIS 101 and GIS 110)) and CET 144

Credit: 4

Lecture: 3

Lab: 3

#### CET247 Route Surveying and Design

This course introduces fundamental principles of highway and road design to include safety, speed, terrain, and operating volumes as they apply to roadway width, side slopes curvature, and gradient. Design problems include horizontal curves, compound curves, cross-section areas and volumes, and vertical curves with road alignments.

Prerequisites: (Test scores or ENG 102 or higher) and CET 125 and CET 144 and EDD 171

Credit: 3

Lecture: 2

Lab: 3

#### CET248 Boundary Surveying and Law

This course studies the fundamentals of boundary control and legal principles associated with land surveying. Boundary control and location, site development, topographic mapping, subdividing, contour/runoff and other common land surveying practices are covered. Total stations and computers are used to process data. Prerequisites: (Test Scores or ENG 102 or higher) and CET 144 and (MAT 181 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### CET258 Statics with Calculus

This course covers particles, rigid bodies, trusses, frames and machines. Students study rigid objects that are either at rest or move with a constant velocity and that are subject to forces. Topics include calculating forces acting on and within such objects to understand their behavior and to inform their design. Prerequisites: MAT 281 and PHY 281

Credit: 3

Lecture: 3

Lab: 1

#### CET270 Solid Mechanics with Calculus

The course covers topics including the concepts of stress and strain, plane stress, transformation of stress and strain, Mohr's circle, material properties, and stress-strain relationships. This course provides determination of stresses and displacements in axially loaded members and pressure vessels, stresses and displacements in round bars subject to torsion, impact, and dynamic loads. The basic mechanics for the design and analysis of simple structures, and mechanics of deformable bodies is included. Prerequisites: (Test Scores or ENG 101 or higher) and CET 258

Credit: 3

Lecture: 3

Lab: 1

#### CHM100 Basic Chemistry

This preparatory course in the basic concepts of chemistry includes the systems of measurement, matter and energy, atomic theory, periodic table, bonding, nomenclature, equations, gases, liquids and solids, acids and bases, organic and biochemistry. Laboratory experiments are used to illustrate theory. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 3

Lecture: 2

Lab: 2

#### CHM101 Introduction to Chemistry

This course is designed for students with little or no chemistry background. It is an introduction to basic concepts of chemistry focused on chemical bonding, physical and chemical changes, and types of chemical reactions, acids, bases, and salts. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 1      Lecture: 1      Lab: 0

**CHM110      General Chemistry**

This course is designed for students majoring in technical areas other than chemistry. It includes the metric system, structure of matter, nomenclature, reactions, gases, rates and equilibrium, solutions, acids, bases, and nuclear chemistry. Laboratory experiments are used to illustrate theory. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 4      Lecture: 3      Lab: 2

**CHM111      Intro to Organic & Biochemistry**

This course includes a study of organic compounds and reactions and a basic study of biochemical reactions involving carbohydrates, lipids, and proteins and their metabolism. Laboratory experiments are used to illustrate theory. Prerequisite: CHM 110

Credit: 4      Lecture: 3      Lab: 2

**CHM150      Chemical Principles I**

This course is the first of a two-semester sequence for science and engineering majors. Topics covered include atomic and molecular structure, nomenclature, chemical reactions, stoichiometry, oxidation-reduction, thermo-chemistry, electronic structure of atoms, chemical bonding, gases, liquids and solids. Laboratory experiments are used to illustrate theory. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 140 or higher) and (CHM 100 or CHM 110)

Credit: 5      Lecture: 4      Lab: 3

**CHM151      Chemical Principles II**

This course is a continuation of CHM 150. Topics covered include: solutions, thermodynamics, kinetics, equilibria, acids and bases, electrochemistry, coordination, nuclear and macromolecular chemistry. Laboratory experiments are used to illustrate theory. Pre-requisites: CHM 150 and (MAT 153 or MAT 181)

Credit: 5      Lecture: 4      Lab: 3

**CHM240      Organic Chemistry I**

This course is a study of the molecular structure, bonding, nomenclature, properties, reactions, stereochemistry and spectrometric analysis of alkanes, cycloalkanes, alkenes, dienes, alkynes, alkyl halides, and aromatic hydrocarbons. The laboratory consists of isolation, purification, synthesis and analysis techniques related to the above. Pre-requisite: CHM 150

Credit: 4      Lecture: 3      Lab: 3

**CHM241      Organic Chemistry II**

This course is a continuation of CHM 240 that studies molecular structure, bonding, nomenclature, properties, reactions, spectrometric analysis of aromatic compounds, alcohols, phenols, ethers, aldehydes, ketones, carboxylic acids, carboxylic acid derivatives, amines and polymers. The laboratory consists of related isolation, purification, synthesis, and analysis techniques. Pre-requisites: CHM 240

Credit: 4      Lecture: 3      Lab: 3

**CHM245      Intro to Industrial Chemistry**

This course introduces chemical processes are studied from raw materials to products. Topics include materials handling, unit operations, measurements, safety in the chemical workplace, industrial chemicals, and petrochemicals. Synthesis, properties and uses of polymers are also considered. Pre-requisites: CHM 240



Credit: 4      Lecture: 4      Lab: 0

**CHM250      Analytical Chemistry I**

This course is the first of a two-semester sequence covering quantitative analysis. Analytical processes and procedures, good laboratory practices, statistics, sampling, chemical equilibria, and High Performance Liquid Chromatography (HPLC) analysis will be examined. Laboratory experiments are used to illustrate theory. Prerequisites: CHM 151 and CIS 107

Credit: 5      Lecture: 4      Lab: 4

**CHM251      Analytical Chemistry II**

This course is the second of a two-semester sequence covering quantitative analysis. Analysis via classical, spectrometric, electrochemical, chromatographic, electro-phoretic, and kinetic methods will be examined. Laboratory experiments are used to illustrate theory. Prerequisites: CHM 250

Credit: 4      Lecture: 3      Lab: 4

**CHM270      Honors Chem Techn Internship**

Upon recommendation by the instructor, the student placed in this honors internship will gain experience working as a laboratory technician in a research, service, industrial, manufacturing or other facility in the chemical industry or related field. Prerequisites: CHM 151 and instructor's permission.

Credit: 2      Lecture: 0      Lab: 7

**CIS101      Computers in Allied Health**

This course is designed to familiarize Allied Health students with microcomputers. It provides students with hands-on experience with the basic application software (word processing, spreadsheets, and data bases). It also provides students with an understanding of the roles of computers in the health care industry. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 2      Lecture: 2      Lab: 0

**CIS107      Intro to Computers/Application**

This course outlines computer information systems concepts. Topics include use of an operating system and common personal computer (PC) applications such as word processing, spreadsheets, and presentation software. This course also includes an introduction to a broad range of commonly used technological tools. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT 012 or higher)

Credit: 3      Lecture: 2      Lab: 2

**CIS112      Spreadsheet/Graphics Proc**

This course covers advanced spreadsheet concepts and skills using spreadsheet graphics tools to create charts, graphs, and external applications. Additional topics include advanced formatting and macro creation. Prerequisite: CIS 107

Credit: 3      Lecture: 2      Lab: 2

**CIS118      Intro to Relational Databases**

This course will focus on the fundamentals of relational databases to include concepts, terms, and design considerations. It will explore database entity relationships, data normalization, and data modeling. Students will learn structure, concepts, and methods to create, insert, and query data in the database. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher) and (CIS 107 or CIS 120)

Credit: 3      Lecture: 3      Lab: 0

**CIS120      Intro to Programming**

This course provides students with an introduction to the design and implementation of basic computer programming. Topics include, logic development, control structures, variables, input/output, and debugging techniques of modern programming. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 4      Lecture: 3      Lab: 2

**CIS121      Expert Systems**

This course introduces expert systems as a component of artificial intelligence. It is a skill development course in which students develop, and implement small expert systems using current expert system shells and tools. Prerequisites: CIS 120

Credit: 3      Lecture: 2      Lab: 2

**CIS125      Window Based Operating Systems**

This course is an overview of graphic user interfaces (GUI) with an emphasis on personal computers. The student will learn to use a graphical user interface such as Microsoft Windows, to install, optimize, and operate a GUI, to allocate and manage system resources, and to establish communications links between objects. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test score or MAT 012 or higher)

Credit: 4      Lecture: 3      Lab: 2

**CIS130      Computer Organization**

The computer is introduced as a hierarchy of levels. Topics include digital logic, micro-programming, memory, input/output (I/O), computer arithmetic, instruction sets, central processing unit (CPU) structure, control unit operation, parallel organization, reduced instruction set computers (RISC), and assembly language. Prerequisite: CSC 114

Credit: 3      Lecture: 2      Lab: 2

**CIS140      Computer Architecture**

The course covers the internal function and organization of digital computers and the interrelationship between operating systems and architecture. Topics include instruction sets, addressable methods, I/O architecture, CPU organization, machine and assembly language, as well as basic concepts of logic as applied to computing. Prerequisites: CIS 120 and CIS 141.

Credit: 3      Lecture: 2      Lab: 2

**CIS141      Operating Systems I**

This course provides a basic overview of Windows and Linux. Students will install, configure, maintain, and troubleshoot the operating systems. Students will be introduced to basic operating system security. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 3      Lecture: 2      Lab: 2

**CIS145      Networks/Distributed Sys**

The upper layers of ISO OSI model and the principles of distributed operating systems will be developed. Existing protocol suites such as TCP/IP, MAP, and/or TOP will be examined. Distributed file systems such as NFS and/or Andrew will be considered. Prerequisites: CIS 120

Credit: 4      Lecture: 3      Lab: 2

**CIS146 Computer Networking I**

This is part one of a two-part course covering the design, installation, maintenance and support of computer networks. The upper layers of ISO OSI model and the principles of distributed operating systems will be developed. Existing protocol suites such as TCP/IP, MAP, and/or TOP will be examined. Distributed file systems such as NFS will be considered. Prerequisites: CIS 120

Credit: 4      Lecture: 3      Lab: 2

**CIS150 Intro to Object-Oriented Programming**

This course introduces object-oriented programming and the construction and manipulation of classes and objects. Object-oriented programming concepts, algorithms, techniques, and libraries are also reviewed. Prerequisite: CIS 120

Credit: 3      Lecture: 2      Lab: 3

**CIS160 Internet/Web Construction**

This course covers internet with emphasis on World Wide Web. Topics include constructing and administering a web server, and developing web applications. Prerequisites: CIS 120 or CIS 125.

Credit: 3      Lecture: 2      Lab: 2

**CIS170 Internet/Web Multimedia**

This course introduces the creation of internet/web multimedia objects which are then used in presentations, productions, web publishing, and other multimedia-related applications. Prerequisites: CIS 120 or CIS 125

Credit: 3      Lecture: 2      Lab: 2

**CIS180 Internet/Script Programming**

In this course, student will learn how to work with Dynamic HTML to enhance Web page visual design/presentations and how client- and server-side scripts (such as JavaScript, VBScript) are used in Web programming to dynamically manipulate Web page contents. Prerequisites: CIS 120 and CIS 160.

Credit: 4      Lecture: 3      Lab: 2

**CIS190 Network Inst/Maintenance**

This course introduces the student to local area network (LAN) fundamentals and terminology. Topics include selection of LAN interface cards, cable, wiring plans, server operating systems software and hardware; merging of two different LANs into existing networks; and isolating and diagnosing LAN software and hardware problems. Prerequisites: CIS 107 or CIS 120.

Credit: 3      Lecture: 2      Lab: 2

**CIS194 Networking Technologies**

This course provides students with a networking operating-system independent overview of networking media, topologies, standards, implementations issues, and troubleshooting techniques, and provides students with the prerequisite knowledge to prepare for CompTIA's Network+ certification exam. Prerequisites: CIS 120 or CIS 195.

Credit: 3      Lecture: 3      Lab: 1

**CIS195 Network Administration**

This course introduces the student to local area network (LAN) management and administration. Topics include data communications, workstation services, network directories, user account management, printer sharing, security, electronic mail, scheduling software, installation and maintenance of third-party software. Prerequisites: CIS 107 or CIS 120.

Credit: 4

Lecture: 3

Lab: 2

**CIS196 Computer Networking II**

This is part two of a two-part course covering the design, installation, maintenance and support of computer networks. This course covers Local Area Network (LAN) fundamentals and terminology. Topics include selection of LAN interface cards, cable, wiring plans, server hardware and operating system software; configuration and installation of two or more different LANs; LAN maintenance; integrating LANs into existing networks; and isolating LAN software and hardware problems. Prerequisites: CIS 146

Credit: 4

Lecture: 3

Lab: 2

**CIS197 Network Adv Admin (MS)**

This course covers advanced administrations and supports for Microsoft networks and prepares the student to take the appropriate Microsoft MCSE certification exams. Prerequisites: CIS 192

Credit: 4

Lecture: 3

Lab: 2

**CIS199 Data Comms & Networking**

This course covers fundamental data communications, concepts and components, networking models, transmission rules, local area network (LAN) and wide area network (WAN) protocols, wiring and distribution, topologies, and error detection and and correction methods. Prerequisites: CIS 120 and CIS 141

Credit: 3

Lecture: 2

Lab: 2

**CIS201 Microdatabase Programming**

This course covers the design, implementation, and testing of database applications. Topics covered include the transaction processing, the creation and maintenance of database files, and the development of screens and reports using a commercial programmable database package. Prerequisites: CIS 120 or CIS 125.

Credit: 3

Lecture: 2

Lab: 2

**CIS205 Intro Object Orient Programmng**

This is an introduction to Object Oriented Programming course. It deals with the constructions and manipulations of classes and objects. Object oriented programming concepts, algorithms, techniques, and libraries are also reviewed. Students are required to write programs of a moderately complex nature. Prerequisites: CIS 120

Credit: 4

Lecture: 3

Lab: 2

**CIS207 Visual Programming**

This course is an overview of "visual" programming using a programming language like VISUAL BASIC. Topics covered include object-oriented programming, graphical user interfaces, and client-server connectivity using DDE and OLE. Participants will begin by writing simple programs and progress to programs of moderate complexity. In addition, participants will analyze and modify larger, more complex applications. Prerequisites: CIS 120

Credit: 4

Lecture: 3

Lab: 2

**CIS209 Visual Programming**

This course provides students with programming skills to develop Windows applications using a visual programming language. Topics include program structure, language syntax, and implementation details using an integrated development environment (IDE). Prerequisites: CIS 150

Credit: 3

Lecture: 2

Lab: 3

**CIS210 Data Comms/Networking**

This course covers fundamental data communications concepts and components, storage of data, transmission rules and protocols, wiring and distribution, PC local area networks, LAN operating systems, topologies, LAN servers, linking LANs, and LAN management. Prerequisites: CIS 120 and CIS 141.

Credit: 3

Lecture: 2

Lab: 2

**CIS211 Data Structures**

This course introduces the basic concepts, construction, and efficient implementation of data structures such as abstraction, multi-dimensional arrays, stacks, queues, recursion, linked lists, searching, sorting, and trees. Prerequisite: CIS 150 or CSC 164

Credit: 4

Lecture: 3

Lab: 2

**CIS212 Internetworking & Support(MS)**

This course introduces the student to internetworking with Microsoft networks and prepares the student to take the appropriate Microsoft MCSE certification exams. Prerequisites: CIS 197

Credit: 4

Lecture: 3

Lab: 2

**CIS214 Internetworking & Support(NOV)**

This course covers internetworking and support of Novell NetWare. Topics include using research tools, troubleshooting, installing hardware, network management and the implementation of web services with IntranetWare. This course prepares the student to take the appropriate Novell CNE certification exams. Prerequisites: CIS 199

Credit: 4

Lecture: 3

Lab: 2

**CIS220 COBOL**

This course is an introduction to COBOL and its application to business problems. The course will cover structured programming concepts, structured design, input/output operations, control breaks, sorting, table processing, and basic concepts of file organization. Prerequisites: CIS 120

Credit: 4

Lecture: 3

Lab: 2

**CIS221 Advanced COBOL**

A continuation of COBOL. Advanced topics covered include the creation and maintenance of sequential and index-sequential files and data base files for batch and online environments. Prerequisites: CIS 220

Credit: 4

Lecture: 3

Lab: 2

**CIS238 Database Design & Programming**

This course introduces students to database programming using Structured Query Language (SQL). Students acquire working knowledge of the databases necessary to apply and manage the key features such as creating, updating, and reporting. Prerequisite: CIS 120

Credit: 4

Lecture: 3

Lab: 2

**CIS240 Systems Analysis & Design**

This course introduces the modeling concepts and design technology used in the analysis of business problems and the development of alternative solutions involving computers. It includes the design, construction, and implementation of a computerized business system with special attention given to the information systems. Prerequisites: CIS 238 or CNE 215 or CNE 216

Credit: 3

Lecture: 2

Lab: 3

**CIS246 Networking III**

This course is the third in the series and is the first advanced course. It addresses those tasks that network managers and administrators need to perform when managing access and controlling overhead traffic in growing, routed, networks once basic connectivity has been established. The course discusses router capabilities used to control traffic over LANs and WANs, as well as connecting corporate networks to an Internet Service Provider (ISP). Extensive individual and group lab work is required. Prerequisites: CIS 196

Credit: 4

Lecture: 3

Lab: 2

**CIS247 Networking IV**

Students learn how to build, configure and troubleshoot a remote access network to interconnect central sites to branch offices and home offices. Students also learn how to control access to the central site, as well as to maximize bandwidth utilization over the remote links. Prerequisites: CIS 246

Credit: 4

Lecture: 3

Lab: 2

**CIS248 Networking V**

Student will learn how to build campus networks using multi-layer switching technologies over high speed Ethernet. This course includes both routing and switching concepts, covering both Layer 2 and Layer 3 technologies. Prerequisites: CIS 247

Credit: 4

Lecture: 3

Lab: 2

**CIS249 Networking VI**

Student will learn how to baseline and troubleshoot an environment using routers and switches for multi-protocol client hosts and servers connected with both; Ethernet and Fast Ethernet LANs; and Serial, Frame Relay, and ISDN BRI WANs. The course provides students with methodical practice using specific Cisco IOS software and switching software tools to diagnose and correct problems on widely installed networking equipment. Prerequisites: CIS 248

Credit: 4

Lecture: 3

Lab: 2

**CIS250 Operating Systems II**

A continuation of Operating Systems I. Basic principles of operating systems are discussed in greater detail. Topics include concurrent programming, process coordination, deadlocks, protection, and basic concepts of distributed processing. PC and mainframe operating systems are examined, and lab projects will require work in both environments. Prerequisites: CIS 211

Credit: 3

Lecture: 2

Lab: 2

**CIS251 Programming Language II**

A programming language such as C, Modula-2, or ADA, is used to introduce the concepts of algorithms, data structures, and/or low-level programming. Prerequisites: CIS 120

Credit: 4      Lecture: 3      Lab: 2

**CIS253      Open Source Software**

This course provides a detailed review of open source software, including both operating systems and applications. Topics include the history of open source computing; a review of currently available open source operating systems and end-user applications; installing, using and troubleshooting open source software; and open source networking. This course uses the Linux operating systems and related applications, and helps to prepare students for the CompTIA Linux+ certification. Prerequisite: CIS 192

Credit: 4      Lecture: 3      Lab: 2

**CIS260      Internet/Web Commerce**

In this course, student will learn how to: configure and maintain a complete Intranet or Internet e-commerce Web site; develop and publish Web pages using a variety of tools and technologies; produce dynamic Web pages using server-side and client-side scripts, such as ASP and XML; develop effective secured shopping cart applications using a scalable relational database. Concepts of processing credit card transactions with payment gateway systems will be introduced. Prerequisites: CIS 120 and CIS 160

Credit: 4      Lecture: 3      Lab: 2

**CIS280      Applied Programming Workshop**

This course provides practice in the design and programming of real-life applications utilizing skills and knowledge obtained from previous computer information system courses. Prerequisites: CIS 120 and CIS 141 or CIS 221 or CIS 240.

Credit: 4      Lecture: 3      Lab: 2

**CIS281      Topics in Microcomputers**

A discussion of current microcomputer topics such as window programming, graphics, image processing, etc. Prerequisites: CIS 120 or CIS 125 or CIS 205 or CIS 211.

Credit: 4      Lecture: 3      Lab: 2

**CIS282      Mobile App Development**

This course introduces mobile programming software. Students develop apps to be used on mobile devices. Prerequisite: CIS 209 or CSC 164

Credit: 4      Lecture: 3      Lab: 2

**CIS283      Topics in Operating Systems**

An in-depth treatment of an operating system such as MVS, UNIX, or a current operating system. Prerequisites: CIS 141

Credit: 4      Lecture: 3      Lab: 2

**CLT110      Cross-Cultural Immersion**

This course develops competency in global learning and an understanding of different perspectives related to cross-cultural diversity. Students develop an understanding of world cultures and global issues on campus and through study abroad immersion in a host country. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3      Lecture: 3      Lab: 0

**CMT111 Construction Print Reading**

This course introduces the process of interpreting and communicating information found on residential and commercial construction documents. The use of 2-dimensional/ 3-dimensional visualization skills and mathematical calculation skills to read and interpret drawing data are emphasized. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 3

Lecture: 2

Lab: 2

**CMT224 OSHA Constr Industry Training**

This course provides complete information on Occupational Safety Health Administration (OSHA) compliance issues such as recognition, avoidance, abatement, and prevention of safety and health hazards in the workplace. The course also provides information regarding workers' rights and employer responsibilities.

Pre-requisite: (Test score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab:

**CMT234 Cost Estimating/Planning**

This course covers material lists, take-off quantities of materials, and labor costs from residential construction documents. Different methods of estimating are presented, including using productivity software to project costing and scheduling. Prerequisite: (Test scores or ENG 101 or higher) and (CET 125 or (AET 125 and AET 135)) and (Test scores or MAT 181 or higher)

Credit: 3

Lecture: 2

Lab: 2

**CMT235 Adv Cost Estimating/Planning**

This course provides an in-depth analysis of commercial construction costs, bid preparation and value engineering with regard to budgetary constraints. Different methods of estimating using productivity software are presented.

Prerequisite: CMT 234

Credit: 3

Lecture: 2

Lab: 2

**CMT242 Constr Project Management I**

This course develops an understanding of project management using productivity software. Primary topics include an introduction to job organization and coordination, project scheduling, critical path method (CPM) scheduling techniques, materials management, cost estimates, and reporting. Prerequisite: (ACC101 or concurrent) and CMT 234

Credit: 3

Lecture: 2

Lab: 2

**CMT243 Co-op Work Experience**

This course is a cooperative educational work experience. Students develop technical skills, investigate career choices, build confidence, network with people in the field, and transition in entry into the workforce. Prerequisite: CMT 111 and CMT 234.

Credit: 3

Lecture: 0

Lab: 9

**CMT244 Constr Project Management II**

This course further develops an understanding of project management using productivity software. Primary topics include job organization and coordination, project scheduling, critical path method (CPM) scheduling techniques, materials management, cost estimates, and reporting. Emphasis is placed on commercial construction contracts, including planning, scheduling, controlling, and analyzing project progress. Prerequisite: (Test scores or ENG 102 or higher) and (ACC 101 or concurrent and CMT 234 and CMT 242)

Credit: 4

Lecture: 3

Lab: 3



**CNE180 Computer Assmby & Maintenance**

This course provides an overview of the personal computer and its components. Students explore and assemble personal computers. An introduction to non-component troubleshooting is included. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 4      Lecture: 3      Lab: 2

**CNE191 Router Configuration**

This course provides an in-depth view of essential perimeter function regarding routers. Configuration, packet filtering, protocols, troubleshooting, and fortification are covered. Prerequisite: CIS 141

Credit: 3      Lecture: 2      Lab: 2

**CNE192 Network Administration**

This course covers the skills necessary to install, maintain, and troubleshoot computer network infrastructure. Topics include computer networking technologies, basic design principles, computer wiring standards, and test equipment. Prerequisite: CIS141

Credit: 3      Lecture: 2      Lab: 2

**CNE215 Enterprise Server Admin**

This course covers installing, configuring, and maintaining the Windows Server operating system. Emphasis is placed on user and file administration, resource sharing, and Active Directory (AD). Prerequisite: CNE 192

Credit: 3      Lecture: 2      Lab: 2

**CNE216 Open Source Server Admin**

This course covers installing, configuring, and maintaining an open source operating system (OS). User and file administration and resource sharing are covered. Prerequisite: CNE 192

Credit: 3      Lecture: 2      Lab: 2

**CNE280 Advanced Networking Topics**

This course covers advanced topics in network design and implementation to include real-world tasks related to the field of networking. Prerequisites: CNE 215 and CNE 216

Credit: 3      Lecture: 2      Lab: 3

**CNE284 Cloud Computing**

This course introduces cloud computing technology and its practical applications in today's business environments. Topics include an introduction to cloud computing's service models and deployment models and to the way cloud environments are provisioned in public or private clouds. Prerequisites: CNE 215 and CNE 216

Credit: 3      Lecture: 3      Lab: 2

**COM011 Intro to Human Communication**

This introductory course focuses on the development of interpersonal communication skills. Emphasis will be placed on the practical application of these skills. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**COM110      Intro. to Video Production**

This course explores the principles, mechanics, techniques, and aesthetics of video production. Topics include pre-production planning and writing, production procedures, and post-production editing.  
Pre-requisite: Test score or ENG 090 or ENG 091 or higher

**Credit: 3      Lecture: 2      Lab: 3**

**COM111      Human Communications**

This course focuses on theory and application of both intrapersonal and interpersonal communication. Human Communications is based on the premise that no person lives and works in isolation. From both the personal and occupational perspectives, one must be able to communicate with others efficiently and effectively. Prerequisites (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**COM140      Newswriting I**

This writing course provides an introduction to various types of mass media writing, print and broadcast journalism, public relations, and online media. Students gain experience in information gathering, interviewing, organizing, writing, and revising along with an introduction to Associated Press style writing.

Prerequisites: Test scores or ENG 101 or higher

**Credit: 3      Lecture: 3      Lab: 0**

**COM150      Intro to Electronic Media**

This introductory course to the electronic media industries includes the study of broadcasting history and the Federal Communications Commission (FCC) rules and regulations. Topics include the impact of media on politics, technology, and the economy as well as the social and psychological effects.  
Pre-requisite: Test scores or ENG 090 or ENG 091 or higher

**Credit: 3      Lecture: 3      Lab: 0**

**COM152      Podcasting**

Designed to acquaint students with podcasting, the technical skills to produce audio and video internet-formatted broadcasts, and the ability to distribute and market the product to a diverse audience on the internet. Includes a study of copyright law and fair use. Prerequisite: COM 140

**Credit: 3      Lecture: 3      Lab:**

**COM160      Intro to Public Relations**

This course introduces the history, theories, ethics, and practice of public relations, including writing of public relations materials, supplemental information, and the communications planning process.  
Prerequisite: ENG 102 or higher

**Credit: 3      Lecture: 3      Lab:**

**COM210      Advanced Video Production**

This course provides intermediate-level training in digital video production. Emphasis is placed on the production of professional-quality videos using professional non-linear editing software and employing visually aesthetic videography, editing, writing, and performance techniques.

Pre-requisites: COM 140 and COM 110

Credit: 3

Lecture: 2

Lab: 3

#### COM222 Intercultural Communication

This course introduces the knowledge and skills required for effective interpersonal communication with diverse populations. Communication models, barriers to effective communication, and techniques for overcoming communication barriers are discussed. Special emphasis is placed on communicating with members of various cultures in a helping environment. Prerequisites: (Test scores or ENG 102 or higher) and PSY 121 and SOC 111

Credit: 3

Lecture: 3

Lab: 0

#### COM240 Mass Media Law

This course is designed to acquaint students with ethical responsibilities and libelous aspects of reporting as illustrated in historic court cases and to apply legal and ethical principles to news activities. Topics include a study of Delaware's Freedom of Information Act, privacy, libel, and the First Amendment.

Pre-requisites: COM 140 and COM 150

Credit: 3

Lecture: 3

Lab: 0

#### COM242 Newswriting II

This in-depth study of writing, which includes a study of the current techniques, problems and responsibilities of writing and the application of these principles to assigned stories. Students also write for the school publication.

Prerequisites: (Test scores or ENG 102 or higher) and COM 140

Credit: 3

Lecture: 3

Lab: 0

#### COM246 Introduction to Film

This class will review the technical structure of film and all its components - cinematography, sound, lighting, casting, storyboarding and scriptwriting, while also allowing students to share their own personal observations of film and its impact on their lives. Prerequisites: (Test scores or ENG 102 or higher)

Credit: 4

Lecture: 3

Lab: 2

#### COM250 Photography

This course covers photographic theory and practical techniques for creating and interpreting photographic images, which includes a thorough understanding of digital single-lens reflex (SLR) camera operations and basic Photoshop use.

Prerequisites: Test scores or ENG 101 or higher

Credit: 4

Lecture: 3

Lab: 2

#### COM251 Layout and Design

This course introduces layout and design for print and web publishing and covers typography and layout theory. Desktop publishing with industry software is combined with the study of typography, color, and graphics as the basic tools of pagination.

Pre-requisite: COM 140 and OAT 242

Credit: 3      Lecture: 3      Lab: 0

**COM252      Advanced Photography**

This course is an extension of the skills and techniques covered in previous courses designed to expand photographic skills as they apply to communications. Emphasis is placed on linking photography to other forms of communication. Prerequisite: COM 250

Credit: 4      Lecture: 3      Lab: 2

**COM293      Internship with Seminar**

This course provides a variety of practical on-the-job experiences in specific areas of the communications field. The internship and seminar provide an opportunity to exchange ideas and discuss relevant issues in the media. Prerequisite: COM 242

Credit: 5      Lecture: 1      Lab: 12

**CPO106      Statistical Procs Cntrl Ovrvw**

This course provides a brief overview of basic statistics, including variation, and explains how to transform raw data into control charts for variables or attributes and determine in-control/out-of-control conditions. Basic problem solving tools (Pareto Analysis and Cause and Effect Diagrams) are presented. Prerequisites: Test score or Mat 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181 or MAT 185.

Credit: 1      Lecture: 1      Lab: 0

**CPO125      Safety, Health & Environment**

This course will provide the student with a basic understanding of safety, health and environment for chemical plant operations. Topics include properties of hazardous materials, safety and health, industrial hygiene practices, environmental protection regulations, and emergency planning and response. In addition, the student will learn the requirements for compliance with transportation regulations involving shipments of hazardous materials and wastes. Prerequisites: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 153 or MAT 181 or MAT 185.

Credit: 3      Lecture: 3      Lab: 0

**CPO135      Chem Proc Tech-Equipment**

This course provides students with an understanding of the type of equipment used in the chemical process industry. Topics include piping, valves, pumps, compressors, heat exchangers, and other chemical process equipment. The course concludes with a discussion of preventative/ predictive maintenance. Prerequisites: Test score or MAT 012 or higher

Credit: 3      Lecture: 2      Lab: 2

**CPO151      Chem Proc Tech I-Systems**

This course provides an introduction to chemical stoichiometry, fluid flow, heat transfer, plant utilities, and reactor concepts. In addition, the unit operations of distillation, fermentation, crystallization, filtration, and drying are discussed, using a standardized format that emphasizes the operational knowledge and techniques important to chemical process technicians. In addition, renewable energy and biofuels technologies are highlighted. Prerequisites: CHM 110 and CIS 107 and CPO 135

Credit: 4      Lecture: 3      Lab: 2

**CPO240 Quality**

This course provides an overview of the quality concepts used by the chemical process industry. Topics include quality philosophy, continuous improvement, operating consistency, plant economics, team skills, and statistical process control techniques. Prerequisites: (Test score or MAT 153 or higher) and (CHM 110 or CHM 150).

Credit: 3      Lecture: 3      Lab: 0

**CPO252 Chem Proc Tech II-Operations**

This course will provide an overview into the field of operations within the chemical process industry. Students will use existing knowledge of equipment, systems, and instrumentation to understand the operation of an entire unit. Topics include typical duties performed by an operator in commissioning, startup, normal operations, shutdown, turnarounds, and abnormal situations within a generic operating unit. Laboratory exercises include the operation of five pilot plants. Prerequisites: CPO 151 and ELC 101.

Credit: 4      Lecture: 3      Lab: 2

**CPO253 Process Troubleshooting**

This course will provide an overview of different troubleshooting techniques, procedures, and methods used to solve chemical process problems. Topics include application of data collection and analysis, cause/effect relationships, and reasoning. Laboratory instruction involves troubleshooting problems initiated by the instructor in operating pilot plants and computer simulators. Prerequisites: CPO 151 and ELC 101.

Credit: 4      Lecture: 3      Lab: 2

**CPO260 Work Experience**

The course provides a work experience for advanced study in chemical process operator technology. Students who qualify for an internship must work a minimum of 128 hours in either a local industrial facility or an on-campus laboratory. The work experience is mentored and supervised by a workplace employee.

Prerequisites: CPO 100 and CPO 125 and CPO 135 and CPO 151 and ELC 101 and (CPO 252 or concurrent)

Credit: 4      Lecture: 1      Lab: 8

**CRJ101 Intro to Criminal Justice**

This course provides an examination of the history and philosophy of the Criminal Justice system. The structure and function of Law Enforcement and the Judicial and Correctional systems are compared and contrasted with an overview of law and order issues facing the State, Federal and Local agencies. Public Service careers in the Criminal Justice system are surveyed. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3      Lecture: 3      Lab: 0

**CRJ102 Criminal Law**

This course provides an in-depth study of the range, categories, types and elements of criminal acts, the rationale underlying criminal law, and the analysis of situations in terms of criminal violations. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and CRJ 101

Credit: 3      Lecture: 3      Lab: 0

**CRJ104 Drugs Society/Human Behavior**

This course examines the effects of drug and alcohol use on American society. Emphasis is placed upon addictive behaviors that affect the crime rate, drug control policies, and enforcement efforts. Treatment and prevention theories are also discussed. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and CRJ 101

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ105      Computer Appl in Crim./Justice**

This course provides the student with instruction in the operation of computer systems and software commonly used by criminal justice professionals.

Prerequisites: Test Scores or (ENG 090 or ENG 091 or higher) and CRJ 101 and CRJ 102 and CIS 107

**Credit: 3      Lecture: 3      Lab: 1**

**CRJ115      Essntls of Intrvwng/Counselng**

This course focuses on interpersonal communication skills, interviewing strategies, and counseling techniques used in policing, corrections, and rehabilitative agencies. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ118      Corrections in America**

A general overview of the American corrections system, including the history and evolution of the system as well as current philosophies and practices. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ120      Hnrs Issues in Crim. Justice**

This course examines and addresses the criminal justice systems and criminal justice institutions among a number of political systems. Special emphasis is placed on comparative crime rates, various states of the criminal justice process, and specific issues pertaining to various models of government.

Prerequisites: CRJ 101

**Credit: 3      Lecture: 3      Lab:**

**CRJ152      Collct/Analysis Crme Scne Evid**

Intense study of methods of collection, identification, preservation, and presentation of crime scene evidence.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and CRJ 101

**Credit: 3      Lecture: 3      Lab:**

**CRJ220      Criminal Judiciary**

This course examines the structure, jurisdiction, and procedures of different courts: federal, state, adult, and juvenile. It also examines the detailed processes of bail, court procedures, and conviction.

Prerequisites: (Test score or ENG 090 or ENG 091 or higher) and (CRJ 101).

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ222      Constitutional Law**

The Constitution of the United States and the Bill of Rights are examined and interpreted with applications for the criminal justice system. The course emphasis is on legal issues dealing primarily with the relevant amendments and associative cases law. Prerequisite: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (CRJ 101 or HDM 101)

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ223      Criminology**

This course examines the study of the nature and causes of crime using biological, psychological, and sociological theories. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (CRJ 101 or HDM 101)

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ226      Crisis Intervention**

A study of short-term crisis intervention and prevention strategies. Prerequisites: CRJ 115 or HDM 101

**Credit: 3      Lecture: 3      Lab: 0**

**CRJ235      Internship**

This course provides the student actual field experience. Special emphasis is placed on relating the field experience to academic work. Prerequisites: CRJ 102 and CRJ 104 and CRJ 105 and CRJ 115 and CRJ 220 and ENG 102

**Credit: 4      Lecture: 1      Lab: 8**

**CRJ237      Law Enforcement Practicum**

This course directs towards students seeking a career in law enforcement and encompasses major topics instructed at a Delaware police academy, in accordance with DE Council on Police Training (COPT) requirements. Key topics of instruction include traffic laws and collision investigation techniques, criminal law, constitutional law, terrorism, report writing, evidence collection, crime scene processing, crisis intervention techniques, and physical training. Upon successful completion of the course, students may become eligible for advanced standing at a Delaware police academy, if sponsored and hired by a qualifying Delaware police agency. Prerequisites: (Test scores or ENG 102 or higher) and CRJ 102 and CRJ 104 and CRJ 105 and CRJ 115 and CRJ 220 and HDM 202

**Credit: 13      Lecture: 12      Lab: 4**

**CSC114      Computer Science I**

This course introduces the fundamental concepts of programming. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, debugging, and documenting programs. Additionally, the concepts of data abstraction and recursion are introduced. Students employ fundamental concepts to create and assess simple programs.

Prerequisite: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test Scores or MAT 180 or higher)

**Credit: 4      Lecture: 3      Lab: 2**

**CSC164      Computer Science II**

This course, the second in a series, emphasizes the use of classes and objects. Topics include object-oriented programming concepts, abstraction, algorithms, techniques, and libraries. Students write programs that are fault tolerant using multiple files and modules, class hierarchies, inheritance, and polymorphism.

Prerequisite: CSC 114

**Credit: 4      Lecture: 3      Lab: 2**

**CSC214      Computer Science III**

This course, the third in a series, provides a foundation in computer science. Students develop intermediate-to-advanced programming skills using a language that supports an object-oriented approach. Emphasis is placed on data structures, algorithmic analysis, software engineering principles, software and information assurance, and professionalism.

Prerequisite: CSC 164

Credit: 4

Lecture: 3

Lab: 2

#### CSC264 Applied Computer Capstone

In this course, students design and program real-life applications using skills and knowledge learned in previous courses.

Prerequisite: CSC 214

Credit: 4

Lecture: 3

Lab: 2

#### CSM101 Intro to Customer Service

This course introduces students to the concepts and skills needed to perform effectively in a customer-driven service economy. Communication, teamwork, and problem-solving skills are emphasized. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### CSM201 Telecomms Skills

This non-technical course presents fundamental concepts of telecommunications, depicts state-of-the-art technologies, and relates how they are used in business. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### CSM212 Credit/Collections

A comprehensive collegiate course designed to acquaint students with consumer and business credit, public credit policies, collection procedures, and related legal issues. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 090 or EAP 093 or higher) and (Test scores or MAT 005 or higher) and BUS 101

Credit: 3

Lecture: 3

Lab: 0

#### CTS101 Fundamentals-Motor Fleet Safety

This course presents safety fundamentals, essential regulatory requirements, and driver responsibilities not directly related to driving. Federal and state regulations governing commercial drivers and motor carriers are also explained. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or EAP 094 or higher) and (Test score or MAT 005 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### CTS102 Vehicle Sys/Report Malfunction

This course familiarizes the student with tractor-trailer vehicle systems and the proper procedures for handling and reporting vehicle malfunctions. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

Credit: 2

Lecture: 2

Lab: 0



**CTS103 Tractor Trailer Operations**

This course introduces students to combination vehicle (tractor-trailer) control systems and control concepts. Vehicle inspection procedures and requirements, coupling and uncoupling procedures, and shifting procedures and patterns are also covered.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test score or MAT005 or higher)

Credit: 2

Lecture: 2

Lab: 0

**CTS108 Professional Driver Developmnt**

This course introduces the trucking industry from the perspective of a commercial driver applicant by discussing commercial driver qualifications, job seeking skills, substance abuse awareness, driver wellness and whistleblower protection. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

Credit: 3

Lecture: 3

Lab:

**CUL112 Cake Decorating**

This course is designed to teach the basics and fundamentals of professional cake decorating. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 2

Lecture: 1

Lab: 3

**CUL119 Food Safety and Sanitation**

This course covers practical sanitary techniques and safety in food preparation. A Hazard Analysis of Critical Control Points (HACCP) is used to develop a self-inspection system. Prerequisites: (Test score or ENG 090 or ENG 091 or concurrent or higher) and (Test scores or MAT 012 or higher)

Credit: 2

Lecture: 2

Lab: 0

**CUL121 Food Prep I**

This course covers food preparation fundamentals, cooking techniques, and quality. Recipe conversions and food cost analysis are also covered. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 4

Lecture: 3

Lab: 4

**CUL156 Practicum**

This supervised work experience is designed to give the culinarian hands-on training in the field at various stations in the kitchen. Prerequisites: CUL 121

Credit: 3

Lecture: 1

Lab: 5

**CUL171 Garde Manger**

This course introduces cold food preparation. Topics include salads, dressings, canapés, tea sandwiches and cold soups, pates, ballottines, basic charcuterie, and vegetable carvings.

Prerequisites: CUL 119 or concurrent and CUL 121

Credit: 4

Lecture: 3

Lab: 4

**CUL245 Applied Hospitality**

This course, which is held in the culinary arts dining room, is designed to teach students customer service and professional management principles. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 2

Lecture: 1

Lab: 4

**CUL261 Baking**

This production-orientated course focuses on the basic fundamentals of baking. Students learn and apply a set of highly interrelated techniques and baking skills.

Prerequisites: CUL 119 or concurrent and CUL 121

Credit: 4

Lecture: 3

Lab: 4

**CUL262 Pastry**

This is a production-oriented course based on the baking principles learned, in Baking CUL 261. The student will apply these basic principles to produce various desserts and decorative works. Prerequisites: CUL 261

Credit: 4

Lecture: 3

Lab: 4

**CUL285 International Cuisine**

This course introduces various international cuisines. The students produce menus that focus on the taste, flavors, and styles of these various areas. Prerequisites: CUL 171.

Credit: 4

Lecture: 3

Lab: 4

**CUL291 Food Prep II**

In this course, which builds on the fundamentals of CUL 285, staffing requirements are introduced. Students develop healthy bistro-style American regional cuisine menus for specific market segments. Individual workstations are studied and assigned. Prerequisites: CUL 285

Credit: 4

Lecture: 3

Lab: 4

**CVS109 Intro to Clin Internship II**

Continuation of DMS 108 Introductory clinical course offers practical experiences in clinical setting for application of previously learned principles. Prerequisites: DMS 108

Credit: 1

Lecture: 0

Lab: 4

**CVS201 Clinical Internship I**

The continued experience of the introductory course in a diagnostic medical sonography clinical setting for application of learned technical skills. Includes demonstrations in the use and care of ultrasound equipment and initiates participation, under direct supervision, in actual sonographic procedures. Prerequisites: BIO 130 and ECH 112 and VAS 112.

Credit: 3

Lecture: 0

Lab: 15

**CVS202 Clinical Internship II**

A continuation of CVS 201. The goal is to provide an expanded clinical environment for the experience, with emphasis on the comfort and safety of the patient while maintaining quality performance in diagnostic medical sonographic procedures. Echocardiography review is also implemented to strengthen knowledge base. Prerequisites: CVS 201

**Credit: 7      Lecture: 1      Lab: 30**

**CVS203      Clinical Internship III**

A continuation of CVS 202, having the same goals. Providing additional self-development in more independent work and confirming proficiency in cardiovascular sonographic procedures. Prerequisites: CVS 202

**Credit: 7      Lecture: 1      Lab: 30**

**CVS210      Scanning Applications**

This course is designed to integrate previous learned didactic knowledge and laboratory skills to strengthen sonographic knowledge and scanning techniques. Applications of these skills are also emphasized and reviewed. Emphasis is on vascular studies of extremity arteries, extremity veins and cerebrovasculature. A group presentation of sonographic case is also included. Prerequisites: ECH 112 and VAS 112

**Credit: 1      Lecture: 1      Lab: 1**

**DAC141      Intro Drug&Alcohol Counseling**

This introductory course examines the physiological and sociological impact of drug and alcohol abuse. Emphasis placed on the disease concept of addiction and it's progressive nature. Prerequisites: HMS 121

**Credit: 3      Lecture: 3      Lab: 0**

**DAC225      Drug&Alcohol Counseling II**

This course acquaints the student with a variety of treatment techniques unique to the field of drug and alcohol addiction. The course emphasizes learning through an experimental modality. Prerequisites: (ENG 122 or ENG 130) and HMS 122 and HMS 123 and DAC 141.

**Credit: 3      Lecture: 3      Lab: 0**

**DAC230      Assessmnt/Trtmnt/D&A Counslng**

This course is an overview of various types of addictions and the resulting characteristics and behavior patterns of the addicted individual. Emphasis is on etiology assessment and treatment. Prerequisites: (Test scores or ENG 101 or higher) and DAC 141

**Credit: 3      Lecture: 3      Lab: 0**

**DAC240      Families & Addiction**

This course examines the impact of drug and alcohol addiction on the family. The focus will be on reviewing models of family dysfunction and methods of treating the addicted family. Prerequisites: DAC 141

**Credit: 3      Lecture: 3      Lab: 0**

**DAC244      Dir Practice II-Drug/Alcohol**

Individuals are placed in various Drug and Alcohol treatment agencies to learn through supervised participation in working with addicted individuals. Prerequisites: HMS 243

**Credit: 6      Lecture: 1      Lab: 15**

**DHY101      Clinical Dental Hygiene I**

A clinical experience course designed for the practical application of the didactic information presented in DHY 111 - Dental Hygiene Fundamentals I. The seminar aspect will allow time for problem-solving and sharing clinical experiences. Prerequisites: BIO 120

**Credit: 2      Lecture: 1      Lab: 6**

**DHY102      Clinical Dental Hygiene II**

A clinical experience course designed for practical application of the didactic information presented in DHY 111 Dental Hygiene Fundamentals I and DHY 112 - Dental Hygiene Fundamentals II. Prerequisites: DHY 101

**Credit: 3      Lecture: 1      Lab: 10**

**DHY103      Clinical Dental Hygiene III**

A clinical experience incorporating all past and current knowledge and techniques learned in related dental hygiene courses, into the treatment of all types of patients. The seminar aspect will permit a time for problem solving and clinical experience sharing. Prerequisites: DHY 102

**Credit: 2      Lecture: 1      Lab: 6**

**DHY111      Dental Hygiene Fundamentals I**

An introduction to dental hygiene care focusing on clinic preparation procedures, patient assessment, and principles of instrumentation. This course also incorporates medical emergencies in the dental setting and initial supplemental procedures for patient care. Prerequisites: CHM 110

**Credit: 3      Lecture: 3      Lab: 0**

**DHY112      Dental Hygiene Fundamentals II**

A continuation of DHY 111 Dental Hygiene Fundamentals I to develop new skills appropriate to dental hygiene treatment. The course focuses upon various patient populations, the characteristics, common treatment needs, and patient management. Additional areas include ethical and legal issues of dental hygiene care. Prerequisites: DHY 111

**Credit: 3      Lecture: 2      Lab: 3**

**DHY121      Oral Histology/Embryology**

The course deals with the study of oral mucosa, the periodontium, dental tissues, the tongue, and salivary glands. Areas of focus include the function, gross anatomy, clinical characteristics, and microscopic features of these oral tissues. Additionally, embryologic development and tooth development and eruption are covered. Prerequisites: BIO 120

**Credit: 2      Lecture: 2      Lab: 1.50**

**DHY132      Dental Anatomy**

This course deals with the study of the gross anatomy of the dentition and surface structures of the head and neck region. Major topics include morphology of permanent and primary dentition, occlusal concepts, and surface anatomical landmarks. Prerequisites: BIO 120

**Credit: 1.50      Lecture: 1.50      Lab: 0.80**

**DHY133      Head and Neck Anatomy**

This course deals with the study of the gross anatomy of the structure in the head and neck region. Major topics include bones, muscles, the temporomandibular joint, cranial nerves, blood supply, venous drainage, and lymphatic drainage. Prerequisites: BIO 120

**Credit: 1.50      Lecture: 1.50      Lab: 0.50**

**DHY141      Oral Radiography**

This course introduces the principles, theories, and techniques of dental oral radiography. Students practice exposing, mounting, and evaluating dental radiographs for the development of clinical radiographic skills. The paralleling technique using digital radiography is stressed.

Prerequisites: DHY 133

Credit: 3

Lecture: 2

Lab: 2

#### DHY151 Periodontology/Cariology

This course is designed to study two diseases which affect a patient's oral health. Emphasis will be directed to the dental hygienist's role in the prevention and treatment of periodontal diseases and dental cares. Advanced treatment planning philosophies will be introduced for these diseases. Prerequisites: DHY 121

Credit: 3

Lecture: 3

Lab: 0

#### DHY161 Oral Pathology

A study of the etiology, clinical signs and symptoms, and treatment of pathological conditions related to the oral cavity. Emphasis is also placed on the interaction between oral pathology and systemic pathology. Prerequisites: BIO 121 and DHY 121 and DHY 132.

Credit: 3

Lecture: 3

Lab: 0

#### DHY204 Clinical Dental Hygiene IV

A clinical experience incorporating all past and current knowledge and techniques learned in related dental hygiene courses into the treatment of all types of patients. The seminar aspect will permit time for problem solving and sharing clinical experience. Prerequisites: DHY 103

Credit: 4

Lecture: 1

Lab: 13

#### DHY205 Clinical Dental Hygiene V

A final course in clinical techniques to develop all aspects previously learned in total patient care. The seminar aspect will permit time for problem solving and sharing clinical experiences. Prerequisites: DHY 204

Credit: 4

Lecture: 1

Lab: 16

#### DHY212 The Compromised Dental Patient

A seminar and clinic lab focusing on the needs and treatment of the mentally, physically, and medically compromised patient. The course will include a variety of lectures, discussions, films, laboratory exercises, field trips, and clinical sessions. Prerequisites: BIO 125 and DHY 112

Credit: 1.50

Lecture: 1.50

Lab: 1

#### DHY213 Adv Clinical Techniques

The course lectures will provide information on additional clinical techniques building on skills introduced in radiography, periodontology and previous clinical courses. The laboratory portion will supplement the lecture portion and include skills related to the areas of oral radiography, periodontology, and clinical dental hygiene practice. Prerequisites: DHY 141

Credit: 3

Lecture: 2

Lab: 2

#### DHY215 Practice Management

A course designed to assist the student seeking a professional career in dental hygiene. Emphasis will be placed on interview skills, legal implications, professional organizations, alternative practice settings, and dental office management. Prerequisites: DHY 212

**Credit: 1      Lecture: 1      Lab: 0**

**DHY271      Pharmacology for Dental Hygien**

This course is designed to supply students with a basic understanding of pharmacologic principles and therapeutic applications to health care. Special emphasis is placed upon therapeutic agents used in the dental practice as well as other agents which may impact the practice of dental hygiene. Prerequisites: DHY 112

**Credit: 1.50      Lecture: 1.50      Lab: 0**

**DHY281      Operative/Specialty Dentistry**

A lecture and laboratory series in the concepts of operative dentistry including chemical and physical properties of materials. This course also includes information on procedures in specialty areas of the dental practice. Prerequisites: DHY 213

**Credit: 1      Lecture: 1      Lab: 0.50**

**DHY290      Community Dental Health**

This course focuses on health care problems and systems within the community setting. Content includes addressing health needs through assessment, planning, and evaluation of dental health programs. Prerequisites: DHY 112

**Credit: 2      Lecture: 2      Lab: 0**

**DHY291      Community Dental Health Fld Wrk**

This course focuses on field work experiences to provide direct involvement with community members. Content addressing dental health needs through assessment, planning, and evaluation of programs. Prerequisites: DHY 290

**Credit: 1      Lecture: 0      Lab: 2**

**DMS104      Intro to Clinical Internship**

This course is an introductory clinical course that provides orientation experiences in the clinical setting for application of didactic principles. Prerequisites: (Test scores or ENG 101 or higher) and BIO 120 and MAT 153 and PHY 111

**Credit: 1      Lecture: 0      Lab: 7**

**DMS106      Intro-Patient Care/Sonography**

This course introduces patient care knowledge and skills necessary to perform sonographic procedures on all patient populations. In addition, an introduction to the field of diagnostic medical sonography is provided. Prerequisites: (CHM 110 or concurrent) and (PHY 111 or concurrent)

**Credit: 3      Lecture: 3      Lab: 1**

**DMS107      Essentials in Pt. Care/Sono**

This introductory course covers patient care skills necessary to perform diagnostic sonographic procedures on all patient populations in the field. Prerequisites: MAT 153 and BIO 120 and PHY 111 and (Test Score or ENG 101 or higher)

**Credit: 3      Lecture: 3      Lab: 1**

**DMS108      Intro to Clin Internship I**

This introductory clinical course provides orientation experiences in a clinical setting for application of previously learned principles.

Prerequisite(s): DMS 106

Credit: 1

Lecture: 0

Lab: 4

**DMS109 Intro to Clin Internship II**

This continuation of Intro to Clinical Internship I offers practical experiences in a clinical setting for application of previously learned principles.

Prerequisites: DMS 108

Credit: 1

Lecture: 0

Lab: 4

**DMS110 Acoustical Physics**

This course gives a theoretical and practical understanding of the basic principles of ultrasound instrumentation, sound wave concepts, characteristics of sound propagating media, beam patterns, beam and image artifact, Doppler effect, system performance testing, bio-effects and safety. Prerequisites: MAT 153 and (DMS 106 or DMS 107)

Credit: 3

Lecture: 3

Lab: 0

**DMS112 OB/GYN Sonography I**

This course studies the reproductive organs of the female in the non-gravid state. The role of diagnostic medical sonography in the determination of congenital anomalies, pathology, infertility management, and contraception is discussed. Prerequisites: MAT 153 and BIO 120 and PHY 111 and (((Test Score or RDG 120) and (Test Score or ENG 121 or higher)) or Test Score or ENG 101 or higher)

Credit: 2

Lecture: 2

Lab: 1.50

**DMS113 Gynecological Sonography**

This course is a study of the reproductive organs of the female in the non-gravid state. Topics include the role of diagnostic medical sonography in the determination of congenital anomalies, pathology, infertility management, and contraception.

Prerequisites: BIO 120 and DMS 106

Credit: 2

Lecture: 2

Lab: 1

**DMS114 Obstetrical Sonography**

This course is a study of the reproductive organs of the female in the gravid state. Topics include the role of diagnostic medical sonography in the determination of fetal age, growth, and well-being; the detection of anomalies; and obstetrical management.

Prerequisites: DMS 113

Credit: 2

Lecture: 2

Lab: 1

**DMS121 Abdominal Sonography I**

This course covers the study of diagnostic medical sonography of the abdomen. Instruction includes cross-sectional anatomy, physiology, and pathophysiology of abdominal viscera.

Prerequisites: BIO 120 and DMS 106

Credit: 2

Lecture: 2

Lab: 1

**DMS122            Abdominal Sonography II**

This course is a continuation of Abdominal Sonography I appropriate to the study of diagnostic medical sonography, covering cross-sectional anatomy, physiology and pathophysiology of the abdomen, and superficial structures.

Prerequisites: DMS 121

Credit: 2

Lecture: 2

Lab: 1

**DMS131            Abd/Small Parts Sono. I**

This course studies the diagnostic medical sonography of the abdomen to include cross-sectional anatomy, physiology and pathophysiology of abdominal viscera. Prerequisites: (MAT 153 and BIO 120 and PHY 111 and ((Test Score or RDG 120) and (Test Score or ENG 121 or higher)) or Test Score or ENG 101 or higher)

Credit: 2

Lecture: 2

Lab: 1.50

**DMS201            Clinical Internship I**

This introductory course is the continued experience in a clinical setting for application of learned technical skills. The course includes demonstrations in the use and care of ultrasound equipment and initiates participation, under direct supervision, in actual sonographic procedures.

Prerequisites: DMS 114 and DMS 122 and VAS 112

Credit: 3

Lecture: 0

Lab: 15

**DMS202            Clinical Internship II**

A continuation of Clinical Internship I, this course experience provides an expanded clinical environment with emphasis on the comfort and safety of the patient while maintaining quality performance in diagnostic medical sonographic procedures.

Prerequisites: DMS 201

Credit: 7

Lecture: 1

Lab: 30

**DMS203            Clinical Internship III**

A continuation of Clinical Internship II, this course provides additional self-development in more independent work and confirms proficiency in general sonographic procedures.

Prerequisites: DMS 202

Credit: 7

Lecture: 1

Lab: 30

**DMS210            Scanning Applications**

This course is designed to integrate previously learned didactic knowledge and laboratory skills to strengthen sonographic scanning techniques. Applications of these skills are emphasized and reviewed.

Prerequisites: DMS 114 and DMS 122 and VAS 112

Credit: 1

Lecture: 1

Lab: 1

**DMS211            Abdominal Sonography III**



This course is designed to provide basic information on some of the more common applications of diagnostic medical sonography in the neonate, infant, and young pediatric patient. It includes instrumentation and scanning techniques of the brain, abdomen, gastrointestinal and genitourinary tracts, and infant hip.

Prerequisites: DMS 122

Credit: 1                      Lecture: 1                      Lab: 0

**DMS214                      Essentials in Vascular U/S**

This course introduces the fundamentals of vascular sonography. Topics include hemodynamics, cerebrovascular, peripheral arterial and venous anatomy, physiology, pathophysiology, and ultrasound testing methods. Prerequisite: DMS 215 and DMS 231

Credit: 2                      Lecture: 2                      Lab: 1

**DMS215                      OB/GYN Sonography II**

This course studies the reproductive organs of the female in the gravid state. Topics include the role of diagnostic medical sonography in the determination of fetal age and growth, fetal well-being, detection of anomalies, and obstetrical management. Prerequisite: DMS 112

Credit: 2                      Lecture: 2                      Lab: 1

**DMS230                      Special Topics**

This course is designed to integrate knowledge from previous courses with current studies to produce thorough, sequential information in areas of special topics pertaining to diagnostic medical sonography. Case studies provide a means to discuss and review pathology, clinical manifestation of symptoms, differential diagnosis, sonographic patterns, and protocols in scanning. Review for the American Registry for Diagnostic Medical Sonography (ARDMS) board examination is also included.

Prerequisites: DMS 202 or CVS 202

Credit: 2                      Lecture: 2                      Lab: 0

**DMS231                      Abd/Small Parts Sono. II**

This course provides the skills necessary to produce diagnostic sonographic images of peritoneal and retroperitoneal structures, the urinary system, spleen, and superficial structures. Prerequisite: DMS 131

Credit: 2                      Lecture: 2                      Lab: 1

**DMS235                      Pediatric Sonography**

This course provides basic information on some of the more common applications of diagnostic medical sonography in the neonate, infant and young pediatric patient. Topics includes instrumentation and scanning techniques of the brain, abdomen, gastrointestinal and genitourinary tracts, and infant hip. Prerequisites: DMS 215 and DMS 231.

Credit: 1                      Lecture: 1                      Lab: 0

**DMS240                      Clinical Internship I**

This course is the first in a series that will provide supervised off-campus experience and practice in the multidisciplinary areas of diagnostic medical sonography that occurs in a variety of healthcare settings. Prerequisites: DMS 112 and DMS 131.

Credit: 3                      Lecture: 0                      Lab: 16

**DMS241                      Clinical Internship II**

This course, the second in a series, provides the student with clinical exposure necessary to be successful in the field of sonography with emphasis on the comfort and safety of the patient while maintaining quality performance in diagnostic medical sonographic procedures. Prerequisite: DMS 240

Credit: 6                      Lecture: 0                      Lab: 32

**DMS242                      Clinical Internship III**

This course, the third in a series, provides the student with clinical exposure necessary in the field of sonography with emphasis on the comfort and safety of the patient during more complex exams while maintaining a quality performance in diagnostic medical sonographic procedures. Prerequisite: DMS 241

Credit: 5                      Lecture: 0                      Lab: 24

**DMS243                      Clinical Internship IV**

This course, the final in a series, provides the student with clinical exposure necessary to be successful in the field of sonography with an emphasis on the comfort and safety of the patient during more complex exams while maintaining quality performance in diagnostic medical sonographic procedures. Prerequisite: DMS 242

Credit: 5                      Lecture: 0                      Lab: 24

**DMS250                      Selected Topics in U/S**

This course integrates previous concepts with current studies to produce thorough, sequential information in areas of special topics pertaining to diagnostic medical sonography. Case studies provide a means to discuss and review pathology, clinical manifestation of symptoms, differential diagnosis, sonographic patterns and protocols in scanning. In addition, a review of the American Registry for Diagnostic Medical Sonography (ARDMS) board examination is included. Prerequisite: DMS 242

Credit: 2                      Lecture: 2                      Lab: 0

**EAP093                      Academic Reading**

This course prepares non-native speakers of English for success in college-level studies by developing their academic vocabulary, reading, and writing.

Prerequisite: ESL 048 and (Test score or ESL 042) and Test score or ESL 044 and Test score or ESL 046

Credit: 3                      Lecture: 3                      Lab: 0

**EAP094                      Accelerated Academic Reading**

This accelerated course prepares those advised non-native speakers of English for success in college-level studies by developing their academic vocabulary, reading, and writing.

Prerequisite: Test scores or ESL 042 and Test scores or ESL 044 and Test scores and ESL 045

Credit: 2                      Lecture: 2                      Lab: 0

**EAP095                      Academic Communication**

This course prepares non-native speakers of English for success in college-level studies by developing academic vocabulary, listening strategies, and speaking skills needed for academic situations.

Prerequisite: ESL 048 and Test scores or ESL 042 and ESL 044 and ESL 046

Credit: 2                      Lecture: 2                      Lab: 0

**EAP097                      Academic Research**

This course prepares non-native speakers of English for success in college-level studies by introducing the research process and further developing the writing skills needed for college classes.

Prerequisite: Test scores or ENG 101 or higher

Corequisite: ENG 102

Credit: 2

Lecture: 2

Lab: 0

#### EBZ220 Fundamentals of E-Commerce

This course explores electronic commerce concepts, models, and strategies necessary to effectively build and manage E-Commerce applications. Students will learn how to make better decisions and determine information requirements for development of E-Commerce in both traditional and web-based businesses. Topics include risk management, security and privacy issues, EDI, E-Commerce payment systems, accounting in E-Commerce systems, regulatory and legal issues, and web marketing. Prerequisites: CIS 107 and BUS 101.

Credit: 3

Lecture: 3

Lab: 0

#### EBZ221 Strategic Aspects: E-Business

As the capstone course in the E-Business Technology, this course serves to integrate all of the strategic aspects of E-business. Case studies will be used to identify and examine the latest trends and directions in using the Internet for business purposes. Students will learn to develop, integrate, and manage technology applications impacting the operations in an organization. Prerequisites: EBZ 220

Credit: 4

Lecture: 3

Lab: 2

#### ECE111 Childhd Nutrition/Safety

This course is a study of nutrition, health, and safety needs for normal growth and development during early childhood. Student will be required to pass cardiopulmonary resuscitation (CPR) and First Aid training. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### ECE120 Comtemp Issues in Erly Childhd

This course offers a study of various models, theories, and issues in early childhood education programs as well as an understanding of the impact of these items on children's development. Multiple facets of professionalism and its effects will be explored. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### ECE121 Infant & Toddler Methods & Lab

This course is an introduction to program designed for infants and toddlers. Emphasis is on child/caregiver interaction, developmentally appropriate practice for infants and toddlers, and on managing programs in centers and in family day care homes. Emphasis is also provided on develop-mentally appropriate activities for infants and toddlers. Activity areas include social/emotional development, cognitive and language development, and sensory motor development. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 5

Lecture: 4

Lab: 4

#### ECE123 Early Childhd Methods I & Lab

This course is an introduction to the language arts, literacy, science, social studies, and math curriculum suitable for use with children in the early childhood and primary grade settings. The course is designed to help the student understand the importance of these various curriculum areas in the child's overall development and the materials/activities included in the curriculum. It also includes applied practice as students will have "hands-on" experience and will develop and evaluate plans for implementation. Prerequisites: PSY 125 and ECE 121

Credit: 5

Lecture: 4

Lab: 4

**ECE125 Early Childhd Methods II & Lab**

This course is an introduction to art, technology, creative dramatics, imaginary play, physical and musical activities. Instruction and coursework is designed to help the student understand the importance of these various curriculum areas in the child's overall development and the materials/activities included in the curriculum. It also includes applied practice as students will have "hands-on" experience and will develop and evaluate plans for implementation.

Prerequisites: PSY 125 and ECE 120 and ECE 121

Credit: 5

Lecture: 4

Lab: 4

**ECE127 Childhood Classroom Mgt**

This course focuses on the development of a positive class- room environment exploring the various approaches to class- room management. Topics such as establishing objectives, goal setting, record keeping, and appropriate guidance techniques are covered. Prerequisites: PSY 125 and ECE 120

Credit: 3

Lecture: 3

Lab: 0

**ECE131 Early Childhood Leadership II**

In this course, students learn components of effective management including systems and the importance of systems thinking; stakeholder analysis and management; the strategic planning process; how policies, procedures, and systems are interconnected; and tools for taking charge of program operations. Students learn how to manage a fiscally responsible early childhood business and are introduced to effective budgeting and accounting. Students develop skills needed to promote a positive public image and to create environments that welcome and support the learning of children and adults, as well as promote their health and safety. Prerequisite: ECE 130

Credit: 3

Lecture: 3

Lab: 0

**ECE132 Early Childhood Leadership III**

In this course, students learn to support children's development and learning by understanding the interactive environment, the advantages of different groupings and staffing patterns, and continuity of care. Students learn how to implement curriculum and the importance of observation and child assessment in achieving program goals. Students explore the director's role in creating family partnerships, promoting an appreciation of diversity, and nurturing open communication. Students learn the importance of program evaluation and continuous quality improvement - the leadership practice of assessing needs, defining desired outcomes, developing an action plan, and evaluating effectiveness. Prerequisite: ECE 131

Credit: 3

Lecture: 3

Lab: 0

**ECE222 Program Planning/Evaluation**

This course provides students with information on the various aspects involved in program planning and the tools used for evaluating a program. Students will gain experience in developing their own programs and in using various evaluation processes.

Prerequisites: (Test score or ENG 101 or higher) and ECE 120 and ECE 125.

Credit: 3

Lecture: 3

Lab: 0

**ECE226 Assessment of Young Children**

This course provides an overview of child assessment with an emphasis on screening and assessment instruments and methods. Ten hours of observation is a course requirement. Prerequisites: (Test scores or ENG 102 or higher) and (PSY 125 or PSY 126) and ECE 120

Credit: 3

Lecture: 3

Lab: 0

**ECE233            Exceptional Child**

This course provides an overview of the diverse aspects of exceptionality including the psychological, medical, and sociological implications with a major emphasis on appropriate educational practices. Students will examine legal and ethical issues of children with exceptionality. Prerequisites: PSY 121 and (PSY 125 or PSY 126)

**Credit: 3            Lecture: 3            Lab: 0**

**ECE244            Fld Work - Teaching Practicum**

The teaching practicum provides practical experience in an approved classroom environment under the supervision of a professional teacher. Prerequisites: ECE 111 and ECE 123 and ECE 125 and ECE 127 and (ECE 222 or ECE 222 concurrent) and ECE 226 and ECE 233 and EDC 120 and (EDC 220 or EDC 220 concurrent)

**Credit: 6            Lecture: 1            Lab: 15**

**ECH111            Echocardiography Techniques I**

This course introduces the student to the fundamental skills and principles needed to perform echocardiography. Technologist and patient safety will be addressed. The course covers the standard two dimensional cardiac views and M-mode evaluations. Emphasis is placed on cardiac anatomy, cardiovascular physiology, cardiac disease and its effect on the heart, and the study of basic cardiovascular pharmacology. Prerequisites: BIO 120 and DMS 106.

**Credit: 3            Lecture: 3            Lab: 1.50**

**ECH112            Echocardiography Techniques II**

This course is a continued study of ECH 111 - Echocardiography Techniques I with an emphasis on pericardial and myocardial diseases, cardiac neoplasm and masses, cardiac trauma, and disease of the aorta and great vessels. Doppler and color flow echocardiography and the study of of prosthetic valves will also be included. Introductory clinical experiences integrate aprevously learned principles. Prerequisites: ECH 111

**Credit: 3            Lecture: 3            Lab: 1.50**

**ECH213            Echocardiography Technique III**

This course is a continued study of ECH 112 Echocardiography Techniques II. Understanding and proficiency in the performance of Doppler echocardiography will be emphasized. The study of embryology and congenital heart diseases will also be included. Prerequisites: ECH 112

**Credit: 3            Lecture: 3            Lab: 1**

**ECO111            Macroeconomics**

This course instructs students in the basic principles of supply and demand as they impact on the American economy. It places special emphasis on those national policy decisions that are used to solve the problems of inflation and unemployment, such as Keynesian, monetarist, and supply side policy approaches. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 3            Lecture: 3            Lab: 0**

**ECO122            Microeconomics**

This course covers the basic principles of supply and demand as they impact the American economy. Special emphasis is placed on those national policy decisions that influence individual consumers and American businesses. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT 012 or higher)

**Credit: 3            Lecture: 3            Lab: 0**

**EDC100            Professional Prep: Praxis I**

The student will review mathematics, reading and writing concepts in preparation for the Praxis I test required for teacher certification. Test taking strategies and stress reduction techniques will also be studied. Prerequisites: (Test scores or ENG 101 or higher) and (Test scores or MAT 015 or higher)

Credit: 1

Lecture: 1

Lab: 0

**EDC101 Intro to Paraeducator Issues**

This introductory course examines the roles and responsibilities of the paraeducator including professional, ethical, and legal aspects. The ability to communicate effectively with students, parents and school personnel will be emphasized. Standards-based education, diversity issues and career opportunities in education will be studied. Field experience/observation hours and documentation of ParaPro test scores are a course requirement. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**EDC115 Nature of Science**

This course introduces students to the nature of science by presenting four major components: scientific knowledge, scientific processes, the nature of the knowledge, and the relationship between science and society. Students analyze significant historic investigations and discoveries. The students use the four components to study how the historic examples demonstrate the nature of science and the connection between science and society. Prerequisites: (Test score or ENG 090 or ENG 091 or higher) and (Test score or MAT 012 or higher).

Credit: 1

Lecture: 1

Lab: 0

**EDC120 Foundations of Literacy**

This course includes effective strategies to develop phonological awareness, fluency instruction, vocabulary instruction and text comprehension, as well as techniques to decode and understand reading materials. Successful strategies for teaching writing skills will also be a major focus of this course. Recent trends and theories in literacy education will be explored. Prerequisites: (Test scores or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

**EDC150 Issues in Elementary Education**

This course provides students with an overview of teaching as a profession. The philosophical, historical and social foundations of teaching and learning are explored. National and state curriculum frameworks are examined. Field experience is a course requirement. Prerequisites: (Test Scores or ENG 101 or concurrent or higher)

Credit: 3

Lecture: 3

Lab: 0

**EDC211 Classroom Management**

The course explores behavior management theories with an emphasis on the child centered approach known as Positive Behavior Supports (PBS). Proactive strategies for a positive learning environment will be emphasized. The strategies will highlight behavior management, diversity and multicultural factors, mainstreaming, and classroom organization. Prerequisites: PSY 125 or PSY 126

Credit: 3

Lecture: 3

Lab: 0

**EDC220 Parent/Family/School Interact**

Using an interdisciplinary approach, this course focuses on the dynamic relationship of the home, the school and the community as each contributes to the development and education of children. The course examines principles, techniques, and resources relevant to working with parents as individuals, couples, and both traditional and non-traditional families and with the community and community agencies. This course includes field experience. Prerequisites: PSY 121 and (PSY 125 or PSY 125 concurrent) or (PSY 126 or PSY 126 concurrent).

Credit: 3      Lecture: 3      Lab: 0

**EDC230      Children's Literature**

This course provides an overview of developmentally appropriate literature focusing on cultural perspectives and universal themes found in fiction and information text. Through class and individual projects, students explore children's literature, as well as create and evaluate integrated lessons. Field experience/observation hours are a course requirement. Service learning hours and documentation of PRAXIS I scores are required. Prerequisites: (ENG 122 or ENG 130) and EDC 120

Credit: 3      Lecture: 3      Lab: 0

**EDC250      Internship & Seminar**

An approved internship in a local school setting will provide practical experience for the prospective paraeducator. The class meets on a regular basis to evaluate activities, share experiences, and assess readiness to direct additional activities under the supervision of a teacher. Prerequisites: EDC 211 or EDC 211 concurrent

Credit: 4      Lecture: 1      Lab: 9

**EDC260      Educational Psychology**

This course focuses on the developmental concerns of adolescents and how these issues may influence the adolescent learner in formal and informal learning situations. Academic motivation, interpersonal relationships, learning styles, and teacher expectations are studied. A field placement in a secondary school setting is an essential course component. Prerequisites: PSY 121 or PSY 126

Credit: 3      Lecture: 3      Lab: 1

**EDD110      Intro to Engineering Tech**

This course introduces design problems and study activities common to engineering technologies. Conceptualization and communication skills are developed using mathematics, physical science, and engineering graphics. Measurement, use of tools, computer-aided design (CAD) technology, and computer literacy are explored. Prerequisites: (((Test Scores or RDG 005 or RDG 051 or NCS 052 or NCW 091 or ESL 032 or RDG 120) and (Test Scores or ENG 005 or ENG 051 or NCS 051 or NCW 090 or ESL 034 or ENG 121 or ENG 125)) or Test Score or ENG 006 or ENG 007 or ENG 090 or ENG 091 or ENG 099 or ENG 101 or ENG 102 or ENG 122 or ESL 100) and (Test Scores or MAT 005 or NCS 005 or MAT 012 or NCS 012 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 181).

Credit: 3      Lecture: 2      Lab: 2

**EDD131      Engineering Graphics/CAD**

This course covers the development of basic drafting skills using traditional drafting equipment with special emphasis on computer-aided equipment. The focus includes two-dimensional drawings and the development of orthographic projections with a variety of design problems and study activities to help the student conceptualize and communicate graphically.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT012 or higher)

Credit: 3      Lecture: 2      Lab: 4

**EDD141      Engr Drafting & Design I**

This course introduces engineering drafting. Topics include a study of geometric construction, proper use of drafting equipment, freehand sketching, lettering, orthographic projection, forming and machining processes, dimensioning methods, and sectioning and pictorial drawings. The standards and practices recommended by American National Standards Institute (ANSI) and American Society of Mechanical Engineers (ASME) are followed.

Prerequisites: (Test Scores or MAT010 or higher) and (Test Score or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 4

Lecture: 2

Lab: 5

#### EDD142            Engr Drafting & Design II

This course focuses on advanced drafting practices and includes the study of primary and secondary auxiliary views and an extensive in-depth study of all American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME) dimensioning practices along with tolerances, fits, and surface texture. Threaded and miscellaneous fasteners are also discussed.

Prerequisites: EDD 141

Credit: 3

Lecture: 2

Lab: 2

#### EDD161            Intro - CAD using MicroStation

In this introductory computer-aided drafting (CAD) course, students use MicroStation software to create quality 2D designs, manipulate and modify elements, assemble project data, and create printed output.

Prerequisites: AET 123 or AET 125 or CET 125 or EDD 141

Credit: 3

Lecture: 2

Lab: 2

#### EDD171            Intro to CAD Using AutoCAD

This course introduces computer aided design (CAD) and how to use AutoCAD software to create quality two dimensional (2D) designs. AutoCAD's tools and features to create designs, manipulate and modify elements, assemble project data, and create printed output are emphasized. Prerequisites: (Aet 123 or concurrent) or (CET 125 or concurrent) or (EDD 141 or concurrent) or (EDT 151 or concurrent)

Credit: 3

Lecture: 2

Lab: 2

#### EDD233            Engr Drafting and Design III

This advanced drafting course reinforces engineering drawing and its applications. This course includes the theories of all types of section drawings, detail and assembly drawings, welding drawings, and development drawings. Surface texture, geometric dimensioning and tolerancing (GD&T), and threaded and miscellaneous fasteners are also discussed in depth.

Prerequisites: EDD 142 and EDD 171

Credit: 3

Lecture: 2

Lab: 2

#### EDD234            Eng. Drafting - Piping

This introductory piping drafting course emphasizes industrial piping drafting with a study of pipe fittings and valves, pumps, tanks, vessels and equipment along with the symbols, specifications, and their applications to a piping process system. Topics include flow diagrams and piping and instrumentation diagrams (P&IDs), plans and elevations, piping isometrics, and spool drawings.

Prerequisites: EDD 142 and EDD 171

Credit: 3

Lecture: 2

Lab: 2



**EDD246 Eng. Drafting - Structural**

This advanced drafting course familiarizes the student with developing structural steel and architectural drawings. The American Institute of Steel Construction (AISC) and American Concrete Institute (ACI) references are used.  
Prerequisites: (EDD 142 and EDD 271) or (CET 125 and EDD 171)

Credit: 3

Lecture: 2

Lab: 2

**EDD249 Engineering Design Process**

This is an advanced design course that familiarizes the student with the various stages of the engineering process using parametric modeling.  
Prerequisites: EDD 142 and EDD 272

Credit: 3

Lecture: 2

Lab: 2

**EDD271 Advanced CAD**

A continuation of (EDD 171) Introduction to CAD. This course will elaborate on the more advanced computer-aided drawing and editing commands, symbol libraries, attributes, and pictorial drawings. Prerequisite: EDD 171

Credit: 3

Lecture: 2

Lab: 2

**EDD272 Solid Modeling**

This course introduces the concepts and commands of parametric solid modeling. Students create and add relationships to sketches, extrude the sketches to create models, add features such as fillets, cuts, chamfers, holes, drafts, shells, lofts, and sweeps. In addition, students extract two-dimensional (2D) documentation from the three-dimensional (3D) models and add details to the drawings. Prerequisites: (EDD 271 and (EDD 142 or EDT 152)) or (EDD 171 and EDT 128)

Credit: 3

Lecture: 2

Lab: 2

**EDD273 Advanced Solid Modeling**

This advanced course covers multi-body part techniques; part editing, equations, and errors techniques; top down design; sheet metal; welded structures; three dimensional (3D) sketching of components and assemblies; surface modeling; reverse engineering; and product design, development, and documentation. Prerequisites: EDD 272

Credit: 3

Lecture: 2

Lab: 2

**EDT128 Machine Trades Blueprnt Rding**

This course covers the interpretation of detail working prints involving multiview, sectional, and auxiliary views to more complex assembly drawings. Geometric tolerancing is also studied.  
Prerequisites: (Test Scores or MAT012 or higher) and (Test Score or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**EDT152 Engineering Design II**

This intermediate course provides an overview of the rules, standards, and practices used to design, draw, dimension, and tolerance simple mechanical components and assemblies. The use of computer aided design (CAD), engineering design standards, and vendor supplied specifications in the design process are covered. Orthographic and detailed assembly drawings are developed to scale, dimensioned and drawn to acceptable professional standards.  
Prerequisites: EDD 141 and EDD 272 or concurrent

Credit: 4

Lecture: 3

Lab: 3

**EDT252 Engineering Design III**

This advanced course provides an overview of the rules, standards, and practices in designing, drawing, dimensioning, and tolerancing mechanical components and assemblies. The use of computer-aided design (CAD), engineering design standards, product end-use requirements, manufacturability considerations, and vendor supplied specifications in the design process are covered. Original designs for complex functional mechanical components and systems are developed, dimensioned, and drawn to acceptable professional standards. Prerequisites: EDT 152 and (Test Score or ENG 101 or ENG 102 or ENG 122) and MET 123 and (MET 132 or MET 132 concurrent)

Credit: 4

Lecture: 3

Lab: 3

**ELC101 Intro to Instrumentation**

This course provides the student with instrumentation fundamentals required to understand the measurement and control aspects of plant operations. Prerequisites: (((Test Scores or RDG 051 or higher and (Test Score or ENG 051 or higher)) or Test Score or ENG 090 or concurrent or higher) and Test Score or MAT 015 or higher).

Credit: 3

Lecture: 2

Lab: 2

**ELC102 Basic Electricity for Aviation**

This course provides students with a basic understanding of the theory and application of electricity, electrical devices, and the application of electricity in aviation. Prerequisites: (Test Score or MAT012 or higher) and (Test Score or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 2

Lab: 3

**ELC125 Electrical Circuits I**

This course introduces applied electronic circuit analysis with the study of fundamentals, including Ohm's law, Watt's law, and Kirchhoff's laws. Topics include measuring instruments, oscilloscope, switches, circuit breakers, resistance, capacitance, inductance, series, parallel, and series-parallel circuits, transformers, alternating and direct power sources, and magnetism. Prerequisites: (Test Scores or ENG 090 or concurrent or ENG 091 or concurrent or higher) and (Test scores or MAT 140 or concurrent or higher)

Credit: 4

Lecture: 3

Lab: 3

**ELC126 Analog Electronics I**

This course introduces analog electronics circuit analysis. Topics include semiconductor theory, filtered and unfiltered rectifiers, special purpose diodes, multipliers, limiters, clampers, bipolar junction transistors, and small-signal and large-signal amplifiers. Prerequisites: ELC 125 and (MAT 181 or MAT 181 concurrent)

Credit: 3

Lecture: 2

Lab: 2

**ELC127 Digital Electronics**

This course covers digital concepts, including logic levels, pulse waveforms, number systems, logic gates, Boolean algebra, DeMorgan's theorem, systematic reduction of logical expressions, universal property of negative-AND (NAND) and NOR gates, pulsed operations, adders, comparators, encoder/decoders, multiplexers/demultiplexers, parity circuits, flip-flops, and synchronous and asynchronous counters.

Prerequisites: (Test scores or ENG 090 or concurrent or ENG 091 or concurrent or higher) and (Test score or MAT140 or concurrent or higher)

Credit: 4

Lecture: 3

Lab: 3

**ELC131 Digital Electronics II**

A study of advance digital electronic topics including memory elements, flip-flops, synchronous and asynchronous counters, shift registers, programmable logic arrays, read-only memories, eproms digital-to-analog and analog-to-digital conversion, and introductory microprocessor topics. Prerequisites: ELC 130

Credit: 4

Lecture: 3

Lab: 3

**ELC205 Computer Networks and System I**

This course introduces the fundamentals of data communications and computer network principles and applications. Students install, configure, and troubleshoot basic network hardware and peripherals, emphasizing hands-on practical experiences. Specific topics include network topologies, protocols, cabling systems, wireless transmission and security. Prerequisites: CEN 150 and ELC 125

Credit: 4

Lecture: 3

Lab: 2

**ELC206 Computer Networks & Systems II**

This course is a continuation of data communications and computer network principles and applications in which students configure, troubleshoot, and secure networks and related peripherals.

Prerequisites: ELC 205 and ELC 227 and CEN 180

Credit: 3

Lecture: 2

Lab: 3

**ELC215 Programmable Logic Controllers**

A course in modern control of processes. Programmable controllers, computer-controlled machines, bar code readers, and process control will be covered. An introduction to the field of robotics is included. Prerequisites: (ELC 118 and ELC 119) or (ELC 120 or ELC 122) and ELC 130 and MAT 181.

Credit: 4

Lecture: 3

Lab: 2

**ELC221 Analog Electronics II**

A study of amplifier frequency response, decibels, Miller effect, Miller's theorem, operational amplifier circuits, various forms of communications systems, including associated circuit building blocks and concepts. These include filter networks, Fourier series and the frequency domain, distortion, noise and measurements, oscillator circuits amplitude and frequency modulation, the phase-locked loop, transmission lines and antennas and fiber optics. Prerequisites: ELC 220

Credit: 4

Lecture: 3

Lab: 3

**ELC225 Electrical Circuits II**

This course covers advanced treatment of direct current (DC) /alternating current (AC) circuit analysis with emphasis on applied use of fundamental theorems including Kirchoff's laws; source conversions; Thevenin and Norton's theorems; maximum power transfer; branch, mesh, and nodal analysis techniques; transient circuit effects; phasor analysis; apparent, reactive, and real power; and series/parallel resonant conditions. Prerequisites: ELC 125 and (MAT 182 or MAT 182 concurrent)

Credit: 4

Lecture: 3

Lab: 3

**ELC226 Analog Electronics II**

This course covers the fundamentals of analog electronic circuits with emphasis toward application, circuit/component recognition, expected input and output signals, and measurement criteria. Topics include field effect transistors, frequency response of amplifiers, operational amplifiers, and industrial circuits including unijunction transistors (UJTs), silicon controlled rectifiers (SCRs), photoelectronics, sensors, and transducers. Prerequisites: ELC 126 and (MAT 182 or MAT 182 concurrent) and (ELC 225 or ELC 225 concurrent)

Credit: 3      Lecture: 2      Lab: 2

**ELC227      Microcontroller Fundamentals**

This course presents the concepts and hands-on experience necessary to understand the architecture and software associated with microcontrollers. Structured laboratory exercises include assembly and high level programming, interrupt management, and peripheral interfacing. Prerequisite: ELC 125 and ELC 127 and CEN 180

Credit: 3      Lecture: 2      Lab: 3

**ELC228      Microcontroller Applications**

This course introduces students to the practical aspects of using a microcontroller for real-time embedded applications and develops the skills to interface the microcontroller with peripherals such as timers, stepper motors, analog-to-digital converters, keypads and light-emitting diode, or liquid crystal displays using project-based content. Prerequisites: ELC 227

Credit: 4      Lecture: 3      Lab: 4

**ELC236      Analog Electronics III**

This course covers an advanced study of electronic communications systems that includes signal analysis and synthesis of electrical noise, Fourier series, modulation and demodulation, transmission and reception of amplitude modulated (AM) and frequency modulated (FM) signals, transmission lines, wave propagation, antenna theory, microwaves, lasers, and fiber optics. Prerequisites: ELC 226

Credit: 3      Lecture: 2      Lab: 2

**ELC243      Programmable Logic Controllers**

This course covers the fundamentals of programmable logic controllers (PLC) systems. Topics include ladder logic programming, analog and digital interfacing, identification and isolation of common system faults, and writing specific tasks. Prerequisites: ELC 125 and ELC 127

Credit: 4      Lecture: 3      Lab: 3

**ELC248      Electro-Mech. Systems**

A course in the power and controls systems found in modern machines. Electrical topics include basic DC and AC electrical theory, circuits, electrical control components such as switches, relays, transformers, contactors, motors, servos, and electrical safety. Mechanical components include couplings, gear drives, belting, chain drives and how the electrical components are incorporated into a function system. Pre-requisites: MAT 182 and PHY 205

Credit: 4      Lecture: 3      Lab: 3

**ELC260      Biomedical Instrumentation**

This course introduces the operation and maintenance of biomedical equipment through classroom and laboratory environment. Students learn to evaluate, test, troubleshoot, and repair various types of equipment commonly used in the medical field. Prerequisites: ELC 226 or concurrent

Credit: 4      Lecture: 3      Lab: 3

**ELC261      Biomedical Instrumentation II**

This course reinforces and applies the operation and maintenance of biomedical equipment through classroom and laboratory environment. Students strengthen skills to evaluate, test, troubleshoot, and repair various types of equipment commonly used in the medical field. Prerequisites: ELC 260

Credit: 4      Lecture: 3      Lab: 3

**ELC265 Intro to Digital Systems**

This course covers analysis and design of logic circuits. Topics include Boolean algebra and its application to switching circuits, simplification of switching functions, and design of logic circuits at gate level and with medium scale integration (MSI) and low scale integration (LSI) components. Analysis and design of synchronous and asynchronous sequential state machines are also covered.

Prerequisite: CEN 100 and CSC 114

Credit: 3

Lecture: 2

Lab: 4

**ELC266 Analog Circuits I**

This course covers the laws of the electric circuit, analysis of alternating current (AC) and direct current (DC) circuits, network equations, and network theorems. Prerequisites: CEN 100 and MAT 282 and PHY 281

Credit: 4

Lecture: 3

Lab: 4

**ELC270 Process Instrumentation I**

This course covers theory, application, tuning and troubleshooting of industrial control using proportional- integral-derivative (PID) control algorithms. Topics include pressure, level, and temperature devices and their measurement. Prerequisites: ELC 101 and (PHY 111 or PHY 205 or PHY 281)

Credit: 4

Lecture: 3

Lab: 2

**ELC272 Electronic Circuit Analysis I**

This course introduces the physical principles of solid state electronic devices. Topics include a quantitative study of elementary circuits including biasing, linear power amplifiers, low-frequency small signal analysis, multiple transistor circuits, and feedback. Prerequisite: ELC 266

Credit: 4

Lecture: 3

Lab: 4

**ELC275 Microprocessor Systems**

This course introduces microprocessors as embedded devices. Emphasis is on Input/Output techniques, interrupts, real-time operation, high-level code debugging and interfacing to various types of sensors and actuators. Projects that address various embedded applications are a major part of the course. Prerequisites: CIS 211 and ELC 265 and ELC 266 or concurrent

Credit: 4

Lecture: 3

Lab: 4

**ELC282 Signals and Systems**

This course is an introduction to signals and systems, with an emphasis on time and frequency characterization of linear, time-invariant systems. Topics include discrete and continuous time systems, sampling, and Fourier, Laplace, and Z transforms. Application examples include medical imaging, radar, audio and image processing, virus delivery protocols, and biological networks. Prerequisite: MAT 282

Credit: 4

Lecture: 4

Lab: 0

**ELC283 Introduction to LabVIEW**

This course introduces LabVIEW instrumentation software that uses graphical programming language to write programs and analyze predefined electronic circuits.

Prerequisites: ELC 126 and ELC 227

**Credit: 3      Lecture: 2      Lab: 2**

**ELC290      Internship**

Applied experience through a supervised work situation such as a campus repair shop, computer store or related business and industry. Prerequisites: ELC 130

**Credit: 4      Lecture: 1      Lab: 9**

**ELC291      Biomed Electronics Internship**

This course provides the student with experience working in a clinical engineering environment at a local hospital. The student applies learned knowledge and skills to technical situations while learning about professional growth, ethics, and maintenance philosophies. Prerequisites: ELC 226 and ELC 260

**Credit: 3      Lecture: 0      Lab: 10**

**ELM130      Industrial Electricity**

This course provides an overview of three phase circuits, protective devices, transformer connections, motors, motor starters, and industrial maintenance techniques. Electrical and solid state motor controls are introduced. Emphasis is placed on electrical and industrial safety circuits. Prerequisites: MAT 140 or concurrent

**Credit: 3      Lecture: 2      Lab: 4**

**ELM205      Mechanisms and Design**

This course provides an introduction to tools, drawings, and mechanical drive components found in industrial and manufacturing environments. Students become familiar with the installation, operation, maintenance, and repair of mechanical drive systems. Prerequisites: MAT 140 or concurrent.

**Credit: 3      Lecture: 2      Lab: 4**

**ELM250      Industrial Automation**

This course reinforces and applies pneumatics, industrial controls, and networking to construct, modify, test, and troubleshoot a flexible manufacturing system. Topics include sensors, actuators, machine vision, human-machine interfaces, programmable logic controllers, and industrial networks. Prerequisite: ELC 243

**Credit: 3      Lecture: 2      Lab: 4**

**ELM252      Fluid Power**

This course provides an introduction to hydraulic and pneumatic systems for the transfer and control of power. Reinforcement of fluid power management through the use of programmable logic controllers is provided. Prerequisite: ELC 243 or concurrent.

**Credit: 3      Lecture: 2      Lab: 3**

**ELM290      Electromechanical Internship**

This course provides students an opportunity to gain experience working in an industrial or manufacturing environment. Students apply previously learned knowledge and skills to real-world technical situations while learning about professional growth, ethics, and maintenance philosophies. Prerequisite: ELM 252

**Credit: 3      Lecture: 0      Lab: 9**

**EMT200      Intro To Paramedic Technology**

An introductory course that prepares the student for the role of paramedic. The topics covered include an overview of the emergency medical services (EMS) system, roles and responsibilities of the paramedic, wellbeing of the paramedic, ambulance operations and national and local issues which impact EMS. In addition, this course will provide the student with the theory and skills necessary to provide basic care in the prehospital environment. Prerequisites: BIO 130 Co-requisites: EMT 201 and EMT 207

Credit: 5      Lecture: 3      Lab: 7

**EMT201      Patient Assessment**

A comprehensive course in the theory and skills of patient assessment. The topics covered include patient history, techniques of physical examination, patient assessment, clinical decision making, communications and documentation of findings. Prerequisites: BIO 130 Co-requisites: EMT 200 and EMT 207

Credit: 3      Lecture: 3      Lab: 0

**EMT202      Medical Emergencies I**

This comprehensive course provides students with theory and skills related to the pathology, assessment, and management of adult patients with various medical conditions. Topics include diseases involving these systems: respiratory, neurologic, endocrine, immune, gastrointestinal, and genitourinary. Topics covered include diseases of those systems, such as physiology, pathology, pharmacology, and medication administration. PREREQUISITES: EMT 200 and EMT 201 and EMT 207 CO-REQUISITES: EMT 203 and EMT 217

Credit: 3      Lecture: 3      Lab: 0

**EMT203      ALS Skills Lab I**

A comprehensive course focusing on advance life support (ALS) skills associated with the current and anticipated paramedic scope of practice. Emphasis is placed on basic and advanced airway management, non-invasive monitoring, and electrical therapies. PREREQUISITES: EMT 200 and EMT 201 and EMT 207 CO-REQUISITES: EMT 217

Credit: 3      Lecture: 0      Lab: 10

**EMT204      Special Populations**

A comprehensive course focusing on the pathophysiology, assessment and management of the neonatal, pediatric, geriatric and special needs patient. Prerequisites: EMT 202 and EMT 203 and EMT 211 and EMT 217. Co-requisites: EMT 213 and EMT 227

Credit: 4      Lecture: 4      Lab: 0

**EMT207      Paramedic Clinical I**

A supervised clinical experience is provided in pertinent clinical and prehospital settings correlating with the knowledge, skills and techniques presented in EMT 200 and EMT 201. Emphasis is placed on basic life support and patient assessment skills. Prerequisites: BIO 130 Co-requisites: EMT 200 and EMT 201

Credit: 1      Lecture: 0      Lab: 4

**EMT211      Cardiology**

This comprehensive course covers the pathophysiology, assessment and management of adult patients with diseases involving the cardiovascular system. Emphasis is placed on basic and advanced cardiac monitoring, acute coronary syndromes and peripheral vascular disease. Prerequisites: EMT 200 and EMT 201 and EMT 207. Co-requisites: EMT 203 and EMT 217

Credit: 4      Lecture: 4      Lab: 0

**EMT212      Medical Emergencies II**

A comprehensive course that covers the pathophysiology, assessment and management of adult patients with various medical conditions. Emphasis is placed on diseases involving the renal, urological, gastrointestinal, and hematological systems. Prerequisites: EMT 202 and EMT 203 and EMT 211 and EMT 217. Co-requisites: EMT 213 and EMT 227.

Credit: 3

Lecture: 3

Lab: 0

**EMT213 ALS Skills Lab II**

This course, a continuation of ALS Skills Lab I, focuses on advanced life support (ALS) skills associated with the current and anticipated paramedic scope of practice. Emphasis is placed on trauma management and scenario-based instruction. Prerequisites: EMT 202 and EMT 203 and EMT 211 and EMT 217 Co-requisites: EMT 227

Credit: 3

Lecture: 0

Lab: 10

**EMT214 Legal Issues/Research**

This course covers the legal principles that govern health care, including documentation, the Patient Bill of Rights, liability, confidentiality, and specialized topics concerning emergency medical services. Protocols and laws specific to the State of Delaware will be emphasized. Also included is an overview of the collection and management of data associated with prehospital and preventive services. Prerequisite: EMT 200

Credit: 3

Lecture: 3

Lab: 0

**EMT215 Trauma Emergencies**

A comprehensive course that covers the pathophysiology, assessment and management of patients who experience traumatic injuries. Prerequisites: EMT 202 and EMT 203 and EMT 211 and EMT 217. Co-requisites: EMT 213 and EMT 227.

Credit: 2

Lecture: 2

Lab: 0

**EMT217 Paramedic Clinical II**

A supervised clinical experience is provided in pertinent clinical and prehospital settings correlating with the knowledge, skills and techniques presented in EMT 202, EMT 203 and EMT 211. Emphasis is placed on advanced patient assessment, airway management and team leader development. Prerequisites: EMT 200 and EMT 201 and EMT 207. Co-requisites: EMT 203.

Credit: 3

Lecture: 0

Lab: 15

**EMT224 Applied Prehospital Research**

This course uses an interdisciplinary approach to synthesize, analyze, and consider solutions to a prehospital healthcare issue or problem. Topics include the creation of a research statement, the evaluation of published research, and the completion of a literature review. The course culminates with a faculty guided research experience to produce a scholarly written presentation or proposal.

Prerequisite: EMT 214

Credit: 2

Lecture: 2

Lab:

**EMT227 Paramedic Clinical III**

A supervised clinical experience is provided in pertinent clinical and prehospital settings correlating with the knowledge, skills and techniques presented in EMT 204, EMT 212, EMT 213 and EMT 215. Emphasis is placed on trauma care, pediatric care and team leader practice. Prerequisites: EMT 202 and EMT 203 and EMT 211 and EMT 217. Co-requisites: EMT 213.

Credit: 3

Lecture: 0

Lab: 15



**EMT290 Paramedic Field Clinical**

A supervised clinical experience is provided in the prehospital setting. Students must manage trauma and medical patients across all age groups as team leader. Prerequisites: EMT 204 and EMT 212 and EMT 213 and EMT 214 and EMT 215 and EMT 227.

Credit: 4      Lecture: 1      Lab: 15

**ENG007 Intro Reading & Writing (ACC)**

This accelerated introductory course covers fundamental reading and writing skills for success at the developmental level. Reading and writing activities are integrated to provide continuity and practical application. Prerequisites: Test scores

Credit: 2      Lecture: 2      Lab:

**ENG090 Reading & Writing**

This course provides reinforcement in writing skills and in reading fluency and comprehension skills. Reading and writing activities are integrated to provide continuity and practical application. Prerequisites: Test Scores or ENG 006 or ENG 007 or higher

Credit: 5      Lecture: 5      Lab:

**ENG091 Reading & Writing (ACC)**

This accelerated course provides reinforcement in writing skills and in reading fluency and comprehension skills. Reading and writing activities integrated to provide continuity and practical application. Prerequisites: Test scores

Credit: 2      Lecture: 2      Lab:

**ENG100 Grammar Essentials**

This course is designed to provide instruction in grammar fundamentals. Topics include sentence structure, sentence variety, punctuation, agreement, and pronoun usage. Additional resources are available for skill enhancement. Prerequisites: None

Credit: 1      Lecture: 1      Lab:

**ENG101 Crit Thinking & Acad Writing**

This college-level course is designed to teach the concepts of critical thinking and reading skills in the context of written response and essay writing. This course introduces and reinforces the skills necessary to complete academic essays and to respond to diverse texts in meaningful ways.

Pre-requisite: (Test scores or ENG 090 or ENG 091 or higher or EAP 093 or higher)

Credit: 3      Lecture: 3      Lab:

**ENG102 Composition and Research**

This college-level course is designed to enhance writing, research, and speaking skills and to provide academic writing and reasoning skills to foster lifelong learning. Prerequisite: ENG 101

Credit: 3      Lecture: 3      Lab:

**ENG111 Honors Composition & Research**

This advanced writing course also focuses on high order critical reading (analysis, synthesis, contextualization, and evaluation) and presentation skills. The course emphasizes sophisticated approaches to argumentation and research that are informed by cultural studies theory. Students must be recommended by their ENG 101 instructor.  
Pre-requisites: ENG 101 or higher and English department chairperson approval

Credit: 3      Lecture: 3      Lab:

#### ENG122      Technical Writing-Comm

This advanced college-level course is designed to enhance skills in the creation of professional communications and reports through the interpretation and analysis of primary and secondary sources.

Prerequisites: Test score or ENG 102 or higher

Credit: 3      Lecture: 3      Lab: 0

#### ENG124      Oral Communications

This course emphasizes listening and oral communication skills through practice in individual and group activities.

Prerequisite: (Test score or ENG 102 or higher)

Credit: 3      Lecture: 3      Lab: 0

#### ENG126      American Literature I

This literature survey course traces the technical and cultural evolution of American literature from the colonial period to the end of the Civil War.

Prerequisites: Test score or ENG 102 or higher

Credit: 3      Lecture: 3      Lab: 0

#### ENG127      American Literature II

This literature survey course traces the technical and cultural evolution of American literature from the Industrial Revolution and Civil War era (1865) to the present.

Prerequisite: Test score or ENG 102 or higher

Credit: 3      Lecture: 3      Lab: 0

#### ENG128      African-American Literature

This literature course traces the contributions of African-Americans from the colonial era to the present.

Prerequisites: Test score or ENG 102 or higher

Credit: 3      Lecture: 3      Lab: 0

#### ENG129      Creative Writing

This college-level course is designed to foster creativity and improve writing skills through practice in writing essays, short stories, and literature critiques.

Pre requisites: Test score or ENG 102 or higher

Credit: 3      Lecture: 3      Lab: 0

**ENG130      Honors Tech. Writing & Comm**

This advanced writing course is designed to introduce patterns of professional writing, including format, graphics, and visual design. Focusing on scenario-based writing, this course requires the primary and secondary research required to write for various professional and technical audiences. Students must be recommended by their ENG 102 instructor. Pre-requisite: ENG 102 or higher and English department chairperson approval

Credit: 3      Lecture: 3      Lab: 0

**ENG131      Honors Oral Communication**

This advanced course is designed to develop effective oral communication skills. Through individual and group activities, the course focuses on appropriate research, listening, and presentation delivery skills for diverse audiences and purposes. Students must be recommended by their ENG 102 instructor.

Pre-requisite: ENG 102 or higher and English department chairperson approval

Credit: 3      Lecture: 3      Lab: 0

**ENT101      Intro to Entrepreneurship**

This course introduces the student to the responsibilities of the entrepreneur and the unique concepts of business ownership. Students will benefit from case studies and practical entrepreneurial experiences, including interaction with successful regional entrepreneurs. Topics include the importance of business planning and the role and nature of entrepreneurship as a mechanism for creating new ventures. Prerequisites: (((Test Scores or RDG 051 or higher) and (Test Scores or ENG 051 or higher)) or Test Scores or ENG 090 or concurrent or ENG 091 or concurrent or higher).

Credit: 3      Lecture: 3      Lab: 0

**ENT103      Legal Issues for ENT**

This course provides the entrepreneur with an understanding of the common legal issues encountered from the perspective of the business owner. Students apply the concepts learned to select their business structure, learn contract law, properly navigate government regulations and understand legal parameters related to the management of human resources. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (ENT 101 or BUS 101)

Credit: 3      Lecture: 3      Lab: 0

**ENT104      Opportunity Analysis**

This course examines the entrepreneur's role in the global economy as an exploiter of opportunities. Topics include the creative search for ideas, the innovation process, and the opportunity analysis to screen for the best ideas. Learning activities cover the decisions needed to transform an idea into a business opportunity. Topics covered include the common sources of ideas, the environmental scan, creating opportunities from ideas, quick industry analysis, competitor scan, decision making principles and analytical techniques to screen opportunities for commercialization potential. Prerequisites: CIS 107 and (ENT 101 or BUS 101).

Credit: 3      Lecture: 3      Lab: 0

**ENT106      Business Procedures**

This course teaches entrepreneurs to state their business passion in practical terms with methods for analyzing their market and competition, setting achievable goals and focusing on strategic business planning. Students explore business processes in the entrepreneurial environment. Topics include the probability of risks along with the development of crisis management, disaster recovery, and business continuity plans. Prerequisites: (BUS 101 or ENT 101) and CIS 107

Credit: 3      Lecture: 3      Lab: 0

**ENT211      Business Start Up Design**

This course covers market needs identification, financial goal setting, product/service planning, market research and analysis, organizational team development, business profitability, fund seeking and cash flow, and future business planning.

Pre-requisite: (ENT 101 or BUS 101) and ENT 106

Credit: 3      Lecture: 3      Lab: 0

**ENT220      Leadership**

This course explores the characteristics of organizational leaders and evaluates various theories related to leadership. It emphasizes the development of leadership skills that motivate others to implement the entrepreneur's vision.

Leadership strategies and management techniques that promote team building and business success are also covered. Prerequisites: BUS 101 or ENT 101 or HRI 101

Credit: 3      Lecture: 3      Lab: 0

**ENT225      Entrepreneurial Experience**

In this course, students acquire applied experience in owning and running a business through job shadowing, an internship, a business simulation, or a student start-up business. Students are expected to comply with the business regulations, laws, and policies for the applicable practicum. Prerequisites: ENT 106 and ENT 211

Credit: 3      Lecture: 3      Lab: 0

**ENT240      Funding & Finance for ENT**

This course covers sources of capital options, basic financial knowledge, and forecasting skills. Topics include ratio analysis, financial oversight, and cash flow necessary to develop and maintain a business. Prerequisites: (ACC 100 or ACC 101) and (Test Scores or MAT 140 or MAT 153 or higher)

Credit: 3      Lecture: 3      Lab: 0

**ENT285      Business Plan Development**

In this course, students prepare professional, comprehensive business plans that will guide student business start-ups and address capital funding. Students present their business plans to community leaders. Prerequisites: ENT 106 and ENT 211

Credit: 3      Lecture: 3      Lab: 0

**ENV190      Intro to Env'tl Science & Tech**

This course introduces environmental science, pollution control and environmental technology. It provides students with a basic understanding of the normal ecology of the planet and the risks associated with polluting the environment. Environmental pollution and control technology topics include safe drinking water, wastewater treatment, air pollution, solid waste and hazardous waste management. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

Credit: 3      Lecture: 3      Lab: 0

**ENV215      OSHA Hazardous Waste Operation**

This course provides simulation and hands-on exercises as they relate to hazardous materials and hazardous waste.

Prerequisites: CHM 110

Credit: 2

Lecture: 2

Lab: 1

#### ENV240 Environmental Field Sampling

This course will examine theory, application, methodology and instrumentation used in the sampling and analysis of environmental contaminants. This class will use lecture and an opportunity in which students may work with various environmental companies and agencies within their respective counties. Students will be provided with opportunities to gain knowledge, experience, and skills in many of the following areas as well as other closely related fields: water pollution, air pollution, industrial wastes, NPDES permitting, solid waste management, site assessment, water treatment, municipal/industrial wastewater treatment. Prerequisites: BIO 150 and CHM 110.

Credit: 3

Lecture: 2

Lab: 4

#### ENV256 Process Control

This course introduces the monitoring, operation, and control concepts for biological treatment processes. The primary emphasis is on the activated sludge wastewater treatment process, but the technique of fixed film process operation is also covered. Topics include level monitoring, data acquisition, process control calculations, biological process analysis, and problem solving. Advanced topics include filamentous bacteria identification, biological nitrogen removal, biological phosphorus removal, and current issues in the industry.

Prerequisites: (BIO 125 or BIO 140 or BIO 150) and (Test Scores or MAT015 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### ENV260 Water/Wastewater Process Dsgn

This course covers the engineering principles and design criteria of basic environmental control processes; coagulation/flocculation basins; clarifiers, gravity filters; activated sludge systems; stabilization ponds; chemical treatment processes for disinfection, nitrate and volatile organic compound (VOC) removal; advanced wastewater treatment processes for suspended solids; phosphate and nitrate removal; carbon absorption; and various wastewater reclamation processes. Prerequisites: BIO 150 or concurrent and CHM 110 and CET 125 and ENV 190 and MAT 181.

Credit: 4

Lecture: 4

Lab: 0

#### ENV264 Wtr Srcs, Trnsmssn & Dstrbtn

This course covers surface and groundwater sources. Topics include hydrology, water quality, laws and regulations, flow measurements, storage, intake structures, wells, materials and equipment, line repair, fire hydrant maintenance, cross-connection control, storage, water quality, pump stations, cleaning and maintenance of lines, and infiltration inflow monitoring.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT012 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### ENV267 Water Treatment

This course covers the theory, processes, application, and operation of potable water treatment systems in depth. Topics include the theory and operation of mixing systems, coagulation chemistry, monitoring optimization of chemical applications, flocculation, sedimentation, water filtration, disinfection, water softening, ion exchange, membrane processes, and treatment plant instrumentation and control.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT015 or higher)

Credit: 4

Lecture: 3

Lab: 2

**ENV268 Industrial Waste Management**

Study of basic industrial waste treatment processes and procedures, including: environmental impact statements; stream protection measures; NPDES system and permits; stream organic loading computations; waste treatment economics; waste volume reduction; flow equalization and proportioning; neutralization; design and operating principles of treatment processes for suspended, colloidal, inorganic and organic dissolved solids; federal pre-treatment requirements; specific case studies. Prerequisites: BIO 127 and CHM 130 and MAT 181.

Credit: 3      Lecture: 3      Lab: 0

**ENV271 Principles of Site Assessment**

This course provides a detailed study of the legislative background, standards and procedures for carrying out Phase I Site Assessments. Topics include legislation, assessment hierarchy, liabilities, the Transaction Screen Process, Phase I assessment procedures, and hazardous materials. Prerequisites: ENG 102 and ENV 190

Credit: 2      Lecture: 2      Lab: 0

**ENV275 Environmental Sustainability**

This course introduces the critical areas of sustainable growth, design and development. Emphasis is on Delaware-specific growth and environmental issues, including water quality, habitat, stormwater and drainage, energy savings, and sea-level rise. Students identify development options that will result in more sustainable places to live and work. Prerequisites: (MAT 181 or MAT 185 or MAT 281) and (Test score ENG 102 or ENG 121) and ENV 190 and CET 144 and CET 240.

Credit: 3      Lecture: 3      Lab: 0

**ENV292 Wastewater Sys & Solid Hndling**

This course covers wastewater systems operations, including primary sedimentation, disinfection, aerobic and anaerobic sludge digestion, oxidation ponds, bio-filters and bio-reactors, solids handling, disposal, and management. Topics include centrifugation, gravity concentration, gravity thickening, flotation thickening, filter presses, vacuum presses, incineration, land fill, and land application. Laboratory control procedures and sludge conditioning are also covered.

Prerequisites: (Test Scores or ENG 090 or ENG 91 or higher) and (Test Scores or MAT015 or higher)

Credit: 4      Lecture: 3      Lab: 2

**ENV293 Mgmt of Wastewater/Water Fac**

This course introduces the fundamental practices used to manage a water or wastewater facility. Topics include the functions of an operator, operation and maintenance from a management perspective, regulatory compliance, reporting requirements, audits, safety, and financial management.

Prerequisites: (Test Scores or ENG 102 or higher) and MAT 181 and (BIO 140 or BIO 150)

Credit: 4      Lecture: 3      Lab: 3

**ENV298 Instrumentation & Pumping**

This course introduces the instrumentation processes and pumping systems used to monitor and control contemporary water and wastewater treatment and collection facilities. Topics include measurement of temperature, pressure, liquid level and flow, the transmission and control of these parameters as well as the identification, application, troubleshooting, and repair of commonly found pumps and systems.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT015 or higher)

Credit: 3      Lecture: 2      Lab: 2

**ESL022 Beginning ESL Reading/Vocab**

This beginning reading course is designed for students to build their vocabulary, and begin developing comprehension skills. Topics from everyday life and popular culture will be presented. Prerequisites: None

Credit: 4      Lecture: 4      Lab: 0

**ESL031 Personal Computers for ESL**

This course is designed to expose the non-native speaker of English to the computer keyboard, the basic parts of the computer, and simple work processing features. Emphasis is placed on keying, proofreading, and spelling by keying daily assignments and personal business letters. Prerequisites: ESL 022 and ESL 024 and ESL 026 and ESL 028.

Credit: 3      Lecture: 3      Lab: 0

**ESL032 Intermediate Reading**

Students will read articles of high beginner-intermediate level difficulty. Emphasis will be placed on vocabulary expansion through context and basic comprehension. Students will also become acquainted with the college library. Prerequisites: Test score or ESL 022.

Credit: 4      Lecture: 4      Lab: 0

**ESL034 Intermediate Writing**

Students will compose simple, compound and complex sentences in short paragraphs which show unity and coherence. They are introduced to formal letter writing and electronic correspondence. Prerequisites: Placement or (ESL 024 and ESL 026).

Credit: 4      Lecture: 4      Lab: 0

**ESL036 Intermediate Grammar/Comm**

Students at this level expand their use of grammatical structures to facilitate communication in a variety of settings. Prerequisites: Placement scores or ESL 026

Credit: 8      Lecture: 8      Lab: 1

**ESL038 Intermediate Listening/Speakng**

This course develops listening and speaking skills for intermediate-level ESL students through interactive and task-based activities. Emphasis is on communicating in daily life situations. Prerequisites: Placement or (ESL 026 or ESL 028).

Credit: 4      Lecture: 4      Lab: 0

**ESL042 Advanced ESL Reading**

Students develop a variety of reading strategies, expand vocabulary and build a greater understanding of United States culture and/or history through reading in textbooks and online. Prerequisites: Test score or ESL 032

Credit: 4      Lecture: 4      Lab: 0

**ESL044 Advanced ESL Writing**

This is an advanced writing course for the non-native speaker of English. Students develop their ability to consistently produce grammatically and contextually correct sentences in various tenses. Students also develop their ability to create unified, coherent paragraphs with a controlling idea and adequate supporting details. Prerequisites: Two Test scores or (ESL 034 and ESL 036).

**Credit: 4      Lecture: 4      Lab: 0**

**ESL046      Advanced Grammar/Communication**

Students are introduced to complex grammatical structures and develop mastery of English through a series of carefully sequenced communicative activities. Prerequisites: Placement scores or (ESL 034 and ESL 036).

**Credit: 8      Lecture: 8      Lab: 1**

**ESL048      Advanced Listening/Speaking**

This course develops listening and speaking skills for advanced-level ESL students through interactive and task-based activities. Emphasis is on understanding and expressing ideas and opinions in extended discourse on a broad range of topics. Prerequisites: Placement or (ESL 036 or ESL 038).

**Credit: 4      Lecture: 4      Lab: 0**

**ESL100      ESL for Degree Programs**

Students develop the skills necessary for success in college courses, progressing from writing of paragraphs to essays, to a thesis paper. Reading and listening exercises will help students develop the comprehension and note taking skills required for college level lectures and texts. Prerequisites: Three Test scores or (ESL 042 and ESL 044 and ESL 046).

**Credit: 8      Lecture: 8      Lab: 0**

**EXS100      Introduction to Exercise Scien**

This course presents an overview of scientific principles, methodologies, and research as applied to exercise and physical fitness. The emphasis is on physiological responses and adaptations to exercise. Coordinated laboratory experiments are an integral part of this course. Prerequisites: BIO 120

**Credit: 4      Lecture: 3      Lab: 2**

**EXS101      Functional Kinesiology**

The study of the relationship between the muscular and skeletal systems acting to provide motion through the biomechanical leverage system. The course will focus on the biomechanics of muscular actions during strength training exercises and cardiovascular exercises using various types of equipment. Prerequisites: BIO 120

**Credit: 3      Lecture: 2      Lab: 2**

**EXS105      Conditioning & Strength Trning**

Conditioning and strength training presents a thorough review of skeletomuscular anatomy, physiology, and kinesiology along with basic principles of aerobic conditioning, strength training, flexibility and stretching. Prerequisites: EXS 100 and EXS 101

**Credit: 4      Lecture: 3      Lab: 2**

**EXS120      Wellness and Health Promotion**

The focus of this course is on personal health management and behavior change techniques used for individual and group populations. Through case studies and small group learning the student will analyze current life styles and propose safe and effective life style modifications to optimize health and wellness. Prerequisites: EXS 100 and EXS 101

**Credit: 3      Lecture: 3      Lab: 1**

**EXS135      Exercise Science Clinical I**



This course is a supervised clinical experience performed in a fitness facility which provides the student with experience in fitness evaluation, prescription, and instruction.  
Prerequisites: EXS 105 and EXS 120 and HLH 110

Credit: 2      Lecture: 1      Lab: 5

#### EXS200      Nutrition for Sport & Exercise

This course covers the functions and sources of nutrients, energy balance, and metabolism with an emphasis on health promotion and disease prevention. Supplements, weight control, myths and fallacies, evolution of popular diets, and dietary approaches for specific physical activity are examined. Prerequisites: BIO 115 and EXS 135.

Credit: 3      Lecture: 3      Lab: 0

#### EXS205      Fitness for Special Populations

This course presents the pathophysiological basis of disease of various body systems. Appropriate exercise prescription and precautions for special populations are considered. Prerequisites: EXS 135 and BIO 121

Credit: 3      Lecture: 3      Lab: 1

#### EXS225      Advanced Exercise Testing

This course presents techniques for assessing cardiovascular fitness, flexibility, body composition, muscular strength, and pulmonary capacity. Safety guidelines and precautions are emphasized. Prerequisites: EXS 135 and MAT 153

Credit: 4      Lecture: 3      Lab: 2

#### EXS230      Health Fitness Instruction

This course presents the information covered in the American College of Sports Medicine (ACSM) Health/Fitness Instructor certification examination. Methods to assess design, and implement individual and group exercise and fitness programs for apparently healthy individuals and individuals with controlled disease are examined. Case studies and coordinated laboratory activities are an integral part of this course. Prerequisites: (Test scores or ENG 102 or higher) and EXS 135

Credit: 4      Lecture: 3      Lab: 2

#### EXS235      Exercise Clinical II

This course is comprised of two eight week supervised clinical experiences which provide the student with in-depth experience in fitness evaluation, prescription, and instruction. Management skill concepts will also be presented. Prerequisites: EXS 200 and EXS 205 and EXS 225 and EXS 230

Credit: 5      Lecture: 1      Lab: 21

#### FET111      Intro to Fire Protec Eng Tech

This course is a study of the nation's fire experience with an overview of the technology and techniques used to protect people and property. Fire codes, detection and alarm systems, water-based sprinkler systems, introductory hydraulic principles, and building construction types are covered along with human behavior in fire situations. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 4      Lecture: 3      Lab: 3

#### FET112      Fire Protection Systems

This course of study will concentrate on the fire protection equipment which can be installed in a building to protect both the occupants and the property from unwanted fires. The first portion of the course will be devoted to automatic fire sprinklers and special fire extinguishing systems. The various types of sprinkler heads, valves and systems will be discussed and demonstrated utilizing the Fire Protection Systems Laboratory for student activities. The second portion of the course will be devoted to a study of the various types of fire/heat/smoke detection devices and fire alarm systems. Prerequisites: FET 111

Credit: 3

Lecture: 2

Lab: 2

**FET160 Codes and Standards**

Fire prevention regulations, the Life Safety Code, and building codes are covered. Fire protection standards and their role in safeguarding people and property are discussed. Exercises are based on real-world situations. Prerequisite: FET 111

Credit: 4

Lecture: 3

Lab: 2

**FET200 Industrial Fire Hazards**

The industrial environment serves as a background for this study of fire hazards, causes, and engineered prevention technologies. Unique fire protection challenges are discussed and observed during field trips. The duties of the fire prevention and loss control manager are covered. In addition, the fire protection segments of the OSHA Act are emphasized.

Prerequisite: FET 160

Credit: 4

Lecture: 3

Lab: 3

**FET201 Loss Control Procedures**

The detection, correction, and monitoring of unsafe acts and conditions are covered in this course. Loss prevention activities in vehicle operations, workmen's compensation issues, and other non-fire related potential loss situations are discussed. Prerequisites: FET 200

Credit: 3

Lecture: 3

Lab: 0

**FET221 Fire Design I**

Using computer-aided drawing and fire protection industry specific software, students prepare code-compliant working drawings and hydraulic calculations for automatic sprinkler system designs. Pre-requisites: EDD 171 and FET 112 and FET 160

Credit: 4

Lecture: 3

Lab: 3

**FET222 Fire Protection Design II**

Using computer-aided drawing and fire protection industry specific software, students prepare code compliant working drawings and hydraulic calculations for special hazard systems or components such as, but not limited to, fire pumps, standpipes, water spray systems, foam systems, halon or gaseous clean agent systems, CO2 systems, as well as fire alarm systems. The drawings will comply with the current codes and standards. Prerequisites: FET 221

Credit: 4

Lecture: 3

Lab: 3

**FET261 Inspections**

Fire and safety inspections are important in a comprehensive loss control program. The knowledge and skills necessary to perform effective inspections are covered in this course. Inspections of various occupancies will be completed and reported by the students. Prerequisites: FET 200

**Credit: 4      Lecture: 3      Lab: 2**

**FIN100      Intro to Financial Literacy**

A study of the basics of finances. Topics to be discussed include income sources, purchasing power, financial decisions and planning, banking procedures, risk management, buying and credit decisions, and savings and investing options. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 005 or higher)

**Credit: 1      Lecture: 1      Lab: 0**

**FIN221      Money and Banking**

A study of the commercial and central banking systems with emphasis on the Federal Reserve Bank, the effects of changes in the money supply, interest rates on the economy, and the roles of financial intermediaries and financial markets in US and global economies. Prerequisites: (Test score or ENG 102 or higher) and ECO 111

**Credit: 3      Lecture: 3      Lab: 0**

**FSM123      Intro to Food Service**

The study and application of supervisory and managerial techniques used in quantity food preparation. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**FSM151      Field Experience I**

This Supervised Field Experience is designed to give the student an introductory laboratory in a food service operation with emphasis on hands-on training in safety, sanitation, nutrition management, recipe management, equipment usage, inventory controls and interviewing. Prerequisites: FSM 210

**Credit: 3      Lecture: 1      Lab: 5**

**FSM152      Field Experience II**

This Supervised Field Experience will serve to aid the student in understanding the managerial or administrative aspects of food service. Prerequisites: FSM 151

**Credit: 3      Lecture: 1      Lab: 5**

**FSM210      Quantity Food Production**

Both the lecture and lab in this course emphasize organization, staff requirements, and quantity food production. Portion control, planning, and the basics acquired in Introduction to Food Preparation are applied to quantity production in the kitchen, pantry, and bakeshop.

Prerequisite: CUL 121 and CUL 119 or concurrent

**Credit: 3      Lecture: 2      Lab: 3**

**FSM265      Effectv Food Serv Mrkt & Mngnt**

Effective Food Service Marketing and Management is designed to introduce the fundamentals of food service marketing and kitchen facilities management to the student. It includes the foundations of marketing in relationship to the consumer with emphasis on advertising, product promotion menu design and pricing strategies. Kitchen facilities management for the food service manager and the effects on marketing are explored. Prerequisites: (Test score or ENG 102 or higher) and MAT 120

Credit: 3      Lecture: 3      Lab: 0

**FSY100      Introduction to Food Science**

This course introduces the field of food science and technology with emphasis on the science behind food technology, the importance of food in providing proper nutrition, and the opportunities for employment in the food industry.

Prerequisites: (Test scores or ENG 090 or ENG 091 or concurrent or higher)

Credit: 3      Lecture: 3      Lab:

**FSY110      Food Safety & Sanitation**

This course covers food safety and sanitation practices and addresses consumer complaints and public health issues related to food service establishments. This course prepares students for the National ServSafe certification exam provided by the National Restaurant Association. Prerequisite: Test Scores or ENG 090 or ENG 091 or higher

Credit: 3      Lecture: 2      Lab: 2

**FSY120      Technology of Food Processing**

This course introduces the principles of food processing including refrigeration, freezing, dehydration, canning, and fermentation in relation to the technology of foods and beverages. Prerequisites: FSY 100

Credit: 3      Lecture: 3      Lab:

**FSY205      Principles of HACCP**

This course provides a basic understanding of Hazard Analysis Critical Control Points Systems (HACCP). It identifies and applies the seven principles of the HACCP system, which covers prerequisite programs, designing flow charts, identifying food safety hazards, establishing critical control points, monitoring procedures, verification, and record-keeping procedures within a food manufacturing industry. This course prepares students for an International HACCP Alliance certification.

Prerequisite: FSY 110

Credit: 3      Lecture: 2      Lab: 2

**FSY210      Food Safety & Defense**

This course covers principles required in a food defense program for facilities that manufacture, process, package, ship, and store food products. Topics include bioterrorism and requirements that are relative to federal food defense regulations.

Pre-requisite: FSY 110

Credit: 3      Lecture: 2      Lab: 2

**FSY220      Food Chemistry**

This course includes chemical aspects of food composition. Emphasis on the functional properties and chemical reactions of the major components of foods: carbohydrates, lipids, proteins, and water. Prerequisites: FSY 110 and CHM 100

Credit: 4      Lecture: 3      Lab: 2

**FSY225      Microbiology of Foods**

This course introduces cultural and morphological characteristics of microorganisms involved in food spoilage, food-borne disease, and good fermentation with emphasis on analysis of microbiological quality of foods. Prerequisites: FSY 110 and BIO 140

Credit: 4

Lecture: 3

Lab: 2

**FSY290 Food Safety Internship**

The Food Safety internship applies and combines classroom and laboratory knowledge to actual work experiences. The purpose of this course is to provide a supervised work experience for the students to gain knowledge and experience related to food science and food safety in the food production industry. Prerequisites: FSY 110 and FSY 120 and FSY 210 and FSY 220 and FSY 225

Credit: 5

Lecture: 1

Lab: 12

**FSY291 Seminar in Food Safety**

This course facilitates the successful transition of potential graduates into a professional career or transfer to a bachelor's degree program in the field of food safety. The seminar will provide information to obtain a career in food safety, develop professional skills, and enhance interview and presentation skills. Prerequisites: FSY 290 or concurrent

Credit: 2

Lecture: 2

Lab:

**GEO105 Geology and the Environment**

This course examines interrelationships between humans and the physical environment. Topics covered include: geologic factors in land use planning, hydrology, geologic hazards, waste disposal and pollution, contaminant transport, conservation of earth's natural resources, climate, energy and geologic resource development, population dynamics, risk, and related current issues in environmental geosciences. Prerequisites: (Test score or ENG 102 or concurrent or higher) and MAT 181

Credit: 3

Lecture: 2

Lab: 2

**GIS101 Introduction to GIS**

This course introduces the fundamental concepts of a geographic information system (GIS) through hands-on applications with common GIS software. The course will focus on collecting, managing, processing, and presenting geographic data. Topics include data structures and basic functions, methods of data capture and sources of data, and the nature and characteristics of spatial data and objects.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 140 or higher)

Credit: 3

Lecture: 2

Lab: 2

**GIS110 Spatial Data Analysis & Model**

This course introduces students to problem solving and decision-making using geospatial analysis techniques applicable to a range of disciplines. It focuses on both vector and raster data analysis and applicable workflows and includes introductory scripting to improve workflow.

Prerequisites: (Test score or ENG 101 or higher) and (MAT 10 or higher) and GIS 101.

Credit: 4

Lecture: 3

Lab: 2

**GIS120 Data Acquisition & Management**

This course addresses the interpretation and understanding of a variety of data formats available in global information systems (GIS). It introduces the fundamental concepts of primary GIS data creation and discusses quantitative techniques for collection, classification, and management of geographical data.

Prerequisites: (Test score or ENG 101 or higher) and (MAT 140 or higher) and GIS 101.

Credit: 4      Lecture: 3      Lab: 2

### GIS210      Cartographic Design & Vis

This course introduces fundamental cartographic concepts. Emphasis is placed on design principles necessary to create and edit effective visual representations of data in different formats. Topics include the ethical and appropriate application of map scale, map projections, generalization, and symbolization.

Prerequisites: GIS 110

Credit: 3      Lecture: 2      Lab: 3

### GIS220      Programming for GIS Techs

The course covers customization of geographic information systems (GIS) software applications using modified service interface elements. Topics include the theory and implementation of a variety of current scripting languages. In addition, students solve geospatial problems and streamline GIS workflows through the creation and modification of scripts.

Prerequisites: GIS 110 and CIS 120

Credit: 4      Lecture: 3      Lab: 2

### GIS230      Geospatial Web App & Dev

The course introduces the design and development of web-based geospatial applications, the publication and maintenance of geospatial services, and the basic maintenance and optimization of geospatial servers. The course also includes an introduction to browser and mobile-enabled interactive applications.

Prerequisites: GIS 120 and (CIS 238 or concurrent)

Credit: 3      Lecture: 2      Lab: 3

### GIS240      Emerging GIS Technologies

This course provides instruction and hands-on experience in rapidly emerging trends in geospatial technology. Students explore new technologies such as open source applications, 3D visualizations, online interactive mapping, innovations in the geospatial industry, and integration with related technologies.

Prerequisites: GIS 110 and GIS 120

Credit: 3      Lecture: 2      Lab: 3

### GIS260      Geospatial Projects

In this capstone project-based course, students compile, analyze, and present geospatial data while emphasizing the value of visual communication.

Prerequisites: GIS 210 and GIS 220 and GIS 230 and MAT 255 and (Test score or ENG 102 or higher).

Credit: 4      Lecture: 3      Lab: 3

### GIS270      GIS Co-op

This course provides a supervised work experience in a co-operative setting to expose students to procedural, professional, and ethical issues faced by a geospatial technician on the job.

Prerequisites: GIS 110 and GIS 120

Credit: 2      Lecture: 0      Lab: 7

**GIS271 GIS Internship**

This course provides an internship work experience to expose students to procedural, professional, and ethical issues faced by a geospatial technician on the job.

Prerequisites: GIS 110 and GIS 120

Credit: 2

Lecture: 0

Lab: 7

**HDM101 Intro Hmlnd Sec/Emergency Mngt**

This course introduces the student to the various agencies that provide homeland security services and how they prepare for and respond to a wide variety of actual and potential emergencies. The legal and philosophical bases and enabling legislation for the existing governmental structures are also explored. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HDM103 Info/Intel Shrg in Hmlnd Sec**

This course introduces students to the systems and methods used by United State intelligence agents, the venues and jurisdictional limits of various agencies, and the legal basis for intelligence gathering, analysis, and dissemination for homeland security purposes. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HDM105 Environmental Hazards**

This course provides an overview of the environmental vulnerabilities of the United States and typical hazard mitigations and responses to various threats to our environmental resources and infrastructures. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and HDM 101

Credit: 3

Lecture: 3

Lab:

**HDM110 Issues Hmland Sec & Emg Mgt**

This course covers pertinent Department of Homeland Security enabling legislation, historical and recent disaster events, and the lessons learned. Students study the need to balance homeland security with individual rights in the context of a free and democratic society. Prerequisites: (Test Scores or ENG 101 or higher) and HDM 101

Credit: 3

Lecture: 3

Lab: 0

**HDM202 First Responder**

This course covers the roles, responsibilities, and proper procedures Emergency Medical responders and Law Enforcement Responder should utilize at the scene of events to treat injured persons, secure scenes and minimize loss of life.

Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (HDM 101 or CRJ 101)

Credit: 3

Lecture: 3

Lab: 1

**HDM204 All-Hzrds/Infra/Protection**

This course emphasizes the plans and procedures implemented by emergency management agencies as they prepare for and respond to a variety of emergency situations. Students study the elements of critical infrastructure protection in the United States and plans for continuity of operations in a pre/post-disaster environment. Prerequisites: HDM 101 and HDM 103 and HDM 105

Credit: 3

Lecture: 3

Lab: 0

**HDM225 Supervision Leadership in E M**

This course covers the essential elements and principles involved in the development, implementation, and evaluation of the plans and policies used by emergency planning and response agencies. Aspects of leadership, planning, exercise design and evaluation, and grant management are also discussed. Prerequisites: HDM 101 and HDM 103 and HDM 204 and (Test Score or ENG 102 or higher).

Credit: 3      Lecture: 3      Lab: 0

**HDM235 Homeland Def/Emer Mgt Intrnshp**

The final stage of the student's program. The student is placed in an emergency planning/response agency or a private sector business concerned with continuity of operations in a pre-/post-emergency environment. Students will learn through supervised participation in the work of the agency. Emphasis is placed on hands-on application of skills and knowledge. Prerequisites: (Test scores or ENG 102 or higher) and HDM 204.

Credit: 4      Lecture: 1      Lab: 9

**HDM244 Introduction to Terrorism**

This course examines the roots and impact of international and domestic terrorism. It also examines the various types of terrorism, such as religious, state-sponsored, and individual. Prerequisites: ENG 101 and PSY 121 and SOC 111

Credit: 3      Lecture: 3      Lab: 0

**HIM100 Intro to Health Information**

This course is an introduction to the healthcare industry and health records. Emphasis is on the roles of health professionals, functions of the hospital health information department, content and analysis of health records in a variety of healthcare settings, storage and retrieval of health information, health data quality, and common registries. Prerequisites: BIO 100 and CIS 107 and (Test scores or ENG 101 or higher)

Credit: 3      Lecture: 2      Lab: 2

**HIM120 Coding I**

This is the first course in a three-course sequence. Principles and guidelines are introduced for using the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) and Current Procedural Terminology/Healthcare Common Procedure Coding System (CPT/HCPCS) to code diagnoses and procedures in outpatient and inpatient setting. Emphasis is placed on assigning the correct code to a diagnostic or procedural statement and sequencing diagnoses and procedures.

Prerequisites: BIO 108 and HIM 100

Credit: 3      Lecture: 2      Lab: 2

**HIM121 Coding II**

This is the second course in a three-course sequence. Principles and guidelines are reinforced for using the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology/Healthcare Common Procedure Coding System (CPT/HCPCS) systems to assign and correctly sequence codes in outpatient and inpatient settings. Emphasis is placed on the coding guidelines for assigning and sequencing codes and coding and sequencing both diagnoses and procedures from case scenarios.

Prerequisites: BIO 130 and HIM 120

Credit: 3      Lecture: 2      Lab: 2



**HIM122 Coding III**

This is the third course in a three-course sequence. Principles and guidelines are reinforced for using the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology/Healthcare Common Procedure Coding System (CPT/HCPCS) systems to assign and correctly sequence codes in outpatient and inpatient settings. This course focuses on coding from complex case scenarios and emphasizes the reimbursement impact of coding as well as auditing for correct coding and reimbursement.

Prerequisites: HIM 121

Credit: 3

Lecture: 2

Lab: 2

**HIM130 Legal Aspects of HIM**

This course focuses on legal and regulatory issues in healthcare with emphasis on their application to healthcare information services and documentation of care. Students explore the rights and responsibilities of providers, employers, payers, and patients in a healthcare context. Topics include civil liability terminology, judicial and legislative processes, legal and regulatory issues pertaining to confidentiality of information, and laws and regulations addressing release of information and retention of records.

Prerequisites: Test score or ENG 101 or higher

Credit: 3

Lecture: 3

Lab:

**HIM170 Medical Coding Practicum**

This course is a supervised practicum performed in a healthcare facility that provides the student with experience in medical coding applications. The in-class component of the course is a hands-on directed experience coding a variety of electronic health records.

Prerequisites: HIM 120 and HIM 121

Co-requisite: HIM 222

Credit: 4

Lecture: 2

Lab: 6

**HIM220 HIM & Healthcare IT**

This introductory course focuses on health record and information systems. Topics include compliance, the Health Insurance Portability and Accountability Act (HIPAA), communication and network technologies, integration of systems, interoperability, and databases. Emphasis is placed on information security and the development, implementation, and maintenance of relational databases to support healthcare delivery.

Prerequisites: HIM 100 and MAT 135

Corequisite: ISY 143 and HIM 225

Credit: 3

Lecture: 2

Lab: 2

**HIM222 Healthcare Reimbursement**

In this course, students explore reimbursement and payment methodologies applicable to healthcare in the United States in various settings. Forms, processes, practices, and the roles of the health information professional are examined. Concepts related to insurance products, third-party and prospective payment, and managed care organizations are explored. Issues of data exchange among the patient, provider, and insurer are analyzed in terms of organizational policy, regulatory issues and information management operating systems. The importance of coding integrity is emphasized.

Prerequisite: HIM 100

Credit: 3

Lecture: 2

Lab: 2

**HIM225 Technical Practicum**

In this course, students apply concepts in a healthcare facility or in the health information management lab. Emphasis is placed on data collection, data verification, filing, abstraction, professionalism, legal issues, Health Information Portability and Accountability Act (HIPAA), release of information, documentation guidelines, electronic health records (EHR), record storage and imaging, the master patient index (MPI), and database usage.

Prerequisites: HIM 121

Co-requisite: HIM 220

Credit: 3

Lecture: 1

Lab: 6

**HIM230 Supervision & Organization**

This course introduces the principles of organization and management/supervision and develops effective skills in leadership, motivation, and team building. It includes fundamentals of budgeting, equipment selection, marketing, and quality improvement. Prerequisites: HIM 225

Credit: 3

Lecture: 3

Lab:

**HIM231 Quality Assessment**

This course introduces the principles of quality assessment process and develops skills in collecting and analyzing data. It includes quality improvement, risk management, case management, and accreditation quality improvement standards. Prerequisites: HIM 225

Credit: 3

Lecture: 3

Lab:

**HIM250 Professional Practicum**

This is the course for students seeking a degree in Health Information Management. The components of health information analysis, information management, information systems, organization, and supervision are vital focus areas of this internship/experience. Students are required to complete a clinical at a healthcare facility. Prerequisites: HIM 225 Co-requisites: HIM 230 and 231.

Credit: 4

Lecture: 1

Lab: 8

**HIS111 U. S. History: Pre-Civil War**

This course is a survey of colonial America and United States history through 1877. The course covers political, social, cultural, and economic factors that shaped the pattern of life in the United States through the period of Reconstruction. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HIS112 U. S. History: Post-Civil War**

This course surveys United States history through 1877 to present. The course covers political, social, cultural, and economic factors that shaped the pattern of life in the United States. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HLH101 Intro To Patient Care**

This course will provide the student with the basic concepts of patient care, including consideration of the physical and psychological needs of the patient and family. Routine and emergency patient care procedures will be described, as well as, infection control procedures utilizing Standard Precautions. Prerequisite: BIO 120

Credit: 2

Lecture: 2

Lab: 1

**HLH102 Physical Activity for Health**

This introductory health course is designed to promote regular physical activity as an important component of health and wellness. Students will learn the significant role exercise plays in the prevention of disease and will participate in a variety of exercise experiences. Students will identify appropriate physical activity goals and will create individual plans to incorporate these activities into a healthy lifestyle. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 1

Lecture: 1

Lab: 1

**HLH110 First Aid, Safety & CPR**

The National Safety Council's principles and guidelines for safety, CPR and first aid are examined. Upon completion of the course, the student will be able to administer basic first aid and emergency care. Prerequisites: BIO 110 or BIO 120.

Credit: 3

Lecture: 2

Lab: 2

**HLH130 Nurse Assistant Training**

Students will learn to safely perform basic nursing assistant skills under the supervision of the licensed nurse in a health care facility. Communication, observation and documentation skills are incorporated to aid the student in meeting the psychological, physical and environmental needs of the patient. Following successful completion of this course, the student will be qualified to take the Nurse Aid Competency Examination for certification. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 6

Lecture: 5

Lab: 5

**HLH215 Cardiovascular Monitoring**

This course focuses on cardiovascular monitoring for allied health students with major emphasis on the normal and abnormal EKG patterns. Such topics as systematic interpretation, dysrhythmias, normal and abnormal 12 lead EKGs, and cardioversion and defibrillation will be covered. Prerequisites: BIO 121 and (DMS 106 or NMT 101 or RCT 140)

Credit: 2

Lecture: 2

Lab: 0

**HMS121 Introduction to Human Services**

This course introduces the field of human services. Emphasis is placed on client needs, services, and the skills and attitudes required of the effective human services worker. It also provides an overview of the major functions of human service agencies and the occupations available in Delaware. Prerequisites: (Test Score or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HMS122 Theories of Counseling**

This course is an overview of basic counseling theories and techniques in terms of the client-worker relationship. Prerequisites: HMS 121 and PSY 121 and (Test score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HMS123 Dynamics/Group Communication I**

This course is an overview of the theories, principles, and techniques of organization, leadership, and participation in the group process. Emphasis is placed upon the development of therapeutic communication skills. Prerequisites: HMS 121 and PSY 121 and (Test score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HMS124 Comm Living Skills/Supports**

Students will learn to assess the need for and provide services that address: physical, personal, and household management; community connections and networking; locating services - transportation, etc.; and self-advocacy skills. Other learning components will include researching community services and interviewing professionals and clients directly involved in the relevant issues in the field. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and HMS 120

Credit: 3

Lecture: 3

Lab: 1

**HMS125 Assessment and Communication**

Students will learn to encourage sensitive communication skills; build a rapport with clients; take a person centered approach; use alternative communication technology; appropriately interpret and use assessments; and gather information to provide services tailored to the needs to the client. Additional learning components include site visits and interpreting assessments and writing a plan for practical applications. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and HMS 120

Credit: 3

Lecture: 3

Lab: 1

**HMS126 Desgn/Evaluation of Services**

Students will review and analyze best practices; evaluate existing programs utilizing best practices; identify potential concerns and corresponding solutions; and design an activity program to successfully support a client to obtain maximum independence. Additional learning components include a project to design a new program or extend an existing program based on best practices. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and HMS 120

Credit: 3

Lecture: 3

Lab: 1

**HMS211 Marriage and the Family**

The course is an overview of the family social system, history of family research, mate selection, human sexuality, and the family's reaction to change. Prerequisites: (Test scores or ENG 102 or higher) and PSY 121 and SOC 111

Credit: 3

Lecture: 3

Lab: 0

**HMS221 Ethical Problems and Issues**

This course provides students the tools needed to clarify their own values as well as to understand the basic moral problems and issues of the society that surrounds them. Emphasis is on the development of a personal value system and the relationship of ethics to the human services profession. Prerequisites: HMS 121 and (Test score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

**HMS223 Social Policy/Program Planning**

The course reviews the nature of social policy and its historical development. Basic trends in social and human services are related to political and social developments in the United States. An overview is provided of the policy making and planning process. Prerequisites: HMS 121 and (Test score or ENG 101 or higher) and POL 111 and (SOC 111 or PSY 225)

Credit: 3

Lecture: 3

Lab: 0

**HMS225 Interviewing/Counseling Skills**

This experiential course focuses on helping skills needed in human service settings. The emphasis is on the practical acquisition of interviewing, counseling, and case management skills.

Prerequisites: HMS 122

Credit: 3

Lecture: 3

Lab: 1

#### HMS243 Directed Practice I

This course applies the values, concepts, and skills gained from courses to the actual process of helping people. The student is placed in an agency or organization to learn through supervised participation. Emphasis is placed on individual growth in self-awareness, interpersonal communication, interviewing skills, and an introduction to the agency and the client system.

Prerequisites: (Test score or MAT 012 or higher) and CIS 107 and HMS 122 and HMS 123 and (Test score or ENG 102)

Credit: 6

Lecture: 1

Lab: 15

#### HMS244 Directed Practice II

This course continues to apply the values, concepts, and skills gained from courses to the actual process of helping people. The student is placed in an agency or organization to learn through supervised participation. Emphasis is placed on individual growth in self-awareness, interpersonal communication, interviewing skills, and an introduction to the agency and the client system.

Prerequisites: HMS 243

Credit: 6

Lecture: 1

Lab: 15

#### HRI101 Introduction to Hospitality

This course provides a general overview of the hospitality industry. Emphasis is placed on the variety of operations, diversity of management, personal opportunities, and market segments. Prerequisites: (Test Scores or MAT 015 or higher) and (((Test Score or RDG 051 or higher) and (Test Scores or ENG 051 or higher)) or Test Scores or ENG 090 or concurrent or ENG 091 or concurrent or higher).

Credit: 3

Lecture: 3

Lab: 0

#### HRI210 Beverage Management

This course introduces a variety of beverages: wine, beer, distilled beverages, and low and nonalcoholic beverages. It covers the management of beverage facilities and equipment, the purchasing functions, the effective writing of beverage lists, internal control, cost control, and alcoholic beverage service. Prerequisites: HRI 101 or CUL 121

Credit: 3

Lecture: 3

Lab: 0

#### HRI211 Food Principles/Menu Planning

This course covers basic cooking skills in an institutional setting. Topics include planning and preparing nutritionally balanced menus, keeping abreast of changing technology, and applying creative techniques to new dishes.

Prerequisites: HRI 101 and (Test Score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### HRI212 Food/Beverage Cost Control

This course investigates the principles of cost controls and their application to the hospitality industry. The flow of costs for beverages, food, and labor are discussed in the context of operational efficiency. Issues relating to fraud prevention are also reviewed. Prerequisites: (Test scores or ENG 102 or higher) and (HRI 101 or CUL 121) and (Test scores or MAT 120 or higher)

Credit: 3      Lecture: 3      Lab: 0

#### HRI214      Principles of Hospitality Mgmt

This course covers management decisions made by hospitality managers on a daily basis. All aspects of management are addressed with broad discussions of the functions of a hospitality manager.  
Prerequisite: HRI 101

Credit: 3      Lecture: 3      Lab: 0

#### HRI215      Lodging Operations Management

This course covers the functions and procedures used by management and administrative employees to operate a lodging facility. Topics include front office operations, operational statistics and reporting, needs planning, procurement, staffing requirements, and typical day-to-day operational tasks. Prerequisites: (Test score or ENG 102 or higher) and (Test score or MAT 140 or higher) and HRI 101

Credit: 3      Lecture: 3      Lab: 1

#### HRI216      Property Management

This course includes the basic skills of engineering, maintenance, and energy concepts in a hospitality establishment. Prerequisites: (Test score or ENG 102 or higher) or HRI 101

Credit: 3      Lecture: 3      Lab: 0

#### HRI219      Innkeepers' Law

This course covers potential legal problems and pitfalls in the hospitality industry, with a focus on the growth of federal government legislation and regulations that affect this industry. Prerequisites: (Test score or ENG 102 or higher) and HRI 101

Credit: 3      Lecture: 3      Lab: 0

#### HRM224      Training and Development

This course provides a practical approach to training employees in their industry and business environment. Students acquire the knowledge and skills necessary to understand the processes of training and development. Components of training design, including needs assessment, objectives, evaluation, and presentation styles are covered. Prerequisites: MGT 231 or MGT 231 concurrent.

Credit: 3      Lecture: 3      Lab: 0

#### HTT100      Intro To Histotechnology

This introductory course provides an overview of the study of histology, laboratory safety and conduct, record keeping, and careers in histotechnology.  
Prerequisite(s): BIO 100 or concurrent and BIO 120 or concurrent

Credit: 3      Lecture: 2      Lab: 2

#### HTT201      Histology

A course in the study of human organs and tissues for the purpose of the developing histotechnological skills. Emphasis will be placed on recognition, composition, and functions of the organs and tissues. Macroscopic and microscopic laboratory examination and evaluation of the specimens are included. Prerequisites: BIO 121 and HTT 100

**Credit: 2**
**Lecture: 2**
**Lab: 1**
**HTT202 Histology Internship**

This supervised internship provides students with additional practice in all basic and specialized procedures used in the histology laboratory setting.

Prerequisite(s): (Test scores or ENG 102 or higher) and HTT 201 and HTT 212 and HTT 221

**Credit: 9**
**Lecture: 1**
**Lab: 24**
**HTT211 Histotechnology Procedures I**

An introduction to equipment and basic procedures used in the Histology laboratory. Theories and procedures for fixation, processing, embedding, and microtomy will be followed by laboratory experience. Prerequisites: HTT 100 and MAT 153 and CHM 110.

**Credit: 3**
**Lecture: 2**
**Lab: 4**
**HTT212 Histotechnology Procedures II**

Part II of Procedures (HTT 211) - Introduction to advanced techniques and special procedures. Students will learn procedures for cytology, cytogenetics, muscle enzyme histochemistry, immunohistochemistry and molecular histology. The course will include tissue preparation, staining technology, quality control and trouble shooting, for these more advanced techniques. Prerequisite: HTT 211

**Credit: 3**
**Lecture: 2**
**Lab: 3**
**HTT220 Histochemistry I**

This course applies basic biology and chemistry principles to the study of fixation, processing, and staining of tissue specimens. Students learn various troubleshooting techniques and their applications relative to maintaining quality control in the histology lab.

Prerequisites: BIO 125 or concurrent and CHM 111 and HTT 100

**Credit: 3**
**Lecture: 2**
**Lab: 3**
**HTT221 Histochemistry II**

This course is a continuation Histochemistry I with instruction in advanced histologic technology procedures and theories.

Prerequisite(s): HTT 220

**Credit: 3**
**Lecture: 2**
**Lab: 4**
**IET209 Survey in Prod Plan & Cntrl**

This advanced course covers product development and production manufacturing. Determination of economical manufacturing methods, selection of materials and machinery, estimation of materials and labor costs, production planning and scheduling, and the layout of a production line are covered. Prerequisites: (((Test Scores or RDG 120) and (Test Scores or ENG 121 or higher)) or Test Scores or ENG 102 or higher) and EDT 252 and EDD 273

**Credit: 3**
**Lecture: 2**
**Lab: 2**

**IMT110 Intro to Industrial Technology**

This course is designed as a preparatory to familiarize the student with the practices and principles of working in an industrial facility as a part of an industrial technical team working on processes and utilizing information systems. Core topics include interpersonal communication, teamwork, basic statistical concepts, manufacturing information systems, fundamentals of manufacturing processes, and probability. Laboratory work in the topic areas will be included to illustrate concepts covered. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

Credit: 3

Lecture: 2

Lab: 2

**IMT120 Industrial Management Systems**

An overview of industrial organizations and management principles, cost control methods applied to industry, maintenance organizations, and inventory control. Total Quality Management (TQM) principles also will be covered. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP higher)

Credit: 3

Lecture: 3

Lab: 0

**IMT121 Machines & Mechanical Devices**

A course in the basic operating principles of machines and mechanical devices. The uses of the devices and machines employed in manufacturing, process control and other areas are introduced. Maintenance issues with respect to machines and devices are covered. The accurate alignment of drive components is discussed and proper alignment principles are presented. Prerequisites: IMT 110

Credit: 4

Lecture: 3

Lab: 2

**IMT211 Mechanical Installation & Main**

This course is directed toward the principles applied to the installation of mechanical devices through a review of the organizational concept. It stresses the importance of the maintenance function in the total operation of a facility. Special emphasis will be placed on maintenance job planning and scheduling, preventive maintenance, maintenance material control, and maintenance training. The importance of proper installation techniques will be included. Prerequisites: IMT 121

Credit: 4

Lecture: 3

Lab: 4

**IMT222 Safety Health and Env. Regs.**

The safety, health and environmental regulations that apply to industrial processes and industries will be reviewed. Develop a working knowledge of the procedures to follow when encountering regulations such as EPA, NEC, BOCA, etc. will be covered. Prerequisites: IMT 110

Credit: 3

Lecture: 3

Lab: 0

**IMT290 Industrial Maintenance Intshp.**

Applied experience through a supervised work situation, such as a campus repair shop, computer business, or industrial facility. Prerequisites: IMT 211 and (MET 252 or ELM 252).

Credit: 4

Lecture: 1

Lab: 9

**ISY111 Ethics & the Information Age**

This course discusses ethics and moral philosophy appropriate to computer information and technology, including a framework for ethically-grounded decision making in the information age. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 2

Lecture: 2

Lab: 0



**ISY143 Intro to Information Security**

This course introduces students to information security terminology, the legal environment, risk management, security technologies, and security planning and implementation. Students prepare for further study in computer forensics and cyber network protection. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**ISY150 Introductory Scripting**

This course examines various types of scripting languages and their appropriate use for intergration of applications and systems. Topics include the use of scripting languages to facilitate the management, integration, and security of the systems that support an organization. Students experience a hands-on application and problem-solving introduction to script programming.

Prerequisite: CIS 120

Credit: 3

Lecture: 2

Lab: 2

**ISY201 Advanced Operating Systems**

This course covers advanced topics in computer operating systems and their design implementation. Topics include portable operation systems, mobile operation systems, virtual memory management, file systems, parallel computing, and virtualization. Prerequisite: CNE 192

Credit: 3

Lecture: 2

Lab: 2

**ISY243 Information & Network Security**

This course introduces computer information and networking security principles and relates them to other areas of information technology. Topics include how to harden a network, protect communications, and use cryptography and Public Key Infrastructure (PKI) to thwart attackers. This course prepares students to take an optional network security certification examination. Prerequisite: ISY 143

Credit: 4

Lecture: 3

Lab: 2

**ISY250 Network Def & Countermeasures**

This course examines the different aspects of penetration testing and techniques needed to assess network and application security. Students learn multiple approaches used in ethical hacking and develop incident reports to recommend ways to better secure the environment.

Prerequisite: CNE 192

Credit: 3

Lecture: 2

Lab: 2

**ISY251 Hardening the Infrastructure**

This course examines tools, techniques, and technologies used in the securing of information assets and designed to provide in-depth information on the software and hardware components of information security and assurance. Topics covered include firewall configurations, network security, virtual private networks (VPNs), and security monitoring tools. Prerequisite: CNE 192

Credit: 3

Lecture: 2

Lab: 2

**ISY270 Computer Forensics**

This course introduces digital investigations, preparing students to acquire and analyze digital evidence. It covers file structures in different computer operating systems, data recovery techniques, data hiding, data preservation techniques, chain-of-evidence procedures and expert witness testimony. Prerequisite: CNE 192

Credit: 4

Lecture: 3

Lab: 2

**ISY275 Portfolio/Experiential Learn**

This course prepares students with the workforce skills necessary for professional job placement in the information security field. Emphasis is given to self-assessment techniques, career planning tools, and professional workplace behavior such as being part of a Help Desk, Customer Support Team, or computer business/industrial facility. Students construct professional portfolios that include work samples, job search packages, and reflections on the required experiential learning components.

Prerequisites: ISY 250 and ISY 251

Credit: 3

Lecture: 2

Lab: 2

**ISY280 Advanced Security Topics**

This course covers advanced topics in information and network security. Students use knowledge, skills, and abilities to perform tasks related to the field of information security. This course is based on a sequence of hands-on laboratory exercises for teams of students and emphasizes defensive tools and techniques. Prerequisites: ISY 250 and ISY 251

Credit: 3

Lecture: 2

Lab: 3

**ISY291 Information Security Intern**

This course is a supervised work experience that prepares students with the workforce skills necessary in the information security field. Emphasis is placed on skill application and professional workplace behavior in various locations.

Prerequisites: ISY 250 and ISY 251

Credit: 3

Lecture: 1

Lab: 6

**LAS271 Intro to Lasers**

This laboratory-based laser course includes elements and operations of lasers and optical power meters, laser safety, properties of laser light, emission and absorption, lasing action, optical cavities, temporal and spatial characteristics, helium-neon (HeNe) case study, and laser classification and characteristics. Prerequisites: (MAT 182 or MAT 185 or MAT 281) and (PHY 205 or PHY 281)

Credit: 4

Lecture: 3

Lab: 2

**LAS272 Geometrical Optics & Lasers**

This laboratory-based laser course includes reflection and refraction (at plane and curved surfaces), thin and thick lenses, stops and apertures, matrix optics, lasers and resonators, laser systems, and applications to fiber optics. Prerequisite: (MAT 182 or MAT 185 or MAT 281) and (PHY 205 or PHY 281)

Credit: 4

Lecture: 3

Lab: 2

**LAS273 Wave Optics & Lasers**

This laboratory-based laser course includes light sources and their characteristics; radiometry and photometry; wave nature of light; reflection and refraction; propagation; interference; diffraction; polarization; holography; and applications to fiber optics. Prerequisites: (MAT 182 or MAT 185 or MAT 281) and (PHY 205 or PHY 281)

Credit: 4

Lecture: 3

Lab: 2

**MAT005 Basic Math**

A study of arithmetic including whole numbers, fractions, decimals, ratios, proportions, and percents. Prerequisites: None

Credit: 4

Lecture: 4

Lab: 0

**MAT012**      **Review of Math Fundamentals**

A review of arithmetic, math in daily living, basic geometry, English/metric conversions, simple algebraic expressions, and simple algebraic equations. Prerequisites: Test score or MAT 005 or NCS 005 or NCS 012 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 181.

Credit: 4      Lecture: 4      Lab: 0

**MAT015**      **Elementary Algebra**

Topics in this elementary algebra course include operations on real numbers, simplification and evaluation of algebraic expressions, solving equations and inequalities, solving word problems, exponents, polynomials, factoring, graphing, and simultaneous equations. Prerequisites: Test score or MAT 012 or NCS 012 or MAT 090 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181.

Credit: 4      Lecture: 4      Lab: 0

**MAT112**      **Aviation Mathematics**

This course provides students with math skills that are essential to Aviation Maintenance. Topics include on-the-job applications of whole numbers, fractions, decimals, percentages, measurement, and operations with signed numbers. This course meets FAA certification standards. Prerequisites: Test Score or MAT 012 or higher

Credit: 4      Lecture: 4      Lab: 0

**MAT120**      **Math for Behavioral Sciences**

This course reviews and applies set theory, ratios and proportions, percentages, consumer mathematics, basic algebraic principles, and introductory statistical concepts. Pre-requisites: Test scores or MAT 012 or NCS 012 or MAT 015 or MAT 119 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181.

Credit: 3      Lecture: 3      Lab: 0

**MAT125**      **Math for the Trades**

This is a course designed to provide students with math skills that are essential to a wide variety of industrial and technical trade areas. Topics include on-the-job applications of whole numbers, fractions, decimals, percents, measurement, and operations with signed numbers. Prerequisite: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 130 or MAT 140 or MAT 150 or MAT 153 or MAT 181 or MAT 185.

Credit: 4      Lecture: 4      Lab: 0

**MAT129**      **Math for Health Sciences**

Topics in this course include a review of arithmetic operations on real numbers, dimensional analysis, simplification and evaluation of algebraic expressions, solving equations and inequalities, solving application problems, exponents, and graphing. Prerequisites: Test scores or MAT 012 or NCS 012 or MAT 015 or MAT 119 or MAT 120 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181

Credit: 3      Lecture: 3      Lab: 0

**MAT130**      **Algebra for Allied Health**

This course presents linear equations, quadratics, graphing, properties of exponents and logarithms, basic statistics, metrics, and right triangle trigonometric functions. Prerequisite: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 140 or MAT 150 or MAT 153 or MAT 181 or MAT 185.

Credit: 4      Lecture: 4      Lab: 0

**MAT135      Biomedical Statistics**

This course stresses the use of biomedical data in studying methods of descriptive and inferential statistics, properties of the normal distribution, point and interval estimators, hypothesis testing of the population mean, and correlation and regression. Prerequisites: Test score or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 140 or MAT 150 or MAT 153 or MAT 181 or MAT 185.

Credit: 3      Lecture: 3      Lab: 0

**MAT140      Essentials of College Algebra**

A course for students who have successfully completed a first course in elementary algebra. Topics include linear equations and inequalities, absolute value inequalities, functions, linear functions, polynomials, factoring, rational and radical expressions, rational and negative exponents, complex numbers, and solutions to equations and application problems involving linear, rational, radical, and quadratic equations. Prerequisite: Test score or MAT 015 or MAT 090 or MAT 135 or MAT 141 or MAT 153 or MAT 181 or MAT 182 or MAT 251 or MAT 261 or MAT 281

Credit: 4      Lecture: 4      Lab:

**MAT141      College Algebra**

This course stresses essential skills and concepts needed for mastering problem-solving techniques. Topics include integers, polynomials, graphing linear equations and inequalities, systems of equations, matrix algebra, exponents, radicals, and complex numbers. Prerequisites: Test score or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 135 or MAT 140 or MAT 150 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251 or MAT 261 or MAT 281.

Credit: 3      Lecture: 3      Lab: 0

**MAT143      College Geometry**

This course is designed to cover the elementary concepts of plane Euclidean geometry and to help make the transition from algebra to precalculus. Special emphasis will be given to logical systems, proofs, angle relationships, parallel lines, similarity and circle relationships. Prerequisites: Test score or MAT 140 or MAT 153 or MAT 181 or MAT 185

Credit: 3      Lecture: 3      Lab: 0

**MAT150      Business Mathematics**

This foundation course in business mathematics includes a study of percentage problems, simple and compound interest, bank reconciliations, installment buying, present value, payroll, taxes, trade and cash discounts, markup and markdown, depreciation, tables and graphs, and amortization. Prerequisite: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 130 or MAT 140 or MAT 153 or MAT 181 or MAT 185.

Credit: 3      Lecture: 3      Lab: 0

**MAT153      College Math and Statistics**

A study of exponents, roots, radicals, quadratic equations, relations and functions, graphing, polynomial functions, systems of equations, inequalities, exponential and logarithmic functions, elementary statistics including organizing and presenting data, measures of central tendency and measures of variation. Prerequisites: Test score or MAT 015 or MAT 016 or NCW 045 or MAT 075 or MAT 090 or MAT 135 or MAT 140 or MAT 141 or MAT 181 or MAT 182 or MAT 185 or MAT 201 or MAT 251 or MAT 261 or MAT 281.

Credit: 4      Lecture: 4      Lab: 0

**MAT155      Mathematics of Finance**

This course includes math of buying and selling, personal finance, depreciation, inventory control, accounting mathematics, financial statements and ratio analysis, annuities and sinking funds, insurance, securities, business statistics, and applied problems. Prerequisites: Test score or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 135 or MAT 140 or MAT 150 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251 or MAT 261 or MAT 281.

Credit: 3      Lecture: 3      Lab: 0

**MAT181      Algebra and Trigonometry I**

A study of elementary functions including linear functions, quadratic functions, polynomial functions, exponential and logarithmic functions, and right triangle trigonometry. Prerequisites: Test score or MAT 075 or MAT 090 or MAT 140 or MAT 153 or MAT 185 or MAT 201.

Credit: 4      Lecture: 4      Lab: 0

**MAT182      Algebra and Trigonometry II**

A study of circular and trigonometric functions, vector applications, complex numbers, simple curve sketching of algebraic and trigonometric functions, nonlinear systems, matrix methods, and properties of conic sections. Prerequisites: MAT 181.

Credit: 4      Lecture: 4      Lab: 0

**MAT185      Precalculus**

This course is designed to integrate intermediate algebra, analytic geometry, and trigonometry with other college algebra topics through a functional approach as a preparation for calculus. Prerequisites: Test score or MAT 075 or MAT 090 or MAT 140 or MAT 153 or MAT 181 or MAT 182.

Credit: 4      Lecture: 4      Lab: 0

**MAT201      Mathematics for Teachers I**

This course is designed to provide prospective teachers with the knowledge and skills needed to communicate mathematical concepts. Topics include techniques of problem solving, set theory, number theory, the real number system, elementary algebra, and an introduction to geometry. Prerequisites: Test score or MAT 015 or MAT 016 or NCW 045 or MAT 075 or MAT 090 or MAT 140 or MAT 141 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251 or MAT 261 or 281.

Credit: 4      Lecture: 4      Lab: 0

**MAT202      Mathematics for Teachers II**

This course is a continuation of MAT 201. Topics include areas and volumes of geometric figures, geometric constructions, measurement, introductory probability, and statistics. Prerequisites: MAT 201.

Credit: 4      Lecture: 4      Lab: 0

**MAT203      Math for Teachers III**

This course is a continuation of MAT 201 and MAT 202 and is designed to enable preservice teachers to better teach mathematical concepts. Topics include polynomial, quadratic equations, systems of linear equations, the rectangular coordinate system, functions, graphs of linear and quadratic functions, the use of functions as models, linear inequalities, consumer mathematics, and an introduction to calculus. Prerequisites: MAT 201 and MAT 202.

Credit: 4      Lecture: 4      Lab: 0

**MAT251      Finite Math**

A study of selected algebraic topics, including mathematics of finance, systems of linear equations and matrix algebra, linear programming, properties of probability and probability distributions, Markov chains and techniques of applied problem solving. Prerequisites: Test scores or MAT 140 or higher

Credit: 3

Lecture: 3

Lab: 0

**MAT253 Discrete Math**

A study of discrete models, sets, functions, logic, mathematical induction, algorithms, recursions, relations, graphs, and trees and matrices. Prerequisites: (Test score or MAT 153 or higher)

Credit: 3

Lecture: 3

Lab: 0

**MAT255 Business Statistics I**

A study of basic concepts of data organization, measures of central tendency, variability, probability and probability distributions, sampling and sampling distributions, estimation dealing with population means and proportions of large and small samples, and hypothesis testing. Course will include techniques of applied problem solving. Prerequisite: MAT 140 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251

Credit: 3

Lecture: 3

Lab: 1

**MAT256 Business Statistics II**

This course covers hypothesis testing of means and proportions, chi-square test, analysis of variance, regression and correlation analysis, non-parametric testing methods, and statistical process control. Topics include techniques of applied problem solving using data analysis software such as Excel. Prerequisite: MAT 255

Credit: 3

Lecture: 3

Lab: 1

**MAT261 Business Calculus I**

Content includes solving mathematical models of real world phenomena including functions, graphs, limits, continuity, and the use of differentiation and integration to solve problems involving business management and computer science applications. Prerequisites: Test score or MAT 140 or higher

Credit: 4

Lecture: 4

Lab: 0

**MAT262 Business Calculus II**

A study of integral calculus of algebraic, exponential, and logarithmic functions. Topics include techniques of integration, multivariate calculus, and applications from the business management and computer science fields. Prerequisites: MAT 261.

Credit: 4

Lecture: 4

Lab: 0

**MAT263 Principles of Discrete Math**

This course is a study of sets, logic, induction, the integers, functions, sequences, counting, and an introduction to graph theory. Proofs will be emphasized throughout the course. Prerequisites: Test score or MAT 190 or higher

Credit: 4

Lecture: 4

Lab: 1

**MAT279 Problem Solving Strategies**

This course is a study of the various problem solving strategies that are used in solving mathematical problems. There will be an emphasis on the use of these strategies within the context of a traditional secondary mathematics curriculum. Activities include group work, application of educational technology, oral and written presentations, and a compilation of a portfolio of problem solving strategy problems. Prerequisites: MAT 263 or MAT 281 or MAT 282 or MAT 283 or MAT 285 or MAT 288 or MAT 291

Credit: 4      Lecture: 4      Lab:

**MAT281      Calculus I**

A study of functions, limits, and continuity, differential calculus of algebraic and trigonometric functions with applications, and an introduction to the development of the definite integral. Prerequisites: Test score or MAT 182 or MAT 185.

Credit: 4      Lecture: 4      Lab: 1

**MAT282      Calculus II**

Integral calculus of algebraic, trigonometric, exponential, and logarithmic functions with applications. Topics include methods and application of integrations, infinite series, parametric equations, and polar coordinates. Prerequisites: MAT 281

Credit: 4      Lecture: 4      Lab: 1

**MAT283      Calculus III**

A study of partial derivatives, multiple integrals, line integrals, and vectors. Prerequisites: MAT 282

Credit: 4      Lecture: 4      Lab: 1

**MAT285      Introduction to Proof**

This course provides a transition from computational mathematics to abstract, proof based mathematics. The primary focus of the course will be the development of skills to read, understand, and produce proofs of mathematics statements. Topics which will be addressed include set theory, functions, relations, cardinality, the order properties of real numbers, least upper bound, greatest lower bound, the completeness axiom, and limits. Prerequisites: MAT 263 and MAT 281

Credit: 4      Lecture: 4      Lab: 1

**MAT288      Linear Algebra**

The study of linear equations, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors. Prerequisites: MAT 282

Credit: 4      Lecture: 4      Lab: 1

**MAT291      Ordinary Differential Equation**

The study of solutions of ordinary differential equations of first and second order using qualitative, numeric and analytic approaches, Mathematical modeling of real life phenomena will be studied. Prerequisites: MAT 282

Credit: 4      Lecture: 4      Lab: 1

**MAT292      Engineering Math I**

This course has students apply fundamental mathematical procedures and processes to solve engineering problems. Topics consist of solutions of linear algebraic equations, Gauss elimination, vector spaces, subspaces, linear dependence, linear ordinary differential equations of 2nd order and higher, initial value and boundary value problems, eigenvalues, coupled linear ordinary differential equations, and nonlinear differential equations. This course includes problems and exercises drawn from the areas of circuit theory and mechanical oscillators. Prerequisite: MAT 283 or concurrent

Credit: 3

Lecture: 3

Lab: 1

**MEA100 Intro to Medical Assisting**

This course provides an overview of the background, concepts, and ethics of practice in medical assisting. The role of the medical assistant and the various sites available for employment are examined. Prerequisites: Test scores or ENG 090 or ENG 091.

Credit: 3

Lecture: 3

Lab: 0

**MEA120 Medical Office Procedures I**

This course introduces the administrative duties of a medical assistant, including handling the telephone, managing accounts payable and receivable, managing a medical office, medical coding, and obtaining third party reimbursement. Prerequisite(s): (Test scores or ENG 101 or concurrent) and BIO 100 and OAT 121  
Co-Requisite(s): MEA 150

Credit: 4

Lecture: 3

Lab: 2

**MEA125 Medical Office Procedures II**

This course introduces the students to skills necessary for working in a modern computerized medical office. They will use the computer to schedule and monitor appointments and will get more experience with the billing process. Prerequisite: MEA 120 Co-requisite: MEA 151

Credit: 4

Lecture: 3

Lab: 2

**MEA150 Medical Lab Procedures I**

This is the first of two courses covering some basic skills and theory of the medical assistant profession. Lab safety, cardiopulmonary resuscitation (CPR), electrocardiograms (EKG), first aid, monitoring vital signs, and patient examination techniques are covered.

Prerequisite(s): MAT 155 and BIO 100 and (BIO 110 or (BIO 120 and BIO 121))

Co-requisite(s): MEA 120

Credit: 4

Lecture: 3

Lab: 3

**MEA151 Medical Lab Procedures II**

This course will cover basic laboratory skills of the profession. Universal precautions will be integrated with testing in hematology, chemistry, urinalysis, microbiology, and serology. Competency in phlebotomy is required. Prerequisite: MEA 150 Co-requisite: MEA 125

Credit: 4

Lecture: 3

Lab: 3

**MEA170 Pharmacology for Medical Asst**

This course is an introduction to chemical characteristics, actions, and uses of common prescription and over-the-counter drugs. Modes of contraindications are covered for each drug discussed. Prerequisites: MEA 120 and MEA 150  
Co-requisites: MEA 125 and MEA 151

Credit: 4

Lecture: 4

Lab: 1



**MEA270 Medical Assistant Seminar**

This course examines specialty areas of employment for medical assistants and reinforces roles, responsibilities, and practice implications. Review for the certified medical assistant (CMA) exam offered by the American Association of Medical Assistants (AAMA) is included.

Prerequisite(s): MEA 125 and MEA 151

Co-requisite(s): MEA 290

Credit: 3

Lecture: 3

Lab: 0

**MEA290 Medical Assistant Internship**

Students acquire applied experience in an appropriate work situation such as a physician's office or clinic. Prerequisite: MEA 125 and MEA 151 and MEA 170 Co-requisite: MEA 270

Credit: 4

Lecture: 0

Lab: 12

**MET115 Intro to Mech Eng Tech**

This preparatory course incorporates design problems and study activities using engineering graphics, mathematics, and technical science to teach students how to conceptualize and communicate information. Special emphasis is placed on computer literacy and computer-aided design technology for engineering technology applications.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 3

Lecture: 2

Lab: 2

**MET123 Modern MFG Techniques**

This course covers modern manufacturing techniques. Topics include the care and use of hand tools, precision measuring tools, the selection of materials, computerized numerical control, arc welding processes and proper use of machine tools including the lathe, drill press, and milling machines.

Prerequisites: (Test Scores or MAT 010 or higher) and (Test Score or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3

Lecture: 2

Lab: 4

**MET125 Adv Manufacturing Techniques**

This course covers laboratory and lecture activities including metal inert gas (MIG) welding, tungsten inert gas (TIG) welding, computer integrated manufacturing, abrasive machining, and other specialized machining processes. Topics include material on ferrous metals, non-ferrous metals, plastics, and heat treatment of steels. Pre-requisites: MET 123.

Credit: 3

Lecture: 2

Lab: 4

**MET132 Statics**

This course analyzes the effects of forces acting on a body at rest, including the study of centroids, area moment of inertia, trusses, and frames.

Prerequisites: MAT 181 and ((PHY 205 or concurrent) or (PHY 281 or concurrent))

Credit: 3

Lecture: 3

Lab: 1

**MET235 Computer NmrcI Cntrl Machining**

This course is designed for the first-time user of computer numerical control (CNC) equipment. The history, applications programming, and operations are explored in this course. Machinists, machine operators, supervisors, engineers, and engineering students with some machining knowledge will benefit from this CNC course.  
Pre-requisites: MET 125 and EDD 131 and MAT 140

Credit: 4

Lecture: 3

Lab: 2

**MET241 Fluid Mechanics**

This course covers physical properties of fluids, pressure and static forces, laminar and turbulent incompressible flow, conservation of energy and mass, design of fluid piping systems, energy losses, pump characteristics and selection, and heat transfer.

Prerequisites: MET 132 and PHY 205

Credit: 4

Lecture: 3

Lab: 2

**MET242 Strength of Materials**

This course analyzes axial, shearing, and torsional stresses and strains in machine and structural elements such as beams, columns, and shafts under static, impact, and dynamic loads. Topics include thin-walled cylinders, joints, and couplings as well as shear and bending moment diagrams and the design of beams.

Prerequisites: MET 132

Credit: 3

Lecture: 2

Lab: 2

**MET243 Dynamics**

The motion of particles and rigid bodies is illustrated using linear, rotational, and plane motion. These concepts are used to determine the forces and torques required to change motion through inertia, work-energy, and impulse-momentum approaches. Other important concepts include elastic and inelastic impact, power, and the coefficient of restitution.

Prerequisites: MET 132 and PHY 205

Credit: 3

Lecture: 3

Lab: 0

**MET245 Machine Design**

This course covers design principles and calculations appropriate to various machine elements including beams, bearings, bushings, shafts, power components, gears, cams, belts and fly-wheels.

Pre-requisites: MET 242 and MET 243 and ELC 248 and (MET 252 or MET 252 concurrent) and (MET 264 or MET 264 concurrent)

Credit: 3

Lecture: 3

Lab: 0

**MET252 Fluid Power**

This course covers hydraulic and pneumatic systems in the transfer and control of power. Introduction to the electrical, pneumatic, and hydraulic control of these power systems is included. Specific topics include pumps, actuators, conductors, system theory, system design, servomechanisms, and fluid logic. The laboratory component simulates the set-up and troubleshooting of hydraulic and pneumatic systems with various types of controls.

Prerequisites: MAT 181 and PHY 205

Credit: 3

Lecture: 2

Lab: 2

**MET264 Material Science**

This course covers the physical, chemical, and mechanical properties of metals, ceramics, plastics, and other engineering materials. Specific topics include ferrous metals, non-ferrous metals, heat treatment, common polymers, microstructure examination, composite systems, and corrosion. The laboratory component of the course instructs the student in a variety of standard methods for determining the properties of common materials.

Prerequisites: MAT 182

Credit: 4

Lecture: 3

Lab: 2

**MET271 Engineering Project**

In this course, students participate in small group design in various fields of engineering technology such as machine design, fluid mechanics, pneumatics, hydraulics, electro-mechanics, and structures. Projects are taken from inception through a complete design process, including cost analysis and a final design report.

Prerequisites: MET 125 and MET 241 and MET 242 and ELC 248

Co-requisite: MET 245

Credit: 3

Lecture: 1

Lab: 6

**MGT212 Principles of Management**

The course is an introduction to the management field presenting a systemized body of knowledge through the functions of planning, organizing, staffing, motivating, controlling and utilizing strategies to deal with internal and external environment forces. Prerequisites: BUS 101 and (((Test score or RDG 120) and (Test Score or ENG 121)) or Test Score or ENG 102 or concurrent or ENG 122).

Credit: 3

Lecture: 3

Lab: 0

**MGT218 Small Business Management**

This course presents practical approaches to managing in a small business environment including: selecting a type of business, obtaining and maintaining human resources, planning and organizing daily operations, developing operational requirements and locating sources, basic accounting and financial control, marketing considerations, business location and layout, and employee leadership. Prerequisites: (Test score or ENG 102 or higher) and (ENT 101 or MGT 212)

Credit: 3

Lecture: 3

Lab: 0

**MGT231 Human Resource Management**

The management of the human resources process focusing on recruitment, training and development, motivation, remuneration, and management-unions relationships and Human Resource (HR) policies is studied. Prerequisites: MGT 212 or HRI 112 or OMT 100 or FET 201.

Credit: 3

Lecture: 3

Lab: 0

**MGT248 Culinary Supervisory Development**

This course explores human resource management in the food service industry. Topics include legal issues, training, interviewing, and employee-employer relations.

Prerequisites: Test score or ENG 090 or ENG 091 or higher and Test Score or MAT012 or higher

Credit: 3

Lecture: 3

Lab: 0

**MIS220 Management Information Systems**

This course covers essential information systems concepts and practices required to manage a modern organization. Emphasis is placed on how information systems are causing changes in the organization and the operations of businesses and how information systems can increase the competitiveness of a business.  
Pre-requisite: CIS 107 and BUS 101 and MGT 212

Credit: 3

Lecture: 3

Lab: 1

**MKT212 Principles of Marketing**

This course surveys marketing principles with an emphasis on how they affect both consumer and industrial buying behaviors. Topics include marketing mix, pricing techniques under various market conditions, effect of supply and demand, channels of distribution, marketing research, brand policy, and government regulation of marketing. Pre-requisites: (((Test score or RDG 120) and (Test score or ENG 121 or higher)) or Test Score or ENG 101 or higher) and (Test score or MAT 015 or higher) and (BUS 101 or HRI 101 or ENT 101 or COM 140)

Credit: 3

Lecture: 3

Lab: 0

**MKT213 Problems in Marketing**

Principles mastered in MKT 212 Principles of Marketing applied to marketing situations and problems through the use of written and oral case study analysis and presentation. Prerequisites: MKT 212

Credit: 3

Lecture: 3

Lab: 0

**MKT214 Advertising and Promotion**

This course, an overview and application of advertising and promotion principles, introduces concepts of planning, advertising, research, artistic, creative, and psychological aspects to advertising as well as other promotional activities. Prerequisites: MKT 212

Credit: 3

Lecture: 3

Lab: 0

**MKT216 Retailing**

The student will examine changes in marketing and consumer demand for goods and services. Principles of retailing, its role in the economy, emerging trends, consumer behavior, customer satisfaction, merchandising and service strategies, and legal and ethical considerations are presented. Prerequisites: BUS 101 and MKT 212.

Credit: 3

Lecture: 3

Lab: 0

**MKT217 E-Marketing Fundamentals**

This course explores web marketing including internet marketing strategies and performance metrics, on-line design principles, and on-line customer relationships. Students will complete various hands-on projects related to building and managing a successful on-line marketing operation. Prerequisites: MKT 212 and CIS 107.

Credit: 3

Lecture: 3

Lab: 1

**MKT219 Sales & Sales Management**

An introduction to the basic principles of sales, including prospecting, identifying customer wants, needs, and buying motives; creating effective sales presentations and demonstrations; handling buyer resistance; closing the sale; providing after sales support; and managing a sales staff. Prerequisites: BUS 101 or ENT 101

Credit: 3

Lecture: 3

Lab: 0

**MKT291 Marketing Honors**

A survey of marketing principles with an emphasis on how they affect both consumer and industrial buying behaviors. Topics include marketing mix, pricing techniques under various market conditions, effect of supply and demand, channels of distribution, marketing research, brand policy, and government regulations of marketing. Students will apply the above concepts through a variety of prospects and/or computer exercises or simulations, with an appropriate project. Prerequisites: (Test score or ENG 102 or higher) and BUS 101 and ECO 111 and MAT 255

Credit: 3

Lecture: 3

Lab: 0

**MLT120 Hematology I**

This course covers normal maturation, morphology, function of blood cells, and hemostasis as well as qualitative and quantitative changes that occur. Topics include phlebotomy techniques and the practical application of instrumentation used in the hematology lab.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 4

Lecture: 3

Lab: 3

**MLT121 Hematology II**

This course covers routine and special hematology procedures, white blood cells maturation sequences, normal and abnormal morphology, associated diseases, coagulation theory, procedures, and practical applications of laboratory testing.

Prerequisites: MLT 120

Credit: 4

Lecture: 3

Lab: 3

**MLT130 Hematology for the Vet Tech**

Normal maturation, morphology, function of blood cells, and hemostasis as well as qualitative and quantitative changes that occur are included in this course. Venipuncture techniques and the practical application of instrumentation used in the veterinary hospital are covered in lab. Prerequisites: VET 101 and VET 102.

Credit: 4

Lecture: 3

Lab: 3

**MLT220 Clinical Chemistry I**

This course covers the qualitative and quantitative measurement of biochemical constituents in body fluids and their significance to disease. Topics include urinalysis, electrolyte and acid-base balance, carbohydrate, and non-protein nitrogen analysis. Laboratory exercises incorporate sample collection and preparation, safety, quality control, and instrumentation. Prerequisites: CHM 151 or CHM 111

Credit: 4

Lecture: 3

Lab: 3

**MLT221 Clinical Chemistry II**

This course covers the qualitative and quantitative measurement of biochemical constituents in body fluids and their significance to disease. Topics include the study of the liver and biliary system, enzymology, endocrinology, toxicology, and special testing. Laboratory exercises incorporate sample collection and preparation, safety, quality control and instrumentation. Prerequisites: MLT 220

Credit: 4

Lecture: 3

Lab: 3

**MLT250 Clinical Microbiology I**

This course covers microbial structure, metabolism, growth and control. Interactions between humans and microbes are also studied. In addition, the laboratory portion of this course covers isolation, identification and antibiotic studies of bacteria of clinical significance. Prerequisites: BIO 120 and BIO 121 and (CHM 110 or CHM 150)

Credit: 4

Lecture: 3

Lab: 3

**MLT251 Clinical Microbiology II**

This course covers isolation, identification, and antibiotic studies of bacteria of clinical significance. Basic techniques used to detect and identify fungi and parasites are introduced. Prerequisites: MLT 250

Credit: 4      Lecture: 3      Lab: 3

**MLT260 Immunology**

This course covers theory and application of immunity and the immune response such as antibody structure and interactions, the complement system, hypersensitivity reactions, and disorders of the immune response. Topics include routine immunology/serology procedures and interpretation of test results in relation to disease states. Student laboratory experiments provide experiences in fundamental serology/immunology techniques. Prerequisites: BIO 121

Credit: 4      Lecture: 3      Lab: 3

**MLT261 Blood Banking**

This course introduces immunohematology and covers the theory and practice of a wide variety of procedures used in donor selection, component preparation and use, and techniques used to detect antigen/antibody reactions during transfusions.

Prerequisites: MLT 260

Credit: 4      Lecture: 3      Lab: 3

**MLT291 Clinical Practicum**

This course provides an intense exposure to the clinical laboratory environment to familiarize the student with the scope of work, variety of tests, and automation found within each laboratory department.

Prerequisites: MLT 221 and MLT 251 and MLT 261

Credit: 7      Lecture: 0      Lab: 36

**NCC046 Grammar for College Comm**

Designed for the non-native speaker of English who has English language fluency, this course focuses on the complex grammatical structures of English and applies those structures to writing needed for college level studies. Prerequisite: Test score or completion of secondary school in the United States.

Credit: 7      Lecture: 7      Lab: 2

**NCN103 Shop Applications for Computer**

This is an introductory course in modern personal computing. The skills learned in this course are computing survival skills for the modern industrial work force. These skills will also assist the student in the CNC and Graphics CAD courses. The covered topics include: keyboarding skills, basic MS-DOS commands, file manipulation, file transfer, basic Windows and a brief introduction to word processing and spread sheets. Introduction to selected software used on local shop floors will be included in the course of study. Prerequisite: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181 or MAT 185.

Credit: 3      Lecture: 2      Lab: 2

**NCN104 Geometric Dimension/Tolerance**

This is an introductory course of Geometric Dimensioning and Tolerancing based on American Society of Mechanical Engineers (ASME)/American National Standards Institute (ANSI) Y14.5-2009. Topics include: Datums, General Tolerancing, Symbols and Terms, Location Tolerances, Material Condition Symbols, and Tolerances of Orientation and Runout. Pre-requisites: MET 123 and MET 131

Credit: 2      Lecture: 2      Lab: 0

#### NCN105      Machine Shop Practicum I

This course provides students the opportunity to refine skills learned in other classes and to develop basic skills required in modern machine shops. Emphasis is on safety for both the operator and the machine, as well as to other workers.

Pre-requisites: MET 123 and (EDD 131 or concurrent)

Credit: 4      Lecture: 2      Lab: 5

#### NCN106      Machine Shop Practicum II

This is a one-semester course designed to provide the student with the opportunity to refine skills learned in other classes and to develop more advanced skills that are prevalent in modern machine shops. Safety for the operator, machine and others will be closely monitored. Pre-requisites: MET 125 and NCN 105

Credit: 4      Lecture: 2      Lab: 5

#### NCS005      Basic Math Review Lecture

This review course is designed for the college student who needs a rapid review in basic numerical processes with whole numbers, fractions, decimals, ratios, proportions and percents and their applications. (Credits do not apply to graduation requirements.) Prerequisite: Test score

Credit: 1      Lecture: 1      Lab: 0

#### NCS012      Math Fundmnt'ls Review Lecture

This review course is designed for the college student who needs a rapid review in basic numerical processes with whole numbers, fractions, decimals, ratios, proportions, percents, geometry, measurement, signed numbers, solving equations and their applications. (Credits do not apply to graduation requirements.) Prerequisite: Test score

Credit: 1      Lecture: 1      Lab: 0

#### NCS051      Pre-Tech Writing Review

A rapid review course designed to provide reinforcement in writing skills before taking English Composition. Topics include sentence structure, usage, and essay development. (Credits do not apply to graduation requirements.) Prerequisite: Test score

Credit: 1      Lecture: 1      Lab: 0

#### NCS052      Pre Tech Reading Review

A rapid review course designed to provide reinforcement in vocabulary, comprehension skills, and reading flexibility before taking Critical Reading and Thinking. Prerequisite: Test score

Credit: 1      Lecture: 1      Lab: 0

#### NCS110      Biotechnolgy Summer Exp

This course will cover basic topics and techniques of biotechnology. Topics may include DNA and protein structure and separation, bacterial transformation, polymerase chain reaction, genetic diseases, forensics, and genetically modified organisms. Laboratory experiments will be an integral part of this course. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 1      Lecture: 1      Lab: 1

**NCS115      Topics in Health Care**

This course will investigate the subject of health care disparities in the United States. Topics may include historical biases, issues affecting access to health care, community health care attitudes, research on health care and treatments, and the effect of the genetic background of various ethnic groups on health. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 1      Lecture: 1      Lab: 0

**NCW040      Chemistry Mathematics**

This course is designed for students who will benefit from a refresher in the basic mathematics required for chemistry. The course emphasis includes algebraic techniques, logarithms, ratios and proportions. Prerequisites: Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 181 or MAT 185.

Credit: 1      Lecture: 1      Lab: 0

**NCW090      Intro to College Rhetoric**

A sixteen-hour course designed for students to complete the objectives outlined in Unit 4 of ENG 051, Pre-Tech Writing. Successful completion of this course enables students to move directly into Composition. Additional assistance is available in the Learning Assistance Center and Writing Center. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 1      Lecture: 1      Lab: 0

**NCW091      Intro to Textual Analysis**

A sixteen-hour course designed for students to complete the objectives outlined in Unit 4 of RDG 051, Pre-Tech Reading. Successful completion of this course enables students to move directly into Critical Reading and Thinking. Additional assistance is available in the Learning Assistance Center and Writing Center. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 1      Lecture: 1      Lab: 0

**NMT101      Patient Care for the NMT**

(syllabus in progress) Prerequisites: BIO 100 and MAT 181

Credit: 2      Lecture: 1      Lab: 1

**NMT115      Intro to NMT with Clinical Lab**

Introduction to quality control, radiation measurement, appropriate venipuncture techniques, application of infection control and safety procedures and computer applications for nuclear medicine. Clinical practicum will include 80 hours of IV training and nuclear medicine procedures. Prerequisites: NMT 101

Credit: 4      Lecture: 3      Lab: 5

**NMT121      Computers & Informatics**



Intro (syllabus in progress) Prerequisite: NMT 101

Credit: 2      Lecture: 2      Lab:

**NMT201      Nuclear Medicine I**

The study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results and pathology. Prerequisites: (Test score or ENG 102 or higher) and BIO 121 and NMT 222

Credit: 4      Lecture: 4      Lab: 0

**NMT202      Nuclear Medicine II**

The continued study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results, and pathology. Prerequisites: NMT 201 Co-requisites: NMT 211 and NMT 223 and NMT 296.

Credit: 3      Lecture: 3      Lab: 0

**NMT203      Nuclear Medicine III**

The study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results, pathology and radioassay procedures. Prerequisites: NMT 202 Co-requisites: NMT 212 and NMT 226 and NMT 297.

Credit: 2      Lecture: 2      Lab: 0

**NMT211      Scan Reading I**

In the review and interpretation of studies performed, the student is able to see directly how the work accomplished each day affects the overall patient diagnosis. Prerequisites: NMT 201 and NMT 224 and NMT 295. Co-requisites: NMT 202 and NMT 223 and NMT 296.

Credit: 1      Lecture: 0      Lab: 3

**NMT212      Scan Reading & PET/CT**

A continuation of NMT 211 Scan Reading & PET/CT. In the review and interpretation of studies performed, the student is able to see directly how the work accomplished each day affects the overall patient diagnosis. Prerequisites: NMT 211 Co-requisites: NMT 203 and NMT 226 and NMT 297

Credit: 1      Lecture: 0      Lab: 2

**NMT222      Nuclear Physics**

This course is an introduction to the atom and radioactivity. The major topics to be covered include atomic structure, decay processes and products, half-life, interaction of radiation with matter, and dosimetry. Prerequisites: NMT 101 and (PHY 112 or PHY 205)

Credit: 3      Lecture: 3      Lab: 0

**NMT223      Nuclear Med Instrumentation**

Through lecture and laboratory sessions, basic principles of radiation detection are applied. Imaging systems, radionuclide statistics, quality control, spect, and computer applications are stressed. Prerequisites: NMT 115 and NMT 295 Co-requisites: NMT 202 and NMT 211 and NMT 296

Credit: 4      Lecture: 3      Lab: 3

**NMT224      Radiopharmacy & Pharmacology**

An introduction to radiopharmaceutical synthesis, sterility testing, quality control, mechanisms of radionuclide localizations, and governmental regulations. Prerequisites: CHM 111 and NMT 115 Co-requisites: NMT 201 and NMT 295

Credit: 2                      Lecture: 2                      Lab: 0

**NMT226                      Radiobiology/Protection**

A study of the genetic and somatic effects resulting from radiation interactions by presenting principles of radiation therapy related to human injury. Students learn radiation hazards, evaluation methods, prevention, and decontamination. The course addresses government regulations related to patient, employee, general public, and environment. Prerequisites: NMT 222 and NMT 223 Co-requisites: NMT 203 and NMT 212 and NMT 297

Credit: 2                      Lecture: 2                      Lab: 0

**NMT295                      Clinical Internship I**

Provides initial training in the field of Nuclear Medicine Technology by rotating through each section of the affiliate hospitals. Administration, clinical procedures, equipment operations, and health physics will be mastered by supervised hands-on experience. Prerequisites: (Test score or ENG 102 or higher) and NMT 115 and NMT 222

Credit: 4                      Lecture: 0                      Lab: 18

**NMT296                      Clinical Internship II**

Provides intermediate training in the field of Nuclear Medicine Technology by rotating through each section of the affiliate hospitals. Administration, clinical procedures equipment operations, and health physics will be mastered by supervised hands-on experience. Prerequisites: NMT 295 Co-requisites: NMT 202 and NMT 211 and NMT 223

Credit: 5                      Lecture: 0                      Lab: 25

**NMT297                      Clinical Internship III w/CT**

Provides advanced training in the field of Nuclear Medicine Technology by rotating through each section of the affiliate hospitals. Administration, clinical procedures, equipment operations, and health physics will be mastered by supervised hands-on experience. Practicum evaluation of computer techniques and programs will be emphasized. Prerequisite: NMT 296 Co-requisites: NMT 203 and NMT 212 and NMT 226

Credit: 6                      Lecture: 0                      Lab: 32

**NRG100                      Exploring Eng & Sustainability**

This course provides an overview of sustainable design practices, energy systems, renewable energy technologies and their current applications. Emphasis will be placed on energy consumption, production, efficiency, and conservation. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 012 or higher)

Credit: 1                      Lecture: 1                      Lab: 1

**NRG101                      Intro to Energy Management**

This course is an introduction to the practice of energy management. Specific topics include career opportunities, working in teams, introduction to renewable and nonrenewable energy sources, energy end uses, unit conversion, basic energy physics, solving energy efficiency problems, and use of calculators and computers as tools for solving these problems. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 3                      Lecture: 2                      Lab: 2

**NRG108                      Safety Basics**

This course introduces students to the OSHA regulations relevant to the construction industry to ensure safety. Hands-on use of ladders, harnesses, and personal protective equipment (PPE) is taught.  
Pre-requisite: (Test scores or ENG 090 or ENG 091 or higher) and (Test score or MAT012 or higher)

Credit: 1

Lecture: 1

Lab: 1

**NRG109 Solar Construction & Safety**

This course investigates industry standards as applied to modern building construction. The student is introduced to the construction industry to ensure safety in the installation of solar photovoltaic and solar thermal systems. Hands-on use of tools, methods, and materials common to light construction are introduced.  
Prerequisites: NRG 108 or concurrent

Credit: 1

Lecture: 1

Lab: 1

**NRG110 Construction Standards**

This course will investigate industry standards as applied to modern building construction. The student will be introduced to OSHA regulations pertinent to the construction industry to assure safety in the installation of solar photovoltaic and solar thermal systems. Hands-on use of tools, methods and materials common to light construction will be introduced. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 015 or higher)

Credit: 2

Lecture: 1

Lab: 2

**NRG111 Res/Light Comm Energy Analysis**

This course explores how a building's design affects its energy use. Topics include building shell analysis and auditing, building services and utilities, air leak testing, the study and auditing of residential and light commercial energy use, lighting, and the use of diagnostic equipment to conduct detailed energy assessments following Building Performance Institute (BPI) standards. Home Energy Rating System (HERS) Index and Energy Star audit standards are used as resource material.  
Prerequisites: (Test score or MAT015 or higher) and NRG 101

Credit: 3

Lecture: 2

Lab: 2

**NRG123 Fundamentals of Control System**

This course introduces the concepts of building automated control systems. Topics include sensors, controlled variables, devices, controllers, and signals with an emphasis on design characteristics, sensor calibration, and maintenance of major components. Control drawings, schematics, and process and instrumentation diagrams are also introduced.

Prerequisites: NRG 140 and PHY 120 and ELC 125 or concurrent

Credit: 3

Lecture: 2

Lab: 3

**NRG124 Energy Efficient Methods**

This course covers the physics and calculations used in energy analyses including the basics of alternating current (AC) and direct current (DC) power, electromagnetism, motor operation, single- and three-phase power calculations, as well as inductive and capacitive reactance as it applies to power factor. Topics include interpolation and extrapolation methodology used in energy calculations. Prerequisites: NRG 101 and OAT 152 and MAT 140.

Credit: 3

Lecture: 2

Lab: 2

**NRG126 Fundamentals of HVAC systems**

In this in-depth course on HVAC systems, students identify and analyze the energy consumption of the various HVAC equipment and systems used in commercial buildings; learn the fundamentals of psychrometrics, fan laws, and air/water properties; and interpret fan tables and pump curves for energy calculations. Building heating and cooling load calculations are emphasized.

Prerequisites: NRG 101 and MAT 140 and PHY 120

Credit: 4

Lecture: 3

Lab: 3

#### NRG127 HVAC Energy Systems II

This course covers the physics and calculations used in energy analyses, including thermodynamics, fluid flow mechanics, power factor, motor operation, and single- and three-phase power calculations. Topics include interpolation and extrapolation methodology used in energy calculations, weather data manipulations, and energy use analysis. Lab activities include data logging and analyzing building HVAC and/or electrical systems.

Prerequisites: NRG 126

Credit: 4

Lecture: 3

Lab: 3

#### NRG140 Commercial Building Systems

This course introduces plumbing, electrical, lighting, life safety, and HVAC systems in commercial buildings. Emphasis is placed on the performance characteristics and maintenance requirements of these systems as they drive control requirements. Various sequences of operation and maintenance procedures are covered.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test score or MAT015 or higher)

Credit: 3

Lecture: 2

Lab: 2

#### NRG142 Energy Accounting

This course will cover several energy accounting techniques and procedures. Students will analyze utility bills and rate schedules as well as seasonal and annual trends of energy use. Benchmarking, base lining, weather adjustment, and time of use utility rates will also be covered. Prerequisites: NRG 101 and MAT 140 and OAT 152

Credit: 2

Lecture: 2

Lab: 0

#### NRG154 Alternative Energy Tech.

This course includes a survey of energy sources such as geothermal, wind, low head hydro, solar, and biomass. Environmental, social, and economic advantages of each source are assessed.

Pre-requisites: NRG 101 and OAT 152 and (Test scores or MAT015 or higher)

Credit: 3

Lecture: 2

Lab: 2

#### NRG200 Solar Energy Systems

Solar Energy Systems is a course that details the resources and movement of the sun. Students will determine the sun hours for a given location and time. Students will use tools and associated software to properly perform a complete site analysis. Prerequisite: NRG 154

Credit: 2

Lecture: 2

Lab: 1

#### NRG201 Photovoltaic Systems I

This course covers the fundamentals of photovoltaic (PV) modules, including how a solar cell converts sunlight into electricity. The system components of a PV system (including the role of modules, inverters, and charge controllers) are discussed. Students size PV systems for a variety of uses.

Prerequisites: NRG 154 and (ELC 125 or concurrent) and (Test scores or MAT153 or higher)

Credit: 4

Lecture: 3

Lab: 2

#### NRG202 Photovoltaic Systems II

This course covers the design of both the electrical and mechanical systems required in photovoltaic (PV) systems. Secondary components required in PV systems and how all parts are integrated into the overall system are explored. Troubleshooting typical problems that can occur when installing PV systems is also discussed.

Pre-requisite: NRG 109 and NRG 201 and ELC 125 and NRG 205 or concurrent and ENG 102

Credit: 4

Lecture: 3

Lab: 2

#### NRG203 Cncpts of Solar Thermal Design

This course introduces the concepts of solar heating design, installation, and operation. Design characteristics, components, operation, and maintenance of major components are covered. Site evaluation, codes and regulations, system selection, and planning are emphasized.

Prerequisites: (NRG 109 or NRG 110) and NRG 201

Credit: 3

Lecture: 2

Lab: 2

#### NRG204 Work Exp:Renwble Energy Solar

This course provides students with practical experience in the renewable solar energy field.

Prerequisites: NRG 109 and NRG 201

Credit: 3

Lecture:

Lab: 9

#### NRG205 Solar Policy and Financing

Students in this course explore advanced concepts of solar policy and financing, including power purchase agreements, state subsidies, federal subsidies, and tax benefits of solar power systems.

Prerequisite: NRG 201 and NRG 250

Credit: 3

Lecture: 2

Lab: 2

#### NRG206 Co-op Ed: Energy Management

The Energy Management Cooperative Education course provides practical field experience in the energy field.

Prerequisite: NRG 124

Credit: 3

Lecture: 0

Lab: 9

#### NRG207 NABCEP Solar Entry Level Prep

This course is a review for the North American Board of Certified Energy Practitioners (NABCEP) Entry Level Exam.

Prerequisites: NRG 110 and NRG 201

Credit: 1

Lecture: 1

Lab:

#### NRG209 BAS Co-operative Education

This course provides the student with practical experience in the building automation system field. Prerequisites: NRG 123 and ACR 121

Credit: 3                      Lecture: 0                      Lab: 9

**NRG214                      Capstone in Energy Use/Anal.**

This course applies skills learned throughout the energy management program to a commercial building energy audit. The student will present the results in a formal report and presentation. In addition, the course includes a review for the Certified Energy Manager exam.

Pre-requisites: ACR 222 and (AET 111 or AET 123) and (Eng 102 or concurrent) and NRG 124 and NRG 142 and NRG 154 and (NRG 223 or concurrent) and NRG 233 and NRG 241.

Credit: 6                      Lecture: 4                      Lab: 5

**NRG223                      Energy Control Strategies**

This course includes building system control theory, sequences, and controlled device selection criteria. The effects on system performance are analyzed. An emphasis is placed on identifying and understanding control strategies related to heating, ventilation, and air conditioning (HVAC) equipment and components. Modifications in control sequence of operations are evaluated and calculations are employed to estimate energy savings. Prerequisites: ACR 222 and NRG 124

Credit: 3                      Lecture: 2                      Lab: 2

**NRG226                      Bldg Mech/Elec Systms Analysis**

This course covers the physics and calculations used in energy analyses, including thermodynamics, fluid flow mechanics, power factor, motor operation, and single- and three-phase power calculations. Topics include interpolation and extrapolation methodology used in energy calculations, weather data manipulations, and energy use analysis. Lab activities include data logging and analyzing building HVAC and/or electrical systems.

Pre-requisites: NRG 126

Credit: 4                      Lecture: 3                      Lab: 2

**NRG233                      Lighting Fundmt & Applications**

This course examines fundamental lighting concepts and their utilization and applications within the built environment. Students identify and evaluate the various quantitative and qualitative characteristics of light sources and luminaires, as well as perform various types of illuminance calculations. Student teams will develop lighting audits with potential energy conservation methods from various lighting measures. Prerequisites: (PHY 111 or PHY 205) and (Test scores or MAT 140 or MAT 181 or MAT 185)

Credit: 4                      Lecture: 3                      Lab: 2

**NRG241                      Energy Investment Analysis**

A student in this course will learn to construct spreadsheets to analyze energy investment alternatives. Topics include: interest, simple payback and life-cycle analysis, time value of money, cash flow equivalence, cost-benefit analysis, effects of tax credits, depreciation, inflation and/or escalating fuel costs on energy investments, and cost estimating procedures. Prerequisites: NRG 111 and OAT 152

Credit: 2                      Lecture: 2                      Lab: 1

**NRG245                      Building Systems Integration**

In this course, students apply the fundamentals of controls and networking to integrate building systems (such as access, lighting, environmental control, and fire alarm management) into a functional building operating system. Emphasis is placed on alarm reporting and remote energy management capabilities. System and building commissioning processes are also covered.

Pre-requisites: NRG 123 and CEN 126

Credit: 3

Lecture: 2

Lab: 2

#### NRG250 Energy Accounting/Invest Analysis

This course covers energy accounting and investment analysis techniques and procedures, including benchmarking, base lining, weather adjustment, and time-of-use utility rates. Energy accounting techniques form the basis of a life cycle cost analysis, which includes factors specific to the energy field.

Prerequisite: NRG 111 and OAT 152 and (Test Scores or ENG 101 or higher)

Credit: 4

Lecture: 3

Lab: 2

#### NRG253 BAS Capstone

In this course, students assemble and program a control system for a building central station variable volume air handler and associated components to be integrated into the construction of other building systems. Emphasis is placed on safety, field documentation, project commissioning, and measurement and verification procedures.

Prerequisites: ACR 222 and NRG 245 and NRG 223 or concurrent

Credit: 3

Lecture: 2

Lab: 4

#### NUR101 NLN-RN PAX Preparation Course

This course is designed to prepare prospective nursing students to take the National League for Nursing Pre-Admission Exam (NLN-RN PAX), which is a requirement for the application process of the Associate Degree Nursing Program.

Pre-requisite: (Test score or ENG 090 or ENG 091 or higher) and (Test score or MAT 012 or higher)

Credit: 1

Lecture: 1

Lab: 0

#### NUR102 NLN-PN PAX Preparation Course

This course is designed to assist prospective nursing students to be better prepared to take the National League for Nursing Pre-Admission Exam (NLN-PAX). The NLN-PAX is required as part of the application process for the Associate Degree Nursing Program at the Owens, Terry and Stanton campuses of Delaware Tech. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

Credit: 1

Lecture: 1

Lab:

#### NUR111 Cultural Competency & Health

In this study abroad course, students are introduced to cultural theories and concepts that influence health beliefs and practices. The course is designed to offer healthcare providers tools for effective delivery of culturally competent care. Pre-requisite: (Test score or ENG 101 or higher)

Credit: 3

Lecture: 3

Lab: 0

#### NUR114 Pharmacology for Nurses

This elective course is designed to provide nursing students with additional knowledge of pharmacology. This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Drug prototypes are used to examine major drug classifications highlighting therapeutic use, adverse reactions, precautions, and contraindications, and health teaching. Legal, ethical, and contemporary issues are presented as they relate to nursing practice. Prerequisites: BIO 120 and BIO 121.

Credit: 3

Lecture: 3

Lab: 0

**NUR131 Fundamentals of Nursing**

This course introduces the student to the role of the practical nurse as a member of the multi-disciplinary healthcare team. Emphasis is placed on integrating the nursing process and theoretical concepts into the performance of fundamental skills in the healthcare setting. This course also explores the legal-ethical standards of nursing practice as they relate to the practical nurse.

Prerequisites:

(BIO 110 or (BIO 120 and BIO 121)) and (PSY 127 or concurrent) and MAT 129 and (Test score or ENG 101 or higher)

Credit: 4

Lecture: 2

Lab: 6

**NUR132 Medical-Surgical Nursing I**

This course defines the role of the practical nurse as a provider of care and member within the discipline of nursing. Emphasis is placed on the systematic attainment of theoretical knowledge using the nursing process and beginning critical thinking skills needed for beginning medical-surgical clinical practice. Concepts of promotion, maintenance, and restoration of health in caring for adults in the acute care and community settings are introduced.

Prerequisites: PSY 127 and NUR 131

Credit: 6

Lecture: 3

Lab: 9

**NUR133 Medical-Surgical Nursing II**

This course completes the systematic approach to the delivery of medical-surgical theoretical knowledge. The increased complexity of critical thinking in the nursing process prepares the practical nursing student for entry into a medical-surgical nursing practice when caring for adults in the acute care and community settings.

Prerequisites: NUR 131 and PSY 127

Credit: 6

Lecture: 3

Lab: 9

**NUR134 Essentials-Mental Hlth Nursing**

This course explores the role of the entry-level practical nurse as a provider of care and member within the discipline of nursing in the mental health setting by introducing theoretical knowledge needed for beginning clinical practice. The use of the nursing process promotes critical thinking in the care of clients with alterations in mental health.

Prerequisites: (NUR 131 or concurrent) and (PSY 127 or concurrent)

Credit: 2

Lecture: 1

Lab: 3

**NUR135 Essents Maternal/Chld Nursing**

This course explores the role of the entry-level practical nurse as a provider of care and member within the discipline of nursing in the maternal/child setting by introducing theoretical knowledge needed for beginning clinical practice. The use of the nursing process promotes critical thinking in the care of childbearing families and children across the lifespan.

Prerequisites: NUR 131 and PSY 127

Credit: 4

Lecture: 2

Lab: 6



**NUR137            Essentials Legal-Ethical Issues**

This course explores the legal-ethical standards of nursing practice as it relates to the practical nurse. Emphasis is placed on development of interpersonal skills used in the workplace. Focus is placed on preparation for employment. Prerequisites: (BIO 110 or (BIO 120 and BIO 121)) and PSY 127 or concurrent and MAT 129 and ENG 101.

Credit: 1            Lecture: 1            Lab: 0

**NUR170            Nursing Concepts I**

This entry-level nursing course introduces concepts integral to the individual, nursing, and healthcare domains. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, and professionalism within a variety of healthcare settings. Prerequisites: BIO 120 and (MAT 119 or MAT 129)

Credit: 8            Lecture: 5            Lab: 9

**NUR171            Nursing Care of Adults I**

This course introduces the student to the role of the nurse as a member of the multi-disciplinary health care team. Emphasis is placed on theoretical concepts and the performance of fundamental skills. Critical thinking is introduced using the nursing process in the care of adults in long-term care settings. Prerequisites: (Test score or ENG 102 or higher) and (BIO 110 or (BIO 120 and BIO 121)) and PSY 127

Credit: 4            Lecture: 2            Lab: 6

**NUR172            Nursing Care of Adults II**

This course defines the role of the nurse as a provider of care, and member within the discipline of nursing. Emphasis is placed on theoretical knowledge needed for beginning clinical competence. Through use of critical thinking and the nursing process, focus is placed on concepts of promotion, maintenance, and restoration of health when caring for adults in acute care and community settings. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and NUR 171.

Credit: 6            Lecture: 3            Lab: 9

**NUR173            Nursing Care of Adults III**

This course enables a demonstration of an understanding of the role of the nurse in entry-level practice as a provider of care and member within the discipline of nursing. There is continued emphasis placed on theoretical knowledge needed for clinical competence. By building on critical thinking and the nursing process, focus is placed on the concepts of promotion, maintenance, and restoration of health when caring for adults in the acute care and community settings. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and MAT 119 and NUR 172.

Credit: 6            Lecture: 3            Lab: 9

**NUR174            Mental Health Nursing**

This course enables the demonstration of an understanding of the role of the entry-level nurse as a provider of care, and member within the discipline of nursing in mental health settings. Introduces theoretical knowledge needed for beginning clinical competence. By continuing to build on critical thinking and the nursing process, focus is placed on the concepts of promotion, maintenance, and restoration of health when caring for clients with alterations in mental health. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and MAT 119 and NUR 172.

Credit: 2            Lecture: 1            Lab: 3

**NUR175            Maternal/Newborn Nursing I**

This course enables demonstration of an understanding of the role of the entry-level nurse as a provider of care and member within the discipline of nursing in the maternal-newborn setting. Introduces theoretical knowledge needed for beginning clinical competence. By continuing to build on critical thinking and the nursing process, focus is placed on promotion, maintenance, and restoration of health for the care of childbearing families and women across the reproductive life span. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and MAT 119 and NUR 172.

**Credit: 2      Lecture: 1      Lab: 3**

**NUR176      Nursing Care of Children I**

This course enables demonstration of an understanding of the role of the entry-level nurse as a provider of care and member within the discipline of nursing in pediatric settings. Emphasis is placed on theoretical knowledge needed for beginning clinical competence. By continuing to build on critical thinking and the nursing process, focus is placed on the concepts of promotion, maintenance, and restoration of health when caring for children and their families. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and MAT 119 and NUR 172.

**Credit: 2      Lecture: 1      Lab: 3**

**NUR177      Nursing Perspectives I**

This course enables demonstration of an understanding of the role of the entry-level nurse as it relates to the legal and ethical standards of nursing practice. Emphasis is placed on development of interpersonal skills used in the workplace. Focus is placed on preparation for employment. Prerequisites: (BIO 110 or BIO 120) and BIO 121 and NUR 172.

**Credit: 1      Lecture: 1      Lab: 0**

**NUR178      Transition:Professional Nursing**

This course assesses and provides theoretical and clinical knowledge, as well as curriculum awareness, for the transitioning Licensed Practical Nurse into the Associate Degree Nursing program. Emphasis is placed on establishing a baseline of knowledge and clinical competency that assists the returning student in his or her goal to be a professional nurse. Prerequisites: (Test score or ENG 102 or higher) and ((NUR 173 and NUR 174 and NUR 175 and NUR 176 and NUR 177) or NUR 199) and BIO 120 and BIO 121 and PSY 127 and MAT 119

**Credit: 2      Lecture: 2      Lab: 0**

**NUR179      Paramedic Bridge Course**

This course assesses and provides theoretical and clinical knowledge, as well as curriculum awareness, for the transitioning certified paramedic into the Associate Degree Nursing program. Emphasis is placed on establishing a baseline of knowledge and clinical competency with diverse populations in a variety of settings that assists the paramedic in his or her goal to be a professional nurse. Prerequisites: (Test score or ENG 102 or higher) and NUR 198 and BIO 120 and BIO 121 and BIO 125 and MAT 119 and PSY 127

**Credit: 10      Lecture: 8      Lab: 2**

**NUR180      Nursing Concepts II**

This nursing course is designed to further develop the nurse's role as an entry-level healthcare provider. Concepts integral to the individual, nursing, and healthcare domains build on prior knowledge, and are demonstrated in a healthcare environment. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, and professionalism in inpatient healthcare settings. Prerequisites: BIO 121 and NUR 170

**Credit: 4      Lecture: 2      Lab: 6**

**NUR181      Mental Health Concepts**

This mental health nursing course is designed to further develop the nurse's role as an entry-level healthcare provider. New concepts are introduced relative to mental health. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, and professionalism within a variety of mental health settings. Prerequisites: BIO 121 and NUR 170

**Credit: 4      Lecture: 2      Lab: 6**

**NUR190      Nursing Transition Course**

This course provides theoretical and clinical knowledge to transition licensed practical or vocational nurses (LPN/LVN) and certified paramedics into the concept-based Associate of Applied Science in Nursing Degree program. Emphasis is placed on establishing core concepts, clinical competency with diverse populations, and professionalism in a variety of settings. Prerequisites: NUR 199 and BIO 120 and BIO 121 and (PSY 127 or concurrent) and (MAT 119 or MAT 129)

Credit: 6

Lecture: 4

Lab: 6

**NUR200 Nursing Concepts III**

This nursing course is designed to further develop the nurse's role as an entry level healthcare provider. Concepts integral to the individual, nursing, and healthcare domains build on prior knowledge and are demonstrated through increasingly complex exemplars. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, and professionalism in the highly complex healthcare setting. Prerequisites: PSY 127 and ((NUR 180 and NUR 181) or NUR 190) and (Test Scores or ENG 101 or higher)

Credit: 4

Lecture: 2

Lab: 6

**NUR201 Maternal-Child Health Concepts**

This maternal-child health nursing course is designed to further develop nurse's role as an entry level healthcare provider. Concepts integral to the individual, nursing, and healthcare domains build on prior knowledge and are demonstrated through increasingly complex exemplars. New concepts are introduced relative to maternal-child health. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, and professionalism in a variety of maternal-child settings. Prerequisites: PSY 127 and ((NUR 180 and NUR 181) or NUR 190) and (Test Score or ENG 101 or higher)

Credit: 4

Lecture: 2

Lab: 6

**NUR210 Nursing Concepts IV**

This nursing course is designed to further develop the nurse's role as an entry-level healthcare provider and transition to practice as a professional nurse. Concepts integral to the individual, nursing, and healthcare domains build on prior knowledge and are demonstrated through increasingly complex exemplars. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, professionalism, and management in the highly complex healthcare setting. Prerequisites: NUR 200 and NUR 201

Credit: 4

Lecture: 2

Lab: 6

**NUR211 Community & Profess Concepts**

This community and professional nursing course is designed to further develop the nurse's role as an entry-level healthcare provider and transition to practice as a professional nurse. Concepts integral to the individual, nursing, and healthcare domains build on prior knowledge and are demonstrated through increasingly complex exemplars. Clinical experiences emphasize the safe, caring, competent performance of nursing practice, communication, professionalism, and management in a variety of community healthcare settings. Prerequisites: NUR 200 and NUR 201

Credit: 4

Lecture: 2

Lab: 6

**NUR221 Nursing Care of Adults I**

This course develops the concepts and principles of nursing as it applies to the care of individuals with orthopedic and sensory conditions, complex nutritional problems, and imbalances of homeostasis. A clinical focus on teaching to empower patients taking into account individual diversity is emphasized. Prerequisites: (Test score or ENG 102 or higher) and BIO 121 and PSY 127 and MAT 119 and ((NUR 121 and NUR 122 and NUR 123) or (NUR 123 and NUR 124 and NUR 125 and NUR 126) or (NUR 199))

Credit: 3

Lecture: 2

Lab: 3

**NUR222 Nursing Care of Adults II**

This course develops the concepts and principles of nursing as it applies to the care of individuals with cardiovascular, respiratory, immunological, and neurological problems. A clinical focus on professionalism, encompassing the nurse's role in interdisciplinary collaboration, is emphasized. Prerequisites: (Test score or ENG 102 or higher) and PSY 127 and BIO 121 and MAT 119 and ((NUR 121 and NUR 122 and NUR 123) or (NUR 123 and NUR 124 and NUR 125 and NUR 126) or (NUR 199))

Credit: 3

Lecture: 2

Lab: 3

**NUR223 Nursing Care of Adults III**

This course develops the concepts and principles of nursing as it applies to the care of individuals with hematological and renal disorders and cancer. Content is also provided regarding nursing's role within the dynamic healthcare system. A clinical focus on the roles of the nurse as manager, care coordinator, advocate, collaborator, and researcher is emphasized. Prerequisites: (Test score or ENG 102 or higher) and BIO 121 and PSY 127 and MAT 119 and ((NUR 121 and NUR 122 and NUR 123) or (NUR 123 and NUR 124 and NUR 125 and NUR 126) or (NUR 199))

Credit: 3

Lecture: 2

Lab: 3

**NUR224 Maternal Newborn Nursing**

This course develops the concepts and principles of nursing as it applies to the care of maternal-newborn patients and families. The integration of basic genetic concepts and principles develops the importance of genetics in nursing theory and clinical practice. Prerequisites: (Test score or ENG 102 or higher) and and BIO 121 and PSY 127 and MAT 119 and ((NUR 121 and NUR 122 and NUR 123) or (NUR 123 and NUR 124 and NUR 125 and NUR 126) or (NUR 199))

Credit: 3

Lecture: 2

Lab: 3

**NUR225 Pediatric Nursing**

This course develops the concepts and principles of nursing as it applies to the care of pediatric patients and families. The clinical focus is in the acute care setting and incorporates health promotion experiences. Prerequisites: (Test score or ENG 102 or higher) and and BIO 121 and PSY 127 and MAT 119 and and ((NUR 121 and NUR 123 and NUR 122) or (NUR 123 and NUR 124 and NUR 125 and NUR126) or (NUR 199))

Credit: 3

Lecture: 2

Lab: 3

**NUR241 Nursing Care III-A**

The purpose of this Adult-Health course is to expand the nurse's role as provider of care, manager of care, and member of the discipline of nursing. Concepts integral to health, illness and professional nursing practice will be included. Learning experiences are geared towards student- centered, active-learning strategies which enhance the student's ability to apply theory to practice. Clinical experiences focus on caring for adults in a variety of medical-surgical settings where the student functions as a member of the health-care team. Prerequisites: (BIO 125 or BIO 250) and NUR 143 and NUR 144

Credit: 5

Lecture: 2

Lab: 9

**NUR242 Nursing Care III-B**

The purpose of this Mental Health/Psychiatric course is to expand the nurse's role as provider of care, manager of care and member of the discipline of nursing. Concepts integral to health, illness and professional nursing practice will be included. Learning experiences are geared towards student- centered, active-learning strategies which enhance the student's ability to apply theory to practice. Clinical experiences stress therapeutic communication techniques and effective individual interactions in various age groups in a variety of inpatient and community mental health settings. Prerequisites: (Bio 125 or BIO 250) and NUR 143 and NUR 144

Credit: 5

Lecture: 2

Lab: 9

**NUR243 Nursing Care IV-A**

The emphasis of this adult-health course is to expand the nurse's role as an independent provider of care and manager of care for a group of clients. Students integrate theoretical knowledge, nursing process, and critical thinking to demonstrate safe clinical competence. Learning experiences are geared towards student-centered, active-learning strategies which provide opportunities for students to apply theory to practice. Clinical experiences focus on caring for adults in a variety of complex medical-surgical settings where the student functions as a member of the health-care team. Prerequisites: SOC 111 and NUR 241 and NUR 242

Credit: 5

Lecture: 2

Lab: 9

**NUR244 Nursing Care IV-B**

The emphasis of this community health course is to expand the nurse's role as an independent provider of care and manager of care for a group of clients. Students integrate theoretical knowledge, nursing process, and critical thinking to demonstrate safe clinical competence. Learning experiences are geared towards student-centered, active-learning strategies which provide opportunities for students to apply theory to practice. Clinical experiences focus on caring for individuals and families throughout the lifespan within a variety of community based healthcare settings. Prerequisites: SOC 111 and NUR 241 and NUR 242

Credit: 5

Lecture: 2

Lab: 9

**NUR271 Nursing Care of Adults IV**

This course examines the role of the professional nurse as a provider of care, manager of care and member within the discipline of nursing. Emphasis is on advanced theoretical knowledge required for clinical competence. Concepts of community health nursing are introduced. Synthesis of critical thinking and the nursing process is applied for the promotion, maintenance, and restoration of health when caring for adults in a variety of acute care and community settings. Prerequisites: (Test score or ENG 102 or higher) and ((NUR 173 and NUR 174 and NUR 175 and NUR 176 and NUR 177) or NUR 199) and (NUR 178 and BIO 120 and BIO 121 and MAT 119 and PSY 127)

Credit: 5

Lecture: 2

Lab: 9

**NUR272 Nursing Care of Adults V**

This course interprets the role of the professional nurse as a provider of care, manager of care and member within the discipline of nursing. Emphasis is on advanced theoretical knowledge required for clinical competence. Community health nursing is integrated. Critical thinking and the nursing process are used in the evaluation of the effectiveness of the promotion, maintenance, and restoration of health when caring for adults in a variety of acute care and community settings. Prerequisites: NUR 271

Credit: 5

Lecture: 2

Lab: 9

**NUR274 Community Mental Hlth Nursing**

This course interprets the role of the professional nurse as a provider of care, manager of care and member within the discipline of nursing in the community mental health setting. Emphasis is placed on advanced theoretical knowledge required for clinical competence. Critical thinking and the nursing process are used in the evaluation of the promotion, maintenance, and restoration of health when caring for the client with alterations in mental health. Prerequisites: NUR 271

Credit: 3

Lecture: 1

Lab: 6

**NUR275 Maternal/Newborn Nursing II**

This course examines the role of the professional nurse as a provider of care, manager of care and member within the discipline of nursing in the maternal-newborn setting. Emphasis is placed on advanced theoretical knowledge required for clinical competence. Concepts of community health are introduced. Synthesis of critical thinking and the nursing process is applied in the promotion, maintenance, and restoration of health when caring for childbearing families and women across the reproductive life span. Prerequisites: (Test score or ENG 102 or higher) and ((NUR 173 and NUR 174 and NUR 175 and NUR 176 and NUR 177) or NUR 199) and (NUR 178 and BIO 120 and BIO 121 and (MAT 119 or MAT 129) and PSY 127)

Credit: 3

Lecture: 1

Lab: 6

**NUR276 Nursing Care of Children II**

This course interprets the role of the professional nurse as a provider of care, manager of care and member within the discipline of nursing in pediatric settings. Emphasis is placed on advanced theoretical knowledge required for clinical competence. Community health nursing is integrated. Critical thinking and the nursing process are used in the evaluation of the effectiveness of the promotion, maintenance, and restoration of health when caring for children and their families. Prerequisites: NUR 271 and NUR 275.

Credit: 3

Lecture: 1

Lab: 6

**OAT110 Basic Keyboarding**

This course introduces Microsoft Word, the Internet, master keyboarding skills, basic web literacy, and email. Prerequisite: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT005 or higher)

Credit: 2

Lecture: 2

Lab: 1

**OAT121 Keyboarding**

This course develops touch control of the keyboard and proper keyboarding techniques and builds basic speed and accuracy. Students use word processing software to format letters, reports, tables, memos, and related business communications.

Prerequisite: (Test scores ENG 006 or ENG 007 or higher) and (Test scores or MAT005 or higher)

Credit: 4

Lecture: 3

Lab: 2

**OAT122 Keyboarding Applications**

This course continues the development of keyboarding skills, speed-building, and accuracy. Students perform advanced word processing skills in the formatting of various types of business correspondence, reports, tables and electronic forms. Prerequisite: OAT 121

Credit: 4

Lecture: 3

Lab: 2

**OAT151 Access Level I**

This course will teach the fundamentals of Microsoft Access. Prerequisites: None

Credit: 3

Lecture: 2

Lab: 2

**OAT152 Excel Level I**

This course will teach the fundamentals of Microsoft Excel. Upon completion of this course, participants may be eligible to take the Microsoft Office Specialist Core level certification test in Excel. Prerequisites: None

Credit: 3

Lecture: 2

Lab: 2

**OAT157 Word Level I**

This course covers the fundamental concepts of word processing skills necessary to be successful with an organization. Students build technical knowledge and reinforce problem-solving abilities through project-based learning.

Pre-requisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT005 or higher)

**Credit: 3      Lecture: 2      Lab: 2**

**OAT158      Word Level II**

This course covers advanced concepts of word processing skills necessary to be successful within an organization. Students demonstrate technical knowledge and reinforce problem-solving abilities through simulated project-based learning.

Prerequisite: OAT 157

**Credit: 3      Lecture: 2      Lab: 2**

**OAT159      PowerPoint**

This course covers comprehensive presentation application and delivery methods necessary to be successful within an organization.

Prerequisite: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT005 or higher)

**Credit: 3      Lecture: 2      Lab: 2**

**OAT240      Integrated Business Applicatns**

This capstone course is designed to give the student an opportunity to demonstrate in-depth knowledge of word processing, data bases, spreadsheets and graphics, presentation software, and other methods of multimedia communication.

Prerequisites: OAT 151 and OAT 152 and OAT 157 and OAT 159

**Credit: 3      Lecture: 2      Lab: 2**

**OAT242      Desktop Publishing**

This course covers desktop publishing software and concepts to produce professional business publications.

Prerequisite: (Test scores or ENG 006 or ENG 007 or higher)

**Credit: 4      Lecture: 3      Lab: 2**

**OAT281      Legal Research and Writing II**

This course builds upon the competencies acquired in OAT 280 Legal Research & Writing. Students will gain additional experience and skill in critical analysis of legal issues, locating and evaluating appropriate legal authority, and the application of such authority to the resolution of hypothetical factual situations. Emphasis will also be placed on proper legal writing and citation. Prerequisite: OAT 280

**Credit: 3      Lecture: 3      Lab: 0**

**OTA110      Intro To Occupational Therapy**

This course provides an overview of the occupational therapy profession, including the history and philosophy of occupational therapy, the Occupational Therapy Practice Framework (OTPF), and the roles and responsibilities of the occupational therapy assistant. Prerequisites: BIO 120 Co-Requisite: OTA 120

**Credit: 3      Lecture: 3      Lab: 1**

**OTA120      Activity Analysis**

This course introduces the importance of purposeful activities. Emphasis is placed on activity analysis, incorporating the Occupational Therapy Practice Framework (OTPF). Pre-requisites: BIO 120 Co-Requisites: OTA 110

**Credit: 2      Lecture: 1      Lab: 2**

**OTA130      Kinesiology for the OTA**

This lecture/laboratory course is the study of joint motion and muscle function. Students learn to analyze functional movement involved in occupational performance. Pre-requisites: OTA 120 and BIO 123

**Credit: 2      Lecture: 1      Lab: 2**

**OTA220      Pediatric Health Conditions**

This course provides information related to the study of medical conditions, diseases, and dysfunctions of individuals birth to 21 years of age. Pre-requisites: OTA 110 and BIO 121 and PSY 127

**Credit: 3      Lecture: 3      Lab: 0**

**OTA221      Adult & Geriatric Health Cond**

This course provides information related to the study of the medical conditions, diseases, and dysfunctions of the adult and geriatric populations. Pre-requisite: OTA 220 Co-Requisites: OTA 223 and OTA 224

**Credit: 3      Lecture: 3      Lab: 0**

**OTA222      Pediatric Intervention**

This course introduces evaluation and application of occupational therapy techniques in treating the pediatric and young adult populations and individuals with developmental disabilities across the lifespan. Pre-requisites: BIO 121 and OTA 110 and OTA 120

**Credit: 4      Lecture: 3      Lab: 3**

**OTA223      Adult & Geriatric Intervention**

This course introduces evaluation and application of occupational therapy techniques in treating the adult and geriatric populations.

Prerequisities: MAT 135, OTA 130 and OTA 222 Co-requisites: OTA 221 and OTA 224

**Credit: 4      Lecture: 3      Lab: 3**

**OTA224      Psychosocial Intervention**

This course introduces the theory and application of occupational therapy techniques with a focus on mental health and well-being. Skills are developed to facilitate group treatment in a variety of clinical settings. Prerequisites: OTA 120 and PSY 223 Co-requisites: OTA 221 and OTA 223

**Credit: 4      Lecture: 4      Lab: 1**

**OTA225      Clinical Fieldwork Level I-A**

This fieldwork experience provides exposure to pediatric and young adult populations and individuals with developmental disabilities across the lifespan served by occupational therapy. A seminar class provides additional exposure to roles and responsibilities of the certified occupational therapy assistant (COTA) and issues that impact service delivery across the lifespan. Students function as participating observers in the clinical setting with emphasis on the development of their professional behaviors. Pre-requisites: OTA 110

**Credit: 2      Lecture: 1      Lab: 5**

**OTA226      Clinical Fieldwork Level I-B**



This adult and geriatric fieldwork experience exposes students to individuals served by occupational therapy. Students function as participating observers in the clinical setting with emphasis on continued development of their professional behaviors. Prerequisites: OTA 225 Co-requisites: OTA 223

Credit: 2                      Lecture: 1                      Lab: 5

**OTA229                      Professional Seminar**

This course provides discussion and application of professional, ethical, legal, and multicultural aspects of occupational therapy as they relate to clinical experiences. Prerequisites: OTA 225 Co-requisites: OTA 226

Credit: 1                      Lecture: 1                      Lab: 0

**OTA231                      Clinical Fieldwork Level II-A**

Clinical Fieldwork Level II-A provides supervised practical experience for the student to include: observing, treating, reporting, and recording occupational therapy evaluations and interventions for clients with various conditions. The student will experience treatment of individuals and groups across the life span and in a variety of treatment settings. Continued emphasis will be placed on the development of professions behaviors. A seminar class provides additional exposure to roles and responsibilities of the COTA, emerging practice areas, trends that impact service delivery across the lifespan, and preparation for the certification examination and entry into the workforce Prerequisites: OTA 223 and OTA 224

Credit: 6                      Lecture: 2                      Lab: 20

**OTA232                      Clinical Fieldwork Level II-B**

This Clinical Fieldwork Level II-B provides supervised practical experience for the student to include: observing, treating, reporting, and recording occupational therapy evaluations and interventions for clients with various conditions. The student will experience treatment of individuals and groups across the life span and in a variety of treatment settings. This Clinical Fieldwork Level II-B will be provided in a different clinical setting than OTA 231. A seminar class provides additional exposure to roles and responsibilities of the COTA, emerging practice areas, trends that impact service delivery across the lifespan, and preparation for the certification examination and entry into the workforce. Prerequisites: OTA 231 (concurrent)

Credit: 6                      Lecture: 2                      Lab: 20

**PHY100                      Intro to Physics**

This course is designed for students who need a basic introduction to principles of physics, especially in the career fields and other non-engineering disciplines. Emphasis is on a broad, general introduction to physics and day-to-day applications of the principles of physics. Prerequisites: (Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 140 or MAT 141 or MAT 150 or MAT 153 or MAT 181 or MAT 185) and (Test score or MAT 015 or MAT 016 or NCW 045 or MAT 075 or MAT 090 or MAT 135 or MAT 141 or MAT 141 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251 or MAT 261 or MAT 281).

Credit: 3                      Lecture: 2                      Lab: 2

**PHY110                      Physics Physical Therapy Assnt**

This course studies basic physics for the physical therapist assistant. Content includes motion, forces, energy, mechanical advantage, fluids, heat, sound and light waves, and electricity. Prerequisite: MAT 153

Credit: 4                      Lecture: 3                      Lab: 2

**PHY111                      Conceptual Physics**

A basic course covering the concepts of physics with limited mathematical application. Prerequisites: Test score or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 135 or MAT 140 or MAT 141 or MAT 153 or MAT 181 or MAT 182 or MAT 185 or MAT 251 or MAT 261 or MAT 281.

**Credit: 4      Lecture: 3      Lab: 2**

**PHY112      Physics for Allied Health**

This is an introductory, algebra/trigonometry based course in physics with an emphasis on allied health applications. The major topics to be covered include motion, force, torque, energy, waves, electricity, and sound. Prerequisites: MAT 181

**Credit: 4      Lecture: 3      Lab: 2**

**PHY115      Physics for Respiratory Care**

A basic physics course that focuses on the content appropriate to the practice of respiratory therapy. Content includes emphasis on flow, gas laws, volume, and other related topics. Prerequisites: MAT 130

**Credit: 4      Lecture: 3      Lab: 2**

**PHY120      Energy Physics**

This course covers the fundamentals of physics concepts with an emphasis on energy principles including energy conservation, thermodynamics, energy efficiency, and principles of fluid dynamics. Prerequisites: (Test scores or MAT 020 or higher)

**Credit: 3      Lecture: 3      Lab: 1**

**PHY171      Physics I**

This laboratory-based physics course includes vectors, kinematics, dynamics, energy, momentum, gravitation, rotational motion and dynamics, equilibrium, and mechanical properties of matter. Prerequisites: MAT 181

**Credit: 4      Lecture: 3      Lab: 2**

**PHY172      Physics II**

This laboratory-based physics course includes fluids, harmonic motion, waves and sound, thermal properties of matter, heat, thermodynamics, light, lenses, and mirrors. Prerequisites: PHY 171

**Credit: 4      Lecture: 3      Lab: 2**

**PHY205      General Physics I**

This course is designed to introduce students to physics concepts and its applications to science and industry. Topics include vectors, one and two dimensional motion, work and energy, momentum, collisions, circular motion, gravity, rotational dynamics, mechanics of solids and fluids, fluids in motion, thermal physics, heat, and vibrations and waves. Prerequisites: MAT 181 or MAT 182 or MAT 185 or MAT 281

**Credit: 4      Lecture: 3      Lab: 3**

**PHY206      General Physics II**

This course is designed to introduce students to physics concepts and its applications to science and industry. Topics include sound, electric fields and electric forces, electric energy, potential and capacitance, current, resistance and DC circuits, RC circuits, magnetism and inductance, AC circuits and EM waves, sound, reflection and refraction, optics, and introductory modern physics. Prerequisites: PHY 205 and (MAT 182 or MAT 185 or MAT 281).

**Credit: 4      Lecture: 3      Lab: 3**

**PHY271 Electricity and Magnetism**

This laboratory-based physics course includes electricity, electric energy, electric current, magnetism, electromagnetic induction, alternating current, and modern physics. Prerequisites: MAT 181 and (PHY 171 or ELC 120 or ELC 124).

**Credit: 4****Lecture: 3****Lab: 2****PHY281 Physics I with Calculus**

This calculus-based physics course includes vectors, kinematics, dynamics, energy, momentum, gravitation, rotational motion and dynamics, equilibrium, and mechanical properties of matter. Prerequisites: MAT 281

**Credit: 4****Lecture: 3****Lab: 2****PHY282 Physics II with Calculus**

This calculus-based physics course includes the study of electric fields, electric forces, electrical energy, capacitance, electric current, magnetism, electro-magnetic induction, alternating current, and electro-magnetic waves. Prerequisites: MAT 282 and PHY 281

**Credit: 4****Lecture: 3****Lab: 2****PHY284 Oscillation and Waves**

This course builds on the concepts introduced in PHY 281 (Physics I with Calculus) with strong emphasis on oscillation and waves. Continuum physics, with elements of elasticity theory and fluid mechanics along with oscillations and resonance phenomena in both mechanical systems and electrical circuits is introduced. Wave propagation, interference, diffraction, and dispersion are covered in depth. Advanced labs accompany the curriculum throughout the course. Prerequisites: (MAT 281 or MAT 282 or MAT 283) and PHY 281

**Credit: 4****Lecture: 3****Lab: 2****PLG160 Family Law**

This course studies the basic legal principles of marriage, divorce, support, adoption, juvenile law, and parent/child relationships, with an emphasis on drafting legal documents. Prerequisites: Test Scores or ENG 090 or ENG 091 or higher.

**Credit: 3****Lecture: 3****Lab: 0****PLG170 Intro to the Legal System**

This course provides a perspective of the legal system and specific knowledge of the present and potential role of the legal assistant within the system. Prerequisites: (Test Scores or ENG 006 or ENG 007 or higher) and (Test Score or MAT 005 or higher).

**Credit: 3****Lecture: 3****Lab: 0****PLG172 Law of Simple Contracts**

This course covers the negotiation and creation of agreements that legally bind parties in business arrangements with special emphasis on negotiations, offers, acceptance of offers, terms, and the conditions and circumstances under which contracts are made or broken. Prerequisites: Test Scores or ENG 090 or ENG 091 or higher.

**Credit: 3****Lecture: 3****Lab: 0****PLG175 Estate Admin and Probate**

This course discusses basic legal concepts of wills, trusts, and intestacy. Topics include the fundamental principles of law, along with the organization and jurisdiction of the probate court. An analysis of estate administration procedures and instruction in the preparation of estate and fiduciary and tax forms is also discussed. Prerequisites: (Test Score or MAT 012 or higher) and (Test Scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PLG270 Criminal Law/Invest Procedures**

This course introduces substantive criminal law and procedures including elements of certain crimes, arrests, indictments, trial, and post-conviction proceedings. Investigative techniques are also covered. The role of the legal assistant is explored. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Score or MAT 005 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PLG271 Real Property Law**

This course introduces the basic concepts of the law of real property. Purchases and sales agreements, options, easements, deeds, title searches, closing procedures, foreclosures, evictions, condominiums and zoning are covered. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Score or MAT 012 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PLG273 Civil Procedure**

This course introduces the process of civil litigation, as well as interviewing and investigative skills. The course also includes drafting pleadings and discovery. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PLG274 Torts**

The course includes the substantive law of torts and insurance, in addition to case investigations. Prerequisites: Test Scores or ENG 090 or ENG 091 or higher

Credit: 3

Lecture: 3

Lab: 0

**PLG276 Business Entities**

This course studies laws of the Uniform Commercial Code and follows those laws to draw up articles of incorporation, minutes, by-laws, and other corporate documents pertaining to partnership agreements, promissory notes, security agreements, and sales contracts. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT 005 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PLG280 Legal Research & Writing**

This course introduces the books in the law library used to find and interpret statutes, case law, and administrative regulations. Students use digests, citators, and secondary legal sources. Emphasis is on writing interoffice memoranda and other legal documents. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and OAT 121 and OAT 170

Credit: 3

Lecture: 2

Lab: 2

**PLG285 Law Office Mgmt & Procedures**

This course studies all phases of law office procedures and the management and organization of a law office, the various software used, and filing principles. Development and usage of systemization within the law office are emphasized. Principles and legal theory are demonstrated through practical application. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and PLG 170

**Credit: 3      Lecture: 2      Lab: 2**

**POL111      Political Science**

This course focuses on the organization and operation of government at the various levels emphasizing involvement in the democratic process. It provides a working understanding of the structure and functioning of the formal political system on the local, state, national, and international levels. This course assist student's in clarifying their personal political value system. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**POS103      Poultry Biology**

This course studies the anatomy and physiology of poultry, including the structure and its functions; integumentary, skeletal, and muscular systems; and reproduction, growth, and embryology. Poultry disease identification is introduced. Coordinated laboratory exercises are an integral part of this course. Prerequisite: (Test score or ENG 090 or ENG 091 or higher)

**Credit: 3      Lecture: 2      Lab: 2**

**POS205      Poultry Processing**

Students learn the fundamentals of poultry processing from receiving to shipping, including designing and operating equipment, packaging, sanitizing, using labor, complying with state and federal regulations, grading poultry, and controlling quality, Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**POS208      Poultry Health & Diseases**

Students learn fundamentals of poultry health and disease through a detailed study of the major diseases affecting poultry. The course stresses factors relating to health, causes of diseases, defense mechanisms, immunology, nutrition, and environment. Prerequisites: POS 103 and (Test score or MAT 012 or NCS 012 or MAT 015 or NCW 045 or MAT 075 or MAT 090 or MAT 119 or MAT 120 or MAT 125 or MAT 130 or MAT 141 or MAT 150 or MAT 153 or MAT 181 or MAT 185).

**Credit: 3      Lecture: 3      Lab: 0**

**POS215      Poultry Production Management**

This course is an overview of the broiler industries as related to agriculture. Topics covered are production management techniques needed to be successful as an entrepreneur in this field of agriculture. Students receive a general introduction to hatching egg production, hatchery operations, feed production, broiler/breeder production, processing, economics, bio-security, health, and history of the Poultry Industry on the Delmarva Peninsula. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (AGS 102 or FSJ 100)

**Credit: 3      Lecture: 2      Lab: 2**

**PSY100      Human Relations**

This course introduces the social and behavioral sciences. Students will develop a method of establishing meaningful human relationships within an interpersonal and intrapersonal context using a multi-focus approach. Prerequisites: (((Test scores or RDG 051 or NCS 052 or RDG 120) and (Test Scores or ENG 051 or NCS 051 or ENG 121 or ENG 125)) or Test Scores or ENG 090 or ENG 090 concurrent or ENG 091 or concurrent or ENG 099 or ENG 101 or ENG 102 or ENG 122 or ESL 100).

**Credit: 3      Lecture: 3      Lab: 0**

**PSY121      General Psychology**

This course is a survey of general principles underlying human behavior and mental processes. It includes study of the nervous system, perception, learning, motivation, personality, and psychological disorders. Methods of assessment and research principles are discussed. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PSY122 Social Psychology**

A study of the impact social institutions have on the behavior of the individual. Social psychology deals with how we perceive other people in social situations, how we respond to others and how they respond to us and the systematic study of social behavior. Prerequisite: PSY 121

Credit: 3

Lecture: 3

Lab: 0

**PSY123 Industrial Psychology**

Industrial (Organizational Psychology) provides an overview of the sociopsychological processes specific to formal organizations by emphasizing the interrelationships among individuals, groups and the organizational structure. Behavioral dynamics is the human resource focus that includes attitudes, communication, motivation, stress, teamwork, conflict resolution, diversity, and gender issues. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PSY125 Child Development**

This course covers basic concepts relevant to child development. Emphasis is placed upon physical, cognitive, emotional, and social development during childhood. The interrelationship of these factors is also discussed and evaluated. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PSY126 Child/Adolescent Development**

This course introduces the processes of physical, cognitive, emotional, and social development during childhood and adolescence. Prerequisite: PSY 121

Credit: 3

Lecture: 3

Lab: 0

**PSY127 Human Development**

This course provides a life-span approach to human development through examination of the physical, cognitive, psychological, and social processes and tasks associated with each stage in the life cycle. Emphasis will be placed on assessment of needs and common health problems as viewed in a developmental context. Pre-requisites: (Test Scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PSY130 Mentoring: Psych of Helping**

This course is designed to develop the awareness and skills necessary to mentor a targeted population of proteges. Emphasis will be placed on learning the fundamentals of mentoring and mentoring programs, understanding developmentally at-risk patterns within the target population, and both didactic and experiential components. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**PSY223            Abnormal Psychology**

This course introduces the causes, characteristics, and treatments of various categories of abnormal behavior. The student will examine and comprehend the diversity of factors surrounding maladaptive behavior, including historical views, classification of abnormal disorders, physical and psychological symptoms, and available treatments.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and PSY 121

Credit: 3            Lecture: 3            Lab: 0

**PSY224            Human Sexuality**

The basic biology of sexuality, including the psychology and sociology of human sexuality. The course focuses on behavior patterns, emotions, and socio-cultural factors affecting interpersonal relationships. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3            Lecture: 3            Lab: 0

**PSY230            Mentor Practicum**

The mentor is placed in a designated school/agency and matches with a preselected protege. Emphasis is placed on activity and effectively mentoring the protege for a predetermined, minimum number of hours per week. Mentors will be responsible to the agency as well as the college and will be supervised by the project director and/or student coordinator of the program. Prerequisites: PSY 130

Credit: 2            Lecture: 1            Lab: 4

**PTA100            Introduction to PTA**

This course introduces the profession of physical therapy, including history, role utilization, professional organization, standards and ethics of practice. Basic patient care procedures, including cardiopulmonary resuscitation (CPR) certification and documentation are covered. Prerequisites: BIO 120

Credit: 2            Lecture: 2            Lab: 1

**PTA101            Basic Techniques**

This course focuses on the theory and skill development in body mechanics, transfers, gait training, assessment techniques, therapeutic exercise and massage. It integrates didactic, laboratory, and clinical experiences. Prerequisites: PTA 100

Credit: 4            Lecture: 2            Lab: 5

**PTA102            Modalities**

This course introduces the theory and skill development in modalities, electrical stimulation, pain management, and wound care. It integrates didactic, laboratory, and clinical experiences. Prerequisite: PTA 100

Credit: 3            Lecture: 2            Lab: 4

**PTA115            Kinesiology**

This course examines the relationship between the muscular and skeletal systems that provide motion through the biomechanical leverage system. Prerequisites: BIO 121 and (PHY 110 or PHY 112 or PHY 171 or PHY 205) and PTA 100 and BIO 123 or concurrent

Credit: 3            Lecture: 2            Lab: 2

**PTA116            Intro to Pathology**

This courses introduces diseases, including process and their influence on the anatomical and physiologic activity the body. Prerequisites: BIO 121 and PTA 101 or concurrent

**Credit: 3      Lecture: 3      Lab: 0**

**PTA205      Path.Treatmnt Orthopedic Conds**

This course focuses on orthopedic conditions and their underlying pathology. Emphasis will be placed on physical therapy rehabilitation of these conditions. Prerequisites: BIO 123 and PTA 101 and PTA 102 and PTA 115 and PTA 116 and (PTA 206 or concurrent)

**Credit: 4      Lecture: 3      Lab: 3**

**PTA206      Path/Treat Neurologcl Conds.**

This course studies the neurologically and developmentally involved patients, including positioning, handling, and facilitation of normal motor control through specialized therapeutic techniques. Prerequisites: BIO 123 and PTA 101 and PTA 102 and PTA 115 and PTA 116 and (PTA 205 or concurrent)

**Credit: 4      Lecture: 3      Lab: 3**

**PTA208      Special Topics for the PTA**

This course introduces specialized topics in the profession of physical therapy, including but not limited to women's health, architectural barriers, acquired immunodeficiency syndrome (AIDS) rehabilitation, home healthcare, nontraditional therapies, cardiopulmonary rehabilitation, seating, and industrial rehabilitation. Prerequisites: PTA 205 and PTA 206 and PTA 211

**Credit: 3      Lecture: 3      Lab: 0.50**

**PTA209      PTA Management Issues**

This course reviews non-patient care related topics and their influence on the clinical practice of the physical therapist assistant (PTA). Prerequisites: PTA 205 and PTA 206 and PTA 211

**Credit: 2      Lecture: 2      Lab: 0**

**PTA211      Clinical Practice I**

This course is the initial comprehensive clinical experience in a physical therapy setting for application of learned clinical skills on patients under the supervision of a licensed physical therapist or physical therapist assistant (per State Practice Act). Prerequisite: PTA 102 Co-requisites: PTA 205 and PTA 206

**Credit: 4      Lecture: 1      Lab: 13**

**PTA212      Clinical Practice II**

This course is an intermediate full-time clinical experience in a physical therapy setting for application of learned skills practiced in PTA 211 and a continuation of application of newly learned techniques, under the supervision of a licensed physical therapist or physical therapist assistant (per State Practice Act). Prerequisite: PTA 211

**Credit: 3      Lecture: 0      Lab: 13**

**PTA213      Clinical Practice III**

This course is an advanced full-time clinical experience in a physical therapy setting for refinement of previously learned skills and continuation of application of techniques and procedures under the supervision of a licensed physical therapist or physical therapist assistant. (per State Practice Act). Prerequisite: PTA 212 or concurrent

**Credit: 4      Lecture: 0      Lab: 18**

**RAD105      Intro Patient Care/Radiography**



This course introduces the fundamentals of radiologic science and its relation to healthcare. The radiographer's role in providing patient care to all patient populations is examined. Medical ethics and law are discussed. Prerequisites: BIO 120 and CHM 110 and MAT 153

Credit: 3                      Lecture: 2                      Lab: 2

**RAD130                      Radiographic Procedures I**

This course provides the student with the knowledge and skill necessary to perform standard radiographic procedures of the chest, abdomen, upper extremity, lower extremity, shoulder girdle, and pelvic girdle, as well as identification of the anatomy demonstrated. Energized laboratory experience supports the lecture portion of this course. Prerequisite: RAD 105

Credit: 4                      Lecture: 3                      Lab: 3

**RAD131                      Radiographic Procedures II**

This course provides the student with the knowledge and skill necessary to perform standard radiographic procedures of the bony thorax, vertebral column, urinary, biliary, and gastrointestinal systems, as well as, identification of the anatomy demonstrated. Mobile, surgical, and trauma radiography are discussed. Energized laboratory experience supports the lecture portion of this course. Prerequisite: RAD 130

Credit: 4                      Lecture: 3                      Lab: 3

**RAD140                      Prin Radiographic Imaging I**

This course provides the student with an overview of radiographic principles that include radiographic physics, x-ray production, interactions with matter and scatter radiation control relative to basic imaging. Prerequisite: RAD 105

Credit: 3                      Lecture: 3                      Lab: 0

**RAD141                      Prin Radiographic Imaging II**

This course provides the student with an in-depth knowledge of radiographic principles that include image quality factors, anatomic/pathologic variances, exposure systems and image acquisition methods. Prerequisite: RAD 140

Credit: 3                      Lecture: 3                      Lab: 0

**RAD150                      Radiation Protection/Biology**

This course provides the student with an overview of the principles of radiation protection for the radiographer, patients, other personnel, and the public. Radiation effects on biological molecules and organisms and factors affecting biological response are also presented. Prerequisites: RAD 140

Credit: 2                      Lecture: 2                      Lab: 0

**RAD160                      Clinical Radiography I**

This clinical course, the first in a series, provides the student with exposure to the practice of radiography and takes place in various diagnostic imaging departments. The student develops and refines skills in patient management, equipment manipulation, positioning, technical factors selection, and image evaluation. Prerequisite: RAD 105

Credit: 3                      Lecture: 0                      Lab: 16

**RAD161                      Clinical Radiography II**

This clinical course, the second in a series, provides the student with exposure to the practice of radiography and takes place in various diagnostic imaging departments. The student develops and refines skills in patient management, equipment manipulation, positioning, technical factors selection, and image evaluation. Prerequisite: RAD 160

**Credit: 3      Lecture: 0      Lab: 16**

**RAD162      Clinical Radiography III**

This clinical course continues to provide the student with exposure to the practice of radiography and takes place in various diagnostic imaging departments. The student develops and refines skills in patient management, equipment manipulation, positioning, technical factors selection, and image evaluation. Prerequisites: RAD 161 and BIO 121

**Credit: 5      Lecture: 0      Lab: 24**

**RAD222      Selected Topics in Radiography**

This course is a review of program content in preparation for the American Registry of Radiologic Technologists (A.R.R.T.) examination. The student will focus on content areas that are relevant to the registry and identify areas where remediation may be necessary. Prerequisites: RAD 260

**Credit: 3      Lecture: 3      Lab: 0**

**RAD230      Radiographic Procedures III**

This course provides the student with the knowledge and skill necessary to perform standard radiographic procedures of the cranium. Procedural considerations for arthrography, myelography, hysterosalpingography, mammography, and pediatric radiography are discussed. An introduction to cross-sectional anatomy and advanced imaging/therapeutic modalities are presented along with a review of pharmacology. Energized laboratory experience supports the lecture portion of this course where applicable. Prerequisite: RAD 131

**Credit: 3      Lecture: 2      Lab: 2**

**RAD240      Radiographic Imaging Equipment**

This course provides the student with knowledge of various types of equipment routinely utilized to produce diagnostic images. Radiographic processing and quality control of imaging equipment and accessories are also presented. Prerequisites: RAD 141

**Credit: 3      Lecture: 3      Lab: 0**

**RAD250      Radiographic Pathology**

This course provides the student with an introduction to the concepts of disease. Pathology, as it relates to various radiographic procedures, is discussed. Prerequisite: RAD 260

**Credit: 2      Lecture: 2      Lab: 0**

**RAD260      Clinical Radiography IV**

This clinical course continues to provide the student with exposure to the practice of radiography and takes place in various diagnostic imaging departments. The student develops and refines skills in patient management, equipment manipulation, positioning, technical factors selection, and image evaluation. Prerequisite: RAD 162

**Credit: 5      Lecture: 0      Lab: 24**

**RAD261      Clinical Radiography V**

This clinical course, the final in a series, provides the the student with exposure to the practice of radiography and takes place in various diagnostic imaging departments. The student develops and refines skills in patient management, equipment manipulation, positioning, technical factors selection, and image evaluation. Prerequisite: RAD 260

**Credit: 5      Lecture: 0      Lab: 24**

**RAD270 Digital Image Acquistn/Display**

This course provides the student with an in-depth knowledge of the principles of digital imaging. Image acquisition, characteristics, display and quality assurance are presented. The basic principles of Computer Tomography (CT) are also discussed. Prerequisites: RAD 240

Credit: 2

Lecture: 2

Lab: 0

**RCT120 Pharm for Respiratory Care**

This course covers a basic understanding of pharmacological principles and therapeutic applications in relation to healthcare practice. Special emphasis is placed on therapeutic agents used in respiratory care.

Prerequisites: BIO 120 and CHM 110 and MAT 153 and ENG 101

Credit: 3

Lecture: 3

Lab: 0

**RCT130 Intro to Respiratory Care**

This course introduces the delivery of respiratory care. Emphasis is placed on principles of gas flow, pressure regulation, production, and storage. Theory, equipment, and procedures of oxygen therapy are also addressed. Integration and application of these procedures are essential to delivery of respiratory care.

Prerequisite: MAT 153

Credit: 7

Lecture: 6

Lab: 2

**RCT140 Pulmonary Physiology**

This course covers normal structure and function of the human respiratory system. Topics include mechanics of breathing, gas exchange and transport, acid-base balance, and control of ventilation. Emphasis is placed on integrating normal pulmonary physiology concepts to respiratory care.

Prerequisite: BIO 120

Credit: 3

Lecture: 3

Lab: 0

**RCT210 Neonatal/Pediatric Resp Care**

This course covers neonatal and pediatric diseases and the analysis of effective delivery of respiratory care modalities to these patients.

Prerequisite: RCT 231

Co-Requisites: RCT 232, RCT 252

Credit: 3

Lecture: 3

Lab: 0

**RCT231 Respiratory Care Procedures I**

This course covers the administration of basic respiratory care modalities. Topics include positive pressure breathing, stained maximal inspiration (SMI), chest physical therapy, aerosolized medications, and bedside pulmonary function testing.

Prerequisites: RCT 130, BIO 121

Co-Requisite: RCT 251

Credit: 4

Lecture: 3

Lab: 2

**RCT232 Respiratory Care Procedures II**

This course covers the administration of more advanced respiratory care techniques. Topics include artificial airways and mechanical ventilation.

Prerequisite: RCT 231

Co-Requisites: RCT 210 and RCT 252

Credit: 7

Lecture: 6

Lab: 3

#### RCT233 Spec Topics in Respiratory Care

This course provides the student with advanced concepts in respiratory care associated with support of the critically ill patient.

Prerequisite: RCT 232

Co-Requisite: RCT 253

Credit: 4

Lecture: 4

Lab: 0

#### RCT241 Pulmonary Pathophysiology I

Pulmonary Pathophysiology I introduces the student to evaluation of the patient with pulmonary disease. Evaluation includes signs and symptoms, physical assessment, chest radiography, pulmonary function, and pertinent laboratory tests. Assessment and decisions for care of patients with obstructive lung diseases are emphasized.

Prerequisites: RCT 140 and BIO 121

Credit: 3

Lecture: 3

Lab: 0

#### RCT242 Pulmonary Pathophysiology II

This course introduces patterns of restrictive lung disease. Topics include pneumonias, fibrotic lung disease, pulmonary neoplasms, disorders of pulmonary circulation, diseases of the pleura and thoracic wall, neuromuscular disease, aspiration, trauma, and acute respiratory distress syndrome (ARDS). Care assessment and decisions are emphasized.

Prerequisite: RCT 241

Credit: 4

Lecture: 4

Lab: 0

#### RCT243 Pulmonary Function Studies

This course covers pulmonary function and exercise testing with an emphasis on interpretation and clinical application. Prerequisite: RCT 140

Credit: 2

Lecture: 1

Lab: 3

#### RCT251 Clinical Respiratory Care I

This course applies respiratory care techniques in a patient care setting. Topics include application of infection control, patient assessment, oxygen therapy, bronchial hygiene, aerosol therapy, and professional communication.

Prerequisites: RCT 130, ENG 102

Co-requisites: RCT 231

Credit: 2

Lecture: 0

Lab: 8

#### RCT252 Clinical Respiratory Care II

This clinical course is a continuation of Clinical Respiratory Care I. The student applies more advanced respiratory care modalities under supervision. Emphasis is placed on bronchial hygiene techniques, care of patients with artificial airways, and introductory mechanical ventilation.

Prerequisite: RCT 251

Co-Requisites: RCT 210 and RCT 232

Credit: 3

Lecture: 0

Lab: 16

### RCT253 Clinical Respiratory Care III

This advanced clinical course provides the student with supervised practice in all aspects of respiratory care. Emphasis is on care of the critically ill adult, pediatric, and neonatal patient in a variety of settings.

Prerequisite: RCT 252

Credit: 5

Lecture: 0

Lab: 24

### SCI100 Environmental Monitoring Techn

Students will be introduced to hands-on field and laboratory techniques in biology, biotechnology and chemistry to monitor the environment. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

Credit: 1

Lecture:

Lab: 2.50

### SCI101 The World: An Owner's Manual

Scientific literacy is important to understand how the world and society works. This course explores important issues of the day such as global climate change, drug-resistant bacteria, global information systems, and invasive species. Basic concepts in earth science, human health and technology will be discussed. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 2

Lecture: 2

Lab:

### SCI107 Explorations on the Delaware Bay

The course provides students with the opportunity to conduct multi-disciplinary, collaborative, hands-on research of environmental issues facing the Delaware Bay. Students will be introduced to themes and skills that will be expanded upon in their program science courses. This is the first of a two-semester sequence.

Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores for MAT012 or higher) and Instructor signature required.

Credit: 3

Lecture: 2

Lab: 3

### SCI108 Research on the DE Bay

This course applies skills and techniques learned in Explorations on the Delaware Bay (SCI 107) to plan and conduct research projects on the Delaware Bay. This is the second course of a two-semester sequence.

Prerequisites: SCI 107, Instructor signature required.

Credit: 1

Lecture: 0

Lab: 2

### SCI112 Science Crs Success Strategies

This class is designed to improve learning and comprehension in the science courses that precede major classes. Student success, learning styles, time management, problem solving, and effective study skills will be covered.

Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

**Credit: 1      Lecture: 1      Lab: 0**

**SCI130      Introduction to Research**

Research is integral to many fields of study. This course investigates the components of a research project including scientific principles, project design, documentation, communication, and professional ethics and behavior. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 2      Lecture: 2      Lab:**

**SCI141      Nutrition in the Culinary Field**

This course, which is designed for students in the culinary or food service management field, covers the basic principles that apply to the connection between good nutrition and healthy menu planning and development. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 2      Lecture: 2      Lab: 0**

**SCI206      Pesticide Principles and Apps**

This course examines the principles of insects, weed and disease control in agricultural crops, horticultural plants and turf, integrated pest management, economics and safety. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher) and AGS 105

**Credit: 3      Lecture: 3      Lab: 0**

**SCI223      Applied Ecology**

This course offers an exploration of the ecology of plant form, function, abundance and diversity. Topics include plant adaptations to environmental conditions, life history variation, competitions, and mid-Atlantic native plant distribution. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 012 or higher)

**Credit: 3      Lecture: 3      Lab: 0**

**SCI230      Research Methodology**

To successfully conduct undergraduate research, students require an in-depth knowledge of the scientific process. This class investigates experimental design, data collection, statistical analysis, scientific integrity, and communication within the context of ongoing research projects. Prerequisites: (Test scores or ENG 101 or higher) and (Test scores or MAT 140 or higher) and (BIO 150 or CHM 150 or PHY 171 or PHY 281) and (NCJ 130 or SCI 130)

**Credit: 3      Lecture: 2      Lab: 3**

**SCI240      Turfgrass Physiology**

This course is an introduction to the science of turf grasses. Students will develop an understanding of turf grass growth, development, and adaption, cultural practices used to manage turf grasses, pest problems, and establishment methods. Students will be exposed to the various grasses used in turf grass management. Topics covered will be identification, growth and development, seasonal grasses, turf grass environment and an overview of cultural practices will be discussed. Prerequisites: AGS 101 and AGS 105

**Credit: 3      Lecture: 2      Lab: 2**

**SGT100      Intro to Surgical Technology**

This course introduces surgical technology as a technical profession. Topics include professionalism, communication, biomedical science, the biopsychosocial needs of the surgical patient, ethical/legal issues specific to the perioperative setting, and patient and workplace safety.

Prerequisite: Test scores or ENG 090 or ENG 091 or higher

Credit: 2

Lecture: 2

Lab: 1

### SGT200 Surgical Technology I

This course highlights the basic knowledge and fundamental techniques necessary for assuming the responsibilities of a surgical technologist. Preoperative and intraoperative patient care concepts, with both non-sterile and sterile responsibilities, are emphasized. This course also introduces skill development related to instrumentation, equipment, patient transportation, surgical positioning, and preoperative patient preparation.

Prerequisite: (Test Score or ENG 102 or higher) and BIO 100 and BIO 121 and BIO 125 and CIS 107 and SGT 100 and (MAT 119 or MAT 129 or MAT 130 or MAT 140 or higher)

Corequisite: SGT 202

Credit: 7

Lecture: 4

Lab: 8

### SGT202 Pharmacology

This course will provide students with foundation in pharmacology. This will prepare the student to safely and appropriately prepare and manage operating room medications and solutions. Prerequisites: BIO 121 and BIO 125 and SGT 100.

Credit: 2

Lecture: 2

Lab: 0

### SGT210 Surgical Technology II

This course will review the surgical specialties and focus on the diagnostic and surgical interventions and complications. Knowledge and skills for effective performance as a scrubbed member of the operating room team are reinforced. Focus is placed on the responsibilities of the surgical technician in intraoperative case management during intermediate surgical interventions. Prerequisites: SGT 200 and SGT 202. Corequisite: SGT 211

Credit: 7

Lecture: 4

Lab: 10

### SGT211 Surgical Tech Clinical I

This course will be clinical rotations in the operating room of affiliated healthcare institutions. Knowledge and techniques essential to effective performance as a scrubbed member of the surgical team will be stressed as the student develops and improves skills as the scrub person. Progression to solo scrub experience is expected. Prerequisites: SGT 200 and SGT 201. Corequisite: SGT 210

Credit: 2

Lecture: 0

Lab: 9

### SGT220 Surgical Technology III

This course is a continuation of SGT 210. Knowledge and skills for effective performance as a scrubbed member of the operating room are stressed. The responsibilities of the surgical technologist in the care and safety of the patient during and after surgical intervention in both general and specialty field surgery are reviewed. Prerequisites: SGT 210 and SGT 211. Corequisite: SGT 221

Credit: 4

Lecture: 3

Lab: 4

### SGT221 Surgical Technology Clinical II

This course will be clinical rotations in the operating room of affiliated healthcare institutions. Learning experiences in advanced surgical interventions in general and specialty surgery are included. Focus is on the student assuming an independent role as a surgical technologist to facilitate transition from student to graduate. Prerequisites: SGT 210 and SGT 211. Corequisite: SGT 220

Credit: 5                      Lecture: 0                      Lab: 24

**SMT120                      Dsgning Safe Work Environments**

The role of the safety manager in creating safe working conditions is discussed. Safety techniques and programs for construction sites, vehicle operations, factories, offices, and laboratories are presented. Hazardous processes, working with electrical equipment and power tools will also be covered. Prerequisites: None

Credit: 4                      Lecture: 3                      Lab: 3

**SMT221                      Industrial Hygiene II**

This advanced course deepens and broadens the student's understanding of occupational health issues. Air, noise, and chemical sampling equipment and techniques are covered in lab exercises. Prerequisites: SMT 210

Credit: 3                      Lecture: 2                      Lab: 2

**SOC103                      Sustainability and Society**

This course introduces contemporary sustainability topics using the "3E" (economics, equity, and the environment) framework. Topics include sustainability impacts of land use, energy, water use, agriculture, economics, policy, social issue, and natural resource. Prerequisites: (Test Scores or ENG 090 or ENG 091 or higher) and (Test Scores or MAT 012 or higher)

Credit: 3                      Lecture: 3                      Lab:

**SOC104                      Human Geography**

This course introduces the concepts and concerns of human geography through analysis of human interaction with the environment. Specifically, the course examines the use and alteration of the earth's surface as well as common geographic patterns and processes that have shaped human understanding. In addition, students evaluate human socioeconomic organization at the global, regional, and local levels. Pre-requisite: (Test score or ENG 090 or ENG 091 or higher) and (Test score or MAT 012 or higher)

Credit: 3                      Lecture: 3                      Lab: 0

**SOC111                      Sociology**

This course provides an analysis of American social organization and culture, through a cross-cultural perspective. Sociology investigates, describes and analyzes patterns of human behavior in all areas of human experience for the purpose of understanding the human condition. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3                      Lecture: 3                      Lab: 0

**SOC213                      Ethical Issues in Health Care**

This course introduces the social process found in the healthcare system, including those within the group, institutions, and community medical environments. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3                      Lecture: 3                      Lab: 0

**SOC215                      Business Ethics**



This course examines the philosophical foundation of morality and ethics. Theory is applied to a variety of business situations using examples and case studies. Situations are viewed from the perspectives of businesses, employees, consumers, and society. The student develops an appreciation of the complexities of moral dilemmas. Prerequisites: (Test scores or ENG 102 or higher) and BUS 101

Credit: 3

Lecture: 3

Lab: 0

**SOC221 Human Diversity**

This course is designed to increase the student's awareness, tolerance, and appreciation for participation in an increasingly complex and diverse human landscape. This course will have a double focus: one will be an historical approach to intercultural relationships, and the other will be an analysis of the current success in incorporating the emerging diverse minorities into our general social fabric. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**SOC224 Family Structures**

An introduction to the development and interpersonal processes of the family, alternative family structures and lifestyles, and dysfunctional patterns and social problems of the family group. Prerequisites: SOC 111

Credit: 3

Lecture: 3

Lab: 0

**SPA135 Spanish for Healthcare Workers**

This course prepares students to use Spanish for basic communications in health care situations, for example, making appointments and discussing medical histories, injuries, test procedures. Focus is also on cultural patterns and attitudes toward health care issues. Prerequisites: None

Credit: 3

Lecture: 3

Lab: 0

**SPA137 Spanish Communication II**

This course focuses on describing events in the past and present in the Spanish language. Communication is expanded to include a greater variety of social interactions. Communicative abilities continue to be developed in the areas of listening, speaking, reading, and writing. Prerequisites: SPA 136

Credit: 4

Lecture: 4

Lab: 0

**SPA138 Spanish Communication III**

This course focuses on describing events of the past, present, and future in the Spanish language. Complex language structures are introduced, and communicative ability is expanded to include topics of a more subjective nature, requiring more in-depth understanding of cultural differences. Prerequisites: SPA 137

Credit: 4

Lecture: 4

Lab: 0

**VAS111 Vascular Techniques I**

This course introduces the student to the basic, vascular, physical principles and instrumentation; vascular physiology and hemodynamics; vascular anatomy; and fundamental skills and principles needed to perform peripheral arterial evaluation of the upper and lower extremities. Prerequisites: BIO 120 and DMS 106.

Credit: 3

Lecture: 3

Lab: 1

**VAS112 Vascular Techniques II**

This course is a continuation of VAS 111 Vascular Techniques I. Emphasis is placed on the fundamental skills and principles needed to perform peripheral venous evaluation of the upper and lower extremities. Evaluation of cerebrovascular, intracranial Doppler is also introduced. Introductory clinical experiences integrate previously learned principles. Prerequisites: VAS 111

Credit: 3      Lecture: 3      Lab: 1

#### VAS213      Vascular Techniques III

A continuation of VAS 112 Vascular Techniques II. Emphasis is placed on the fundamental skills and principles needed to perform and evaluate abdominal aorta, IVC, liver vasculature, mesenteric arteries and renal vasculatures. Prerequisites: VAS 112

Credit: 3      Lecture: 3      Lab: 1

#### VET101      Intro to Veterinary Technology

This course introduces the fundamentals of Veterinary Technology and its relation to veterinary practice. Career opportunities, professional ethics, veterinarian-client-patient relationship (VCPR), practice management, public health, and regulatory organizations are discussed. Students study those aspects of medical terminology that are commonly used by the veterinary profession. Prerequisites: (BIO 140 or BIO 150) and (CHM 100 or CHM 110) and MAT 153

Credit: 2      Lecture: 1      Lab: 3

#### VET102      Veterinary Anatomy

This course, the first of a two part series, provides a broad foundation in the structure and function of the major animal species and uses a body system approach to studying comparative anatomy. The connection between the study of anatomy with clinical veterinary medical and surgical nursing is emphasized. Coordinated laboratory includes models, radiographs, and preserved specimens. Prerequisites: (BIO 140 or BIO 150) and (CHM 100 or CHM 110) and MAT 153

Credit: 3      Lecture: 2      Lab: 3

#### VET110      Veterinary Physiology

This course, the second of a two part series, provides a broad foundation of the structure and function of the major animal species and uses a body system approach to studying comparative physiology. The connection between the study of physiology with clinical veterinary medical and surgical nursing is emphasized using on-line assignments. Prerequisites: VET 101 and VET 102

Credit: 3      Lecture: 2      Lab: 3

#### VET120      Breeds And Behavior

This course provides an overview of the common breeds of companion animals. Breed characteristics and genetic disease predisposition are discussed. Fundamental principles of animal behavior, including patterns of behavior, evolution of behavior, reproduction, and abnormal behavior are addressed. Prerequisites: VET 101 and VET 102

Credit: 2      Lecture: 2      Lab: 0

#### VET140      Pharmacology for Vet Techs

This course examines veterinary drugs and medicines. Topics include classes and actions of drugs, pharmacokinetics, pharmacy maintenance and record keeping, and drug dispensing laws and procedures. The laboratory provides opportunities to obtain drug information and calculate drug doses of common medications used in veterinary medicine. Prerequisites: VET 101 and VET 102

Credit: 3      Lecture: 2      Lab: 3

#### VET145      Exotic Animal Care and Mgmt

This course provides a basic overview on the health and medical care of common species of exotic animals that a veterinary technician may encounter in practice. Husbandry, nutritional requirements, common diseases, and basic nursing care will be discussed. Students will have the opportunity to handle a variety of exotic animals. Prerequisite: VET 110

Credit: 1

Lecture: 1

Lab: 0

**VET205 Small Animal Health & Disease**

This course discusses infectious and noninfectious disease of companion animals. The etiology, diagnosis, treatment, and prevention of diseases will be covered. The role of the veterinary technician in educating the public on common diseases and their clinical signs will be discussed. Prerequisites: MLT 130 and VET 120 and VET 110 and VET 140.

Credit: 3

Lecture: 3

Lab: 0

**VET210 Veterinary Clinical Pathology**

This course provides basic background in veterinary pathology covering theory and techniques in clinical chemistry, urinalysis, cytology, parasitology, mycology, toxicology, and microbiology. Practical application of laboratory skills and use of diagnostic equipment is taught in the laboratory. Prerequisites: MLT 130 and VET 110 and VET 140

Credit: 3

Lecture: 2

Lab: 3

**VET221 Veterinary Nursing I**

This course provides theoretical and technical skills in companion animal medical nursing. Topics include basic animal care and first aid, physical examination, administration of medication, nutrition, and disinfecting/cleaning, as well as bandaging and fluid therapy. Laboratory sessions provide the student hands-on experience with nursing concepts learned during lecture. Prerequisites: MLT 130 and VET 120 and VET 110 and VET 140.

Credit: 3

Lecture: 2

Lab: 3

**VET222 Veterinary Nursing II**

This course provides theoretical and technical skills in companion and exotic animal surgical and anesthesia nursing. Topics include sterile technique, surgical and monitoring equipment, common surgical procedures, dentistry, and wound management. Anesthesiology is discussed including drugs, patient preparation, monitoring, and post-operative care of the patient. Emergency and critical care medicine is included. Laboratory sessions provide the student hands-on experience with concepts learned during lecture. Prerequisites: VET 205 and VET 210 and VET 221

Credit: 3

Lecture: 2

Lab: 3

**VET224 Lg Animal/Equine Nurs/Hlth Mgt**

This course focuses on nursing care and health and disease of food animals and equine. This course provides an introduction to techniques and health management that a technician will be expected to provide in a large animal veterinary practice. Common diseases of livestock and equine including basic therapeutics or diagnostic approaches, and vaccinations will be discussed. The laboratory will provide the student with the opportunity to perform basic techniques, including venipuncture, bandaging, physical examination, and medicating cattle, sheep, and horses. Prerequisite: VET 221

Credit: 4

Lecture: 3

Lab: 3

**VET230 Research Animal Technology**

This course prepares students to work with a variety of animals used in research. Laboratory sessions provide hands-on training in restraint, drug administration, sample collection, anesthesia, and research techniques. Lectures will cover husbandry, diseases, and sanitation, as well as the principles and ethics of animal research. Prerequisites: VET 205

Credit: 3

Lecture: 2

Lab: 2

**VET235 Diagnostic Imaging**

This course provides theoretical and practical information needed to produce diagnostic radiographs using a wide variety of species, including dogs, cats, horses, and exotics. Other topics, including patient/staff safety, ultrasonography, contrast studies, and digital radiography are discussed. Laboratory sessions provide the student hands-on experience with concepts learned during lecture. Prerequisites: VET 205 and VET 221

Credit: 3      Lecture: 2      Lab: 3

**VET250 Vet Tech Internship**

This course is designed to give students "hands-on" experience prior to the graduation from the Veterinary Technology program. This course will provide clinical learning situations for developing the techniques required for veterinary technicians in small and/or large animal surgery, medical nursing, clinical pathology, diagnostic imaging, and ancillary areas. Students are assigned to 240 hours working in a variety of clinical and field service settings under the direction of a qualified veterinarian and/or licensed veterinary technician. Prerequisites: VET 222 and VET 224 and VET 235 and VET 230.

Credit: 5      Lecture: 0      Lab: 15

**VET289 Approved Technical Elective**

Students may complete technical electives for which they have written prior approval of the department chairperson. Prerequisite: VET 101 or VET 101 concurrently.

Credit: 3      Lecture: 1      Lab: 8

**VSC115 Intro To Design**

This class is an introduction to the principles and techniques of visual communications and interior design. Emphasis will be placed on the development of problem solving skills required by designers in both disciplines. Key elements of design will be examined in conjunction with training in basic production skills. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 005 or higher)

Credit: 3      Lecture: 2      Lab: 2

**VSC125 Color And Composition**

Extensive work in applied color theory combined with the study of compositional formats and styles. Focus will be on application of these concepts in realistic interior and graphic design projects. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 005 or higher)

Credit: 3      Lecture: 2      Lab: 2

**VSC131 Art History I**

The history of Western art, architecture, and the decorative arts from cave paintings to the height of the Renaissance. Egyptian, Greek, roman, Gothic, and early Renaissance artists and artworks will be examined and discussed as they relate to the history of art and western civilization. Prerequisites:(Test scores or ENG 006 or ENG 007 or higher)

Credit: 3      Lecture: 3      Lab: 0

**VSC132 Art History II**

This course deals with the history of Western art, architecture, and the decorative arts from the height of the Renaissance to the 21st century. Relationship between art of the various periods and their historical and cultural influences will be explored. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 3      Lecture: 3      Lab: 0

**VSC133 History of Graphic Design**

The study of the history and growth of graphic design as it applies to current trends in industry and commerce. The focus will be on a survey of the major innovators and movements in visual communications and advertising in the 20th century. Prerequisite: VSC 115

Credit: 2

Lecture: 2

Lab: 0

**VSC134 Art History Study Abroad**

This course is designed with a study abroad component to immerse the student in the art, architecture, artists, styles, and movements of the designated study abroad location. It will be a focused 3-credit art history course run in distributed format. The art history artifacts will be studied in-place as they are found in the museums and historical sites of the designated study abroad location(s). Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

Credit: 3

Lecture: 3

Lab: 0

**VSC135 Non-Western Art Survey**

This is a survey course of the diverse art of the non-western world. The art of Africa, Native American, India, China, etc., will be examined. Largely ignored in traditional art history courses, non-western art has had a great cultural and stylistic influence on today's art world. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 3

Lecture: 3

Lab: 0

**VSC155 Typography And Layout**

This course examines the history of type and typesetting, modern methodologies and principles, and the aesthetics of good typographic design. Students will strengthen their use of type as a design element through a variety of projects ranging from elementary exercises to intermediate and advanced presentations. Prerequisites: VSC 115 and VSC 160

Credit: 3

Lecture: 2

Lab: 2

**VSC160 Computer Graphics I**

Students will be introduced to the computer as an artistic medium. The basics of the Macintosh operating platform and Adobe Photoshop and QuarkXPress software will be emphasized. Students will become proficient in the use of these important computer graphic software packages through a series of beginning to intermediate projects. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 4

Lecture: 3

Lab: 2

**VSC161 Computer Graphics II**

Students will continue progress initiated in Computer Graphics I and expand their capabilities to include further mastery of Photoshop, QuarkXPress, and additional software skills with the draw program, Adobe Illustrator. Emphasis will be placed on development of professional level projects for inclusion in the student's final portfolio. Prerequisites: VSC 160

Credit: 4

Lecture: 3

Lab: 2

**VSC165 Photography I**

This course is an introduction to the 35mm camera and the exposure controls and creative decision making skills necessary to create quality images on film. It will focus on managing the variables of shutter speed, film speed, aperture settings, and other elements. Artistic and aesthetic issues relevant to professional practice also will be explored. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher) and (Test scores or MAT 005 or higher)

Credit: 4

Lecture: 3

Lab: 2

**VSC166 Photography II**

Students will expand their knowledge of photography beyond those learned in Photography I and develop a deeper understanding of aesthetic issues. It will focus on the technical aspects of processing black and white film and prints and explore the students' personal creativity and vision. Prerequisites: VSC 165

Credit: 3

Lecture: 2

Lab: 4

**VSC175 Print Production Processes**

A study of the processes used in the printing industry. Emphasis will be placed on terminology, practices, and techniques for effectively communicating with printing professionals. Class projects will develop the students' ability to design within the parameters necessary to insure a printable solution. Prerequisites: VSC 155 and VSC 160

Credit: 2

Lecture: 1.50

Lab: 1

**VSC181 CorelDraw**

An introduction to CorelDraw, a PC-based graphic design software package. Emphasis will be placed on illustrative and text handling capabilities of the software through exercises and projects. This serves as a valuable cross-training course for visual communications students. Prerequisites: (Test scores or ENG 006 or ENG 007 or higher)

Credit: 4

Lecture: 3

Lab: 2

**VSC185 Advanced Drawing**

Self-paced study of advanced techniques in a selected drawing media or technique. Targeted for students with skills beyond the foundation level or students intending an illustration career. Requires permission of the department chairperson. Prerequisites: VSC 109

Credit: 3

Lecture: 2

Lab: 2

**VSC186 Advanced Painting**

Self-paced study of advanced techniques in a selected painting media or technique. Targeted for students with skills beyond the foundation level or students intending an illustration career. Requires permission of the department chairperson. Prerequisites: VSC 125

Credit: 3

Lecture: 2

Lab: 2

**VSC187 Advanced Illustration**

Self-paced study of advanced techniques in a selected media or technique. Emphasis will be placed on development of a personal illustrative style. Targeted for students intending to pursue an illustrative career. Requires permission of department chairperson. Prerequisites: VSC 109 and VSC 125 and VSC 165.

Credit: 3

Lecture: 2

Lab: 2

**VSC190 Intro To Videography**

Students will learn the basics of video camera operation, lighting, sound, and editing. Emphasis will be placed on lectures and hands-on assignments as students prepare to use video production techniques on multimedia projects. Prerequisites: VSC 160 and VSC 165

Credit: 3

Lecture: 2

Lab: 2

**VSC251 Portfolio Workshop**

An individualized assessment of the student's work followed by assignments aimed at strengthening the content and/or presentation of the final portfolio. Must be coordinated with other classes in the student's final semester and culminates with a formal portfolio review presentation. Prerequisites: VSC 115 and VSC 155 and VSC 161 and VSC 165.

Credit: 4

Lecture: 3

Lab: 3

**VSC260          Multimedia Authoring**

Students will learn how to script and execute interactive multimedia presentations. Emphasis will be placed on design and techniques through the development of a full multimedia presentation project. Prerequisites: VSC 160 and VSC 161 and VSC 262.

Credit: 3

Lecture: 2

Lab: 4

**VSC261          Multimedia Sound**

This course is a study of the theory, techniques, and control of sound recording and computer sound editing. An emphasis will be placed on the use of sound as it relates to multimedia presentations. Prerequisites: VSC 160

Credit: 3

Lecture: 2

Lab: 2

**VSC262          Computer Graphics III**

Students will continue progress initiated in Computer Graphics I and II and expand their capabilities to use them in multimedia applications. Software skills will expand to include Adobe Premier. Students will complete a four-to-six minute presentation as well as other exercises and projects. Emphasis will be placed on development of professional level projects for inclusion in the student's final portfolio. Prerequisites: VSC 115 and VSC 160.

Credit: 4

Lecture: 3

Lab: 2

**VSC263          Advanced Multimedia Authoring**

In this class students will learn advanced concepts in scripting as they build on skills mastered in Multimedia Authoring. Advanced Lingo software and web applications also will be addressed. Requires permission of the department chairperson. Prerequisites: VSC 260

Credit: 4

Lecture: 3

Lab: 3

**VSC264          3-D Design and Animation**

In this class, students will learn advanced concepts as they build on skills mastered in earlier computer graphics classes. Students will be introduced to designing and animating objects using 3-D software and the use of timelines for animation. Prerequisites: VSC 162

Credit: 4

Lecture: 3

Lab: 3

**VSC265          Motion Graphics**

A study of the basics of computer animation via foundation level projects. Additional work will be done using traditional animation methods in a digital environment. Prerequisites: VSC 161

Credit: 3

Lecture: 2

Lab: 4

**VSC267          Color Photography**

Students will be introduced to the concepts of color photography incorporating digital darkroom tools. Students will be using traditional camera techniques combined with digital manipulating and printing methods. Prerequisites: VSC 125 and VSC 160 and VSC 166.

Credit: 4

Lecture: 3

Lab: 3

**VSC268          Photo Illustration**

Students will be asked to expand their problem solving abilities as well as their technique as they begin using large format camera techniques. Using the 4x5 camera, students will explore commercial illustration tools, props, lighting and background requirements needed by the new digital photographer. Prerequisites: VSC 166

Credit: 3      Lecture: 2      Lab: 3

**VSC270      Project Management**

A study of management skills as they apply to the advertising and multimedia design industry. Emphasis will be placed on scheduling, pricing, ethical guidelines, and media specification. Students will develop projects and move them through concept, development, production and delivery. Prerequisites: VSC 115 and VSC 160 and VSC 175

Credit: 2      Lecture: 1.50      Lab: 1

**VSC271      Illustration**

This course is a study of the technical and aesthetic aspects of creating illustrations for publication. A range of assignments will be used to build skills in rendering in various media and in the conceptualization of images for editorial, commercial, and book illustrations. Prerequisites: VSC 109 and VSC 115 and VSC 125 and VSC 160.

Credit: 3      Lecture: 2      Lab: 2

**VSC275      Self Promotion**

The current trends in self-promotional techniques for the visual communications professional. Students will develop materials designed to help them get the attention of potential clients or employers. Emphasis will be on showcasing the student's individual talents through a series of promotional projects. Prerequisites: VSC 155 and VSC 161 and VSC 165

Credit: 2      Lecture: 1.50      Lab: 1

**VSC285      Advanced Project Elective**

Advanced level individualized work on a practical field assignment or specified series of assignments that will help prepare the student for the realities of being a visual communications technology professional. Must include scheduling, cost analysis, and contractual components. Requires approval and sponsorship of the department chairperson. Prerequisites: VSC 115

Credit: 3      Lecture: 2      Lab: 4

**VSC292      Video Production**

This course is a study in the coordination of the many facets of the video studio. Direction, sound, camera, output devices, and video editing will be covered as well as scripting and electronic graphics. Prerequisites: VSC 190

Credit: 4      Lecture: 3      Lab: 2

**WEB160      Internet/Web Construction**

This course enables students to create websites using HyperText Markup Language (HTML) and cascading style sheets (CSS). Prerequisites: CIS 120

Credit: 3      Lecture: 2      Lab: 2



## Associate in Applied Science Degree Programs (A.A.S.)

CAMPUS KEY: T = Dover; O = Georgetown; S = Stanton; W = Wilmington

<u>Program</u>	<u>Campus</u>
Accounting	O,T,W
Advertising Design	T
Agribusiness Management	O,T,W
Architectural Engineering Technology	O,T,S
Automotive Technology	O,S
Aviation Maintenance Technology	O
Biological Sciences	O,S
Biomedical Option	T
Biotechnology	O,S
Building Automation Systems Option	T
Business Administration Transfer Option	O,T,W
Cardiovascular Sonography	W
Chemical Process Operator	S
Chemistry	S
Chemistry Math Concentration	S
Civil Engineering Technology	O,S
Communications	O
Computer Aided Drafting/Design Technology	S
Computer Engineering Tcy Option	S
Computer Information Systems	O,T,W
Computer Network Engineering Technology	O,T,W
Computing and Information Science	W
Construction Management Technology	O,S,T
Criminal Justice	O,S,T
Culinary Arts	T,S
Dental Hygiene	W
Design Engineering (Mechanical)	O
Diagnostic Medical Sonography: Owens	O
Diagnostic Medical Sonography: Wilmington	W
Drug Alcohol Counseling	T,W
Early Childhood Development	O,T,W
Electrical and Computer Engineering Transfer Option	O,T,S
Electromechanical Engineering Technology	T
Electronics Engineering Tcy	O,T,S
Electronics Engineering Technology Transfer Option	O,T,S
Emergency Medical Technician Paramedic	T
Energy Management	O,T,S
Entrepreneurship	O,T,W
Environmental Technology: Environmental Engineering Technology	O,S
Exercise Science	W
Fire Protection	S
Food Safety	O
Food Service Management	S
General Business	O,T,W
Geographic Information Systems Technology	S
Health Information Management	W
Histotechnician	W
Homeland Security and Emergency Management	T
Hospitality Management	T,W
Human Services	O,T,W
Information Security	O,T,W
Instrumentation Option	S
Landscape and Ornamental Horticulture	O
Law Enforcement Option	O,T,S
Logistics, Supply Chain, and Operations Management	O,W

Management	O,T,W
Marketing	O,T,W
Mechanical Engineering Technology	S
Medical Assistant	W
Medical Laboratory Technician	O
Multimedia	T
Nuclear Medicine	W
Nursing	O,T,S
Occupational Therapy Assistant	O,W
Office Administration	O
Paraeducator	O,T,W
Paralegal	O,T
Photo Imaging	T
Physical Therapist Assistant	O,W
Production Agriculture	O
Radiologic Technology	O,W
Refrigeration, Heating, & Air Conditioning	O
Renewable Energy Solar	O,T,S
Respiratory Care	O,W
Surgical Technology	T
Surveying and Geomatics Engineering Technology	O,S
Turf Management	O
Veterinary Technology	O
Web Development	O,T

## Business

### Accounting

A.A.S. Degree (O,T,W)

As a graduate of the Accounting Program at Delaware Tech, you will use your strong accounting skills along with communication, computation and interpersonal skills on the job every day. A degree from this program, which has earned national accreditation from the Association of Collegiate Business Schools and Programs (ACBSP), sends a clear signal to potential employers that you have completed a high quality business program that meets rigorous educational requirements established by the ACBSP. Your degree will open the door to many different career paths in accounting. Graduates are employed as general staff accountants for business and industry, and frequently enter the areas of auditing, tax accounting and cost accounting.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
ACC 211 Tax Accounting I	3
ACC 221 Cost Accounting	3
ACC 231 Intermediate Accounting I	3
ACC 232 Intermediate Accounting II	3
BUS 203 Business Law	3
BUS 275 Portfolio/Experiential Lrning	3
MGT 212 Principles of Management	3
FIN 221 Money and Banking	3
or	
ACC 162 Computerized Accounting	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
CIS 107 Intro to Computers/Application	3
MKT 212 Principles of Marketing	3
OAT 152 Excel Level I	3
MAT 255 Statistics I	3
or	

MAT 220

## Visual Communications

### Advertising Design

A.A.S. Degree (T)

The Advertising Design Option of the Visual Communications program is a focused curriculum aimed at training new professional creative talent for the information age. Communicating visual information requires imagination, skill, and talent. While developing skills in key software for print and non-print communications, the program stresses the use of innovative, creative problem solving. As the information highway becomes more and more congested, good design and graphics will be needed to compete for the attention of a visually acute public. A professional in the visual communication industry would be involved in a range of projects from traditional print items such as brochures, publications and stationery to exhibits, signage, audio-visual presentations, and architectural graphics. Graduates of the program may enter careers as in-house designers for corporations, publishers, schools, retailers, and design firms. Many students work as independent, self-employed designers.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
VSC 109 Drawing I	4
VSC 115 Intro To Design	3
VSC 125 Color And Composition	3
VSC 133 History of Graphic Design	2
VSC 155 Typography And Layout	3
VSC 160 Computer Graphics I	4
VSC 161 Computer Graphics II	4
VSC 165 Photography I	4
VSC 175 Print Production Processes	2
VSC 251 Portfolio Workshop	4
VSC 262 Computer Graphics III	4
VSC 270 Project Management	2
VSC 271 Illustration	3
VSC 275 Self Promotion	2
VSC 131 Art History I	3
or	
VSC 132 Art History II	3

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
POL 111 Political Science	3
or	
PSY 121 General Psychology	3
<i>Select 1 course(s) from:</i>	
VSC 135 Non-Western Art Survey	3
VSC 166 Photography II	3
VSC 181 CoreIDraw	4
VSC 185 Advanced Drawing	3
VSC 186 Advanced Painting	3
VSC 187 Advanced Illustration	3
VSC 190 Intro To Videography	3
VSC 260 Multimedia Authoring	3
VSC 265 Motion Graphics	3
VSC 267 Color Photography	4
VSC 268 Photo Illustration	3
VSC 281 Project Elective	3

## Applied Agriculture

### Agribusiness Management

A.A.S. Degree (O,T,W)

*Agriculture plays an extensive and essential part in today's economy. Individuals seeking a career in agriculture and its related occupations will discover the need for a formal education is now greater than ever. The investment in a modern agricultural enterprise is too costly to permit poor planning and preparation. Sound principles of production, management, and marketing are vital to the successful undertaking of an agricultural business. A broad spectrum of agriculture-related careers extends beyond the farm. Employers look to two-year technical colleges for qualified employees, and entrepreneurs look to the associate degree as a means to prepare them for ownership of an agribusiness.*

*Agribusiness Management prepares students for positions related to the agriculture industry by developing their knowledge of agriculture, business and economics. This program will enable graduates to obtain positions with large corporations, small business or government agencies. Those who desire to be self-employed may choose to own or operate a farm business. Academics combined with real world experience will prepare students for a variety of employment opportunities.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3

SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AGS 102 Agricultural Science	3
AGS 104 Intro to Agribusiness Managemt	3
AGS 209 Farm Records & Accounts	3
AGS 212 Intro to Agribusiness Marketng	3
AGS 215 Agriculture Leadership	3
AGS 225 Agriculture Seminar	3
AGS 226 Agribusiness Management	3
Co-op	
<i>Select 3 course(s) from:</i>	
AGS 101 Soil Science	3
AGS 105 Prin of Plant Growth	3
AGS 123 Trfgrss Maintenance Practices	3
AGS 240 Hydroponics Production	3
AGS 250 Greenhouse Crop Production	3

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
CIS 107 Intro to Computers/Application	3
ECO 111 Macroeconomics	3
MGT 212 Principles of Management	3
OAT 152 Excel Level I	3
<i>Select 1 course(s) from:</i>	
BIO 140 General Biology	4
BIO 150 Biology I	4
BIO 151 Biology II	4
SCI 223 Applied Ecology	3

## Architectural Engineering

### Architectural Engineering Technology

A.A.S. Degree (O,T,S)

*Architectural Engineering Technology is an intensive mixture of architectural, civil, mechanical, and electrical principles as they relate to building design and construction. The curriculum provides a broad base instructional program suitable to numerous aspects of the building industry. Graduates of the Architectural Engineering Technology program may work as engineering technicians in offices of architects; mechanical, electrical, structural, or civil consulting engineering firms; contractors and developers; municipal, state and federal building regulating agencies; facilities/plant management offices for private industry; and building material suppliers and fabricators. Graduates of this program are prepared for immediate productivity in the profession.*

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 281 Calculus I	4
Select 2 course(s) from:	
CLT 110 Cross-Cultural Immersion	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 103 Sustainability and Society	3
SOC 111 Sociology	3
VSC 131 Art History I	3
VSC 132 Art History II	3

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AET 123 Arch Drafting/Design I	4
AET 125 Arch Drafting/Design II	4
AET 135 Construction Materials/Methods	3
AET 164 Architectural CAD Applications	3
AET 232 Contracts/Specifications	3
AET 236 Building Service Systems	3
AET 250 Arch Drafting/Design III	4
AET 270 Arch Drafting/Design IV	4
AET 275 Arch Dsgn:Foundation Studies I	4
or	
AET 290 Co-op Work Experience	3
or	
AET 291 Internship Work Experience	3

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CMT 234 Cost Estimating/Planning	3
EDD 171 Intro to CAD Using AutoCAD	3
MET 132 Statics	3
MET 242 Strength of Materials	3
MAT 190 Precalculus	4
or	
MAT 282 Calculus II	4
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4

## Automotive Technology

### Automotive Technology

A.A.S. Degree (O,S)

The Automotive Technology Program allows students to select a practical hands-on Diploma program or a

more rigorous Associate Degree option.

Graduates of the Associate Degree option will be able to perform a variety of preventive maintenance and repair functions on automobiles. Through systematic classroom instruction, completion of required laboratories and structured, mandatory internships, graduates will be able to use printed and electronic information, tools and instruments to diagnose faults and carry out necessary repairs and maintenance procedures.

Graduates of the Diploma program will be able to enter the automotive service industry as entry level technicians. Through the completion of the required pre-tech courses, students completing the Diploma program may transfer their earned credits toward the Associate Degree program. Academically ready students can apply to the program following the guidelines of each location's wait-list process. Interested applicants should review the information provided here and contact their program advisor for program requirements.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
PSY 100 Human Relations	3
SSC 100 First Year Seminar	1

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AUT 114 Intro to Automotive Technology	3
AUT 116 Automotive Electrical	5
AUT 118 Auto Steering & Suspension	3
AUT 119 Automotive Brake Systems	3
AUT 122 Auto Air Conditioning/Heating	3
AUT 202 Automotive Engine Repair	3
AUT 203 Automotive Engine Performance	6
AUT 205 Manual Transmissions/Transaxle	3
AUT 208 Automatic Transmissions	3
AUT 123 Work Experience Co-op I	3
or	
AUT 126 Work Experience Lab I	3
AUT 223 Work Experience Co-op II	3
or	
AUT 226 Work Experience Lab II	3

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
MET 123 Modern MFG Techniques	3

MGT 212 Principles of Management	3
SOC 103 Sustainability and Society	3
ENT 101 Intro to Entrepreneurship	3
or	
BUS 101 Introduction to Business	3

## Aviation Maintenance Technology

### Aviation Maintenance Technology

A.A.S. Degree (O)

The Aviation Maintenance Technology AAS degree prepares graduates for entry level positions as airframe and powerplant maintenance technicians. Graduates will acquire knowledge and skills needed in the fabrication, inspection, engine teardown and build-up, maintenance, repair, and testing of aircraft. Graduates will possess the training qualifications and be capable and competent to successfully pass the Federal Aviation Administration airframe and powerplant mechanic certification examinations.

#### CORE COURSES

Courses	Credits
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 112 Aviation Mathematics	4
PSY 100 Human Relations	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

Courses	Credits
AVI 110 Airframe Maintenance - General	12
AVI 120 Airframe Maint - AF Section I	11
AVI 210 Airframe Maint AF - Section II	12
AVI 220 Airframe Maint AF-Section III	11
AVI 230 Powerplant Maint - Section I	14
AVI 240 Powerplant Maint - Section II	13

#### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
CIS 107 Intro to Computers/Application	3
ELC 102 Basic Electricity for Aviation	3
ENG 124 Oral Communications	3
POL 111 Political Science	3
PSY 121 General Psychology	3

## Biotechnology

### Biological Sciences

A.A.S. Degree (O,S)

The Biotechnology: Biological Sciences program is designed to meet the needs of students who intend to pursue a bachelor's degree in biotechnology or biological sciences. The curriculum provides a theoretical and practical education in various aspects of biology and chemistry that can be applied to diverse careers in the medical, environmental, industrial, and agricultural fields. Standard techniques used in science laboratories are covered, and special emphasis is placed on science and math instruction to prepare students for upper-level course work.

#### CORE COURSES

Courses	Credits
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

Courses	Credits
BIO 150 Biology I	4
BIO 151 Biology II	4
BIO 250 Principles of Microbiology	4
BIT 260 Biotechnology I	4
BIT 261 Biotechnology II	4
CHM 240 Organic Chemistry I	4
CHM 241 Organic Chemistry II	4
CHM 250 Analytical Chemistry I	5

#### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
CHM 150 Chemical Principles I	5
CHM 151 Chemical Principles II	5
CIS 107 Intro to Computers/Application	3
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4

## Electronic Engineering Technology

### Biomedical Option

A.A.S. Degree (T)

This degree program takes the electronics program and provides course work beyond the normal theories and applications of the electronics technology field. Courses from the computer and electromechanical engineering technologies and the nursing program become part of the curriculum requirements. Internship work experience in electronics and in a hospital/medical environment is

a significant part of the program. A student who is training to be a biomedical technician must have a high level of personal commitment, ethical conduct, and a knowledge of interpersonal relationships in order to enable him or her to interact with medical staff within the hospital/medical environment. Courses are transferable to four-year degree programs in engineering technology and related programs. Students are advised to contact the department for details.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CEN 100 Intro Elec & Computer Eng Tech	3
CEN 126 Industrial Networks	3
ELC 125 Electrical Circuits I	4
ELC 126 Analog Electronics I	3
ELC 127 Digital Electronics	4
ELC 225 Electrical Circuits II	4
ELC 226 Analog Electronics II	3
ELC 260 Biomedical Instrumentation	4
ELC 261 Biomedical Instrumentation II	4
ELC 291 Biomed Electronics Internship	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 110 Essentls-Anatomy & Physiology	4
CHM 110 General Chemistry	4
MAT 190 Precalculus	4
PHY 111 Conceptual Physics	4

## Biotechnology

### Biotechnology

A.A.S. Degree (O,S)

Biotechnology associate degree graduates are prepared for entry-level employment in a variety of

laboratory settings. They analyze and interpret data using their knowledge of biological methods, laboratory techniques, and modern instrumentation. Students acquire a theoretical and practical education in various aspects of biology and chemistry that can be applied to diverse careers in the medical, environmental, industrial, and agricultural fields.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
ENG 122 Technical Writing-Comm	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
<i>or</i>	
MAT 190 Precalculus	4
<i>Select 2 course(s) from:</i>	
CLT 110 Cross-Cultural Immersion	3
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
PSY 123 Industrial Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
BIO 150 Biology I	4
BIO 151 Biology II	4
BIO 250 Principles of Microbiology	4
BIT 260 Biotechnology I	4
BIT 261 Biotechnology II	4
CHM 111 Intro to Organic & Biochemistry	4
CHM 250 Analytical Chemistry I	5
CHM 251 Analytical Chemistry II	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CHM 150 Chemical Principles I	5
CHM 151 Chemical Principles II	5
CIS 107 Intro to Computers/Application	3

## Energy

### Building Automation Systems Option

A.A.S. Degree (T)

The Building Automation Systems (BAS) Program leads to an Associate in Applied Science (A.A.S.) degree in Energy Management with a Building Automations System option. BAS technicians conduct the hands-on operation of a building's computer networking of electronic devices designed

to monitor and control the mechanical, security, fire and flood safety, HVAC and humidity control, and ventilation systems. The program incorporates electronics, energy, and HVAC courses designed to train an entry level controls technician.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 261 Business Calculus I	4
<i>Select 1 course(s) from:</i>	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
NRG 101 Intro to Energy Management	3
NRG 108 Safety Basics	1
NRG 123 Fundamentals of Control System	3
NRG 126 Fundamentals of HVAC systems	4
NRG 140 Commercial Building Systems	3
NRG 209 BAS Co-operative Education	3
NRG 223 Energy Control Strategies	3
NRG 226 Bldg Mech/Elec Systms Analysis	4
NRG 233 Lighting Applications	4
NRG 245 Building Systems Integration	3
NRG 253 BAS Capstone	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CEN 126 Industrial Networks	3
EDD 131 Engineering Graphics/CAD	3
ELC 125 Electrical Circuits I	4
OAT 152 Excel Level I	3
PHY 120 Energy Physics	3

## Business

### Business Administration Transfer Option

A.A.S. Degree (O,T,W)

The Business Administration Transfer option is designed to enable graduates to transfer to four year business programs accredited by the Association to Advance Collegiate Schools of Business (AACSB). The option combines studies in non-business and business courses that will best

match students' individual education goals. This option will give graduates the flexibility to transfer to institutions of higher learning.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
ENG 124 Oral Communications	3
MAT 153 College Math and Statistics	4
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
ACC 221 Cost Accounting	3
BUS 101 Introduction to Business	3
MAT 255 Statistics I	3
MAT 256 Statistics II	3
MAT 261 Business Calculus I	4
MGT 212 Principles of Management	3
MKT 212 Principles of Marketing	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
PSY 121 General Psychology	3
or	
SOC 111 Sociology	3
<i>Select 2 course(s) from:</i>	
ENG 128 African-American Literature	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
SPA 136 Spanish Communication I	4
SPA 137 Spanish Communication II	4
<i>Select 1 course(s) from:</i>	
BIO 100 Medical Terminology	3
BIO 110 Essentls-Anatomy & Physiology	4
BIO 140 General Biology	4
CHM 110 General Chemistry	4
ENV 190 Intro to Env'tl Science & Tech	3
PHY 111 Conceptual Physics	4

## Allied Health

### Cardiovascular Sonography

A.A.S. Degree (W)

Sonography is the art and science of employing high frequency sound waves to image organs, vessels, masses, and fluid accumulations within the body. The Cardiovascular Sonography program at the Wilmington Campus provides comprehensive



educational experiences that enable qualified students to acquire the knowledge, skills, and behaviors necessary to be eligible for licensure and employment as entry level diagnostic cardiac sonographers and vascular technologists. The cardiovascular program focuses on procedures that help to diagnose abnormalities related to heart and vascular diseases. The cardiovascular program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDEMS) 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251 of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Part Street, Clearwater, FL 33756, (727)210-2350. Graduates may take the national certification in cardiac and vascular sonography. Courses are offered on campus and a variety of clinical affiliates. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 180 College Algebra	4

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CVS 109 Intro to Clin Internship II	1
CVS 201 Clinical Internship I	3
CVS 202 Clinical Internship II	7
CVS 203 Clinical Internship III	7
CVS 210 Scanning Applications	1
DMS 106 Intro-Patient Care/Sonography	3
DMS 108 Intro to Clin Internship I	1
DMS 110 Acoustical Physics	3
DMS 230 Special Topics	2
ECH 111 Echocardiography Techniques I	3
ECH 112 Echocardiography Techniques II	3
ECH 213 Echocardiography Technique III	3
VAS 111 Vascular Techniques I	3
VAS 112 Vascular Techniques II	3
VAS 213 Vascular Techniques III	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5

BIO 121 Anatomy and Physiology II	5
BIO 130 Disease Proc/Pathophysiology	3
CHM 110 General Chemistry	4
HLH 215 Cardiovascular Monitoring	2
PHY 111 Conceptual Physics	4

## Chemical Process Operator

### Chemical Process Operator

A.A.S. Degree (5)

The Chemical Process Operator curriculum prepares students for employment in industrial plants in the chemical, petroleum, polymer and pharmaceutical industry. The chemical industry throughout the state has a great need for trained chemical operators to adjust and optimize conditions for the production of large quantities of products in local chemical plants and pilot plants. Graduates are readily employed by these local plants at competitive salaries. The program provides a practical education in the various aspects of plant operations such as hands-on training in process operations and control, regulatory compliance, and preventive maintenance skills. Laboratory facilities include not only standard lab equipment, but also modern instrumentation in pilot plant technology and computer simulations.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
SSC 100 First Year Seminar	1
Select 2 course(s) from:	
ECO 111 Macroeconomics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CPO 100 Intro to Chem Proc Oper Tech	3
CPO 125 Safety, Health & Environment	3
CPO 135 Chem Proc Tech-Equipment	3
CPO 151 Chem Proc Tech I-Systems	4
CPO 240 Quality	3
CPO 252 Chem Proc Tech II-Operations	4
CPO 253 Process Troubleshooting	4
CPO 260 Work Experience	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CHM 110 General Chemistry	4
CIS 107 Intro to Computers/Application	3
ELC 101 Intro to Instrumentation	3

ELC 270 Process Instrumentation I	4
PHY 111 Conceptual Physics	4

## Chemistry

### Chemistry

A.A.S. Degree (S)

The Chemistry associate degree will give you the skills needed to work as a technician in a laboratory in chemical, pharmaceutical, and related industries. Chemical and related industries employ scientists at all degree levels in research, production, and quality control laboratories, and in customer service and related areas. The Delaware Tech Chemistry program teaches you to integrate scientific knowledge, laboratory skills, and critical thinking to solve chemical problems.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 190 Precalculus	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
CLT 110 Cross-Cultural Immersion	3
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
PSY 123 Industrial Psychology	3
SOC 111 Sociology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CHM 111 Intro to Organic & Biochemistry	4
CHM 150 Chemical Principles I	5
CHM 151 Chemical Principles II	5
CHM 240 Organic Chemistry I	4
CHM 241 Organic Chemistry II	4
CHM 245 Intro to Industrial Chemistry	4
CHM 250 Analytical Chemistry I	5
CHM 251 Analytical Chemistry II	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 150 Biology I	4
CIS 107 Intro to Computers/Application	3
CPO 106 Statistical Procs Cntrl Ovrw	1
CPO 240 Quality	3
PHY 205 General Physics I	4

## Chemistry

## Chemistry Math Concentration

A.A.S. Degree (S)

The Chemistry, Math Concentration Option is equivalent to the first two years of a Baccalaureate program in Chemistry. Connected Degree agreements with the University of Delaware and Delaware State University create a seamless path between Delaware Tech and senior institutions.

Knowledge of chemistry is critical in areas such as biology, chemical engineering, dentistry, forensic science, materials science, medicine, and pharmacy.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1
ENG 122 Technical Writing-Comm	3
<i>or</i>	
ENG 130 Honors Tech. Writing & Comm	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
BIO 150 Biology I	4
CHM 150 Chemical Principles I	5
CHM 151 Chemical Principles II	5
CHM 240 Organic Chemistry I	4
CHM 241 Organic Chemistry II	4
CHM 250 Analytical Chemistry I	5
CHM 251 Analytical Chemistry II	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
SCI 130 Introduction to Research	2
PHY 205 General Physics I	4
<i>or</i>	
PHY 281 Physics I with Calculus	4
PHY 206 General Physics II	4
<i>or</i>	
PHY 282 Physics II with Calculus	4
MAT 282 Calculus II	4
<i>or</i>	
ECO 111 Macroeconomics	3
<i>or</i>	
ECO 122 Microeconomics	3

## Civil Engineering Technology

### Civil Engineering Technology

A.A.S. Degree (O,S)

*Civil Engineering Technology is one of the broadest fields in the overall practice of engineering because its work is coordinated with so many other areas of engineering. The curriculum provides a broad base instructional program suitable to many aspects of the construction industry. The employment opportunities are extensive, varying and offer graduates numerous challenges in a growing technological society.*

*The program emphasizes practical applications in the areas of site development; route surveying and design; topographic drafting; hydraulics/hydrology; the selection, specification and testing of soils, concrete, asphalt, and other construction materials for the construction industry. The use of computers for CAD, data acquisition and analysis is integrated throughout the program preparing graduates for immediate productivity in the profession.*

*Graduates of the Civil Engineering Technology program may work as engineering technicians in offices of civil/surveying/structural/consulting engineering firms; local, state, and federal departments of natural resources; transportation/highway departments; material testing laboratories; and flood control and soil conservation agencies.*

**CORE COURSES**

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 281 Calculus I	4
Select 2 course(s) from:	
CLT 110 Cross-Cultural Immersion	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 103 Sustainability and Society	3
SOC 104 Human Geography	3
SOC 111 Sociology	3

**PROGRAM/MAJOR COURSES**

<u>Courses</u>	<u>Credits</u>
CET 125 Civil & Envl Drafting & Design	3
CET 135 Engineering Materials	3
CET 144 Surveying Principles	4
CET 225 Civil CAD Applications	3
CET 236 Soils	3

CET 240 Hydraulics and Hydrology	4
CET 244 Principles of Site Development	4
CET 247 Route Surveying and Design	3
MET 132 Statics	3
or	
CET 258 Statics with Calculus	3
MET 242 Strength of Materials	3
or	
CET 270 Solid Mechanics with Calculus	3

**PROGRAM/MAJOR SUPPORT COURSES**

<u>Courses</u>	<u>Credits</u>
CMT 234 Cost Estimating/Planning	3
EDD 171 Intro to CAD Using AutoCAD	3
GIS 101 Introduction to GIS	3
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4
MAT 190 Precalculus	4
or	
MAT 282 Calculus II	4

**Communications Technology**

**Communications**

A.A.S. Degree (O)

*The Communications program provides essential background for students preparing for careers in the print or broadcasting media. Students learn how to write news articles for print and broadcast. They learn how to operate industry standard equipment and software. Instruction is also given in copy writing and in selling advertisements for different types of media. The program emphasizes hands-on experience with students participating in the student-produced website "The Wire" and serving an internship prior to graduation.*

**CORE COURSES**

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

**PROGRAM/MAJOR COURSES**

<u>Courses</u>	<u>Credits</u>
COM 110 Intro. to Video Production	3
COM 140 Newswriting I	3
COM 150 Intro to Electronic Media	3
COM 240 Mass Media Law	3
COM 242 Newswriting II	3
COM 250 Photography	4

COM 251	Layout and Design	3
COM 293	Internship with Seminar	5
<i>Select 2 course(s) from:</i>		
COM 152	Podcasting	3
COM 160	Intro to Public Relations	3
COM 210	Advanced Video Production	3
COM 246	Introduction to Film	4
COM 252	Advanced Photography	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>		<u>Credits</u>
CIS 107	Intro to Computers/Application	3
HIS 111	U. S. History: Pre-Civil War	3
MKT 212	Principles of Marketing	3
OAT 242	Desktop Publishing	4
ENG 129	Creative Writing	3
<i>or</i>		
ENG 124	Oral Communications	3

## Computer Aided Drafting/Design Technology

### Computer Aided Drafting/Design Technology

A.A.S. Degree (S)

*Computer-Aided Engineering Drafting and Design Technology is a program which prepares students for industry by enhancing their computer-aided drafting (CAD) and design skills. The employment opportunities are extensive and varying and offer students numerous challenges in a growing technological society.*

*Graduates of the program may work as CAD technicians in offices of mechanical, electrical, architectural, structural consulting engineering offices; industrial piping; chemical/oil refineries; and municipal, state, and federal agencies. Graduates of this program are prepared for immediate productivity in the profession.*

#### CORE COURSES

<u>Courses</u>		<u>Credits</u>
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 180	College Algebra	4
MAT 190	Precalculus	4
SSC 100	First Year Seminar	1
<i>Select 2 course(s) from:</i>		
COM 111	Human Communications	3
ECO 111	Macroeconomics	3
ECO 122	Microeconomics	3
HIS 111	U. S. History: Pre-Civil War	3
HIS 112	U. S. History: Post-Civil War	3
POL 111	Political Science	3

PSY 100	Human Relations	3
PSY 121	General Psychology	3
SOC 111	Sociology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>		<u>Credits</u>
EDD 141	Engr Drafting & Design I	4
EDD 142	Engr Drafting & Design II	3
EDD 161	Intro - CAD using MicroStation	3
EDD 171	Intro to CAD Using AutoCAD	3
EDD 233	Engr Drafting and Design III	3
EDD 234	Eng. Drafting - Piping	3
EDD 246	Eng. Drafting - Structural	3
EDD 249	Engineering Design Process	3
EDD 271	Advanced CAD	3
EDD 272	Solid Modeling	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>		<u>Credits</u>
AET 236	Building Service Systems	3
MET 115	Intro to Mech Eng Tech	3
MET 123	Modern MFG Techniques	3
PHY 205	General Physics I	4
<i>or</i>		
PHY 281	Physics I with Calculus	4

## Electronic Engineering Technology

### Computer Engineering Tcy Option

A.A.S. Degree (S)

*The Computer Engineering Technology Option combines the hardware and software principles a technician encounters working with microcomputers. Specialized courses cover the fundamentals of electrical and electronic circuit theory as well as device operation and computer circuits. Students will acquire skills in basic PC installation and routine maintenance including troubleshooting and repair of microcomputer equipment and peripherals. Advanced skills in networking and security are also covered. An introduction to software through computer languages, such as C, C++, and assembly language are presented. Graduates can pursue career opportunities as computer technician, field service engineer, customer service representative or computer network technician. The Computer Engineering Technology Option is a path through the Electronics Engineering Technology program and is accredited by the Engineering Technology Accreditation Commission of ABET, <http://abet.org>.*

#### CORE COURSES

<u>Courses</u>		<u>Credits</u>
ENG 101	Crit Thinking & Acad Writing	3

ENG 102	Composition and Research	3
MAT 180	College Algebra	4
SSC 100	First Year Seminar	1
<i>Select 2 course(s) from:</i>		
COM 111	Human Communications	3
ECO 111	Macroeconomics	3
ECO 122	Microeconomics	3
POL 111	Political Science	3
PSY 100	Human Relations	3
PSY 121	General Psychology	3
SOC 111	Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
ELC 125	Electrical Circuits I	4
ELC 126	Analog Electronics I	3
ELC 127	Digital Electronics	4
ELC 205	Computer Networks and System I	4
ELC 206	Computer Networks & Systems II	3
ELC 225	Electrical Circuits II	4
ELC 226	Analog Electronics II	3
ELC 227	Microcontroller Fundamentals	3
ELC 228	Microcontroller Applications	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
CEN 100	Intro Elec & Computer Eng Tech	3
CEN 150	Computer Assembly/Maint	4
CEN 180	C/C++ Language Intro	4
MAT 190	Precalculus	4
PHY 205	General Physics I	4

## Computer Information Systems

### Computer Information Systems

A.A.S. Degree (O,T,W)

The Computer Information Systems prepares students for careers in applied programming and other computer-related fields. Computer concentrations are available leading to Associate in Applied Science degrees, diplomas, and certificates. The following Options are available:

Associate Degree in Computer Information Systems  
Associate Degree in Microcomputers and Networking  
Diploma in Microcomputer Studies  
Certificates in Microcomputers, Network, and Web Developer

These Options prepare students for computer-related careers in businesses that use hardware ranging from microcomputers to large mainframe computers. Students are also taught to use the wide variety of software found in businesses

including microcomputer networks. Each curriculum consists of a core of courses in programming, software applications, systems analysis, and related accounting and mathematics courses. All core courses make extensive use of computers.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>	
ECO 111	Macroeconomics	3
ECO 122	Microeconomics	3
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 153	College Math and Statistics	4
SSC 100	First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
CIS 120	Intro to Programming	4
CIS 141	Operating Systems I	3
CIS 150	Intro to Object-Oriented Programming	3
CIS 199	Data Comms & Networking	3
CIS 209	Visual Programming	3
CIS 211	Data Structures	4
CIS 238	Database Design & Programming	4
CIS 240	Systems Analysis & Design	3
CIS 282	Mobile App Development	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
CNE 180	Computer Assembly & Maintenance	4
ISY 111	Ethics & the Information Age	2
ISY 143	Intro to Information Security	3
ISY 150	Introductory Scripting	3
WEB 160	Internet/Web Construction	3

## Computer Network Engineering Technology

### Computer Network Engineering Technology

A.A.S. Degree (O,T,W)

The Computer Network Engineering program prepares students for careers in the field of networking and data communications. The curriculum, which consists of courses in computing and electronics, is designed to develop students' skills in installing, operating, and trouble-shooting computer networks. An introduction to computer languages, including assembly language, C++, and Visual systems is included. The electronics courses enable students to design and trouble-shoot the physical layer of the network. Graduates of this

program will find jobs as network technicians, network administrators, and installers.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CIS 120 Intro to Programming	4
CIS 141 Operating Systems I	3
CIS 240 Systems Analysis & Design	3
CNE 180 Computer Assmby & Maintenance	4
CNE 191 Router Configuration	3
CNE 192 Network Administration	3
CNE 215 Enterprise Server Admin	3
CNE 216 Open Source Server Admin	3
CNE 280 Advanced Networking Topics	3
CNE 284 Cloud Computing	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ISY 111 Ethics & the Information Age	2
ISY 150 Introductory Scripting	3
ISY 250 Network Def & Countermeasures	3
MAT 253 Discrete Math	3
PHY 111 Conceptual Physics	4

## Computing and Information Science

### Computing and Information Science

A.A.S. Degree (W)

Employment demand for graduates with high level computing and information technology skills is projected to continue to increase over the next decade. The Computing and Information Science program provides students with the skills necessary to design computing and information technology solutions so that they are prepared to be successful upon transfer to a bachelor's degree program. Students who wish to continue their education may do so through connected degree programs with local universities, including the University of Delaware and Delaware State University.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
HIS 111 U. S. History: Pre-Civil War	3
MAT 181 Algebra and Trigonometry I	4
or	
MAT 185 Precalculus	4
Select 1 course(s) from:	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CIS 130 Computer Organization	3
CIS 211 Data Structures	4
CSC 114 Computer Science I	4
CSC 164 Computer Science II	4
CSC 214 Computer Science III	4
CSC 264 Applied Computer Capstone	4
MAT 263 Principles of Discrete Math	4
MAT 182 Algebra and Trigonometry II	4
or	
MAT 282 Calculus II	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ENG 122 Technical Writing-Comm	3
MAT 281 Calculus I	4
ECO 122 Microeconomics	3
or	
ENG 124 Oral Communications	3
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4
HIS 112 U. S. History: Post-Civil War	3
or	
SPA 136 Spanish Communication I	4

## Construction Management Technology

### Construction Management Technology

A.A.S. Degree (O,S,T)

The Construction Management program prepares individuals to work in the office/business end of a construction firm. Students are required to take a core of construction courses and business courses. The student chooses several elective courses to broaden his/her background in a specialized area. Graduates from the program will be prepared to qualify for paraprofessional employment in the construction industry. Career positions include engineering aide, materials and job estimator, assistant construction supervisor/project manager, specification writer, material salesperson, building

inspector, and office manager. Graduates of this program are prepared for immediate productivity in the profession.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 281 Calculus I	4
Select 2 course(s) from:	
CLT 110 Cross-Cultural Immersion	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 103 Sustainability and Society	3
SOC 111 Sociology	3
VSC 131 Art History I	3
VSC 132 Art History II	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CET 125 Civil & Envl Drafting & Design	3
CET 144 Surveying Principles	4
CMT 111 Construction Print Reading	3
CMT 224 OSHA Constr Industry Training	3
CMT 234 Cost Estimating/Planning	3
CMT 235 Adv Cost Estimating/Planning	3
CMT 242 Constr Project Management I	3
CMT 244 Constr Project Management II	4
CMT 243 Co-op Work Experience	3
or	
CMT 246 Internship Work Experience	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
AET 135 Construction Materials/Methods	3
AET 232 Contracts/Specifications	3
AET 236 Building Service Systems	3
AET 264 Architectural CAD Applications	3
NRG 101 Intro to Energy Management	3
MAT 190 Precalculus	4
or	
PHY 205 General Physics I	4

## Criminal Justice

### Criminal Justice

A.A.S. Degree (O,S,T)

The Criminal Justice program prepares students for positions in local, state, and federal criminal justice agencies as well as private agencies. Career areas available to graduates are law enforcement and related services, corrections, counseling, probation, and parole. This program provides students the foundation for transfer to public and private four-year in-state colleges and universities to complete requirements for a bachelor's degree.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1
MAT 120 Contemporary Mathematics	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CRJ 101 Intro to Criminal Justice	3
CRJ 102 Criminal Law	3
CRJ 104 Drugs, Society, & Human Behvr	3
CRJ 105 Computer Appl in Crim./Justice	3
CRJ 115 Essntls of Intrvwng/Counsng	3
CRJ 117 Ethics Prof & Comm in Pbl Sfty	3
CRJ 118 Corrections in America	3
CRJ 220 Criminal Judiciary	3
CRJ 222 Constitutional Law	3
CRJ 223 Criminology	3
CRJ 226 Crisis Intervention	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ENG 122 Technical Writing-Comm	3
PSY 223 Abnormal Psychology	3
POL 111 Political Science	3
or	
HIS 112 U. S. History: Post-Civil War	3
SPA 133 Using Beginning Spanish	3
or	
SPA 136 Spanish Communication I	4

## Culinary Arts

### Culinary Arts

A.A.S. Degree (T,S)

This program provides students with the basic skills necessary for pursuing a career as a chef. Graduates will also be prepared for continuing their studies towards an advanced degree. Classes are a

combination of classroom lecture and hands-on cooking in the demonstration kitchen. Students also prepare and serve lunch in the restaurant located on campus. Students must complete a practicum (field experience) prior to graduation.

Graduates can expect to find employment in hotels, restaurants, clubs, and institutional settings. The program is a member of the National Restaurant Association and the American Culinary Federation. Interested applicants should contact Admissions for required admissions packet.

The Stanton and Terry Campus Culinary Arts programs are accredited by the American Culinary Federation, Foundation Inc.'s Accrediting Commission; 180 Center Place Way; St. Augustine, FL 32095 (800) 624-9458.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 119 Food Safety and Sanitation	2
CUL 121 Food Prep I	4
CUL 156 Practicum	3
CUL 171 Garde Manger	4
CUL 245 Applied Hospitality	2
CUL 261 Baking	4
CUL 262 Pastry	4
CUL 285 International Cuisine	4
CUL 291 Food Prep II	4

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
HRI 210 Beverage Management	3
HRI 212 Food/Beverage Cost Control	3
MGT 248 Culinary Supervisory Development	3
SCI 141 Nutrition in the Culinary Fld	2

## Allied Health

### Dental Hygiene

A.A.S. Degree (W)

The Dental Hygiene program provides comprehensive educational experiences for qualified

students to achieve the knowledge and skills necessary to be eligible for licensure and employment as dental hygienists. The program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The program includes didactic, laboratory and clinical experiences and is based at the Wilmington Campus, with an extension location at the Terry Campus (Dover, DE) that serves Kent and Sussex county students. The Terry Campus-based students complete their didactic courses at both the Dover and Wilmington campus locations and their clinical experiences at the Dover Air Force Base. The Dental Hygiene program cycle begins once a year in the fall semester. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 255 Statistics I	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
DHY 101 Clinical Dental Hygiene I	2
DHY 102 Clinical Dental Hygiene II	3
DHY 103 Clinical Dental Hygiene III	2
DHY 111 Dental Hygiene Fundamtlis I	3
DHY 112 Dental Hygiene Fundmtns II	3
DHY 121 Oral Histology/Embryology	2
DHY 132 Dental Anatomy	1.5
DHY 133 Head and Neck Anatomy	1.5
DHY 141 Oral Radiography	3
DHY 151 Periodontology/Cariology	3
DHY 161 Oral Pathology	3
DHY 204 Clinical Dental Hygiene IV	4
DHY 205 Clinical Dental Hygiene V	4
DHY 212 The Compromised Dental Patient	1.5
DHY 213 Adv Clinical Techniques	3
DHY 215 Practice Management	1
DHY 271 Pharmacology for Dental Hygien	1.5
DHY 281 Operative/Specialty Dentistry	1
DHY 290 Community Dental Health	2
DHY 291 Communty Dental Health Fld	1



Wrk

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 115 Nutrition	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 125 Introductory Microbiology	4
CHM 110 General Chemistry	4

## Design Engineering Technology

### Design Engineering (Mechanical)

A.A.S. Degree (O)

*The Design Engineering Technology curriculum is designed to provide students with a broad knowledge of basic engineering principles. An emphasis is placed on manufacturing, machining, and mechanical drafting and design. The program incorporates hands-on courses that provide students with experience in the modern technologies used in today's manufacturing sector. The program incorporates direct experience in CADD (computer-aided drafting and design), CNC (computer numerical control) machining, and CAM (computer-aided manufacturing). Careers in mechanical design, manufacturing, machining, maintenance, technical sales, and engineering management are likely areas of employment. The Design Engineering Technology program at the Owens Campus is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.*

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
CLT 110 Cross-Cultural Immersion	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
EDD 141 Engr Drafting & Design I	4
EDD 171 Intro to CAD Using AutoCAD	3

EDD 272	Solid Modeling	3
EDD 273	Advanced Solid Modeling	3
EDT 128	Machine Trades Blueprnt Rding	3
EDT 152	Engineering Design II	4
EDT 252	Engineering Design III	4
ELC 125	Electrical Circuits I	4
IET 209	Survey in Prod Plan & Cntrl	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
MET 123	Modern MFG Techniques	3
MET 125	Adv Manufacturing Techniques	3
MET 132	Statics	3
MET 242	Strength of Materials	3
PHY 205	General Physics I	4
or		
PHY 281	Physics I with Calculus	4
MAT 190	Precalculus	4
or		
MAT 281	Calculus I	4

## Allied Health

### Diagnostic Medical Sonography: Owens

A.A.S. Degree (O)

*Diagnostic Medical Sonography is the art and science of employing high frequency sound waves to image organs, vessels, masses, and fluid accumulations within the body. The skilled sonographer, qualified by academic and clinical training, assists the physician in assessing both disease processes and the state of well-being. The Diagnostic Medical Sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC DMS) 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251 of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street Clearwater, FL 33756, (727) 210-2350 to prepare students for national certification in general sonographic learning concentrations.*

*Courses are offered on campus and at a variety of clinical affiliates. Employment opportunities in this dynamic field exist in a wide range of settings such as hospitals, clinics, and doctors' offices. Other opportunities are available in veterinary medicine, industry, sales, mobile services, and the private sector. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>	
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 153	College Math and Statistics	4
PSY 121	General Psychology	3
SOC 213	Ethical Issues in Health Care	3
SSC 100	First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
DMS 104	Intro to Clinical Internship	1
DMS 107	Essentials in Pt. Care/Sono	3
DMS 110	Acoustical Physics	3
DMS 112	OB/GYN Sonography I	2
DMS 131	Abd/Small Parts Sono. I	2
DMS 214	Essentials in Vascular U/S	2
DMS 215	OB/GYN Sonography II	2
DMS 231	Abd/Small Parts Sono. II	2
DMS 235	Pediatric Sonography	1
DMS 240	Clinical Internship I	3
DMS 241	Clinical Internship II	6
DMS 242	Clinical Internship III	5
DMS 243	Clinical Internship IV	5
DMS 250	Selected Topics in U/S	2

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
BIO 100	Medical Terminology	3
BIO 120	Anatomy and Physiology I	5
BIO 121	Anatomy and Physiology II	5
BIO 130	Disease Proc/Pathophysiology	3
CHM 110	General Chemistry	4
PHY 111	Conceptual Physics	4

## Allied Health

### Diagnostic Medical Sonography: Wilmington

A.A.S. Degree (W)

*Diagnostic Medical Sonography is the art and science of employing high frequency sound waves to image organs, vessels, masses, and fluid accumulations within the body. The skilled sonographer, qualified by academic and clinical training, assists the physician in assessing both disease processes and the state of well-being. The Diagnostic Medical Sonography program is accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC DMS) 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251 of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) 1361 Park Street Clearwater, FL 33756, (727) 210-2350 to prepare students for national certification in general sonographic learning*

concentrations.

Courses are offered on campus and at a variety of clinical affiliates. Employment opportunities in this dynamic field exist in a wide range of settings such as hospitals, clinics, and doctors' offices. Other opportunities are available in veterinary medicine, industry, sales, mobile services, and the private sector. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 180 College Algebra	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
DMS 106 Intro-Patient Care/Sonography	3
DMS 108 Intro to Clin Internship I	1
DMS 109 Intro to Clin Internship II	1
DMS 110 Acoustical Physics	3
DMS 113 Gynecological Sonography	2
DMS 114 Obstetrical Sonography	2
DMS 121 Abdominal Sonography I	2
DMS 122 Abdominal Sonography II	2
DMS 201 Clinical Internship I	3
DMS 202 Clinical Internship II	7
DMS 203 Clinical Internship III	7
DMS 210 Scanning Applications	1
DMS 211 Abdominal Sonography III	1
DMS 230 Special Topics	2
VAS 111 Vascular Techniques I	3
VAS 112 Vascular Techniques II	3
VAS 213 Vascular Techniques III	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 130 Disease Proc/Pathophysiology	3
CHM 110 General Chemistry	4
PHY 111 Conceptual Physics	4

## Human Services

## Drug Alcohol Counseling

A.A.S. Degree (T,W)

The goal of the Drug and Alcohol Counseling curriculum is to train students in the various theories and techniques which are unique to drug and alcohol counseling. This program will prepare students for entry into the drug and alcohol counseling profession and/or to continue their education at a four-year institution to complete a bachelor's degree.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1
MAT 120 Contemporary Mathematics	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
DAC 141 Intro Drug&Alcohol Counseling	3
DAC 225 Drug & Alcohol Counseling II	3
DAC 230 Assessmnt/Trtmnt/D&A Counselng	3
DAC 240 Families & Addiction	3
DAC 244 Dir Practice II-Drug/Alcohol	6
HMS 121 Introduction to Human Services	3
HMS 122 Theories of Counseling	3
HMS 123 Dynamics/Group Communication I	3
HMS 221 Ethical Problems and Issues	3
HMS 243 Directed Practice I	6

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
COM 222 Intercultural Communication	3
POL 111 Political Science	3
PSY 127 Human Development	3
PSY 223 Abnormal Psychology	3

## Early Childhood Education

### Early Childhood Development

A.A.S. Degree (O,T,W)

The Early Childhood Education Development curriculum prepares the future Early Childhood

Professionals to develop and implement curriculum, to communicate effectively with families, and to manage a classroom or a child care program. Students may build on the Early Childhood Studies diploma. They will also receive a broad-based education in social sciences, English, and math. The Education department arranges for on-site community-based and/or lab school experiences.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
PSY 121 General Psychology	3
PSY 125 Child Development	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 120 Comtemp Issues in Erly Childhd	3
ECE 121 Infant & Toddler Methods & Lab	5
ECE 123 Early Childhd Methods I & Lab	5
ECE 125 Early Childhd Methods II & Lab	5
ECE 127 Childhood Classroom Mgt	3
ECE 222 Program Planning/Evaluation	3
ECE 233 Exceptional Child	3
ECE 244 Fld Work - Teaching Practicum	6
EDC 220 Parent/Family/School Interact	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ECE 111 Childhd Nutrition/Safety	3
ECE 226 Assessment of Young Children	3
EDC 120 Foundations of Literacy	3
HIS 111 U. S. History: Pre-Civil War	3

## Electrical and Computer Engineering

### Electrical and Computer Engineering Transfer Option

A.A.S. Degree (O,T,S)

This program is designed for students that are interested in pursuing a career in the exciting fields of electrical or computer engineering. Electrical and computer engineers design, research, develop, and test electrical and computer systems and components in a variety of industries. Electrical and computer engineers are designers and innovators that help create the products that we use and rely on in our daily lives for work, entertainment, safety, health, and happiness. Electrical and computer

engineers also develop solutions to current and future problems like sustainable energy resources, secure networks and computers, and new and innovative medical equipment.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
SSC 100 First Year Seminar	1
<i>Select 1 course(s) from:</i>	
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
SPA 136 Spanish Communication I	4
VSC 131 Art History I	3
VSC 132 Art History II	3
<i>Select 1 course(s) from:</i>	
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CEN 100 Intro Elec & Computer Eng Tech	3
CEN 200 Introduction to MATLAB	2
CIS 211 Data Structures	4
CSC 114 Computer Science I	4
CSC 164 Computer Science II	4
ELC 265 Intro to Digital Systems	3
ELC 266 Analog Circuits I	4
ELC 272 Electronic Circuit Analysis I	4
ELC 275 Microprocessor Systems	4
ELC 282 Signals and Systems	4
MAT 292 Engineering Math I	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CHM 150 Chemical Principles I	5
MAT 282 Calculus II	4
MAT 283 Calculus III	4
PHY 281 Physics I with Calculus	4
PHY 282 Physics II with Calculus	4

## Electromechanical Engineering Technology

### Electromechanical Engineering Technology

A.A.S. Degree (T)

The Electromechanical Engineering Technology

Department awards a student an Associate in Applied Science (A.A.S.) degree. To receive this degree, the student must complete training in the fields of electricity, electronics, process control, and hydraulics/pneumatics. The graduating student will be able to construct electrical, electronic, and fluid circuits from engineering designs provided by supervisory engineers, to apply test and evaluation procedures to these circuits, and to correct circuit defects with instrument-aided analysis.

A graduate of this technology is qualified for at least an entry-level position in the electromechanical field, which includes plant maintenance, small machine repairs, and school or hospital maintenance. A student may also choose to attend a four-year institution and pursue a baccalaureate degree in industrial, mechanical, or electromechanical engineering.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CEN 126 Industrial Networks	3
ELC 125 Electrical Circuits I	4
ELC 127 Digital Electronics	4
ELC 243 Programmable Logic Controllers	4
ELM 130 Industrial Electricity	3
ELM 205 Mechanisms and Design	3
ELM 250 Industrial Automation	3
ELM 252 Fluid Power	3
ELM 290 Electromechanical Internship	3
MET 132 Statics	3
MET 242 Strength of Materials	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
EDD 131 Engineering Graphics/CAD	3
MAT 190 Precalculus	4
PHY 205 General Physics I	4

PHY 206 General Physics II 4

## Electronics Engineering Technology

### Electronics Engineering Tcy

A.A.S. Degree (O,T,S)

The graduate of the Electronics Engineering Technology program has extensive training in analog and digital electronics with emphasis on applications and analysis relating to microprocessor, industrial control and communication systems. The students are skilled in computer simulation, robotics, programmable logic controllers, networking, and wireless communications. This program integrates the teaching styles of lecture, demonstration, laboratory and "hands-on" into all course work. Career opportunities in engineering, robotics, avionics, communications, computer electronics, quality control, networking, microwave filters, and manufacturing are likely employment areas.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ELC 125 Electrical Circuits I	4
ELC 126 Analog Electronics I	3
ELC 127 Digital Electronics	4
ELC 225 Electrical Circuits II	4
ELC 226 Analog Electronics II	3
ELC 227 Microcontroller Fundamentals	3
ELC 228 Microcontroller Applications	4
ELC 236 Analog Electronics III	3
ELC 243 Programmable Logic Controllers	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CEN 100 Intro Elec & Computer Eng Tech	3
CEN 150 Computer Assembly/Maint	4

CEN 180	C/C++ Language Intro	4
MAT 190	Precalculus	4
PHY 205	General Physics I	4

## Electronics Engineering Technology

### Electronics Engineering Technology Transfer Option

A.A.S. Degree (O,T,S)

The Electronics Engineering Technology Transfer Program prepares students for transfer to a baccalaureate electronics engineering technology program. Rigorous mathematics and physics instruction as well as hands-on laboratory training in analog and digital electronics, microprocessors, computers and programmable logic controllers provide students the foundational skills necessary for a successful transfer to a four year institution.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ELC 125 Electrical Circuits I	4
ELC 126 Analog Electronics I	3
ELC 127 Digital Electronics	4
ELC 225 Electrical Circuits II	4
ELC 226 Analog Electronics II	3
ELC 227 Microcontroller Fundamentals	3
ELC 228 Microcontroller Applications	4
ELC 243 Programmable Logic Controllers	4
<i>Select 1 course(s) from:</i>	
ELC 236 Analog Electronics III	3
ELC 283 Introduction to LabVIEW	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CEN 100 Intro Elec & Computer Eng Tech	3

CEN 180	C/C++ Language Intro	4
MAT 282	Calculus II	4
PHY 205	General Physics I	4
PHY 206	General Physics II	4

## Allied Health

### Emergency Medical Technician Paramedic

A.A.S. Degree (T)

The Emergency Medical Program prepares students to provide advanced prehospital emergency care under medical command authority to acutely ill or injured patients. Students will recognize, assess, and manage a medical or trauma emergency, record and communicate pertinent data to designated medical command authority, and direct and coordinate the transport of the patient. Students study both on campus and at a variety of field sites. The Emergency Medical Technician program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP); 1361 Park Street; Clearwater, FL 33756; 727-210-2350; [www.caahep.org](http://www.caahep.org). Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 129 Math for Health Sciences	3
SSC 100 First Year Seminar	1
PSY 121 General Psychology	3
<i>or</i>	
SOC 111 Sociology	3
SOC 213 Ethical Issues in Health Care	3
<i>or</i>	
PSY 223 Abnormal Psychology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
EMT 200 Intro To Paramedic Technology	5
EMT 201 Patient Assessment	3
EMT 202 Medical Emergencies I	3
EMT 203 ALS Skills Lab I	3
EMT 204 Special Populations	4
EMT 207 Paramedic Clinical I	1
EMT 211 Cardiology	4
EMT 212 Medical Emergencies II	3

EMT 213	ALS Skills Lab II	3
EMT 214	Legal Issues/Research	3
EMT 215	Trauma Emergencies	2
EMT 217	Paramedic Clinical II	3
EMT 227	Paramedic Clinical III	3
EMT 290	Paramedic Field Clinical	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 130 Disease Proc/Pathophysiology	3
CHM 100 Basic Chemistry	3
or	
CHM 110 General Chemistry	4

## Energy

### Energy Management

A.A.S. Degree (O,T,S)

Students will gain an understanding of energy systems in today's "built environment" and the tools to analyze and quantify energy efficiency. Students will develop sophisticated skills in multi-level analysis, including human and computer modeling, to improve energy efficiency in commercial spaces. These skills will be applied to the description and measurement of energy in building systems with the goal of evaluating and recommending energy solutions that will result in greater efficiency, energy cost savings and lower environmental impact. This approach allows energy users to apply strategic efforts to reduce consumption analytically, as opposed to only replacing controls or undertaking expensive changes in equipment. Academically ready students can apply to the program following the guidelines of each location's competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SOC 103 Sustainability and Society	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 261 Business Calculus I	4
Select 1 course(s) from:	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
NRG 101 Intro to Energy Management	3
NRG 108 Safety Basics	1
NRG 111 Res/Light Comm Energy Analysis	3
NRG 126 Fundamentals of HVAC systems	4
NRG 154 Alternative Energy Tech.	3
NRG 206 Work Exp: Energy Mngmt	3
NRG 214 Capstone in Energy Use/Anal.	6
NRG 223 Energy Control Strategies	3
NRG 226 Bldg Mech/Elec Systms Analysis	4
NRG 233 Lighting Applications	4
NRG 250 Energy Accting/Invest Analysis	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ENG 122 Technical Writing-Comm	3
OAT 152 Excel Level I	3
PHY 120 Energy Physics	3
EDD 131 Engineering Graphics/CAD	3
or	
AET 164 Architectural CAD Applications	3
BUS 101 Introduction to Business	3
or	
ENT 101 Intro to Entrepreneurship	3

## Entrepreneurial

### Entrepreneurship

A.A.S. Degree (O,T,W)

The Entrepreneurship Program is a comprehensive program of integrated credit and non-credit offerings providing opportunities for students to learn successful entrepreneurship. Students may complete an associate degree in entrepreneurship, complete entrepreneurship courses while majoring in another career area for a dual associate degree, complete entrepreneurship courses for a credit certificate, or complete entrepreneurship courses in a non-credit format earning continuing education units (CEU's). Supporting Offerings are provided, which relate to each of the entrepreneurship courses. These Supporting Offerings include Meet the Entrepreneur Series and the Tell Me More Series where experts expand upon topics taught in the courses. An annual conference each spring will be a culminating activity.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1

MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ENT 103 Legal Issues for ENT	3
ENT 106 Business Procedures	3
ENT 211 Business Start Up Design	3
ENT 220 Leadership	3
ENT 225 Entrepreneurial Experience	3
ENT 240 Funding & Finance for ENT	3
ENT 285 Business Plan Development	3
MGT 212 Principles of Management	3
MGT 231 Human Resource Management	3
ENT 101 Intro to Entrepreneurship	3
or	
BUS 101 Introduction to Business	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
MKT 212 Principles of Marketing	3
ACC 100 Introduction to Accounting	3
or	
ACC 101 Accounting I	4
ENG 122 Technical Writing-Comm	3
or	
ENG 124 Oral Communications	3
MKT 217 E-Marketing Fundamentals	3
or	
MIS 220 Management Information Systems	3
or	
EBZ 220 Fundamentals of E-Commerce	3
or	
ACC 162 Computerized Accounting	3
Select 1 course(s) from:	
ACC 162 Computerized Accounting	3
EBZ 220 Fundamentals of E-Commerce	3
MIS 220 Management Information Systems	3
MKT 217 E-Marketing Fundamentals	3

## Engineering

### Environmental Technology: Environmental Engineering Technology

A.A.S. Degree (O,S)

The program provides a full range of courses to prepare students for entry-level positions in the environmental engineering technology field. The Environmental Engineering Technology Program is designed to educate students in the general and technical aspects of environmental issues and common practice environmental procedures. The

degree focuses on practical education with courses covering the basic quantitative and conceptual skills required of environmental engineering technicians. The curriculum is broad-based to meet the demands of a range of environmental positions.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
CLT 110 Cross-Cultural Immersion	3
or	
ECO 111 Macroeconomics	3
MAT 180 College Algebra	4
or	
MAT 190 Precalculus	4
or	
MAT 281 Calculus I	4
SOC 103 Sustainability and Society	3
or	
SOC 104 Human Geography	3
or	
PSY 121 General Psychology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CET 125 Civil & Envl Drafting & Design	3
CET 144 Surveying Principles	4
CET 240 Hydraulics and Hydrology	4
ENV 190 Intro to Envtl Science & Tech	3
ENV 215 OSHA Hazardous Waste Operation	2
ENV 240 Environmental Field Sampling	3
ENV 260 Water/Wastewater Process Dsgn	3
ENV 271 Principles of Site Assessment	3
ENV 275 Environmental Sustainability	3
GEO 105 Geology and the Environment	3
SCI 223 Applied Ecology	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 150 Biology I	4
CHM 110 General Chemistry	4
EDD 171 Intro to CAD Using AutoCAD	3
GIS 101 Introduction to GIS	3
MAT 255 Statistics I	3
or	
PHY 205 General Physics I	4

## Allied Health

### Exercise Science

A.A.S. Degree (W)



*This curriculum is designed to prepare students as fitness technicians. Students will learn to properly conduct health screenings, administer exercise tests, and develop cardiovascular and strength training exercise programs. Through the technical component of the program, students will develop an in-depth understanding of exercise physiology, kinesiology, exercise testing, and fitness programming. Graduates will be qualified to sit for various certifications as offered by the American Council on Exercise (ACE), National Strength and Conditioning Association (NSCA), and American College of Sports Medicine (ACSM) as a Certified Personal Trainer, Group Fitness Instructor, or Lifestyle and Weight Management Coach.*

*Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 180 College Algebra	4
SOC 111 Sociology	3
or	
SOC 213 Ethical Issues in Health Care	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
EXS 100 Introduction to Exercise Scien	4
EXS 101 Functional Kinesiology	3
EXS 105 Conditioning & Strength Trning	4
EXS 120 Wellness and Health Promotion	3
EXS 135 Exercise Science Clinical I	2
EXS 200 Nutrition for Sport & Exercise	3
EXS 205 Fitness for Special Populatns	3
EXS 225 Advanced Exercise Testing	4
EXS 230 Health Fitness Instruction	4
EXS 235 Exercise Clinical II	5

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 115 Nutrition	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
HLH 110 First Aid, Safety & CPR	3

## Fire Protection Engineering

## Technology

### Fire Protection

A.A.S. Degree (S)

*This curriculum is designed to provide the necessary knowledge and skills to work in many areas of the fire protection field and to help solve fire protection and related safety problems in our complex technological society. Technical changes within industry and an increase in the number, variety, type of chemicals, flammable and combustible products, and population densities have accentuated the fire problem. The fire protection engineering technician has a broad scope of occupational opportunities in a variety of areas which include insurance, industry, equipment manufacturers, municipal, and state agencies. Fire protection engineering technicians apply their knowledge in a systematic approach to plans review, occupancy inspections for code compliance, fire prevention planning, fire safety and loss prevention programs, fire administration, equipment representation and sales, and fire protection system design. Laboratory work, field inspections, and field trips provide added experiences. The Fire Protection program emphasizes design and application principles.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
FET 111 Intro to Fire Protec Eng Tech	4
FET 112 Fire Protection Systems	3
FET 160 Codes and Standards	4
FET 200 Industrial Fire Hazards	4
FET 201 Loss Control Procedures	3
FET 221 Fire Design I	4
FET 222 Fire Protection Design II	4
FET 261 Inspections	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
AET 123 Arch Drafting/Design I	4
AET 264 Architectural CAD Applications	3
CHM 110 General Chemistry	4
EDD 171 Intro to CAD Using AutoCAD	3
PHY 111 Conceptual Physics	4

## Food Safety

### Food Safety

A.A.S. Degree (O)

Employment demands for highly skilled Food Safety graduates are projected to continue to increase over the next decade. Food Safety is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe food. The food consumed on a daily basis is the result of extensive food research - a systematic investigation by food scientists into a variety of foods' properties and compositions. It is through the application of the research that food reaches the consumer. Using the principles of food safety, food products are mass produced, and it is the food safety technicians who have the knowledge of selection, preservation, processing, packaging, and distribution resulting in safe food being consumed. All of these interrelated fields contribute to the food industry -- the largest manufacturing industry in the United States.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4
or	
MAT 180 College Algebra	4
PSY 121 General Psychology	3
or	
SOC 111 Sociology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
FSY 100 Introduction to Food Science	3
FSY 110 Food Safety & Sanitation	3
FSY 120 Technology of Food Processing	3
FSY 205 Principles of HACCP	3
FSY 210 Food Safety & Defense	3
FSY 220 Food Chemistry	4
FSY 225 Microbiology of Foods	4
FSY 290 Food Safety Internship	5
FSY 291 Seminar in Food Safety	2

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 115 Nutrition	3
BIO 140 General Biology	4
CHM 100 Basic Chemistry	3

CIS 107 Intro to Computers/Application	3
POS 215 Poultry Production Management	3

## Food Service Management

### Food Service Management

A.A.S. Degree (S)

This management program prepares students for a professional career in the hospitality industry. In addition to the course work, industry work experience is required for the degree. Students will be prepared for employment in full service dinner houses, family restaurants, institutional facilities, and casual dining operations. The Food Service Management program is accredited by the American Culinary Federation, Foundation Inc.'s Accrediting Commission; 180 Center Place Way; St. Augustine, FL 32095; 800-624-9458.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 119 Food Safety and Sanitation	2
CUL 121 Food Prep I	4
CUL 245 Applied Hospitality	2
FSM 123 Intro to Food Service	3
FSM 151 Field Experience I	3
FSM 152 Field Experience II	3
FSM 210 Quantity Food Production	3
FSM 265 Effectv Food Serv Mrkt & Mngnt	3
HRI 210 Beverage Management	3
HRI 212 Food/Beverage Cost Control	3
HRI 219 Innkeepers' Law	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
BUS 101 Introduction to Business	3
CIS 107 Intro to Computers/Application	3
MGT 248 Culinary Supervisory Development	3
SCI 141 Nutrition in the Culinary Fld	2

## Business

## General Business

A.A.S. Degree (O,T,W)

General Business is tailored to enable students to combine studies in non-business and business courses that best match their individual education goals. This program is intended for full-time business students who plan to transfer to a four-year business college or university after graduation before entering the workforce. This flexibility affords students a unique preparation for continued business studies at an institution of higher learning as well as preparation for professional and technical careers requiring basic business and specific technical skills. A degree from this program, which has earned national accreditation from the Association of Collegiate Business Schools and Programs (ACBSP), sends a clear signal to potential employers that you have completed a high quality business program that meets rigorous educational requirements established by the ACBSP.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
BUS 101 Introduction to Business	3
BUS 203 Business Law	3
BUS 275 Portfolio/Experiential Lrning	3
FIN 221 Money and Banking	3
MGT 212 Principles of Management	3
MKT 212 Principles of Marketing	3
Select 2 course(s) from:	
ACC 162 Computerized Accounting	3
MGT 218 Small Business Management	3
MGT 231 Human Resource Management	3
MIS 220 Management Information Systems	3
MKT 214 Advertising and Promotion	3
MKT 219 Sales & Sales Management	3
OAT 121 Keyboarding	4
OAT 151 Access Level I	3
OAT 157 Word Level I	3
OAT 158 Word Level II	3
OAT 159 PowerPoint	3
OAT 242 Desktop Publishing	4

SSC 130 Where's My Money	1
SSC 131 Are You Credit Worthy?	1
SSC 132 Planning for the Beach	1

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
OAT 152 Excel Level I	3
SOC 215 Business Ethics	3
MAT 255 Statistics I	3
or	
MIS 220 Management Information Systems	3
Select 1 course(s) from:	
ENG 122 Technical Writing-Comm	3
ENG 124 Oral Communications	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
SPA 136 Spanish Communication I	4

## Geographic Information Systems Technology

### Geographic Information Systems Technology

A.A.S. Degree (S)

The associate degree in Geographic Information Systems (GIS) Technology provides a wide range of courses to prepare students for entry-level GIS technician positions in a variety of professional fields. The program educates students in the general and technical aspects of geography and geospatial technologies. The student gains practical experience in building, maintaining, modifying, and using GIS databases, data analysis, custom application development, and visual communication. The curriculum is broad-based to meet the demands of a range of geospatial technology positions.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SOC 104 Human Geography	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 190 Precalculus	4
or	
MAT 281 Calculus I	4
Select 1 course(s) from:	
CLT 110 Cross-Cultural Immersion	3
COM 111 Human Communications	3

ECO 111	Macroeconomics	3
ENG 124	Oral Communications	3
HIS 111	U. S. History: Pre-Civil War	3
HIS 112	U. S. History: Post-Civil War	3
SOC 103	Sustainability and Society	3
SOC 111	Sociology	3
VSC 131	Art History I	3
VSC 132	Art History II	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
CIS 238	Database Design & Programming	4
GIS 101	Introduction to GIS	3
GIS 110	Spatial Data Analysis & Model	4
GIS 120	Data Acquisition & Management	4
GIS 210	Cartographic Design & Vis	3
GIS 220	Programming for GIS Techs	4
GIS 230	Geospatial Web App & Dev	3
GIS 240	Emerging GIS Technologies	3
GIS 260	Geospatial Projects	4
GIS 270	GIS Co-op	2
or		
GIS 271	GIS Internship	2

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
CIS 120	Intro to Programming	4
ISY 111	Ethics & the Information Age	2
MAT 255	Statistics I	3
CET 144	Surveying Principles	4
and		
CET 245	Advanced Surveying Principles	4
or		
CRJ 101	Intro to Criminal Justice	3
and		
CRJ 223	Criminology	3
or		
ENV 190	Intro to Envtl Science & Tech	3
and		
GEO 105	Geology and the Environment	3

## Allied Health

### Health Information Management

A.A.S. Degree (W)

The Health Information Management associate degree curriculum provides individuals with the knowledge and skills to process, analyze, abstract, compile, maintain, manage, and report health information. The program is designed to prepare students to function effectively in a technical manner in health information departments in a wide variety of healthcare settings. These settings include ambulatory care, rehabilitation centers, drug and alcohol facilities, local health departments,

third-party payers, pharmaceutical companies, acute care, as well as other health care related organizations such as insurance companies, consulting and outsourcing firms, and technology companies. Health Information professionals are responsible for maintaining components of health information computer systems, protecting patient privacy and providing information security, ensuring health information is complete and available to legitimate users, coding and classifying data for reimbursement, analyzing information necessary for decision support, complying with standards and regulations regarding health information, preparing health data for accreditation and licensing surveys, and analyzing clinical data for research and public policy. In all types of facilities, and in various locations within a facility, the health information technician possesses the technical knowledge and skills necessary to process, maintain, compile and report health information data for reimbursement, facility planning, marketing, risk management, utilization management, quality improvement, and research. In addition, the health information technician may be responsible for functional supervision of the various components of the health information system. This program provides instruction and clinical experiences that assist students in developing the technical skills necessary for many entry level health information positions. Graduates will receive the associate in applied science degree from the College and may be eligible to sit for a variety of credentialing exams in the career field. Academically ready students can apply to the program following the guidelines of the Allied Health's competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements. The Health Information Management associate degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)

### CORE COURSES

<u>Courses</u>	<u>Credits</u>	
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 255	Statistics I	3
PSY 121	General Psychology	3
SOC 213	Ethical Issues in Health Care	3
SSC 100	First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
HIM 100	Intro to Health Information	3
HIM 120	Coding I	3
HIM 121	Coding II	3
HIM 122	Coding III	3

HIM 130	Legal Aspects of HIM	3
HIM 220	HIM & Healthcare IT	3
HIM 222	Healthcare Reimbursement	3
HIM 225	Technical Practicum	3
HIM 230	Supervision & Organization	3
HIM 231	Quality Assessment	3
HIM 250	Professional Practicum	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
BIO 100	Medical Terminology	3
BIO 108	Basic Pharmacology	2
BIO 120	Anatomy and Physiology I	5
BIO 121	Anatomy and Physiology II	5
BIO 130	Disease Proc/Pathophysiology	3
CIS 107	Intro to Computers/Application	3
ISY 143	Intro to Information Security	3

## Allied Health

### Histotechnician

A.A.S. Degree (W)

*Histotechnology is the art of preparing tissue through specialized cutting, embedding, and staining procedures for both research and diagnostic purposes. The histotechnician is the skilled specialist who prepares and stains these thin tissue specimens for examination by pathologists, dermatologists, researchers, and biologists. They are also trained to perform immunohistochemistry, complex molecular biology and genetic testing procedures using high-tech instruments. Histotechnicians may be employed in hospitals, dermatology laboratories, outpatient laboratories, veterinary facilities, or research laboratories. They work with pathologists, dermatologists, pharmaceutical companies, or forensic investigators. The specimens they prepare can be of human, animal, marine, or plant tissue. The program is fully accredited through the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) 5600 N. River Road, Suite 720, Rosemont, IL 60018, (773) 714-8880 and prepares students to sit for the A.S.C.P. examination. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>	
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
PSY 121	General Psychology	3
SOC 213	Ethical Issues in Health Care	3
SSC 100	First Year Seminar	1

MAT 153	College Math and Statistics	4
or		
MAT 180	College Algebra	4

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>	
HTT 100	Intro To Histotechnology	3
HTT 201	Histology	2
HTT 202	Histology Internship	9
HTT 211	Histotechnology Procedures I	3
HTT 212	Histotechnology Procedures II	3
HTT 220	Histochemistry I	3
HTT 221	Histochemistry II	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>	
BIO 100	Medical Terminology	3
BIO 120	Anatomy and Physiology I	5
BIO 121	Anatomy and Physiology II	5
BIO 125	Introductory Microbiology	4
CHM 110	General Chemistry	4
CHM 111	Intro to Organic & Biochemistry	4
CIS 107	Intro to Computers/Application	3

## Criminal Justice

### Homeland Security and Emergency Management

A.A.S. Degree (T)

*The Homeland Security and Emergency Management Option is a comprehensive option that will provide opportunities to partner with non-credit and continuing education offerings of the college. Students may elect to complete an associate degree in the Homeland Security and Emergency Management Option, take courses in the subject matter while majoring in another career area for a dual associate degree, take courses for a credit certificate in the discipline, or take courses in a non-credit format earning continuing education credits (CEU's).*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>	
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
PSY 121	General Psychology	3
SOC 111	Sociology	3
SSC 100	First Year Seminar	1
MAT 153	College Math and Statistics	4
or		
MAT 120	Contemporary Mathematics	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CRJ 117 Ethics Prof & Comm in Pbl Sfty	3
CRJ 226 Crisis Intervention	3
HDM 101 Intro Hmlnd Sec/Emrgncy Mngt	3
HDM 103 Info/Intel Shrg in Hmlnd Sec	3
HDM 105 Environmental Hazards	3
HDM 110 Issues Hmland Sec & Emg Mgt	3
HDM 202 First Responder	3
HDM 204 All-Hzrds/Infra/Protection	3
HDM 225 Supervision Leadership in E M	3
HDM 244 Introduction to Terrorism	3
ISY 143 Intro to Information Security	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
CRJ 222 Constitutional Law	3
CRJ 223 Criminology	3
ENG 122 Technical Writing-Comm	3
SPA 133 Using Beginning Spanish	3
or	
SPA 136 Spanish Communication I	4

## Business

### Hospitality Management

A.A.S. Degree (T,W)

*As a manager in a hotel, restaurant, country club, theme park or attractions environment, you will play a vital role in the success of that organization. Along with a solid background in the principles of business, hospitality management requires a thorough knowledge of specific areas of hospitality operations. A degree from this program, which has earned national accreditation from the Association of College Business Schools and Programs (ACBSP), sends a clear signal to potential employers that you have completed a high quality business program that meets rigorous educational requirements established by the ACBSP. The majority of hospitality management courses are approved by the Educational Institute of the American Hotel and Motel Association.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 119 Food Safety and Sanitation	2
HRI 101 Introduction to Hospitality	3
HRI 210 Beverage Management	3
HRI 211 Food Principles/Menu Planning	3
HRI 212 Food/Beverage Cost Control	3
HRI 214 Principles of Hospitality Mgmt	3
HRI 215 Lodging Operations Management	3
HRI 216 Property Management	3
HRI 219 Innkeepers' Law	3
MGT 231 Human Resource Management	3
MKT 212 Principles of Marketing	3
or	
ENG 122 Technical Writing-Comm	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
CIS 107 Intro to Computers/Application	3
SPA 136 Spanish Communication I	4
or	
ENT 220 Leadership	3
MIS 220 Management Information Systems	3
or	
MAT 255 Statistics I	3

## Human Services

### Human Services

A.A.S. Degree (O,T,W)

*The mission of the Human Services Program is to provide students with an educational foundation which will allow them to successfully gain entry level employment within the human services arena and/or to succeed in continuing their education at a baccalaureate level upon graduation. The curriculum and individual courses consist of a balance between providing students with a strong theoretical and content foundation as well as an experiential, skill development component in order to prepare students to continue their education and/or to allow them to interface competently and ethically with clients and colleagues in a career setting.*

*The Human Services program at the Owens, Terry, and Wilmington Campuses are accredited by the Council for Standards in Human Service Education (CSHSE). The regional offices are located at 3337 Duke Street, Alexandria, VA 22314-5219, (571)257-3969 and the web site is <http://www.cshse.org>.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
PSY 223 Abnormal Psychology	3
SSC 100 First Year Seminar	1
MAT 120 Contemporary Mathematics	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
HMS 121 Introduction to Human Services	3
HMS 122 Theories of Counseling	3
HMS 123 Dynamics/Group Communication I	3
HMS 221 Ethical Problems and Issues	3
HMS 223 Social Policy/Program Planning	3
HMS 225 Interviewing/Counseling Skills	3
HMS 243 Directed Practice I	6
HMS 244 Directed Practice II	6

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
POL 111 Political Science	3
PSY 127 Human Development	3
SOC 111 Sociology	3
Select 1 course(s) from:	
BIO 110 Essentls-Anatomy & Physiology	4
BIO 120 Anatomy and Physiology I	5
BIO 140 General Biology	4
BIO 150 Biology I	4

## Information Security

### Information Security

A.A.S. Degree (O,T,W)

The curriculum addresses local, regional, and national workforce needs following the National Security Telecommunications and Information Systems Security standards. Students graduating with an associate degree in Information Security will be able to protect personal and networked computing devices from various kinds of cyber attacks. Building and maintaining secure networks, policies, and operating systems are key components to the curriculum.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3

SOC 111 Sociology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ISY 111 Ethics & the Information Age	2
ISY 143 Intro to Information Security	3
ISY 150 Introductory Scripting	3
ISY 201 Advanced Operating Systems	3
ISY 243 Information & Network Security	4
ISY 250 Network Def & Countermeasures	3
ISY 251 Hardening the Infrastructure	3
ISY 270 Computer Forensics	4
ISY 280 Advanced Security Topics	3
ISY 275 Portfolio/Experiential Learn	3
or	
ISY 291 Information Security Intern	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 120 Intro to Programming	4
CIS 141 Operating Systems I	3
CNE 180 Computer Assmby & Maintenance	4
CNE 191 Router Configuration	3
or	
CNE 196	
CNE 192 Network Administration	3
or	
CIS 146 Computer Networking I	4

## Electronic Engineering Technology

### Instrumentation Option

A.A.S. Degree (S)

The Instrumentation Engineering Technology Option prepares graduates for careers as process control instrumentation engineering technicians. Workplace duties can include design, specification, management and troubleshooting of instrumentation and control systems in the areas of chemical processing, food processing, petrochemical production, manufacturing, energy production and other highly technical fields. Graduates offer their employers immediate contributions as team members equipped with a combination of technical knowledge, problem solving experience and communication skills. Courses include a strong component of practical applications, hands-on laboratory experience and basic theoretical concepts. Computer simulation and applications are an integral part of the curriculum. Studies focus on electrical and electronic circuits, digital circuits, microprocessors, computers, programmable logic controls, liquid and gas flow measurement, control

systems, instrumentation and calibration. The Instrumentation Engineering Technology Option is a path through the Electronics Engineering Technology program.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
COM 111 Human Communications	3
or	
ECO 111 Macroeconomics	3
or	
ECO 122 Microeconomics	3
or	
POL 111 Political Science	3
or	
PSY 100 Human Relations	3
or	
PSY 121 General Psychology	3
or	
SOC 111 Sociology	3
Select 2 course(s) from:	
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ELC 101 Intro to Instrumentation	3
ELC 125 Electrical Circuits I	4
ELC 126 Analog Electronics I	3
ELC 127 Digital Electronics	4
ELC 225 Electrical Circuits II	4
ELC 227 Microcontroller Fundamentals	3
ELC 228 Microcontroller Applications	4
ELC 243 Programmable Logic Controllers	4
ELC 270 Process Instrumentation I	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CEN 100 Intro Elec & Computer Eng Tech	3
CEN 150 Computer Assembly/Maint	4
CEN 180 C/C++ Language Intro	4
MAT 190 Precalculus	4
PHY 205 General Physics I	4

## Applied Agriculture

### Landscape and Ornamental

## Horticulture

A.A.S. Degree (O)

Horticulture relates to the production and marketing of ornamental plants. Greenhouse operations, lawn and garden services, and nursery operations are all branches of horticulture.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1
Select 2 course(s) from:	
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AGS 101 Soil Science	3
AGS 102 Agricultural Science	3
AGS 104 Intro to Agribusiness Managemt	3
AGS 105 Prin of Plant Growth	3
AGS 123 Trfgrss Maintenance Practices	3
AGS 136 Turf Equipment Operations	3
AGS 203 Plant Identification	3
AGS 232 Horticulture Cooperative	3
AGS 243 Golf & Turf Irrigation	3
AGS 244 Landscape Plans & Construction	3
AGS 250 Greenhouse Crop Production	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
OAT 152 Excel Level I	3
OAT 157 Word Level I	3
SCI 206 Pesticide Principles and Apps	3
Select 1 course(s) from:	
BIO 150 Biology I	4
BIO 151 Biology II	4
CHM 100 Basic Chemistry	3
CHM 110 General Chemistry	4

## Criminal Justice

### Law Enforcement Option

A.A.S. Degree (O,T,S)

The Law Enforcement Option is an associate degree program designed and offered in collaboration with the Delaware State Police Training Academy.



Students who elect this option will be required to pass a background check preliminarily qualifying them as potential police recruit. The student will then take a curriculum of courses based on the criminal justice associate degree appropriate to the law enforcement career path culminating in a 13-credit lecture and lab course taught by certified police instructors.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1
MAT 120 Contemporary Mathematics	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CRJ 101 Intro to Criminal Justice	3
CRJ 102 Criminal Law	3
CRJ 104 Drugs, Society, & Human Behvr	3
CRJ 105 Computer Appl in Crim./Justice	3
CRJ 115 Essntls of Intrvwng/Counsng	3
CRJ 117 Ethics Prof & Comm in Pbl Sfty	3
CRJ 220 Criminal Judiciary	3
CRJ 222 Constitutional Law	3
CRJ 226 Crisis Intervention	3
CRJ 237 Law Enforcement Practicum	13

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ENG 122 Technical Writing-Comm	3
HDM 202 First Responder	3
PSY 223 Abnormal Psychology	3
SPA 133 Using Beginning Spanish	3
or	
SPA 136 Spanish Communication I	4

## Logistics, Supply Chain, and Operations Management

### Logistics, Supply Chain, and Operations Management

A.A.S. Degree (O,W)

The Logistics, Supply Chain, and Operations Management program is designed to build knowledge in the areas of procurement, transportation, processing, and storage of materials and information. The program provides graduates

with the business principles and technical foundation necessary to make informed logistical and operational decisions in a global economy. Upon graduation, the student is prepared to aid in the design, improvement, installation, and operation of integrated systems of people, materials, and equipment.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
LOM 100 LOM Management	4
LOM 210 Accounting for LOM	3
LOM 230 Project Management	3
LOM 241 Supply Chain Logistics I	3
LOM 242 Supply Chain Logistics II	3
LOM 255 Statistical Quality Management	4
LOM 270 LOM Process Design	4
MGT 231 Human Resource Management	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ENG 124 Oral Communications	3
MAT 255 Statistics I	3
MKT 212 Principles of Marketing	3
MKT 219 Sales & Sales Management	3
OAT 152 Excel Level I	3

## Business

### Management

A.A.S. Degree (O,T,W)

Business Management will prepare the graduate to handle supervisory level management positions in different types of organizational settings in all sectors of the business world. The student will gain a broad based knowledge of support fields such as accounting, law, computers and communications. You will gain knowledge and skills in specific areas of management such as resource training and development, project management, organizational behavior and strategy development.

Business Management courses are offered day and

evening and most are also offered using online and other distance learning formats. The Department of Business Programs has earned national accreditation from the Association of Collegiate Business Schools and Programs (ACBSP) which sends a clear signal to potential employers that you have completed a high quality business program.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
BUS 101 Introduction to Business	3
BUS 203 Business Law	3
BUS 275 Portfolio/Experiential Lrning	3
HRM 224 Training and Development	3
MGT 212 Principles of Management	3
MGT 218 Small Business Management	3
MGT 231 Human Resource Management	3
MKT 212 Principles of Marketing	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ENT 220 Leadership	3
OAT 152 Excel Level I	3
MAT 255 Statistics I	3
or	
MIS 220 Management Information Systems	3
ENG 122 Technical Writing-Comm	3
or	
ENG 124 Oral Communications	3

## Business

### Marketing

A.A.S. Degree (O,T,W)

With an education in Marketing, the graduate will be prepared to work in a variety of entry-level marketing positions in different types of organizational settings in all sectors of the business world. You will gain broad-based knowledge of support fields such as accounting, law, computers

and communications.

You will gain knowledge and skills in specific areas of marketing, such as advertising, e-marketing, sales and sales management, retailing and graphic design. Marketing courses are offered days and evenings and most are offered using online and other distance learning formats. The Department of Business Programs has earned national accreditation from the Association of Collegiate Business Schools and Programs (ACBSP) which sends a clear signal to potential employers that you have completed a high-quality business program.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACC 101 Accounting I	4
ACC 112 Accounting II	4
BUS 101 Introduction to Business	3
BUS 203 Business Law	3
BUS 275 Portfolio/Experiential Lrning	3
MGT 212 Principles of Management	3
MKT 212 Principles of Marketing	3
MKT 214 Advertising and Promotion	3
MKT 217 E-Marketing Fundamentals	3
MKT 219 Sales & Sales Management	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
OAT 242 Desktop Publishing	4
SOC 215 Business Ethics	3
MAT 255 Statistics I	3
or	
MIS 220 Management Information Systems	3
ENG 122 Technical Writing-Comm	3
or	
ENG 124 Oral Communications	3

## Mechanical Engineering Technology

### Mechanical Engineering Technology

A.A.S. Degree (S)

The mechanical engineering technician applies theory and principles of mechanical engineering technology to develop and test processes, equipment and mechanical systems in cooperation with an engineering staff; reviews project construction and engineering drawings to determine specifications, procedures, objectives, problems, and possible solutions; sets up and conducts tests and experiments for complete units or systems to investigate engineering theories regarding improvement in design or performance; analyzes indicated and calculated test results against design or rated specifications; records test procedures, results, and suggestions for improvement; prepares engineering drawings, charts, and graphs. The Mechanical Engineering Technology program at the Stanton Campus is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1
ENG 102 Composition and Research	3
ENG 101 Crit Thinking & Acad Writing	3
Select 2 course(s) from:	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
MET 115 Intro to Mech Eng Tech	3
MET 123 Modern MFG Techniques	3
MET 125 Adv Manufacturing Techniques	3
MET 132 Statics	3
MET 241 Fluid Mechanics	4
MET 242 Strength of Materials	3
MET 243 Dynamics	3
MET 245 Machine Design	3
MET 252 Fluid Power	3
MET 264 Material Science	4
MET 271 Engineering Project	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
EDD 131 Engineering Graphics/CAD	3
ELC 248 Electro-Mech. Systems	4
MAT 190 Precalculus	4
or	

MAT 185 Precalculus	4
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4

## Allied Health

### Medical Assistant

A.A.S. Degree (W)

The Medical Assistant is a multiskilled professional who works with other members of the health care team performing both clinical duties (assisting with patient care) and administrative duties (performing medical office duties.) Graduates of the program may be employed in physicians' offices, hospitals, and other health care facilities. The program consists of course work in the following: keyboarding, medical transcription, business and computer applications for the medical office, insurance coding, phlebotomy, routine diagnostic testing, performing electrocardiograms, obtaining vital signs, and assisting the physician in clinical procedures. In addition to course work and laboratory experiences on campus, students are required to complete a supervised internship in a medical facility. The Associate Degree program at the Wilmington Campus is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) on the recommendation of the Medical Assisting Education Review Board (MAERB), a Committee on Accreditation (CoA) of CAAHEP. Commission on Accreditation of Allied Health Education Programs, 1361 Park Street Clearwater, FL 33756, (727) 210-2350.

Graduates may apply to take the certification exam given by the American Association of Medical Assistants (AAMA). Successful candidates are Certified Medical Assistants (CMA-AAMA). Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
MEA 100 Intro to Medical Assisting	3
MEA 120 Medical Office Procedures I	4
MEA 125 Medical Office Procedures II	4
MEA 150 Medical Lab Procedures I	4
MEA 151 Medical Lab Procedures II	4
MEA 170 Pharmacology for Medical Asst	4
MEA 270 Medical Assistant Seminar	3
MEA 290 Medical Assistant Internship	4

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 110 Essentials-Anatomy & Physiology	4
CIS 107 Intro to Computers/Application	3
OAT 121 Keyboarding	4
SOC 213 Ethical Issues in Health Care	3

## Allied Health

### Medical Laboratory Technician

A.A.S. Degree (O)

The Medical Laboratory Technician Associate Degree program prepares the student who wishes to seek employment as a medical laboratory technician in hospital laboratories, independent laboratories, physicians' offices, community health agencies, or as a technician in research centers, pharmaceutical laboratories, biomedical laboratories, or as a quality control technician in food processing or manufacturing companies.

Students wishing to enroll in the program will be required to submit evidence of a physical examination. The program includes didactic course work on campus followed by a clinical affiliation in an approved hospital. The program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) 5600 N. River Road, Suite 720, Rosemont, IL 60018, (773) 714-8880 which qualifies the graduates to take the ASCP registry examination for Medical Laboratory Technicians. Students will be required to complete the program within four calendar years. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3

ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
MLT 120 Hematology I	4
MLT 121 Hematology II	4
MLT 220 Clinical Chemistry I	4
MLT 221 Clinical Chemistry II	4
MLT 250 Clinical Microbiology I	4
MLT 251 Clinical Microbiology II	4
MLT 260 Immunology	4
MLT 261 Blood Banking	4
MLT 291 Clinical Practicum	7

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
<i>Select 1 course(s) from:</i>	
CHM 110 General Chemistry	4
CHM 150 Chemical Principles I	5
<i>Select 1 course(s) from:</i>	
CHM 111 Intro to Organic & Biochemistry	4
CHM 151 Chemical Principles II	5

## Visual Communications

### Multimedia

A.A.S. Degree (T)

The Multimedia Design Option of the Visual Communications program is a new, innovative option that deals with visual media in non-print forms such as CD's, web pages, and interactive formats. This is a computer intensive option that seeks to blend the visual formats of still and video photography with sound and graphics to create presentations that will bring attention to a client's product or service. Students in this option are able to extend their foundation work in traditional media into the electronic realm. Emphasis will be placed on creative problem solving in addition to skill building in intermediate to advanced multimedia software. Presentations will be designed and executed in preparation for inclusion in the student's final portfolio. Graduates of the program may enter careers in corporate or institutional marketing communication departments, electronic publishing firms, or opt for further study at the baccalaureate level.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
VSC 109 Drawing I	4
VSC 115 Intro To Design	3
VSC 125 Color And Composition	3
VSC 133 History of Graphic Design	2
VSC 155 Typography And Layout	3
VSC 160 Computer Graphics I	4
VSC 161 Computer Graphics II	4
VSC 165 Photography I	4
VSC 175 Print Production Processes	2
VSC 190 Intro To Videography	3
VSC 251 Portfolio Workshop	4
VSC 260 Multimedia Authoring	3
VSC 262 Computer Graphics III	4
VSC 270 Project Management	2
VSC 275 Self Promotion	2
VSC 131 Art History I	3
or	
VSC 132 Art History II	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
POL 111 Political Science	3
or	
PSY 121 General Psychology	3

## Allied Health

### Nuclear Medicine

A.A.S. Degree (W)

*Nuclear Medicine is an imaging and therapeutic profession that utilizes minute traces of radioactive material in the determination of pathologic and physiologic conditions within the body. Students are trained in the proper techniques of intravenous radionuclide administrations, therapies, intricate computer applications, and detailed clinical procedures. The program is fully accredited through the Joint Review Committee on Educational Programs in Nuclear Medicine (JRCNMT) and prepares students for the national certification examination.*

*Students obtain clinical experience and competency at various hospitals and outpatient laboratories. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants*

*should review the information provided here and contact their program advisor for application requirements.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
HLH 215 Cardiovascular Monitoring	2
NMT 101 Patient Care for the NMT	2
NMT 115 Intro to NMT with Clinical Lab	4
NMT 121 Computers & Informatics	2
NMT 201 Nuclear Medicine I	4
NMT 202 Nuclear Medicine II	3
NMT 203 Nuclear Medicine III	2
NMT 211 Scan Reading I	1
NMT 212 Scan Reading & PET/CT	1
NMT 222 Nuclear Physics	3
NMT 223 Nuclear Med Instrumentation	4
NMT 224 Radiopharmacy & Pharmacology	2
NMT 226 Radiobiology/Protection	2
NMT 295 Clinical Internship I	4
NMT 296 Clinical Internship II	5
NMT 297 Clinical Internship III w/CT	6

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
CHM 110 General Chemistry	4
CHM 111 Intro to Organic & Biochemistry	4
PHY 112 Physics for Allied Health	4

## Nursing

### Nursing

A.A.S. Degree (O,T,S)

*The Associate of Applied Science nursing degree program at Delaware Technical Community College provides multiple learning opportunities through a balance of general education courses, nursing courses, and supervised clinical practice. The nursing graduate is prepared to care for individuals and families in a variety of health care settings. The*

graduate will function as an integral member of the healthcare team and utilize evidence-based practice that is patient centered. The graduate of the associate degree nursing program is academically eligible to take the National Council of State Boards of Nursing Licensure Examination for Registered Nurses (NCLEX-RN). The legal requirements for licensure in the State of Delaware are outlined in the Nursing Department Admissions Handbook. The associate degree nursing program provides a foundation for continuation of higher education through articulation with baccalaureate and master's degree nursing programs. The associate degree nursing program is offered at three Delaware Tech campuses: Newark (Stanton), Dover (Terry), and Georgetown (Owens). The program can be completed in five semesters and offers an accelerated option whereby students may self-select to complete their degree sooner. Advanced placement in the program is available for Licensed Practical Nurses (LPN) who hold a current license and for nationally certified Paramedics. Academically ready students can apply for admission to the associate degree nursing program following completion of its pre-requisite requirements. Full-time students following the five semester course sheet (rapid admission process) can also apply. Admission for all applicants is competitive and completion of pre-requisites does not guarantee admission. Interested students should review the written information provided and meet with their academic advisor to discuss program and application requirements and the competitive admission process. Interested students must attend or view an online nursing information session prior to submitting an application to the program. Transfer students must also follow the transfer policy of Delaware Technical Community College. The associate degree nursing program at each campus has full approval from the Delaware Board of Nursing and is nationally accredited through Accreditation Commission for Education in Nursing (ACEN). Information about the accreditation status of the Associate Degree program is available from the Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; (404) 975-5000; www.acenursing.org.

## CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 129 Math for Health Sciences	3
PSY 127 Human Development	3
SOC 111 Sociology	3
SSC 100 First Year Seminar	1

## PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
NUR 200 Nursing Concepts III	4
NUR 201 Maternal-Child Health Concepts	4
NUR 210 Nursing Concepts IV	4
NUR 211 Community & Profess Concepts	4
HLH 130 Nurse Assistant Training	6
and	
NUR 170 Nursing Concepts I	8
and	
NUR 180 Nursing Concepts II	4
and	
NUR 181 Mental Health Concepts	4
or	
NUR 190 Nursing Transition Course	6
and	
NUR 199 Nursing Advanced Credit	8

## PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 125 Introductory Microbiology	4
CHM 100 Basic Chemistry	3

## Allied Health

### Occupational Therapy Assistant

A.A.S. Degree (O,W)

The Occupational Therapy Assistant is an individual who works under the supervision of a certified occupational therapist. The Occupational Therapy Assistant works with individuals or groups by implementing meaningful interventions which support participation in mastering everyday activities (occupations) at home, at work, at school, and in the community. For those with a disability, condition, or impairment being able to perform activities of daily living (ADL) is an important step toward a life that is as independent, productive, as satisfying as possible. The Occupational Therapy Assistant Program is designed to provide general education in the biological, behavioral, and health sciences followed by integrated occupational therapy instruction and laboratory experiences on campus and fieldwork experiences in approved facilities. The Occupational Therapy Assistant programs are currently accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association Inc., 4720 Montgomery Lane, Suite 200, Bethesda, MD 20814-3449, phone: (301) 652-2682, <http://www.acoteonline.org>. Graduates will be able to sit for the National Certification Examination for the Occupational Therapy Assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA).

Many states, including Delaware, require licensure to practice; however, that licensure is based on the results of the NBCOT Certification Exam. Level II Fieldwork (OTA 231 and OTA 232) must be completed within 18 months of the didactic course work for the OTA Program. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

Courses	Credits
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 255 Statistics I	3
PSY 121 General Psychology	3
PSY 127 Human Development	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

Courses	Credits
OTA 110 Intro To Occupational Therapy	3
OTA 120 Activity Analysis	2
OTA 130 Kinesiology for the OTA	2
OTA 220 Pediatric Health Conditions	3
OTA 221 Adult & Geriatric Health Cond	3
OTA 222 Pediatric Intervention	4
OTA 223 Adult & Geriatric Intervention	4
OTA 224 Psychosocial Intervention	4
OTA 225 Clinical Fieldwork Level I-A	2
OTA 226 Clinical Fieldwork Level I-B	2
OTA 229 Professional Seminar	1
OTA 231 Clinical Fieldwork Level II-A	6
OTA 232 Clinical Fieldwork Level II-B	6

### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 123 Clinical Functional Anatomy	3
PSY 223 Abnormal Psychology	3

## Office Administration

### Office Administration

A.A.S. Degree (O)

The Office Administration program offers a flexible program leading to the Associate Degree in Applied Science. While software applications and office administration skills are the foundation of this

program, the course elective structure allows students the opportunity to acquire a broad base of business and computer skills to enhance upward mobility. Software certification opportunities are available.

### CORE COURSES

Courses	Credits
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 145 Math of Finance	3
or	
MAT 153 College Math and Statistics	4
ECO 111 Macroeconomics	3
or	
ECO 122 Microeconomics	3
PSY 121 General Psychology	3
or	
SOC 111 Sociology	3
or	
SPA 133 Using Beginning Spanish	3
or	
SPA 136 Spanish Communication I	4
or	
SPA 137 Spanish Communication II	4
Select 1 course(s) from:	
PSY 121 General Psychology	3
SOC 111 Sociology	3
SPA 133 Using Beginning Spanish	3
SPA 136 Spanish Communication I	4
SPA 137 Spanish Communication II	4

### PROGRAM/MAJOR COURSES

Courses	Credits
ACC 101 Accounting I	4
ACC 162 Computerized Accounting	3
OAT 121 Keyboarding	4
OAT 151 Access Level I	3
OAT 152 Excel Level I	3
OAT 157 Word Level I	3
OAT 158 Word Level II	3
OAT 159 PowerPoint	3
OAT 240 Integrated Business Applicatns	3
OAT 242 Desktop Publishing	4

### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
BUS 101 Introduction to Business	3
BUS 275 Portfolio/Experiential Lrning	3
ENG 124 Oral Communications	3
ACC 112 Accounting II	4
or	
MKT 212 Principles of Marketing	3
or	
MKT 214 Advertising and Promotion	3
or	

SOC 215 Business Ethics	3
or	
COM 111 Human Communications	3
<i>Select 1 course(s) from:</i>	
BIO 100 Medical Terminology	3
COM 111 Human Communications	3
MGT 212 Principles of Management	3
MKT 212 Principles of Marketing	3
MKT 214 Advertising and Promotion	3
PLG 160 Family Law	3
SOC 215 Business Ethics	3

## Education

### Paraeducator

A.A.S. Degree (O,T,W)

*This associate degree program prepares students for a career as a paraeducator in a K-12 school setting. The program provides a foundation in academic skills, child development theories, literacy and mathematics instructional support strategies and a comprehensive range of educational experiences necessary for employment. The program will provide coursework that may transfer to a senior institution for those students who wish to do so.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
HIS 112 U. S. History: Post-Civil War	3
MAT 211 Math for Teachers I	4
SOC 111 Sociology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ECE 111 Childhd Nutrition/Safety	3
EDC 101 Intro to Paraeducator Issues	3
EDC 120 Foundations of Literacy	3
EDC 211 Classroom Management	3
EDC 220 Parent/Family/School Interact	3
EDC 230 Children's Literature	3
EDC 250 Internship & Seminar	4
MAT 212 Math for Teachers II	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ECE 233 Exceptional Child	3
PSY 121 General Psychology	3
PSY 126 Child/Adolescent Development	3
BIO 140 General Biology	4
or	
BIO 150 Biology I	4

ENG 124 Oral Communications	3
or	
ENG 131 Honors Oral Communication	3

## Paralegal

### Paralegal

A.A.S. Degree (O,T)

*According to the U.S. Bureau of Labor Statistics, the paralegal field is one of the fastest growing professions. To prepare graduates to meet this demand, this program offers a combination of specialized legal courses and general education courses with emphasis on the development of highly marketable skills. A legal internship provides work experience to supplement classroom knowledge and applications. Diversified employment opportunities are available in federal, state and local government agencies, law firms, the court system, banks, insurance companies, private business, and corporations. Upon completion of the degree, students will have gained the following competencies: 1) Explain the present and potential role of the paralegal within the legal system; 2) Produce the documents necessary for a functioning law office; 3) Comply with the profession's Code of Ethics within the legal system; 4) Use a range of research methods and information necessary to complete a variety of legal activities; 5) Apply acquired knowledge of legal specialty areas in the workplace. Paralegals may not provide legal services directly to the public except as provided by law.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
PLG 170 Intro to the Legal System	3
PLG 280 Legal Research & Writing	3
PLG 290 Paralegal Internship	4
<i>Select 7 course(s) from:</i>	
PLG 160 Family Law	3
PLG 172 Law of Simple Contracts	3
PLG 175 Estate Admin and Probate	3
PLG 270 Criminal Law/Invest Procedures	3
PLG 271 Real Property Law	3
PLG 273 Civil Procedure	3
PLG 274 Torts	3
PLG 276 Business Entities	3



PLG 285 Law Office Mgmt & Procedures 3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 275 Portfolio/Experiential Lrning	3
ENG 124 Oral Communications	3
OAT 121 Keyboarding	4
ACC 100 Introduction to Accounting	3
or	
ACC 101 Accounting I	4
Select 1 course(s) from:	
ACC 162 Computerized Accounting	3
CLT 110 Cross-Cultural Immersion	3
OAT 151 Access Level I	3
OAT 152 Excel Level I	3
OAT 157 Word Level I	3
OAT 158 Word Level II	3
OAT 159 PowerPoint	3
OAT 240 Integrated Business Applicatns	3
OAT 281 Legal Research and Writing II	3
SPA 133 Using Beginning Spanish	3
SPA 136 Spanish Communication I	4

## Visual Communications

### Photo Imaging

A.A.S. Degree (T)

*The Photo Imaging Option of the Visual Communications program is an exciting 21st century blend of traditional photographic processes and computer-based digital photography. This new technology mixes the aesthetics of fine art photography with the speed and flexibility of digital imaging. It is an exciting field with tremendous potential for artistic as well as commercial creativity. The sophistication of imagery from the computer allows designers and photographers to expand the limits of traditional photography. Students will utilize traditional photography, scanned images, and direct digital images to prepare solutions to realistic assignments. All assignments are geared toward the compilation of a final graduate portfolio. Graduates can look forward to being on the cutting edge of this exciting new technology. As the use of the web and other multimedia formats increases, the demand for skilled digital imaging professionals will continue to rise.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
VSC 115 Intro To Design	3
VSC 125 Color And Composition	3
VSC 133 History of Graphic Design	2
VSC 160 Computer Graphics I	4
VSC 161 Computer Graphics II	4
VSC 165 Photography I	4
VSC 166 Photography II	3
VSC 175 Print Production Processes	2
VSC 190 Intro To Videography	3
VSC 251 Portfolio Workshop	4
VSC 267 Color Photography	4
VSC 268 Photo Illustration	3
VSC 270 Project Management	2
VSC 275 Self Promotion	2
VSC 131 Art History I	3
or	
VSC 132 Art History II	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
POL 111 Political Science	3
or	
PSY 121 General Psychology	3
Select 1 course(s) from:	
VSC 109 Drawing I	4
VSC 135 Non-Western Art Survey	3
VSC 181 CoreIDraw	4
VSC 186 Advanced Painting	3
VSC 260 Multimedia Authoring	3
VSC 261 Multimedia Sound	3
VSC 264 3-D Design and Animation	4
VSC 265 Motion Graphics	3
VSC 281 Project Elective	3
VSC 292 Video Production	4

## Allied Health

### Physical Therapist Assistant

A.A.S. Degree (O,W)

*Physical Therapist Assistants are licensed health care workers who provide physical therapy services under the supervision and direction of the physical therapist. They assist with data collection, implement delegated patient interventions, modify interventions within the established plan of care, participate in discharge planning and follow-up care, document the care provided, and educate and interact with health care team members including families, caregivers, students and patients. Students study both on campus and at varied clinical sites. Graduates of the program may be employed by hospitals, rehabilitation centers, private practice clinics, home health agencies, and other health care settings. The Physical Therapist Assistant programs*

at the Wilmington Campus and the Owens Campus are accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 1111 N. Fairfax Street, Alexandria, VA 22314-1488, (703) 706-3245, email: accreditation@apta.org; website: www.capteonline.org. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
PTA 100 Introduction to PTA	2
PTA 101 Basic Techniques	4
PTA 102 Modalities	3
PTA 115 Kinesiology	3
PTA 116 Intro to Pathology	3
PTA 205 Path.Treatmnt Orthopedic Conds	4
PTA 206 Path/Treat Neurolgcl Conds.	4
PTA 208 Special Topics for the PTA	3
PTA 209 PTA Management Issues	2
PTA 211 Clinical Practice I	4
PTA 212 Clinical Practice II	3
PTA 213 Clinical Practice III	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 123 Clinical Functional Anatomy	3
PHY 110 Physics Physical Therapy Assnt	4
or	
PHY 171 Physics I	4
or	
PHY 205 General Physics I	4

## Applied Agriculture

### Production Agriculture

A.A.S. Degree (O)

The Production Agriculture option involves the growing and marketing of crops and livestock. A thorough knowledge of marketing, management, and finance as well as production skills are the keys to a career as an agriculture producer.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
Select 2 course(s) from:	
ENG 124 Oral Communications	3
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3
Select 1 course(s) from:	
MAT 120 Contemporary Mathematics	3
MAT 153 College Math and Statistics	4
Select 1 course(s) from:	
BIO 150 Biology I	4
CHM 100 Basic Chemistry	3
CHM 110 General Chemistry	4

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AGS 101 Soil Science	3
AGS 102 Agricultural Science	3
AGS 104 Intro to Agribusiness Managemt	3
AGS 105 Prin of Plant Growth	3
AGS 106 Vegetable Crop Production	3
AGS 202 Agronomic Crops	3
AGS 204 Animal Science	3
AGS 230 Production Agriculture Co-op	3
AGS 240 Hydroponics Production	3
AGS 250 Greenhouse Crop Production	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
FSY 100 Introduction to Food Science	3
POS 215 Poultry Production Management	3
SCI 206 Pesticide Principles and Apps	3
SCI 223 Applied Ecology	3
Select 1 course(s) from:	
CIS 107 Intro to Computers/Application	3
OAT 152 Excel Level I	3
OAT 157 Word Level I	3

## Allied Health

### Radiologic Technology

A.A.S. Degree (O,W)

Radiologic Technology is the art and science of using

x-rays to produce images of the organs, bones, tissues and vessels of the human body. Students in this technology are educated in utilizing x-ray equipment and techniques, proper patient positioning, radiation protection methodologies, and quality patient care. As a member of the medical imaging team, the radiologic technologist produces quality, diagnostic images that are interpreted by radiologists -- physicians who specialize in medical imaging. The programs are accredited by the Joint Review Committee on Education in Radiologic Technology ([www.jrcert.org](http://www.jrcert.org)). Graduation from an accredited program in Radiologic Technology ensures eligibility to sit for the certification examination administered by the American Registry of Radiologic Technologists (ARRT). In conjunction with related and technology didactic courses, students apply their knowledge during integrated clinical experiences in area radiology departments. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
PSY 121 General Psychology	3
SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
RAD 105 Intro Patient Care/Radiography	3
RAD 130 Radiographic Procedures I	4
RAD 131 Radiographic Procedures II	4
RAD 140 Prin Radiographic Imaging I	3
RAD 141 Prin Radiographic Imaging II	3
RAD 150 Radiation Protection/Biology	2
RAD 160 Clinical Radiography I	3
RAD 161 Clinical Radiography II	3
RAD 162 Clinical Radiography III	5
RAD 222 Selected Topics in Radiography	3
RAD 230 Radiographic Procedures III	3
RAD 240 Radiographic Imaging Equipment	3
RAD 250 Radiographic Pathology	2
RAD 260 Clinical Radiography IV	5
RAD 261 Clinical Radiography V	5
RAD 270 Digital Image Acquistn/Display	2

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
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BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
CHM 110 General Chemistry	4

## Refrigeration, Heating, & Air Conditioning

### Refrigeration, Heating, & Air Conditioning

A.A.S. Degree (O)

This program offers the opportunity to develop skills leading to the award of an A.A.S. Degree in Refrigeration, Heating, and Air Conditioning. The curriculum is designed to provide the student with practical and theoretical knowledge of refrigeration, heating, and air conditioning systems. The technical courses combine classroom theory with practical, hands-on training. Related courses are intended to prepare students for professional and technical career opportunities. The degree is awarded to students who complete all required technical and related courses. Diploma and Certificate options are available.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 120 Contemporary Mathematics	3
PSY 100 Human Relations	3
or	
PSY 121 General Psychology	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACR 101 HVAC Electricity	5
ACR 102 Fundamentals of Refrigeration	5
ACR 104 Residential Climate Control	5
ACR 105 Residential Heating I	5
ACR 114 EPA Seminar and Exam	1
ACR 115 Air Distribution & Balancing	3
ACR 120 Employee Development Seminar	2
ACR 150 Industry Competency Exam I	1
ACR 151 Industry Competency Exam II	1
ACR 202 Commercial Refrigeration	3
ACR 204 Residential Heating II	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CMT 111 Construction Print Reading	3
NRG 101 Intro to Energy Management	3
NRG 110 Construction Standards	2
SOC 103 Sustainability and Society	3
CIS 107 Intro to Computers/Application	3
or	
OAT 152 Excel Level I	3
AET 236 Building Service Systems	3
or	
NRG 111 Res/Light Comm Energy Analysis	3

## Energy

### Renewable Energy Solar

A.A.S. Degree (O,T,S)

The Renewable Energy Solar Program prepares graduates to work as technicians in the renewable energy industry. Students will develop energy analysis skills to improve energy efficiency and application of renewable energy solar systems. Students will learn solar photovoltaic installation and design and solar thermal applications. They will evaluate and recommend energy solutions with greater efficiency and lower environmental impact with the added benefit of energy cost savings. The focus on renewable energy solar will be integrated with applied practice related to solar photovoltaic and thermal installation. Students will study and work with both grid-tied and stand-alone photovoltaic systems. Academically ready students can apply to the program following the guidelines of each location's wait-list process. Interested applicants should review the information provided here and contact their program advisor for program requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SOC 103 Sustainability and Society	3
SSC 100 First Year Seminar	1
MAT 153 College Math and Statistics	4
or	
MAT 261 Business Calculus I	4
Select 1 course(s) from:	
COM 111 Human Communications	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
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NRG 101 Intro to Energy Management	3
NRG 108 Safety Basics	1
NRG 109 Solar Construction & Safety	1
NRG 111 Res/Light Comm Energy Analysis	3
NRG 154 Alternative Energy Tech.	3
NRG 201 Photovoltaic Systems I	4
NRG 202 Photovoltaic Systems II	4
NRG 204 Work Exp:Renwble Energy Solar	3
NRG 205 Solar Policy and Financing	3
NRG 233 Lighting Applications	4
NRG 250 Energy Accting/Invest Analysis	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ELC 125 Electrical Circuits I	4
OAT 152 Excel Level I	3
PHY 120 Energy Physics	3
EDD 131 Engineering Graphics/CAD	3
or	
AET 264 Architectural CAD Applications	3
BUS 101 Introduction to Business	3
or	
ENT 101 Intro to Entrepreneurship	3

## Allied Health

### Respiratory Care

A.A.S. Degree (O,W)

Respiratory Care is an allied health specialty involved in the treatment, management, and diagnostic evaluation of patients with problems of the cardiopulmonary system. Respiratory Care is one of the most dynamic allied health fields, undergoing a continuous process of discovery and improvement in both therapeutic techniques and related modes of mechanical assistance. The Wilmington and Owens Campus programs are accredited by the Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Road, Bedford, TX 76021-4244, (817) 283-2835, and prepare students for the National Board for Respiratory Care (NBRC) Entry Level and Advanced Practice Examinations. Courses are offered on campus and at a variety of clinical affiliates. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
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ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 153	College Math and Statistics	4
PSY 121	General Psychology	3
SOC 213	Ethical Issues in Health Care	3
SSC 100	First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
RCT 120 Pharm for Respiratory Care	3
RCT 130 Intro to Respiratory Care	7
RCT 140 Pulmonary Physiology	3
RCT 210 Neonatal/Pediatric Resp Care	3
RCT 231 Respiratory Care Procedures I	4
RCT 232 Respiratory Care Procedures II	7
RCT 233 Spec Topics in Respiratory Care	4
RCT 241 Pulmonary Pathophysiology I	3
RCT 242 Pulmonary Pathophysiology II	4
RCT 243 Pulmonary Function Studies	2
RCT 251 Clinical Respiratory Care I	2
RCT 252 Clinical Respiratory Care II	3
RCT 253 Clinical Respiratory Care III	5

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
CHM 110 General Chemistry	4
HLH 101 Intro To Patient Care	2
HLH 215 Cardiovascular Monitoring	2

## Allied Health

### Surgical Technology

A.A.S. Degree (T)

The Surgical Technology program will help to meet the employment demands for highly skilled surgical technologists. The program will provide students with the knowledge and skills required to function effectively in the environment of the operating room. The scrub surgical technologist handles the instruments, supplies, and equipment necessary during the surgical procedure. He/she has an understanding of the procedure being performed and anticipates the needs of the surgeon. He/she has the necessary knowledge and ability to ensure quality patient care during the operative procedure and is constantly on vigil for maintenance of the sterile field. The surgical technologist circulating obtains additional instruments, supplies, and equipment necessary while the surgical procedure is in progress. He/she monitors conditions in the operating room and constantly assesses the needs of the patient and surgical team. The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of

Committee on American College of Surgeons and Association of Surgical Technologists (ARC/STSA); 1361 Park Street; Clearwater, FL 33756; 727-210-2350; www.caahep.org. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 129 Math for Health Sciences	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
SOC 111 Sociology	3
or	
SOC 213 Ethical Issues in Health Care	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
SGT 100 Intro to Surgical Technology	2
SGT 200 Surgical Technology I	7
SGT 202 Pharmacology	2
SGT 210 Surgical Technology II	7
SGT 211 Surgical Tech Clinical I	2
SGT 220 Surgical Technology III	4
SGT 221 Surgical Technology Clinical II	5

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 125 Introductory Microbiology	4
CIS 107 Intro to Computers/Application	3
CHM 100 Basic Chemistry	3
or	
CHM 110 General Chemistry	4

## Civil Engineering Technology

### Surveying and Geomatics Engineering Technology

A.A.S. Degree (O,S)

This program option will prepare graduates with the technical skills necessary to enter careers in boundary and/or land surveying, geographic and/or land information systems, engineering project surveying, mapping and geodesy, or other related areas. This curriculum Option emphasizes practical applications in the areas of field mapping, interpretation of basic land records and the

preparation of maps and plats. Students will learn on modern surveying equipment including total stations, static and kinematic GPS. The use of computers for CAD, data acquisition and analysis is integrated throughout the program preparing graduates for immediate productivity in the profession.

The State of Delaware recognizes the Civil Engineering Technology, Surveying and Geomatics Option as part of the pathway to licensure as a professional land surveyor.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 281 Calculus I	4
Select 2 course(s) from:	
CLT 110 Cross-Cultural Immersion	3
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
HIS 112 U. S. History: Post-Civil War	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 103 Sustainability and Society	3
SOC 104 Human Geography	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CET 125 Civil & Envl Drafting & Design	3
CET 135 Engineering Materials	3
CET 144 Surveying Principles	4
CET 225 Civil CAD Applications	3
CET 236 Soils	3
CET 240 Hydraulics and Hydrology	4
CET 244 Principles of Site Development	4
CET 245 Advanced Surveying Principles	4
CET 247 Route Surveying and Design	3
CET 248 Boundary Surveying and Law	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
AET 232 Contracts/Specifications	3
CMT 234 Cost Estimating/Planning	3
EDD 171 Intro to CAD Using AutoCAD	3
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4
MAT 190 Precalculus	4
or	
MAT 282 Calculus II	4

## Applied Agriculture

### Turf Management

A.A.S. Degree (O)

The Turf Management Degree program is designed to provide skills necessary for an individual to attain gainful employment in the turf management industry. The curriculum provides course study for the field of golf course management and professional turf management specialist. The curriculum will prepare the students for careers as golf and turf management technicians, assistant golf course superintendents, assistant equipment managers, horticulturist, irrigation specialist chemical technician, equipment operator and groundskeeper.

Note: Students will be required to take certain course at the Owens Campus Turf Grass Lab

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1
Select 2 course(s) from:	
POL 111 Political Science	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AGS 101 Soil Science	3
AGS 104 Intro to Agribusiness Managemt	3
AGS 105 Prin of Plant Growth	3
AGS 123 Trfgrss Maintenance Practices	3
AGS 136 Turf Equipment Operations	3
AGS 224 Turf & Athletic Fld Maintenanc	3
AGS 231 Turfgrss Mgt. Co-op Education	3
AGS 241 Trfgrss Wds Insts/Disease Ctrl	3
AGS 242 Golf Course Operation & Maint	3
AGS 243 Golf & Turf Irrigation	3
AGS 244 Landscape Plans & Construction	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
OAT 157 Word Level I	3
SCI 223 Applied Ecology	3
SCI 240 Turfgrass Physiology	3
CHM 100 Basic Chemistry	3
or	

CHM 110 General Chemistry 4

## Allied Health

### Veterinary Technology

A.A.S. Degree (O)

*The Veterinary Technology Associate Degree program provides students with the theoretical and technical skills essential for a wide-range of career options in animal health and management. The curriculum is designed to prepare students for careers as veterinary technicians and for positions in animal hospitals, diagnostic laboratories, research laboratories, animal health industry, zoological parks, and emergency/specialty clinics. The program focuses on the development of laboratory testing techniques, clinical assisting procedures, humane animal care and nursing skills, and hospital management practices. In addition to course work and laboratory experience, students are required to complete one supervised externship at a variety of animal care facilities. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
SSC 100 First Year Seminar	1
<i>Select 2 course(s) from:</i>	
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
HIS 111 U. S. History: Pre-Civil War	3
PSY 100 Human Relations	3
PSY 121 General Psychology	3
PSY 127 Human Development	3
PSY 223 Abnormal Psychology	3
SOC 111 Sociology	3
SOC 213 Ethical Issues in Health Care	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
VET 101 Intro to Veterinary Technology	2
VET 102 Vet Anatomy & Physiology I	3
VET 110 Vet Anatomy & Physiology II	3
VET 120 Breeds And Behavior	2
VET 130 Vet Clinical Pathology I	3
VET 140 Pharmacology for Vet Techs	3
VET 205 Small Animal Health & Disease	2
VET 210 Vet Clinical Pathology II	3
VET 220 Lab/Exotic Animal Care & Mgmt	3

VET 221 Veterinary Nursing I	3
VET 222 Veterinary Nursing II	3
VET 224 Lg Animal/Equine Nurs/Hlth Mgt	3
VET 235 Diagnostic Imaging	3
VET 250 Vet Tech Internship	5

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
SSC 115 Research Success Strategies	1
BIO 125 Introductory Microbiology	4
or	
BIO 250 Principles of Microbiology	4
BIO 140 General Biology	4
or	
BIO 150 Biology I	4
CHM 100 Basic Chemistry	3
or	
CHM 110 General Chemistry	4

## Web Information Systems

### Web Development

A.A.S. Degree (O,T)

*The Computer Information Systems department offers the Web Development degree that provides students with a program of instruction in the development, implementation and management of electronic business operations provided online. This program is designed to provide students with a background in the computer applications needed to assist a company wishing to conduct business using the Internet and the World Wide Web. The students acquire knowledge of basic programming, Web construction, interactive Web sites and Internet scripts. Students will be prepared to: create safe and secure networks for businesses having an online presence, to become Web masters capable of building Web sites, and to become technology strategists able to maximize visits to client's sites.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 153 College Math and Statistics	4
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CIS 141 Operating Systems I	3
CIS 170 Internet/Web Multimedia	3
CIS 194 Networking Technologies	3

CIS 201	Microdatabase Programming	3
CIS 207	Visual Programming	4
CIS 238	Database Design & Programming	4
CIS 240	Systems Analysis & Design	3
CIS 260	Internet/Web Commerce	4
CIS 282	Mobile App Development	4
WEB 160	Internet/Web Construction	3

**PROGRAM/MAJOR SUPPORT COURSES**

<u>Courses</u>	<u>Credits</u>
BUS 101 Introduction to Business	3
CIS 120 Intro to Programming	4
EBZ 220 Fundamentals of E-Commerce	3
ISY 111 Ethics & the Information Age	2
MKT 212 Principles of Marketing	3

**Associate of Arts in Teaching Degree Programs (A.A.T.)**

CAMPUS KEY: T = Dover; O = Georgetown; S = Stanton; W = Wilmington

<u>Program</u>	<u>Campus</u>
Early Care and Education (Birth to Second Grade)	O,T,W
Elementary Education	O,T,W
Math Secondary Education	T,S
Middle-Level Mathematics Education: English Minor	O,W
Middle-Level Mathematics Education: Science Minor	O,W
Middle-Level Mathematics Education: Social Science Minor	O,W
Science Education: Chemistry/Physics	O,T,S



## Early Childhood Education

### Early Care and Education (Birth to Second Grade)

A.A.T. Degree (O,T,W)

The Birth to Second Grade Option combines the Early Childhood Development curriculum with a student transfer focus. The program prepares students for transfer to a four-year in-state institutions to complete requirements for a bachelor's degree and early care/education (Birth to Second Grade). The Birth to Second Grade Option is approved by the Department of Education as the first half of an associate/bachelor's preparation for a Birth to Second Grade teaching certification. This program offers full articulation with several four-year institutions. Students participate in laboratory hours in public and private school systems. This curriculum option offers students the opportunity to work toward a four-year degree while preparing for the various positions in the field of early childhood.

#### CORE COURSES

Courses	Credits
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 211 Math for Teachers I	4
PSY 121 General Psychology	3
PSY 125 Child Development	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

Courses	Credits
ECE 120 Comtemp Issues in Erly Childhd	3
ECE 121 Infant & Toddler Methods & Lab	5
ECE 123 Early Childhd Methods I & Lab	5
ECE 125 Early Childhd Methods II & Lab	5
ECE 127 Childhood Classroom Mgt	3
ECE 226 Assessment of Young Children	3
ECE 233 Exceptional Child	3
EDC 120 Foundations of Literacy	3
EDC 220 Parent/Family/School Interact	3
EDC 230 Children's Literature	3

#### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
CIS 107 Intro to Computers/Application	3
ECE 111 Childhd Nutrition/Safety	3
HIS 111 U. S. History: Pre-Civil War	3
MAT 212 Math for Teachers II	4
MAT 213 Math for Teachers III	4
BIO 140 General Biology	4
or	
BIO 150 Biology I	4

## Education

### Elementary Education

A.A.T. Degree (O,T,W)

Graduates of this option may enter the workforce immediately as a paraeducator in a school setting or they may choose to continue their education. The main focus of this education option is to prepare students to transfer to a four-year college or university where they will complete their bachelor's degree and become certified to teach elementary school. The program provides a foundation in academic skills, child development theory, literacy and mathematics and classroom management strategies. During the required education courses in this option, students are exposed to the teaching profession through a variety of field experiences.

#### CORE COURSES

Courses	Credits
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 211 Math for Teachers I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
PSY 125 Child Development	3
or	
PSY 126 Child/Adolescent Development	3
HIS 111 U. S. History: Pre-Civil War	3
or	
HIS 112 U. S. History: Post-Civil War	3

#### PROGRAM/MAJOR COURSES

Courses	Credits
CHM 101 Introduction to Chemistry	1
CIS 107 Intro to Computers/Application	3
ECE 233 Exceptional Child	3
EDC 120 Foundations of Literacy	3
EDC 150 Issues in Elementary Education	3
EDC 211 Classroom Management	3
EDC 220 Parent/Family/School Interact	3
EDC 230 Children's Literature	3
MAT 212 Math for Teachers II	4
MAT 213 Math for Teachers III	4

#### PROGRAM/MAJOR SUPPORT COURSES

Courses	Credits
BIO 140 General Biology	4
PHY 111 Conceptual Physics	4
SPA 136 Spanish Communication I	4
ENG 124 Oral Communications	3
or	
ENG 131 Honors Oral Communication	3
VSC 131 Art History I	3
or	

VSC 132 Art History II	3
SPA 137 Spanish Communication II	4
or	
ECO 111 Macroeconomics	3

## Education

### Math Secondary Education

A.A.T. Degree (T,S)

This associate degree program will prepare students for transfer to a baccalaureate degree program that leads to a teaching career in middle or high school mathematics. The program includes rigorous mathematics content course work, as well as the integration of educational technology and field experiences in a secondary school setting.

Graduates of this program who have completed the associate degree with a cumulative GPA of 2.5 or higher can transfer to the University of Delaware or Delaware State University.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
HIS 111 U. S. History: Pre-Civil War	3
or	
HIS 112 U. S. History: Post-Civil War	3

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 233 Exceptional Child	3
EDC 260 Educational Psychology	3
MAT 263 Principles of Discrete Math	4
MAT 279 Problem Solving Strategies	4
MAT 282 Calculus II	4
MAT 283 Calculus III	4
MAT 288 Linear Algebra	4
MAT 255 Statistics I	3
or	
MAT 285 Introduction to Proof	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 120 Intro to Programming	4
PHY 281 Physics I with Calculus	4
PSY 127 Human Development	3
SPA 136 Spanish Communication I	4

## Education

### Middle-Level Mathematics Education: English Minor

A.A.T. Degree (O,W)

The main focus of the Middle-Level Mathematics Education program is to provide students with a strong mathematical background that emphasizes the conceptual underpinnings of the mathematics the students will eventually teach. In order to enter the workforce, students will be required to complete a bachelor's degree with a partner university.

Students pursuing the Middle- Level Mathematics Education degree will major in mathematics and choose one of three minors: Science, Social Science or English. The minors enable students to become dually certified in mathematics and their minor field. The major/minor structure for middle school education is the focus of our partner, Wilmington University, and the course sequence sheets were designed to support and guide students based on their desired minor preference.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 201 Mathematics for Teachers I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 233 Exceptional Child	3
MAT 143 College Geometry	3
MAT 180 College Algebra	4
MAT 190 Precalculus	4
MAT 251 Finite Math	3
MAT 253 Discrete Math	3
MAT 255 Statistics I	3
MAT 281 Calculus I	4
MAT 282 Calculus II	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 140 General Biology	4
CIS 107 Intro to Computers/Application	3
EDC 120 Foundations of Literacy	3
EDC 220 Parent/Family/School Interact	3
EDC 230 Children's Literature	3
ENG 124 Oral Communications	3
PSY 126 Child/Adolescent Development	3

## Education

## Middle-Level Mathematics Education: Science Minor

A.A.T. Degree (O,W)

The main focus of the Middle-Level Mathematics Education program is to provide students with a strong mathematical background that emphasizes the conceptual underpinnings of the mathematics the students will eventually teach. In order to enter the workforce, students will be required to complete a bachelor's degree with a partner university.

Students pursuing the Middle- Level Mathematics Education degree will major in mathematics and choose one of three minors: Science, Social Science or English. The minors enable students to become dually certified in mathematics and their minor field. The major/minor structure for middle school education is the focus of our partner, Wilmington University, and the course sequence sheets were designed to support and guide students based on their desired minor preference.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 201 Mathematics for Teachers I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 233 Exceptional Child	3
MAT 143 College Geometry	3
MAT 180 College Algebra	4
MAT 190 Precalculus	4
MAT 251 Finite Math	3
MAT 253 Discrete Math	3
MAT 255 Statistics I	3
MAT 281 Calculus I	4
MAT 282 Calculus II	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 140 General Biology	4
CIS 107 Intro to Computers/Application	3
EDC 220 Parent/Family/School Interact	3
ENG 124 Oral Communications	3
PHY 205 General Physics I	4
PSY 126 Child/Adolescent Development	3

## Education

### Middle-Level Mathematics Education:

## Social Science Minor

A.A.T. Degree (O,W)

The main focus of the Middle-Level Mathematics Education program is to provide students with a strong mathematical background that emphasizes the conceptual underpinnings of the mathematics the students will eventually teach. In order to enter the workforce, students will be required to complete a bachelor's degree with a partner university.

Students pursuing the Middle- Level Mathematics Education degree will major in mathematics and choose one of three minors: Science, Social Science or English. The minors enable students to become dually certified in mathematics and their minor field. The major/minor structure for middle school education is the focus of our partner, Wilmington University, and the course sequence sheets were designed to support and guide students based on their desired minor preference.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ECO 111 Macroeconomics	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 201 Mathematics for Teachers I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 233 Exceptional Child	3
MAT 143 College Geometry	3
MAT 180 College Algebra	4
MAT 190 Precalculus	4
MAT 251 Finite Math	3
MAT 253 Discrete Math	3
MAT 255 Statistics I	3
MAT 281 Calculus I	4
MAT 282 Calculus II	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 140 General Biology	4
CIS 107 Intro to Computers/Application	3
EDC 220 Parent/Family/School Interact	3
ENG 124 Oral Communications	3
POL 111 Political Science	3
PSY 126 Child/Adolescent Development	3
SOC 111 Sociology	3

## Education

### Science Education: Chemistry/Physics

A.A.T. Degree (O,T,S)

*The new Science Education Program will utilize the resources of Delaware Tech's programs and faculty in the Mathematics, Education, Science, English and Social Science departments. Technology is infused within each of the general education areas, so a separate computer technology course will not be part of the course sequence. The major electives and physics course selections allow students to complete courses that articulate to a physics or chemistry bachelor degree program.*

**CORE COURSES**

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 281 Calculus I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
HIS 111 U. S. History: Pre-Civil War	3
or	
HIS 112 U. S. History: Post-Civil War	3

**PROGRAM/MAJOR COURSES**

<u>Courses</u>	<u>Credits</u>
CHM 150 Chemical Principles I	5
CHM 151 Chemical Principles II	5
EDC 115 Nature of Science	1
EDC 260 Educational Psychology	3
MAT 283 Calculus III	4
and	
MAT 291 Ordinary Differential Equation	4
or	
BIO 150 Biology I	4
and	
CHM 240 Organic Chemistry I	4
PHY 205 General Physics I	4
and	
PHY 206 General Physics II	4
or	
PHY 281 Physics I with Calculus	4
and	
PHY 282 Physics II with Calculus	4

**PROGRAM/MAJOR SUPPORT COURSES**

<u>Courses</u>	<u>Credits</u>
EDC 100 Professional Prep: Praxis I	1
MAT 282 Calculus II	4
PSY 127 Human Development	3
SPA 136 Spanish Communication I	4
Select 1 course(s) from:	
ECO 111 Macroeconomics	3
ECO 122 Microeconomics	3
ENG 124 Oral Communications	3
SOC 111 Sociology	3

## Diploma Programs

CAMPUS KEY: T = Dover; O = Georgetown; S = Stanton; W = Wilmington

<u>Program</u>	<u>Campus</u>
Automotive Technician Studies	O,S
Baking and Pastry Skills Studies	S,T
Chemical Process Operator Studies	S
Commercial Transportation Studies	O
Early Childhood Studies	O,T,W
Kitchen Skills Studies	S
Laser & Optics Studies	S
Medical Coding Studies	W
Paraeducator Studies	O,T,W
Practical Nursing Studies	O,T
Refrigeration, Heating, & Air Conditioning Studies	O

## Automotive Technology

### Automotive Technician Studies

Diploma (O,S)

The diploma in Automotive Technician Studies provides the student with a foundation of mechanical skills needed in the automotive industry. The program provides a combination of classroom and shop instruction. Upon completion of the diploma requirements, students who desire to continue their education may transfer these courses into the Automotive Technology Degree program. Academically ready students can apply to the program following the guidelines of each location's wait-list process. Interested applicants should review the information provided here and contact their program advisor for program requirements.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 120 Contemporary Mathematics	3
PSY 100 Human Relations	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AUT 114 Intro to Automotive Technology	3
AUT 116 Automotive Electrical	5
AUT 118 Auto Steering & Suspension	3
AUT 119 Automotive Brake Systems	3
AUT 122 Auto Air Conditioning/Heating	3
AUT 123 Work Experience Co-op I	3
or	
AUT 126 Work Experience Lab I	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ENT 101 Intro to Entrepreneurship	3
or	
BUS 101 Introduction to Business	3

## Culinary Arts

### Baking and Pastry Skills Studies

Diploma (S,T)

This program is designed specifically for industry professionals and students that are employed or plan to be employed in the hospitality industry as a pastry cook and desire to further their education and begin the advancement to a supervisory position. Courses are offered on a part-time basis and credits

earned may be applied to the Associate Degree in the Culinary Arts or Food Service Management. Industry professionals and students will also acquire the three mandatory classes required by the American Culinary federation to begin the certification process.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 112 Cake Decorating	2
CUL 119 Food Safety and Sanitation	2
CUL 121 Food Prep I	4
CUL 261 Baking	4
CUL 262 Pastry	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
HRI 212 Food/Beverage Cost Control	3
MGT 248 Culinary Supervisory Development	3
SCI 141 Nutrition in the Culinary Fld	2

## Chemical Process Operator

### Chemical Process Operator Studies

Diploma (S)

The Chemical Process Operator Studies diploma program prepares students for employment in industrial plants in the chemical, petroleum, polymer and pharmaceutical industries. The chemical industry has a great need for trained chemical operators to adjust and optimize conditions for the production of large quantities of products in local chemical plants and pilot plants. Graduates are readily employed by these local plants at competitive salaries. The program provides a practical education in various aspects of plant operations such as hands-on training in process operations and control, regulatory compliance, and preventive maintenance skills. Laboratory facilities include not only standard lab equipment, but also modern instrumentation in pilot plant technology and computer simulations.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1
<i>Select 1 course(s) from:</i>	
ECO 111 Macroeconomics	3
POL 111 Political Science	3
PSY 121 General Psychology	3
SOC 111 Sociology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CPO 106 Statistical Procs Cntrl Ovrw	1
CPO 125 Safety, Health & Environment	3
CPO 135 Chem Proc Tech-Equipment	3
CPO 151 Chem Proc Tech I-Systems	4
CPO 252 Chem Proc Tech II-Operations	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CHM 110 General Chemistry	4
CIS 107 Intro to Computers/Application	3
ELC 101 Intro to Instrumentation	3

## Automotive Technology

### Commercial Transportation Studies

*Diploma (O)*

*The curriculum is designed to provide the student with operating skills and practical knowledge of tractor trailer driving with emphasis on business skills needed in the transportation industry. It will prepare the student for entry-level employment as a CDL "A" licensed commercial vehicle driver/operator. Students spend their day in a combination of classroom, range practice, and road training in order to develop safe skills of operation and mechanical familiarization of the equipment. Employment opportunities can be found in either local or long-distance areas of the transportation industry.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 120 Contemporary Mathematics	3
PSY 100 Human Relations	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CTS 101 Fundmentals-Motor Fleet Safety	3
CTS 102 Vehicle Sys/Report Malfunction	2
CTS 103 Tractor Trailer Operations	2

CTS 104 Road Driving Practices	1
CTS 105 Range Driving Practices	2
CTS 106 Advanced Driving Operations	2
CTS 107 Advanced Driving Practices	1
CTS 108 Professional Driver Developmnt	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
<i>Select 1 course(s) from:</i>	
BUS 101 Introduction to Business	3
ECO 111 Macroeconomics	3
ENT 101 Intro to Entrepreneurship	3

## Early Childhood Education

### Early Childhood Studies

*Diploma (O,T,W)*

*The Early Childhood Studies program is an intensive study of the child from birth to eight years. This program prepares the student to work under the supervision of qualified teachers with pre-school children in a day care center, nursery school, or child development center. This program is designed for those currently employed in the child care field or for those considering the Associate Degree Program in Early Childhood Education. Credits earned in this program may be applied toward an Associate Degree in Early Childhood Education.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 120 Contemporary Mathematics	3
PSY 125 Child Development	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 111 Childhd Nutrition/Safety	3
ECE 120 Comtemp Issues in Erly Childhd	3
ECE 121 Infant & Toddler Methods & Lab	5
ECE 123 Early Childhd Methods I & Lab	5
ECE 125 Early Childhd Methods II & Lab	5
ECE 127 Childhood Classroom Mgt	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3

## Culinary Arts

### Kitchen Skills Studies

### Diploma (S)

*This program is designed specifically for industry professionals and students who are employed or plan to be employed in the hospitality industry as cooks and desire to further their education and begin the advancement to a supervisory position. Courses are offered on a part-time basis and credits earned may be applied to the Associate Degree in the Culinary Arts or Food Service Management. Industry professionals and students will also acquire the three mandatory classes required by the American Culinary Federation to begin the certification process.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
COM 111 Human Communications	3
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 120 Contemporary Mathematics	3
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 119 Food Safety and Sanitation	2
CUL 121 Food Prep I	4
CUL 171 Garde Manger	4
FSM 210 Quantity Food Production	3

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
HRI 212 Food/Beverage Cost Control	3
MGT 248 Culinary Supervisory Develpmnt	3
SCI 141 Nutrition in the Culinary Fld	2

## Specialized Occupations

### Laser & Optics Studies

#### Diploma (S)

*The Laser & Optics Studies Diploma Program is designed to offer students of any degree program the opportunity to study lasers and optics beyond the Physics II level. Lasers are pervasive in many fields of technology. The theoretical as well as hands-on experience students receive will serve as a solid foundation in the basics necessary to keep up with the advances in laser and optics technology. Further information can be obtained by contacting the Chairperson of the Mathematics/Physics Department.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1
MAT 180 College Algebra	4
or	
MAT 281 Calculus I	4

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
LAS 271 Intro to Lasers	4
LAS 272 Geometrical Optics & Lasers	4
LAS 273 Wave Optics & Lasers	4
PHY 205 General Physics I	4
or	
PHY 281 Physics I with Calculus	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
MAT 190 Precalculus	4
or	
MAT 282 Calculus II	4
PHY 206 General Physics II	4
or	
PHY 282 Physics II with Calculus	4

## Allied Health

### Medical Coding Studies

#### Diploma (W)

*The Medical Coding Studies is a diploma program that prepares graduates for careers as Medical Coders. A Medical Coder manages and classifies medical data for patient billing using standardized codes. Students learn how to correctly assign codes that indicate patient diagnosis, treatment and outcomes in order to properly document patient care and permit data access, analysis and billing. The program provides didactic courses followed by an internship experience in an approved facility. Graduates of the program find employment in a variety of settings, including hospitals, long-term care centers, mental health facilities, federal, state and local health departments, and insurance companies. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 255 Statistics I	3



SOC 213 Ethical Issues in Health Care	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
HIM 100 Intro to Health Information	3
HIM 120 Coding I	3
HIM 121 Coding II	3
HIM 122 Coding III	3
HIM 170 Medical Coding Practicum	4
HIM 222 Healthcare Reimbursement	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
BIO 100 Medical Terminology	3
BIO 108 Basic Pharmacology	2
BIO 120 Anatomy and Physiology I	5
BIO 121 Anatomy and Physiology II	5
BIO 130 Disease Proc/Pathophysiology	3
CIS 107 Intro to Computers/Application	3

## Education

### Paraeducator Studies

*Diploma (O,T,W)*

*The Paraeducator diploma provides career ladder for prospective or employed paraeducators and it is a continuation of the paraeducator certificate. The diploma provides knowledge and skills necessary to assist the classroom teacher in the literacy and mathematical instruction. Child development and safety, and technology skills are also emphasized. The course work in this diploma transfer seamlessly to the Paraeducator Associates Degree.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
MAT 211 Math for Teachers I	4
PSY 121 General Psychology	3
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 111 Childhd Nutrition/Safety	3
ECE 233 Exceptional Child	3
EDC 101 Intro to Paraeducator Issues	3
EDC 120 Foundations of Literacy	3
PSY 126 Child/Adolescent Development	3
SPA 136 Spanish Communication I	4
or	
ECE 127 Childhood Classroom Mgt	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3

## Nursing

### Practical Nursing Studies

*Diploma (O,T)*

*The Practical Nursing Programs at the Owens and Terry Campuses provide the means by which individuals acquire the knowledge and skills necessary to function in a variety of health care settings at the direction of the registered nurse, physician, or dentist. Courses are designed to include theory and practical application which enables the graduate to provide competent patient care. Licensed Practical Nurses may be employed in a variety of health care settings including acute care hospitals, long-term care facilities, doctor's offices, and public health. Admission to the Practical Nursing Program requires that individuals submit official documentation of high school graduation or equivalent, in addition to the completion of all college admission requirements. Prior to admission to the clinical portion of the program, all students must complete the NLN Pre-Admission Examination-PN. In order to receive a license to practice, the graduate practical nurse must pass the National Council of State Boards of Nursing Examination for Practical Nurses. Licensed Practical Nurses may apply for admission to Associate Degree Nursing programs. Advanced placement will be dependent upon meeting requirements. The legal requirements for licensure in the State of Delaware are outlined in the Nursing Department Admissions Handbook. A criminal background check and drug screen is required for all students. Transfer students must follow the transfer policy of Delaware Technical Community College. The Practical Nursing Programs at both campus locations are approved by the Delaware Board of Nursing and the Terry Campus program is also accredited by the Accreditation Commission for Education in Nursing (ACEN). Information about the program is available from the Accreditation Commission for Education in Nursing, 3342 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326;(404) 975-5000; www.nlnac.org Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
ENG 102 Composition and Research	3
MAT 129 Math for Health Sciences	3

PSY 127 Human Development	3	ACR 151 Industry Competency Exam II	1
SSC 100 First Year Seminar	1		

### Certificate Programs PROGRAM/MAJOR COURSES

CAMPUS KEY: T = Dover; O = Georgetown; S = Stanton; W = Wilmington

<u>Courses</u>	<u>Credits</u>	<u>Campus</u>
NUR 131 Fundamentals of Nursing	4	
NUR 132 Medical-Surgical Nursing I	6	S,T
NUR 133 Medical-Surgical Nursing II	6	S
NUR 134 Essentials-Mental Hlth-Nursing	2	O
NUR 135 Essents-Maternal/Chld Nursing	4	S

### PROGRAM/MAJOR SUPPORT COURSES

Direct Support Professional Certificate		O,T,W
Drug/Alcohol Counseling Certificate		T,W
EMT Paramedic Certificate		T
ENR Refrigeration Heating A/C Certificate	<u>Credits</u>	O
BLO 110 Essents-Anatomy & Physiology	4	O,T,W

### Refrigeration, Heating, & Air Conditioning

English as a Second Language Certificate		O,T,W
General Airframe Maintenance Certificate		O
General Powerplant Maintenance Certificate		O
Instructional Design and Technology Certificate		O,T,S,W
Instrumentation Certificate		S
Machinist Training Level I Certificate		S
Machinist Training Level II Certificate		S
Paralegal Certificate		O,T,W
Paraeducator Certificate		O,T

*This curriculum is designed to provide the student with practical and theoretical knowledge of refrigeration, heating, and air conditioning systems. These technical courses combine classroom theory with practical hands-on training. Related courses are intended to prepare students for professional and technical career opportunities. A diploma is awarded to students who successfully complete all required technical and related courses. Certificate options are available.*

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
ENG 101 Crit Thinking & Acad Writing	3
SSC 100 First Year Seminar	1
MAT 120 Contemporary Mathematics	3
or	
MAT 153 College Math and Statistics	4
PSY 100 Human Relations	3
or	
PSY 121 General Psychology	3

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACR 101 HVAC Electricity	5
ACR 102 Fundamentals of Refrigeration	5
ACR 104 Residential Climate Control	5
ACR 105 Residential Heating I	5
ACR 114 EPA Seminar and Exam	1
ACR 120 Employee Development Seminar	2
ACR 150 Industry Competency Exam I	1

## Culinary Arts

### Baking and Pastry Skills Certificate

Certificate (S,T)

Is your favorite room the kitchen and your favorite appliance the stove? If you answered "yes" to both questions, then the one-year Baking and Pastry Skills Certificate offered at Delaware Tech will prepare you for employment in the hospitality industry as an entry-level pastry cook. If you're already an industry professional, you'll learn additional skills to help you advance to a supervisory position. At Delaware Tech, you'll gain experience in the demonstration and skills kitchen, learning the details of culinary arts including food preparation, baking, sanitation, and nutrition.

Courses are offered on a part-time basis, and the 18 credits earned in this program may be applied to the Baking and Pastry Skills Studies Diploma or the Associate Degree in the Culinary Arts or Food Service Management programs. Industry professionals and students will also acquire the mandatory classes required by the American Culinary Federation to begin the certification process.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 112 Cake Decorating	2
CUL 119 Food Safety and Sanitation	2
CUL 261 Baking	4
CUL 262 Pastry	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
MGT 248 Culinary Supervisory Development	3
SCI 141 Nutrition in the Culinary Fld	2

## Chemical Process Operator

### Chemical Process Operator Certificate

Certificate (S)

Delaware Tech's Chemical Process Operator program prepares highly skilled and knowledgeable students for employment as process operators in the chemical, pharmaceutical, polymer, and petroleum refining industries. These important industries

throughout the Delaware River Valley area have a great need for trained process technicians to operate equipment for the production of industrial and consumer products. Graduates are readily employed by these local plants at competitive salaries. The program provides a practical education in the various aspects of plant operations including safe startup, shutdown, troubleshooting procedures, regulatory compliance, and basic preventive maintenance. And our laboratory facilities include high tech mechanical equipment, modern instrument trainers, computer process simulators, and six pilot plant units.

The Chemical Process Operator Technology Program has three options. Certificate, diploma, and associate degree programs are offered so that students can build their educational credentials as they work in the field. The certificate program requires completion of eight courses equivalent to 25 credit hours.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CPO 106 Statistical Procs Cntrl Ovrw	1
CPO 125 Safety, Health & Environment	3
CPO 135 Chem Proc Tech-Equipment	3
CPO 151 Chem Proc Tech I-Systems	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ELC 101 Intro to Instrumentation	3
CHM 100 Basic Chemistry	3
or	
CHM 110 General Chemistry	4

## Automotive

### Commercial Transportation Certificate

Certificate (O)

Do you enjoy the freedom of the open road and want a career that doesn't involve sitting behind a desk? This is a Professional Truck Driver Institute (PTDI) nationally-certified curriculum that combines classroom study with practical experience behind the wheel of diesel-powered tractor trailers on a private training range as well as public streets and highways. You'll also learn the intricacies of handling a variety of truck types and cargo, conducting required inspections, proper reporting and

documentation requirements, and trip planning techniques -- all in a small class-size environment.

The Certificate Program is available in flexible combinations of weekday and evening study. You'll earn college credits while gaining the knowledge and skills necessary to earn your CDL "A" operator's license.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CTS 101 Fundamentals-Motor Fleet Safety	3
CTS 102 Vehicle Sys/Report Malfunction	2
CTS 103 Tractor Trailer Operations	2
CTS 104 Road Driving Practices	1
CTS 105 Range Driving Practices	2
CTS 106 Advanced Driving Operations	2
CTS 107 Advanced Driving Practices	1
CTS 108 Professional Driver Developmnt	3

## Culinary Arts

### Cooking Certificate

*Certificate (S)*

As a graduate of Delaware Tech's Culinary Arts Cooking Certificate program, you'll have the basic skills necessary to start on a career path to becoming a chef. In the program, you'll learn the fundamentals of food preparation and gain practical experience in basic baking, garde-manger, buffet presentation, and international cuisine. You'll work in the skills development kitchen and take field trips to the kitchens of area hotels and restaurants. The Culinary Arts Cooking Certificate prepares students to join the fast-growing food service industry and obtain a respected position in a career field where these skills are in demand. It's an excellent way to earn the credentials to help you advance through the various opportunities that the industry offers with the final goal of becoming a chef.

Courses are offered on a part-time basis, and the 14 credits earned through this program may be applied to the Kitchen Skills Diploma and ultimately the Associate Degree in the Culinary Arts or Food Service Management. Industry professionals and students will also acquire the mandatory classes required by the American Culinary Federation to begin their certification process. The College is a member of the National Restaurant Association and the American Culinary Federation (ACF), and our

program is accredited by the Accreditation Commission of the American Culinary Federation.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CUL 119 Food Safety and Sanitation	2
CUL 121 Food Prep I	4
FSM 210 Quantity Food Production	3

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
MGT 248 Culinary Supervisory Development	3
SCI 141 Nutrition in the Culinary Fld	2

## Human Services

### Direct Support Professional Certificate

*Certificate (O,T,W)*

Make a difference one life at a time! Today, unlike in the past, most individuals with developmental disabilities live in their home communities and thrive thanks to Direct Support Professionals who help them lead self-directed lives and contribute to their communities. As a student in this program, you'll learn how to provide these individuals support in daily living tasks, community living, health and wellness awareness, vocational experiences, and social integration. While enrolled, you'll earn 12 credit hours from a combination of classroom instruction and field work; courses will include face-to-face and online instruction. The skills and knowledge you learn can be applied to residential programs, day programs, or any combination of services appropriate for the client.

Labor market studies in Delaware indicate new job openings in this field within the next five years, and employers of direct support professionals are strongly encouraging certification. If you're looking for a career that is more than just a job, a Direct Support Professional certificate will prepare you for this challenging but rewarding profession.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>		<u>Credits</u>
HMS 120	Direct Support/Cmnty Services	3
HMS 124	Comm Living Skills/Supports	3
HMS 125	Assessment and Communication	3
HMS 126	Desgn/Evaluation of Services	3

## Human Services

### Drug/Alcohol Counseling Certificate

*Certificate (T,W)*

*Alcohol and drug addiction is a major public health problem in America. The consequences are far-reaching and affect individuals, families, and society as a whole. Our program will provide you with an understanding of drug use, abuse, and dependence and the related personal and social consequences. You will develop skills to provide therapeutic services for people dealing with substance abuse, with an emphasis on helping them maintain recovery and prevent relapse. As a graduate, you will be prepared for entry into the drug and alcohol counseling profession and/or to continue your education at a four-year institution to complete a bachelor's degree. This 18 credit-hour certificate program is designed to supplement an existing associate degree in a relevant area of study.*

#### CORE COURSES

<u>Courses</u>		<u>Credits</u>
SSC 100	First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>		<u>Credits</u>
DAC 141	Intro Drug&Alcohol Counseling	3
DAC 225	Drug & Alcohol Counseling II	3
DAC 230	Assessmnt/Trtmnt/D&A Counsng	3
DAC 240	Families & Addiction	3
DAC 244	Dir Practice II-Drug/Alcohol	6

## Allied Health

### EMT Paramedic Certificate

*Certificate (T)*

*Paramedics provide advanced pre-hospital emergency care under medical command authority to acutely ill or injured patients and transport patients by ambulance or other appropriate emergency vehicles. Delaware Tech's 51-credit certificate program prepares you to recognize, assess, and manage a medical or trauma emergency, record and communicate pertinent data to a designated medical command authority, and*

*direct and coordinate the transport of a patient. Enrollment in the Paramedic Certificate is limited to pre-approved candidates from the Delaware State Police Aviation Section or a County Advanced Life Support Service. Academically ready students can apply to the program following the guidelines of the Allied Health competitive admission process. Interested applicants should review the information provided here and contact their program advisor for application requirements.*

#### CORE COURSES

<u>Courses</u>		<u>Credits</u>
SSC 100	First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>		<u>Credits</u>
EMT 200	Intro To Paramedic Technology	5
EMT 201	Patient Assessment	3
EMT 202	Medical Emergencies I	3
EMT 203	ALS Skills Lab I	3
EMT 204	Special Populations	4
EMT 207	Paramedic Clinical I	1
EMT 211	Cardiology	4
EMT 212	Medical Emergencies II	3
EMT 213	ALS Skills Lab II	3
EMT 214	Legal Issues/Research	3
EMT 215	Trauma Emergencies	2
EMT 217	Paramedic Clinical II	3
EMT 227	Paramedic Clinical III	3
EMT 290	Paramedic Field Clinical	4

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>		<u>Credits</u>
BIO 120	Anatomy and Physiology I	5
BIO 121	Anatomy and Physiology II	5
BIO 130	Disease Proc/Pathophysiology	3
CHM 100	Basic Chemistry	3
or		
CHM 110	General Chemistry	4

## Entrepreneurial

### ENT: Refrigeration Heating A/C Certificate

*Certificate (O)*

*Want to start an engaging career? Earning your Refrigeration, Heating, and Air Conditioning Certificate will get you on your way! This curriculum is designed to provide students with the technical and practical knowledge required in the heating, air conditioning, and refrigeration fields at an intermediate level. Classroom studies and hands-on experience prepare certificate recipients for professional career opportunities. Taking part in this*

38-39 credit-hour certificate program also offers new advancement options for individuals who are already employed in the field.

Students learn how to design, install, and maintain residential heating and air conditioning systems. The courses taken in this program can also be applied toward the completion of an associate degree.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ACR 104 Residential Climate Control	5
ACR 105 Residential Heating I	5
ENT 101 Intro to Entrepreneurship	3
ENT 103 Legal Issues for ENT	3
ENT 104 Opportunity Analysis	3

## Early Childhood Education

### Early Childhood Leadership

*Certificate (O,T,W)*

The Early Childhood Leadership (ECL) Certificate is designed to enable graduates to fulfill leadership roles in early childhood education facilities. The program combines studies in best practices including creating an environment that promotes peak performance, optimizing operations to establish a successful business model, and maintaining a quality family-centered environment for young children. It prepares early childhood care and education professionals to serve as leaders in the early childhood care and education programs. Additionally, this Certificate will prepare graduates to serve as advocates for young children as the state of Delaware undergoes a transformation in its approach to preparing, certifying, recruiting, and retaining high quality teachers of young children.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ECE 130 Early Childhood Leadership I	3
ECE 131 Early Childhood Leadership II	3
ECE 132 Early Childhood Leadership III	3

## Specialized Occupations

## English as a Second Language Certificate

*Certificate (O,T,W)*

The Department of Language & Culture offers courses to meet the varied needs of persons for whom English is not a native language. Students can prepare themselves to enter the workforce or pursue a degree.

In beginning, intermediate and advanced level courses, students develop listening/speaking, grammar, reading and writing skills needed for communication in everyday life. A certificate is awarded for program completion.

Students who complete the ESL Certificate Program and wish to pursue a degree take ESL 100, ESL for Degree Programs, which gives them acceptance into open-entry Associate Degree Programs at Delaware Technical Community College and prepares them for studies in any American college or university.

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ESL 022 Beginning ESL Reading/Vocab	4
ESL 024 Beginning Writing	4
ESL 026 Beginning Grammar/Comm	8
ESL 028 Beginning Listenng/Speakng	4
ESL 032 Intermediate Reading	4
ESL 034 Intermediate Writing	4
ESL 036 Intermediate Grammar/Comm	8
ESL 038 Intermediate Listening/Speakng	4
ESL 042 Advanced ESL Reading	4
ESL 044 Advanced ESL Writing	4
ESL 046 Advanced Grammar/Communication	8
ESL 048 Advanced Listening/Speaking	4

## Entrepreneurial

### Entrepreneurship Certificate

*Certificate (O,T,W)*

If you have a desire to be your own boss and have your own business, the Entrepreneurship Program is for you! Now you can explore this opportunity and get credit for it by earning an Introduction to Entrepreneurship Certificate.

Starting and operating a business takes a lot of effort and know-how. The Intro to Entrepreneurship Certificate Program offers the foundational basics of taking your passion and turning it into a business. This certificate is designed to augment the degrees earned in other academic and technical programs. Whether you are in health care, automotive,

refrigeration-heating-air conditioning, agriculture, or any other career vocation, you can learn the basic skills of how to launch your business. By successfully completing 15 credit hours in five specialized courses in the Entrepreneurship curriculum including topics of legal issues, funding and finance, and business plan development, you can earn an Entrepreneurship Certificate. Courses will include face-to-face and online instruction.

Although this certificate is designed to augment other degrees earned in other academic and technical programs, you may seek this introductory certificate to gain the basics of entrepreneurship without pursuing another degree, in which case some prerequisites may be required.

This certificate will help you take your profession or vocation through the initial steps to turn it into a viable business. As an entrepreneur, you can be self-employed or become a job creator for others!

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ENT 103 Legal Issues for ENT	3
ENT 211 Business Start Up Design	3
ENT 240 Funding & Finance for ENT	3
ENT 285 Business Plan Development	3
ENT 101 Intro to Entrepreneurship	3
or	
BUS 101 Introduction to Business	3
ACC 100 Introduction to Accounting	3
or	
ACC 101 Accounting I	4

## Aviation Maintenance Technology

### General Airframe Maintenance Certificate

*Certificate (O)*

The General/Airframe Maintenance Technology certificate program prepares graduates for entry-level positions as airframe maintenance technicians. Graduates will acquire knowledge and skills needed in the fabrication, inspection, maintenance, repair, and testing of aircraft. Graduates will possess the training qualifications and be capable and competent to successfully pass the Federal Aviation Administration airframe mechanic certification examination.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AVI 110 Airframe Maintenance - General	12
AVI 120 Airframe Maint - AF Section I	11
AVI 210 Airframe Maint AF - Section II	12
AVI 220 Airframe Maint AF-Section III	11

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ELC 102 Basic Electricity for Aviation	3
MAT 112 Aviation Mathematics	4

## Aviation Maintenance Technology

### General Powerplant Maintenance Certificate

*Certificate (O)*

The General/Powerplant Maintenance Technology certificate program prepares graduates for entry-level positions as powerplant maintenance technicians. Graduates will acquire knowledge and skills needed in engine teardown and build-up, inspection, maintenance, repair, and testing aircraft. Graduates will possess the training qualifications and be capable and competent to successfully pass the Federal Aviation Administration Powerplant mechanic certification examination.

#### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

#### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
AVI 110 Airframe Maintenance - General	12
AVI 230 Powerplant Maint - Section I	14
AVI 240 Powerplant Maint - Section II	13

#### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
ELC 102 Basic Electricity for Aviation	3
MAT 112 Aviation Mathematics	4

## Instructional Design and Technology

## Instructional Design and Technology Certificate

Certificate (O,T,S,W)

Successfully preparing instructors to be effective users of educational technology is a critical component in helping to solve many of our current educational challenges. The adoption of new and emerging technologies within academia has only continued to grow and offers even more reason to be hopeful. This program prepares instructors to be better able to help their students comprehend difficult-to-understand concepts, engage in active learning, access information and resources, and meet their individual needs. The effective use of technology has proven to enhance learning, as well as improve student engagement and achievement.

The mission of the 15-credit Instructional Design and Technology Certificate program is to prepare educators to design, develop, deliver, and evaluate engaging educational opportunities and experiences to promote student success. The program enables educators to effectively employ emergent technologies in a variety of modes and settings.

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
IDT G21 Instructional Design	2
IDT G22 Foundational Technologies	2
IDT G31 Teaching with Technology	2
<i>Select course(s) from:</i>	
IDT G07 Modem Classroom Management	2
IDT G12 Tech Enabled Assess Strategies	1
IDT G26 Advanced Classroom Technology	2
IDT G32 Implementing Eff. Learning Com	2
IDT G36 Educational Document Control	1
IDT G39 Virtual Learning Env in Ed	1
IDT G43 Crtve Cmns, Fair Use, & Cpyrt	1
IDT G47 Psych of the Online Learner	2
IDT G58 Fundamentals of Acad Advmnt	2
IDT G59 Instructional Strategies	2
IDT G63 ePortfolio Design	1
IDT G82 e-books and Digital Readers	1
IDT G86 Synchronous Tech in Teaching	1
IDT G88 Leveraging Soc'l Media for Lrn	2
IDT G99 Special Topic in Ed Technology	1

## Electronic Engineering Technology

### Instrumentation Certificate

Certificate (S)

If you're interested in a career as a process operator or instrument sales representative, the Instrumentation Certificate is designed to provide you with an introduction to the technical and practical knowledge required in this field. Classroom studies and hands-on experience in this program will prepare you for real-life applications. Taking part in this 15 credit-hour certificate program also offers advancement options if you are already employed in the field; or you could choose to continue your studies to obtain an associate degree, preparing you to be an instrument engineering technician. A career in this field may lead you to work in the chemical processing, food processing, oil and gas production, energy production industries, or other highly technical fields. You could be involved in the installation, calibration, and maintenance of electronic, digital, and pneumatic equipment, as well as the development of procedures for maintenance and problem solving.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
ELC 101 Intro to Instrumentation	3
ELC 270 Process Instrumentation I	4

### PROGRAM/MAJOR SUPPORT COURSES

<u>Courses</u>	<u>Credits</u>
PHY 111 Conceptual Physics	4
or	
PHY 205 General Physics I	4

## Mechanical Engineering Technology

### Machinist Training Level I Certificate

Certificate (S)

The creative work of designing and making tools from such diverse materials as metal, wood, or plastic requires patience, knowledge, and organization -- skills that are supported by the Delaware Tech Machinist Training Certificate program. In this program you will learn through classroom and hands-on instruction in a modern machine shop facility. You will become proficient in modern manufacturing techniques, 3D computer modeling, 2D drafting, and practical machine shop practices.

Well-trained machinists are in demand in the job market. Upon completion of this certificate program,



you will increase your manufacturing job skills to help you gain a rewarding entry level position in a manufacturing environment. This certificate can be earned by successfully completing 16 credit hours through full- or part-time study, in the day or the evening.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
MAT 180 College Algebra	4
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
EDD 131 Engineering Graphics/CAD	3
MET 123 Modern MFG Techniques	3
NCN 105 Machine Shop Practicum I	4

## Mechanical Engineering Technology

### Machinist Training Level II Certificate

*Certificate (S)*

Machinist and skilled manufacturing professionals are in demand. The level II certificate will give you the hands-on skills that companies are looking for. You will learn through classroom and practical instruction in a modern machine shop facility. You will become proficient in geometric dimensioning and tolerancing, modern manufacturing techniques, numerical control machining, computer applications, and advanced manufacturing techniques. In addition, you will learn the finer points of manufacturing and machining.

Upon completion of this certificate program, you will be an accomplished and knowledgeable machinist prepared with the job skills you need for a rewarding position in a manufacturing environment. This certificate can be earned by successfully completing 13 credit hours through full- or part-time study, in the day or the evening.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
MET 125 Adv Manufacturing Techniques	3
MET 235 Computer Nmrcl Cntrl Machining	4
NCN 104 Geometric	2

Dimension/Tolerance	4
NCN 106 Machine Shop Practicum II	4

## Education

### Paraeducator Certificate

*Certificate (O,T,W)*

The Paraeducator certificate provides the first step in a career ladder for prospective or employed paraeducators. This certificate provides the basic skills for a paraeducator with course work in child safety, computer technology and role and responsibilities of a paraeducator.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
CIS 107 Intro to Computers/Application	3
ECE 111 Childhd Nutrition/Safety	3
EDC 101 Intro to Paraeducator Issues	3
MAT 211 Math for Teachers I	4

## Paralegal

### Paralegal Certificate

*Certificate (O,T)*

The Paralegal Certificate is available to students with an underlying associate or bachelor's degree in any discipline who are looking to further their education and gain specialized knowledge in the legal field. The certificate program is designed to prepare graduates to find employment in law firms, federal, state, and local agencies, the court system, banks, and private businesses. Students in the certificate program take a minimum of 24 credits in courses focusing on the structure and organization of the American legal system, basic principles of law and legal research, and various areas of substantive law. In addition, students may have the opportunity to complete an internship to supplement their classroom studies with relevant work experience. Paralegals may not provide legal services directly to the public except as provided by law.

### CORE COURSES

<u>Courses</u>	<u>Credits</u>
SSC 100 First Year Seminar	1

### PROGRAM/MAJOR COURSES

<u>Courses</u>	<u>Credits</u>
PLG 170 Intro to the Legal System	3
PLG 280 Legal Research & Writing	3
PLG 285 Law Office Mgmt & Procedures	3
<i>or</i>	
PLG 290 Paralegal Internship	4
<i>Select 5 course(s) from:</i>	
PLG 160 Family Law	3
PLG 172 Law of Simple Contracts	3
PLG 175 Estate Admin and Probate	3
PLG 270 Criminal Law/Invest Procedures	3
PLG 271 Real Property Law	3
PLG 273 Civil Procedure	3
PLG 274 Torts	3
PLG 276 Business Entities	3

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