COLLEGE CATALOG | 2019

DELAWARE TECHNICAL COMMUNITY COLLEGE

SPRING 2019

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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, family or marital status, pregnancy, national origin, age, disability, sexual orientation or genetic information 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; Delaware's anti-discrimination law and other applicable laws, regulations and Executive Orders.

All persons associated with the college are subject to this policy while on property owned or controlled by the college or while acting in an official capacity, including faculty, staff, officers, trustees, volunteers, contractors and vendors. In addition, this policy applies to conduct that occurs off college property or is otherwise unrelated to the person's association with the college if:

1. The conduct was in connection with a college or college-recognized program, activity or event;
2. The conduct is alleged to have created a hostile environment for a member of the college community;
3. The conduct disrupts the normal operations and processes of the college and is offensive to the college's mission;
4. The continued presence of the individual accused of violating this policy poses a moderate or higher threat to any member of the college community; or
5. The nature of the alleged conduct adversely affects the reputation, mission, image or public perception of the college.

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: Christina M. Garcia, Civil Rights & Title IX Coordinator, Office of the President, 100 Campus Drive, Dover, DE 19904, (302) 857-1903, civilrights@dtcc.edu

(Revised Board of Trustees 6/18/2018)

POLICY ON SEXUAL MISCONDUCT

The College is committed to maintaining and strengthening a learning environment founded on civility and respect, and to providing programs, activities and an educational environment free from all forms of violence. Any act of sexual misconduct is also a form of sex discrimination prohibited by Title IX. The College has a zero tolerance policy for violence and discrimination and is committed to eliminating all forms of sexual misconduct and discrimination from its campuses. Therefore, it is the policy of the College that students and employees of the College are prohibited from committing any and all acts of sexual misconduct.

The College is also committed to fostering a community that promotes prompt reporting of any allegations of sexual misconduct and the timely investigation and fair resolution of any report of sexual misconduct. While the College has the greatest respect for a victim's or survivor's right to privacy and confidentiality, the College must balance those rights against the safety and welfare of the College community. Therefore, it is the policy of the College that any allegation of sexual misconduct will be investigated and adjudicated in accordance with the College's policy, unless otherwise stated therein. It further retains its discretion to report acts of sexual misconduct to law enforcement authorities based on the nature and seriousness of such allegations.

Any person who violates this Policy will be subject to disciplinary action including, but not limited to, dismissal from the College or termination from employment.

Reporting Acts of Sexual Misconduct

The College encourages any person who believes that he or she has been a victim of sexual misconduct to report the alleged misconduct to any College employee or any member of the Board of Trustees of the College as soon as possible (hereafter "Responsible Employee").

Duties of a Responsible Employee

All Responsible Employees are required to report any allegations of sexual misconduct they receive to the Title IX Coordinator. Allegations of sexual misconduct can be made verbally or in writing to the Responsible Employee and may come from either the victim, a third party or the accused.

In addition, the Responsible Employee shall also:

1. Advise the reporting person of his or her obligation to report the allegations of sexual misconduct to the Title IX Coordinator. The employee must also advise the complainant that, depending on the nature and

seriousness of the allegations, the College reserves the right to notify law enforcement authorities of the alleged misconduct.

2. Advise the reporting person that Delaware Tech will respect the privacy of the reporting person or victim and will maintain confidentiality on behalf of the reporting person or victim to the extent the law and Delaware Tech's policies permit.

3. Advise the victim that the victim may contact law enforcement or Delaware Tech Public Safety and that the employee will contact law enforcement or Delaware Tech Public Safety on the victim's behalf if requested.

4. Notify law enforcement or Public Safety within 24 hours after the victim requests such notification.

5. Advise the victim that he or she is entitled to certain rights in criminal proceedings and direct him or her to: The Victim's Bill of Rights, Chapter 94, Title 11 of the Delaware Code: http://delcode.delaware.gov/title11/c094/index.shtml

6. Provide information to the victim regarding confidential medical, counseling, and advocacy services, or direct him or her to: https://www.dtcc.edu/about/public-safety/sexual-violence

7. Contact the Child Abuse and Neglect Report Line for the Department of Services for Children, Youth and Their Families at (800) 292-9582, if the victim is a minor at the time of the report.

Responsibilities of a Campus Security Authority

A **"Campus Security Authority"** is a Delaware Tech employee who is also a campus administrator, a member of the College's Public Safety Department, Deans of Student Affairs (including professional staff), Deans of Instruction (including professional staff), Directors of Human Resources (including professional staff), athletic directors and coaches, faculty advisors to a student group, disabilities support counselors, a member of the CARE Threat Assessment Team, community resource contacts, the Title IX Coordinator and Review Officers.

An employee who is a Campus Security Authority and who receives a report of sexual misconduct must report the allegations of misconduct to both the Title IX Coordinator and the Delaware Tech Public Safety Department. If the reporting person requests that the misconduct not be reported to Public Safety, the employee shall advise the reporting person that the employee must report the allegations of sexual misconduct, but will report only non-identifying information in order to maintain the reporting person's request for confidentiality.

Sexual Misconduct Defined

Sexual misconduct is comprised of sexual assault, dating violence, domestic violence, sexual harassment, stalking and hate crimes, which are defined as follows::

1. Sexual Assault

"Sexual Assault" means any sexual act or acts committed on a person who has not consented to such act or acts or for which a person is incapable of consenting due to age, intoxication or other reasons. Sexual assault includes, but is not limited to:

A. Rape, or attempted rape;

B. Intentional and unwelcome sexual touching (including disrobing or exposure), however slight, with any body part or any object, by a person upon another person without consent, of the person's breasts, buttocks, groin, or genitals (or clothing covering such areas), or coercing, forcing, or attempting to coerce or force another to touch you, themselves, or a third party with any of the body parts or areas when such touching would be reasonably and objectively offensive;

C. Any sexual act in which there is force, violence, or use of duress or deception upon the victim;

D. Any sexual act perpetrated when the victim is unable to give consent; and,

E. Sexual intimidation, which includes, but is not limited to:

1. Threatening, expressly or impliedly, to commit a sexual act upon another person without his or her consent;
2. Stalking or cyber-stalking; and,
3. Engaging in indecent exposure.

2. Dating and Domestic Violence

Both dating and domestic violence encompass any sexual, verbal, or emotional abuse of one partner by the other in a romantic relationship. While arguing and "verbal fighting" occurs in all relationships, intimate partner violence is about power and control. Partner violence can be hard to identify and victims often have difficulty in recognizing and acknowledging partner violence due to the nature of the relationship and complex feelings between the victim and abuser.

"Dating Violence" means abuse or violence committed by a person:

A. Who is, or has been, in a relationship of a romantic or intimate nature with the victim;

B. Where there is, or has been, abuse, as defined in this policy, or a pattern of behavior in the relationship which

is used to establish power and control over the victim through fear and intimidation.

1. “Pattern of Behavior” means behavior by one party in an intimate relationship that is used to establish power and control over the other person in the relationship through fear and intimidation.
2. A pattern of behavior is determined based on the repeated use of words and/or actions and inactions in order to demean, intimidate, and/or control another person. This behavior can be verbal, emotional and/or physical.

C. Examples of abuse, which can occur singly or as a pattern of behavior, include but are not limited to, slapping, pulling hair, punching, damaging property, driving recklessly to scare someone, name calling, humiliating one in public, harassment directed toward a current or former partner or spouse, threats of abuse, such as threatening to hit, harm or use a weapon on another, or other forms of threat.

“Domestic Violence” means abuse or violence committed by a current or former spouse of the victim; by a person who is cohabiting with the victim where they hold themselves out as a couple, with or without a child in common; by a person living separate and apart from the victim with a child in common; or by a person in a current or former substantive dating relationship with the victim, or by any person similarly situated to a spouse or intimate partner of the victim under the domestic violence laws of the State of Delaware; or by a person against a family member as that term is defined in §901(12) , Title 10 of the Delaware Code; or by any person against an adult or youth victim who is protected from that person’s acts under the domestic violence laws of the State of Delaware.

3. Stalking

“Stalking” means engaging in a course of conduct directed at a specific person that would cause a reasonable person to: (i) fear for his or her safety or the safety of others; or (ii) suffer substantial emotional distress.

A. “Course of conduct” means two or more acts, including but not limited, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follow, monitors, observes, surveils, threatens, or communicates to or about a person, or interferes with a person’s property. It can include, but is not limited to:

1. Non-consensual communication (face-to-face, telephone, email)
2. Threatening or obscene gestures;
3. Surveillance/following/pursuit;
4. Showing up outside the victim’s classroom or workplace;
5. Sending gifts (romantic, bizarre, sinister, or perverted)
6. Making threats

B. “Emotional distress” means significant mental suffering or anguish that may, but does not necessarily require medical or other professional treatment or counseling.

C. “Reasonable person” means a reasonable person under the circumstances and with similar identities to the victim.

Stalking behavior has the purpose or effect of unreasonably interfering with an individual’s academic or work performance or creating an intimidating, hostile or offensive learning and work environment. Incidents of stalking occurring on or off the College’s campuses are subject to the College’s disciplinary process.

4. Sexual Harassment

“Sexual Harassment” means any unwelcome sexual advances, requests for sexual favors, and other verbal, written, or physical conduct of a sexual nature constitute sexual harassment when:

A. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual’s education; or

B. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions affecting that individual; or

C. 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.

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:

A. Unwelcome sexual advances, requests for sexual favors, or other non-physical conduct of a sexual nature;

B. Sexually explicit statements, comments, questions, pictures, objects, jokes, or anecdotes;

C. Unwelcome use of the electronic mail or telephone

communication system to communicate prohibited conduct or activities; or

D. Graphic comments about a person's clothing or body.

5. Hate Crimes

A hate crime is any conduct against an individual based on their race, color, religion, creed, ethnic or national origin, sex, sexual orientation, gender identity/expression, genetic information, disability, age, status as a covered veteran, socio-economic status or any other category protected by federal and state civil rights law and which:

A. Adversely affects a term or condition of an individual's employment, education, participation in the College's activities or environment;

B. Has the purpose or effect of unreasonably interfering with an individual's employment or academic performance or creating an intimidating, hostile, offensive or abusive environment;

C. Is used as a basis for or a factor in decisions that tangibly affect that individual's employment, education, or participation in the College's activities or environment.

6. Other Definitions

Other definitions relating to this Policy are contained in Section 13.04 of the Personnel Policy Manual**.**

Confidentiality

The procedures followed in any complaint will be kept confidential to the maximum extent allowable by federal and state 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 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 misconduct based on a 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 if the Complainant requests such assistance.

Requests not to Investigate or Refusal to Prosecute

A. Victims always have the option to forgo criminal prosecution of the accused after an act of sexual misconduct is reported. Victims may also request that the College not investigate the allegations reported, may refuse to file a complaint, and/or refuse to cooperate in the investigation and/or resolution of allegations. However, the College is committed to balancing the rights of the alleged victim and providing a reasonably safe and non-discriminatory environment for its students and employees. Therefore, the College cannot guarantee that it will not conduct an investigation or pursue resolution of the alleged sexual misconduct.

B. The College has the discretion to proceed with an investigation and disciplinary action if there has been a finding by the College that the sexual misconduct occurred even if the victim does not want to move forward with a complaint to the College and/or criminal prosecution. The College will evaluate such reports in the context of its commitment to providing a reasonably safe and non-discriminatory environment. In order to do so, the Title IX Coordinator may conduct a preliminary investigation into the alleged sexual misconduct and may consider the following factors in determining whether to honor the request for confidentiality:

1. The seriousness of the alleged sexual misconduct;
2. The alleged victim's age;
3. Whether there have been other complaints of sexual misconduct against the alleged offender;
4. The alleged offender's right to receive information about the allegation, if the information is maintained by the College as an "education record" under FERPA; and,
5. The applicability of any state and/or federal laws mandating disclosure.

C. The Title IX Coordinator shall inform the alleged victim if the College intends to conduct further investigation and seek resolution of this matter.

Retaliation

No individual shall be subject to retaliation at any time for making a claim of sexual misconduct or for participating in the procedures for the resolution of sexual complaints. It is a violation of College policy for any member of the College community to retaliate against the Complainant, any individual who participates in the investigation or proceedings, or against the individual who has been accused of engaging in sexual misconduct. While all sexual misconduct allegations will be reviewed in accordance with these procedures, the College community is advised that the submission of a claim of sexual misconduct is not proof that the accused is guilty of prohibited conduct under this Policy. Anyone who believes that he/she has been subject to retaliation

arising from sexual misconduct complaints is encouraged to report such behavior to College officials. Students or employees who have engaged in retaliatory conduct shall be subject to the College's disciplinary process and to disciplinary action up to and including dismissal or termination from the College.

Protective Measures

At any point during the complaint, investigative or disciplinary processes, the Title IX Coordinator shall have the authority to take any and all reasonable steps necessary to protect all parties involved, as well as any member of the College community who the Title IX Coordinator believes needs protection, from harassment and/or retaliation. The occurrence or non-occurrence of any protective measure is neither an indicia of guilt nor innocence under these procedures. Any protective measures taken to protect members of the College community from harassment and retaliation shall remain in effect pending the resolution of the allegation(s).

Examples of such protective measures are: (1) placing a transcript hold on the alleged offender's transcript; (2) summarily suspending the alleged offender; (3) changing the alleged offender's schedule; (4) taking such steps as are reasonable, appropriate and necessary to restrict the alleged offender's movement on campus; and/or (5) reassigning the alleged offender or placing him or her on administrative leave.

Protective measures may also include, but are not limited to: (1) issuing no-contact orders to prevent any contact between the alleged victim, the alleged offender, witnesses, and/or third parties; (2) providing the alleged victim an escort to ensure that he or she can move safely between classes, work, and/or other activities; (3) changing work arrangements; (4) arranging for the alleged victim to take an incomplete in a class; (5) moving the alleged victim or the alleged offender from one class section to another; (6) permitting a temporary withdrawal from the College; (7) providing alternative course completion options; and/or (8) providing counseling and/or academic support services.

Protection Orders

Any order of protection, no contact order, restraining order or other similar orders should be immediately presented to the Campus Public Safety Department. Additional protective measures may be given to the victim if requested and such accommodations are reasonable and available, such as changing academic or working situations.

Receipt of a Complaint of Sexual Misconduct or Hate Crime

Procedures for resolving complaints of sexual misconduct and/or a hate crime are contained in **Section 13.04** of the Personnel Policy Manual**.**

Role of the Title IX Coordinator

The College's Title IX Coordinator is responsible for overseeing all Title IX and sexual misconduct and discrimination reports and complaints made to the College and for implementation of the College's sexual misconduct and anti-discrimination policies. The College's Title IX Coordinator has appointed "Civil Rights Officers" to assist in carrying out the responsibilities related to the implementation of its policies.

Role of the Advisor

The complainant and the accused shall have the opportunity to be accompanied by an advisor, including an attorney, of his or her own choice to any meeting or proceeding related to the complaint, investigation, hearing, and adjudication process. Notwithstanding, no party may use an advisor for the purpose of intimidating, or creating a legitimate fear of retaliation in, the other party, such that the other party foregoes his or her right to move forward in the process.

Rights of the Parties

The Complainant and the accused shall have the same opportunity to present evidence, to be heard, and to have an advisor present throughout the complaint, investigation, hearing, and adjudication process. Each party shall be informed of the outcome of disciplinary proceedings pertaining to complaints of sexual offenses, defined as the College's final determination with respect to the alleged sexual misconduct and any sanction that is imposed against the accused. Provided, however, no party or their advisors shall have the opportunity or right to conduct direct or cross-examination of the other parties' witnesses or of the parties themselves.

A. All College personnel will treat the parties with respect.

B. The parties are entitled to privacy during every aspect of the reporting process and any ensuing investigation.

C. All information obtained will be confidential to the maximum extent permitted by law.

D. Victims of sexual misconduct have the right to receive medical treatment and counseling services. The College will provide victims with information of appropriate medical and counseling services available through community-based counseling services.

E. The College will inform victims that they have the option to report their case through the

above-referenced College procedures and/or have the appropriate police agency respond and conduct a full investigation. While victims have the right to refuse to participate in any such proceeding or investigation, the College is required by federal law to investigate all incidents of alleged sexual misconduct on campus.

F. The College will notify victims of their options for protective measures, including but not limited the option to adjust their academic schedule whenever reasonably possible. Victims also have the right to decline the use of any protective measures.

Bystander Intervention

Bystander intervention is when you assume the responsibility, by exercising safe and positive options, to prevent or interrupt acts of sexual misconduct or the potential for such acts. The College is committed to eliminating sexual misconduct within the College community and believes that actively intervening to prevent or interrupt acts of sexual misconduct or any other act of violence in a safe and positive manner so as not to endanger oneself or others is a way of eliminating such misconduct.

You can stop or interrupt such acts by:

A. Verbally intervening and attempting to de-escalate the situation or instructing the participants to separate;

B. Indirectly intervening by alerting the parties' friends, other bystanders, a college officer, campus public safety, or local law enforcement

C. Distracting the attention of one party away from the other party

D. Remember:

1. Do NOT use violence
2. Do NOT be antagonistic
3. Be honest and direct whenever possible
4. Stay calm and positive
5. Recruit assistance to keep yourself and others safe
6. Contact public safety or local law enforcement if the situation escalates.

Victim/Bystander Reporting Options

A. Call 911

B. Call the Campus Public Safety Department.

C. Call a College official.

D. Complete the Incident/Behavior Report form (located on Public Safety web page).

E. Use an emergency phone located on campus and in the parking lots. Reporting does not require a victim or reporting person to take further legal action.

(Revised Board of Trustees, 4/12/16, 4/11/17)

PROCEDURE FOR THE RESOLUTION OF DISCRIMINATION AND SEXUAL MISCONDUCT COMPLAINTS

1. **Oversight.**

The Civil Rights Coordinator/Title IX Coordinator ("Title IX Coordinator") will be responsible for overseeing the prompt, fair and impartial investigation and resolution of reports of discrimination and sexual misconduct to the College. Upon receipt of a complaint, the Title IX Coordinator shall make an initial determination regarding whether or not the complaint states a claim of discrimination or sexual misconduct; provided, however, that no determination that a complaint fails to state a claim for discrimination or sexual misconduct shall be made without first speaking with the Complainant. In cases where a claim of discrimination or sexual misconduct has been stated, the Title IX Coordinator shall immediately communicate, or attempt to communicate, with the Complainant to determine and implement interim/protective measures to the extent necessary. The Title IX Coordinator shall attempt to obtain a written statement from the Complainant within 5 days from the date of receipt of the complaint. However, a delay or refusal by the Complainant to complete a written complaint will not suspend or postpone the Title IX Coordinator's obligation to move forward in the investigation. In addition, when a claim of discrimination or sexual misconduct has been stated, the Title IX Coordinator shall notify the Respondent that a complaint has been filed, the substance of the complaint, any protective measures that may have been instituted, the prohibition against retaliation or harassment involving the Complainant, the name of the Review Officer that will be assigned to investigate the complaint, and, if applicable, whether mediation is available.

2. **Mediation.**

Mediation is an informal and confidential way for the parties to resolve a complaint of discrimination or sexual misconduct prior to an investigation. It is available as an alternative means of resolving a complaint only if the alleged discrimination or sexual misconduct does not involve violence or abuse. Mediation requires the consent of all parties to the complaint and shall be documented by an agreement to mediate. When mediation is appropriate, the Title IX Coordinator shall make the offer to the Complainant first. If the Complainant or Respondent declines mediation, or if the Respondent fails to respond within 5 days from the date he or she receives notice that mediation is available, the Review Officer shall

immediately begin his or her investigation.

Mediation may be discontinued at any time: (1) by either party; (2) by the mediator when he or she feels that further efforts to mediate would be non-productive; or (3) when a voluntary agreement has been reached.

The mediator shall notify the Title IX Coordinator of the success or failure of the mediation. If the mediation results in a voluntary settlement, a copy of the signed agreement shall also be provided to the Title IX Coordinator.

If the parties are unable to resolve the complaint through mediation, then the Review Officer shall immediately begin his or her investigation.

3. **Right to an Advisor.**

The Complainant and the Respondent shall have the right to be accompanied by an advisor, including an attorney of his or her own choosing, to any meeting or proceeding related to the complaint, investigation, hearing, and adjudication process for which the Complainant or Respondent is required to attend. Notwithstanding the foregoing, neither party may use an advisor for the purpose of obstructing the investigation, intimidating a party or witness, or creating a legitimate fear of retaliation in the other party.

a. An advisor may educate the Complainant or Respondent in regard to the process and may advise the Complainant or Respondent of their rights and options at each stage of the proceedings. They may actively participate in any stage of the proceedings unless otherwise specified by the Review Officer.

b. An advisor shall not have the right to conduct direct or cross examination of either parties' witnesses or the parties themselves.

c. The advisor may address the Review Officer, Title IX Coordinator or the Discrimination/Sexual Misconduct Review Committee on behalf their advisee at appropriate times during each meeting or proceeding.

d. The College shall not cancel, postpone, delay or reschedule a meeting or hearing solely because an advisor is unavailable to be present, unless good cause is shown.

e. An advisor may be removed from any meeting or proceeding if he or she engages in conduct prohibited herein; refuses to abide by the instructions of the Review Officer, Title IX Coordinator or Discrimination/Sexual Misconduct Review Committee; is disruptive to the meeting or proceeding; or is disrespectful to any other participant in an investigation, meeting or hearing.

f. The advisor may not attend any meeting or proceeding without his or her advisee present, unless the advisee expressly authorizes the advisor to act as proxy on his or her behalf and consents to the disclosure of their records to the advisor.

g. The College does not offer or provide advisors or legal representation in any meeting or proceeding in which one party has an advisor or legal representation and the other party does not. However, the College shall notify students and employees of available legal assistance from the community.

i. There shall be no discovery by any of the parties or their respective advisors prior to a meeting or hearing.

4. **Interim/Protective Measures**.

If, at any point during the complaint, investigative, or disciplinary process, the Title IX Coordinator deems it necessary for the protection of any member of the College community, the Title IX Coordinator may institute interim/protective measures on behalf of the Complainant, the Respondent, or any witness involved in the complaint.

5. **Initial Meeting with Review Officer**.

The Review Officer shall contact the Complainant and the Respondent to schedule separate initial meetings as soon as practicable after his or her appointment or, if mediation was offered, after it was declined or unsuccessful. For good cause shown, and upon approval from the Title IX Coordinator, the Review Officer may obtain additional time to conduct the initial meetings.

6. **Burden of Proof.**

The Review Officer shall investigate the complaint to determine whether, by a preponderance of the evidence, the alleged discrimination or sexual misconduct has occurred.

7. **Authority to Investigate.**

The Review Officer shall have access to such documents or video in the possession of the College, including student records, public safety records or personnel files, that he or she believes may contain relevant information or which may lead to the discovery of relevant information.

The investigation shall include interviews with both parties involved in the complaint, whenever possible, and/or may include interviews with individuals who may have observed the alleged discrimination or misconduct or may have relevant knowledge of the incident. The investigation may also include interviews with experts, where applicable.

Where applicable, the Review Officer may visit, inspect

and photograph sites relevant to the alleged incident, and collect and preserve relevant evidence (which shall be coordinated with the law enforcement agency having jurisdiction over the alleged incident when a corresponding criminal complaint has been filed).

8. **Review Officer's Report.**

The Review Officer shall submit to the Title IX Coordinator a written investigative report with his or her findings and conclusions of whether, by a preponderance of the evidence, discrimination or sexual misconduct has occurred.

The Title IX Coordinator shall provide a summary of the report to the parties, who may accept the findings and conclusions contained therein or may request a hearing in accordance with Section 12. Either party shall have the right to request a hearing.

A Review Officer's findings shall be final if neither party requests a hearing within 10 days from the date notice of the right to appeal is sent. In situations where a Review Officer's findings of discrimination or sexual misconduct become final, a copy of the report shall be provided to the appropriate Dean of Student Affairs if the Respondent is a student or the appropriate Director of Human Resources if the Respondent is an employee for disciplinary action. If the Respondent is an employee of the Office of the President (including Office of the President employees who work at a campus location), the Review Officer's report shall be provided to the Vice President for Human Resources for disciplinary action.

9. **Appeal.**

Either party may appeal the Review Officer's findings by requesting a hearing on the complaint of discrimination or sexual misconduct. The hearing shall be before a Discrimination/Sexual Misconduct Review Committee (hereafter "Review Committee"), or if both parties agree, may be conducted by the Title IX Coordinator as a single hearing officer (hereafter "Hearing Officer"). A request for a hearing shall be made in writing within ten (10) working days following the date notice of the right to appeal is sent.

The Title IX Coordinator, or his or her designee, shall provide written notice to the parties of the date, time, and place for the Review Committee hearing. Such notice shall also include a summary of the rules governing how the hearing will be conducted.

Absent extenuating circumstances, or an agreement by the parties, the hearing shall take place as soon as practicable.

The role of the Review Committee/Hearing Officer shall be to hear and consider testimony and other relevant, reliable evidence and make findings of fact related thereto. In addition, the Review Committee/Hearing Officer shall be charged with determining, by a preponderance of the evidence, whether or not a violation of the College's Policy on Discrimination or Policy on Sexual Misconduct has occurred.

The Review Committee/Hearing Officer shall accept and consider any and all relevant information or evidence offered by or on behalf of any party, including testimony from the Review Officer regarding the substance of their investigation. Formal rules of evidence or procedure shall not apply to a discrimination/sexual misconduct hearing, but the Review Committee/Hearing Officer may exclude plainly irrelevant or repetitive evidence. No stenographic record or audio or video recording of the hearing may be made.

The Review Committee/Hearing Officer 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 policies has occurred within five (5) working days following the conclusion of the hearing.

If a violation is found to have occurred, the report shall also include a recommendation of appropriate relief and/or sanctions, up to and including dismissal from the College.

The decision of the Review Committee/Hearing Officer shall be final.

10. **Discrimination/Sexual Misconduct Review Committee.**

The Discrimination/Sexual Misconduct Review Committee (hereafter "Review Committee") shall consist of the Title IX Coordinator, who shall serve as the Committee Chairperson, one Review Officer who was not involved in the investigation of the allegations of discrimination or sexual misconduct; and the Dean of Student Affairs or the Director of Human Resources, or his or her designee, on the campus where the alleged incident took place.

11. **Sanctions.**

Sanctions for violations of the College's Policy on Discrimination or Policy on Sexual Misconduct include counseling, verbal and/or written reprimand, improvement or corrective action plan, suspension and/or dismissal from the College or termination from employment at the College, exclusion from academic participation or other college sponsored programs, and/or denial of access to College facilities as determined through these procedures.

Any recommendation for sanctions made by the Review Committee/Hearing Officer shall be reviewed by the appropriate Campus Director if the Respondent is a student or campus employee. If the Respondent is an Office of the President employee, then the

recommendation for sanctions shall be reviewed by the Vice-President with administrative responsibility for the division in which the Respondent is employed. The Campus Director of Vice-President shall either accept, reject or modify any recommendation. Where a recommendation is rejected, the Campus Director or Vice-President shall then determine what sanctions should be taken and the reasons for taking such sanctions, which may be greater or less than the sanctions recommended. For positions that directly report to the President, the President shall be substituted for the Vice-President in the operation of this policy.

12. **Timeframe for Resolving Complaints.**

Every reasonable effort shall be made to conclude the investigation and resolve the complaint within sixty (60) days following receipt of the complaint. Within this sixty (60) day time frame, absent good cause, it is expected that the Review Officer will conclude the investigation and present a report to the Title IX Coordinator, that the parties will be notified in writing of the Review Officer's determination and that a final disposition will have occurred based on the findings of the Review Officer, or on the decision of the Title IX Coordinator or Review Committee in the event an appeal is taken.

13. **Confidentiality and Document Retention.**

The Review Officer, Title IX Coordinator, or anyone having possession of any work product relating to the complaint shall not disclose, distribute, copy or transfer said work product to the parties or any third party. **"Work product"** is defined as any information gathered by the Review Officer for purposes of conducting an investigation of a complaint of discrimination or sexual misconduct.

The complete file, which includes, but is not limited to the complaint, all work product, the investigative report and all dispositions, decisions and/or determinations shall be maintained at the Office of the Title IX Coordinator. The Title IX Coordinator shall maintain confidentiality of the file, which shall only be disclosed by Order of a court of competent jurisdiction or by applicable state or federal law.

When a finding of discrimination/sexual misconduct is final, the Review Committee/Hearing Officer's report and a record of the sanctions imposed shall be maintained as part of the student's educational record or employee's personnel file, as applicable.

14. **Conflicts of Interest.**

The Review Officer shall disclose to the Title IX Coordinator of any potential conflicts of interest which would prevent him or her from conducting the investigation of alleged discrimination or sexual misconduct.

The Complainant or Respondent may identify to the Title IX Coordinator in writing of any real or perceived conflicts of interest posed by assigning such Review Officer to the matter.

If any conflict of interest exists between the Review Officer and any of the parties, the Title IX Coordinator shall reassign the report of alleged discrimination or sexual misconduct to another Review Officer.

15. **Prohibition Against Retaliation.**

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 or sexual misconduct investigation or proceeding, or against the Respondent who has been accused of engaging in discrimination or sexual misconduct. While all discrimination and sexual misconduct allegations will be reviewed in accordance with these procedures, the College community is advised that a claim of discrimination or sexual misconduct is not proof of prohibited conduct. Anyone who believes that he/she has been subject to retaliation arising from discrimination or sexual misconduct allegations is encouraged to report such behavior to the Title IX Coordinator. A finding of retaliatory conduct is subject to disciplinary action, up to and including termination.

(Board of Trustees 4/11/17)

DEFINITIONS APPLICABLE TO SEXUAL MISCONDUCT

The following definitions shall apply to the College's Policy on Sexual Misconduct (Section 1.03) and the Procedure For the Resolution of Discrimination and Sexual Misconduct Complaints (Section 13.04):

Abuse. "Abuse" means conduct which constitutes the following:

A. Intentionally or recklessly causing or attempting to cause physical injury. a sexual offense as defined in §761 of Title 11 of the Delaware Code,

B. Intentionally or recklessly placing or attempting to place another person in reasonable apprehension or fear of physical injury or sexual offense as defined in §761 of Title 11 of the Delaware Code;

C. Intentionally or recklessly damaging, destroying or taking the tangible property of another person;

D. Engaging in a course of alarming or distressing conduct in a manner which is likely to cause fear or emotional distress or to provoke a violent or disorderly response.

E. Trespassing on or in property of another person, or on or in property from which the trespasser has been excluded by court order.

F. Child abuse, as defined in Chapter 9 of Title 16 of the Delaware Code;

G. Unlawful, imprisonment, kidnapping, interference with custody and coercion, as defined in Title 11 of the Delaware Code; or,

H. Any other conduct which a reasonable person under the circumstances would find threatening or harmful.

Complainant. "Complainant" is an alleged victim of sexual misconduct, relationship violence and/or stalking who elects to file a complaint and participate in the College's investigation and resolution of the alleged sexual misconduct.

Complaint. "Complaint" is an allegation of sexual misconduct, relationship violence and/or stalking asserted against another party and reported to or filed with the College.

Consent. "Consent" means informed, actively and freely given, mutually understandable words or actions that indicate a willingness to participate in a mutually agreed upon sexual activity. Consent is mutually understandable when a reasonable person would consider the words or actions of the parties to have manifested a mutual agreement between them to engage in certain activities with each other. It is the responsibility of the initiator to obtain clear and affirmative responses at each stage of sexual involvement. The lack of a negative response is not consent. Consent to one form of sexual activity does not imply consent to other forms of sexual activity. Ignoring objections or acting in spite of objections by the other party does not gain consent.

A. Consent cannot be inferred from:

1. Silence, passivity, or lack of resistance alone;
2. A current or previous dating or sexual relationship alone (or the existence of such a relationship with anyone else);
3. Attire;
4. Spending money on behalf of the other party, e.g. buying dinner on a date;
5. Consent previously given (i.e. consent to one sexual act does not imply consent to another sexual act or a future sexual act.)

B. Use of Force or Threat of Use of Force: There is no consent if it is obtained through the use of physical force, violence, duress, intimidation, coercion or the threat, expressed or implied, of bodily injury. Whether the accused used intimidation coercion to obtain consent is determined by whether a reasonable person in the same or similar circumstances would have felt intimidated or coerced into giving consent.

C. Coercion: "Coercion" is the unreasonable pressure for sexual activity. Coercion is the use of emotional manipulation to persuade someone to do something they may not want to do such as being sexual or performing certain sex acts. Being coerced into having sect or performing sexual acts is not consenting to having sex and is considered sexual misconduct.

D. Incapacitation: "Incapacitation" is a state where someone cannot make rational, reasonable decisions because he/she lacks the capacity to give knowing consent. Consent may never be given by:

1. Minors, even if the other party did not know the minor's age;
2. Mentally disabled persons, if their disability was reasonably known to a sexual partner who is not mentally disabled; or,
3. Persons who are incapacitated as a result of alcohol, drug use, unconsciousness, blackout. The use of alcohol or drugs does not diminish one's responsibility to obtain consent and does not excuse conduct that constitutes sexual misconduct.
4. Persons who are incapacitated as a result of sleep, involuntary physical restraint or consumption of rape drugs.

Dating Violence. "Dating or Domestic violence" means violence committed by a person:

A. Who is, or has been, in a relationship of a romantic or intimate nature with the victim;

B. Where there is, or has been, abuse, as defined in this policy, or a pattern of behavior in the relationship which is used to establish power and control over the victim through fear and intimidation.

1. "Pattern of Behavior" means behavior by one party in an intimate relationship that is used to establish power and control over the other person in the relationship through fear and intimidation.
2. A pattern of behavior is determined based on the repeated use of words and/or actions and inactions in order to demean, intimidate, and/or control another person. This behavior can be verbal, emotional and/or physical.

C. Examples of abuse, which can occur singly or as a pattern of behavior, include but are not limited to, slapping, pulling hair, punching, damaging property, driving recklessly to scare someone, name calling, humiliating one in public, harassment directed toward a current or former partner or spouse, threats of abuse, such as threatening to hit, harm or use a weapon on another, or other forms of threat.

D. Whether dating violence has occurred shall be based on the existence of an intimate relationship which shall take into consideration the following factors:

1. The length of the relationship;
2. The type of relationship; and,
3. The frequency of interaction between the persons involved in the relationship.

Domestic Violence. "Domestic violence" means abuse committed by a current or former spouse of the victim; by a person who is cohabiting with the victim where they hold themselves out as a couple, with or without a child in common; by a person living separate and apart from the victim with a child in common; or by a person in a current or former substantive dating relationship with the victim, or by any person similarly situated to a spouse or intimate partner of the victim under the domestic violence laws of the State of Delaware; or by a person against a family member as that term is defined in §901(12) , Title 10 of the Delaware Code; or by any person against an adult or youth victim who is protected from that person's acts under the domestic violence laws of the State of Delaware.

Fondling. "Fondling" means the touching of the private parts of another person for the purposes of sexual gratification, without the consent of the victim, including instances where the victim is incapable of giving consent because of his/her age or because of his/her temporary or permanent mental incapacity.

Hate Crime. "Hate Crime" means any person who selects a victim because of his or her race, color, disability, national origin or ancestry, sex, religion, gender identity, gender expression, age, education, veteran status, pregnancy, genetic information, socio-economic status or any other category protected by federal or state civil rights law, and commits any act or crime against that victim for the purpose of interfering with the free exercise of his or her First Amendment or other constitutional rights and:

A. Adversely affects a term or condition of an individual's employment, education, participation in the College's activities or environment;

B. Has the purpose or effect of unreasonably interfering with an individual's employment or academic performance or creating an intimidating, hostile, offensive or abusive environment;

C. Is used as a basis for or a factor in decisions that tangibly affect that individual's employment, education, or participation in the College's activities or environment.

Whether alleged conduct constitutes a hate crime depends on the totality of the circumstances and the context in which the conduct is made. For example, verbal expressions or written material that is relevant and appropriately related to course subject matter or curriculum does not constitute a hate crime.

Incest. "Incest" means non-forcible sexual intercourse between persons who are related to each other within the degrees wherein marriage is prohibited by law.

Rape. "Rape" is the act of sexual intercourse or penetration (anal, oral or vaginal), however slight, with any body part or any object, by a man or a woman upon a man or a woman, without consent, including vaginal penetration by a penis, object, tongue or finger; anal penetration by a penis, object, tongue or finger; and oral copulation (mouth to genital or genital to mouth contact).

Retaliation. "Retaliation" means any adverse action threatened or taken against a person because he or she has filed, supported or provided information in connection with a complaint of sexual misconduct, including but not limited to direct and indirect intimidation, threats, and harassment.

Sexual Assault. "Sexual Assault" means a sexual act or acts to which a person has not consented or for which a person is incapable of consenting due to age, intoxication or other reasons. Sexual assault includes, but is not limited to:

A. Rape, or attempted rape;

B. Intentional and unwelcome sexual touching (including disrobing or exposure), however slight, with any body part or any object, by a person upon another person without consent, of the person's breasts, buttocks, groin, or genitals (or clothing covering such areas), or coercing, forcing, or attempting to coerce or force another to touch you, themselves, or a third party with any of the body parts or areas when such touching would be reasonably and objectively offensive;

C. Any sexual act in which there is force, violence, or use of duress or deception upon the victim;

D. Any sexual act perpetrated when the victim is unable to give consent; and,

E. Sexual intimidation, which includes, but is not limited to:

1. Threatening, expressly or impliedly, to commit a sexual act upon another person without his or her consent;
2. Stalking or cyber-stalking; and,
3. Engaging in indecent exposure.

Sexual Exploitation. "Sexual Exploitation" means any act of taking non-consensual unjust or abusive sexual advantage of another person for one's own advantage or benefit or to benefit or advantage anyone other than

the person being exploited. Sexual exploitation includes, but is not limited to:

A. Causing or attempting to cause the incapacitation of another person in order to gain a sexual advantage over such person;

B. Prostituting another person (i.e. personally gaining money, privilege or power from sexual activities of another);

C. Non-consensual videotaping, photographing, or audio-taping of sexual activity and/or distribution of these materials via media such as, but not limited to, the Internet;

D. Exceeding the boundaries of consent (e.g. allowing another person to observe consensual sex without the knowledge of or consent from all participants);

E. Voyeurism; and

F. Knowingly or recklessly transmitting a sexually transmitted disease (including HIV) to another individual.

Sexual Harassment. "Sexual harassment" shall mean any unwelcome sexual advances, requests for sexual favors, and other verbal, written, or physical conduct of a sexual nature constitute sexual harassment when:

A. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's education; or

B. Submission to or rejection of such conduct by an individual is used as the basis for academic decisions affecting that individual; or

C. 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.

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:

A. Unwelcome sexual advances, requests for sexual favors, or other non-physical conduct of a sexual nature;

B. Sexually explicit statements, comments, questions, pictures, objects, jokes, or anecdotes;

C. Unwelcome use of the electronic mail or telephone communication system to communicate prohibited conduct or activities; or

D. Graphic comments about a person's clothing or body.

Sexual Misconduct. "Sexual misconduct" means any unwelcome conduct of a sexual nature, including any conduct or act of a sexual nature committed against an individual without consent. Sexual misconduct can occur between strangers or acquaintances, including people involved in an intimate or sexual relationship. Sexual misconduct can be committed by men or by women, and it can occur between people of the same or different sex. Sexual misconduct also includes complicity in sexual misconduct. The College encourages reporting of all sexual misconduct. Sexual misconduct includes, but is not limited to:

A. Dating violence;

B. Domestic violence;

C. Sexual Assault;

D. Sexual Exploitation;

E. Sexual Harassment; and,

F. Stalking.

Statutory Rape. "Statutory Rape" means nonforcible sexual intercourse with a person who is under the statutory age of consent.

Stalking. "Stalking" means engaging in a course of conduct directed at a specific person that would cause a reasonable person to: (i) fear for his or her safety or the safety of others; or (ii) suffer substantial emotional distress.

A. **"Course of conduct"** means two or more acts, including but not limited, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follow, monitors, observes, surveils, threatens, or communicates to or about a person, or interferes with a person's property. It can include, but is not limited to:

1. Non-consensual communication (face-to-face, telephone, email)
2. Threatening or obscene gestures;
3. Surveillance/following/pursuit;
4. Showing up outside the targeted individual's classroom or workplace;
5. Sending gifts (romantic, bizarre, sinister, or perverted)

6. Making threats

B. **“Emotional distress”** means significant mental suffering or anguish that may, but does not necessarily require medical or other professional treatment or counseling.

C. **“Reasonable person”** means a reasonable person under the circumstances and with similar identities to the victim.

(Revised Board of Trustees, 4/12/16, 4/11/17)

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

Georgetown
Matthew Zink
(302) 259-6049
mzink1@dtcc.edu

Stanton
Heather M. Statler
(302) 454-3927
hstatler@dtcc.edu

Wilmington
Victoria Chang
(302) 434-5553
vchang1@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.

A Message From the President

Mark T. Brainard
President

WATCH DR. BRAINARD'S WELCOME VIDEO

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.

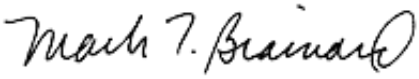
And we deliver high quality programs at a great value. Delaware Tech has one of the lowest tuition rates in the region; 70% of our graduates walk across the stage at commencement debt-free! That's why so many of our graduates begin their higher education careers at Delaware Tech and then seamlessly transfer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



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.

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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 degree, diploma, and certificate programs. Programs are offered in fields such as energy management, engineering technology, business, information technology and networking, nursing, allied health, education, criminal justice, and human services. Over seventy 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 over 230 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.

NON-STUDENTS ON CAMPUS

In order to maintain orderly operations and the safety of the campus community, only registered Delaware Tech students, support staff and other individuals approved by the College, and those who have applied to audit a course (listener status) are authorized to attend class. Non-students are permitted in public areas of the College only.

The College is only responsible for the health, safety, or welfare of minors who are enrolled in a College program or activity. All other minors must be under the direct supervision of a parent or guardian at all times while on campus.

EXTERNAL ORGANIZATIONS ON CAMPUS

Soliciting is not permitted on campus. Military, employers, connected degree partners, and agencies providing services to support students may request space on campus to share opportunities and information that may be of interest to students. These visits may be restricted to designated events/limited dates.

To request approval for a visit, the organization must contact the dean of student affairs or his/her designee. The requesting organization must provide a description of the organization and the nature of the visit. The dean of student affairs will then forward the request to the vice president and campus director with a recommendation for the use.

If approved, the College will permit the organization to use the College's facilities and designate a space on campus where the visitor can interact with students.

At no time shall these visits materially disrupt the College's learning environment, interfere with instructional programs, impede the normal operation of the College, or infringe upon the right of students or employees to learn or work in a safe environment.

In accordance with the College's Statement of Nondiscrimination Policy, decisions to approve or not approve these visits, or decisions pertaining to the terms, conditions or location of a space shall be made in a nondiscriminatory and impartial manner, and shall not be based on religious affiliation, non-affiliation, or belief or for any other reason related to the viewpoint of any person, entity, or organization seeking to use College facilities. Notwithstanding the foregoing, the College reserves the right to impose reasonable, content-neutral restrictions on the time, place and manner of any College facility use. Any such restriction shall be approved by the College's Chief Legal Counsel.

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 graduate from a valid high school (confirmed by the Registrar through the Financial Aid validation process) 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 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.

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

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 high school cumulative GPA, standardized tests, previous college-level coursework in English and mathematics, transfer credit, other credit for prior learning for required courses in English and mathematics, or possession of an associate or higher degree.

High School Cumulative GPA

To use high school cumulative GPA as evidence of readiness for college-level courses, applicants must provide a copy of the official high school transcript showing a cumulative GPA of 3.0 or higher (83% or higher on a percent grade scale or B or higher on a letter grade scale; see GPA conversion chart). High school cumulative GPA is a measure of effort over time, so only the final cumulative GPA at the end of the junior or senior year may be used for placement purposes. Transcripts with pass/fail grades and/or multiple grades excluded from the cumulative GPA may not be eligible as a measure for placement. All transcripts are subject to review. Students presenting a credential other than regular diploma (as defined by the state in which the high school is located) may not be eligible to use high school cumulative GPA for placement purposes.

There are no age limits on high school GPA being used as evidence of college readiness; however, students using high school GPA for placement are also required to provide standardized test scores (see below) for the purposes of advisement. Students who place at college-level based on GPA but do not indicate college readiness on the tests are required to discuss the differences in placement during academic advisement. While students have the right to enroll in college-level courses, planning and advisement is key to finding the course that is most likely to help the student be successful.

Standardized Tests

Students may submit standardized test scores for placement purposes. The College accepts SAT scores and placement test scores from a combination of ACCUPLACER and locally-developed placement tests.

ACCUPLACER Retake Policy

Students are eligible to retake each portion/subject of the ACCUPLACER test one time even if they have had developmental education instruction at the College. Readmitted students or students who previously applied as visiting high school or dual enrollment students who have not demonstrated college readiness are allowed to take the ACCUPLACER once they matriculate no matter how many previous attempts they have had. They are also permitted one retake after matriculation. The length of time between retakes is the student’s prerogative, but students should be strongly encouraged to prepare for the retake attempt. The dean of student affairs may approve additional re-take attempts in exceptional circumstances. There is a per subject charge for each retake.

Previous Coursework, Transfer Credit, or other Credit for Prior Learning

Previous coursework, transfer credit, and other credit for prior learning may exempt students from testing and qualify them for college-level placement in the respective subject.

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 the Student Information System.

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 the Student Information System 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.

Effective spring 2018, First-Year Seminar (SSC 100) is required for graduation and must be taken in the first semester by all incoming award-seeking students in associate degree programs and diploma programs. This includes re-admit and transfer students who have earned fewer than 12 college-level credits that are approved for transfer to Delaware Tech.

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.

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 disability services web page.

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/

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:

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.
4. Third offense of violations 1 and/or 2.	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	Employee: One month suspension without pay and

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.	mandatory participation in drug abuse program. Student: One month suspension from classes and mandatory participation in drug abuse program.
9. 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 nonnarcotic controlled substance in an amount which is beyond that which is typical for immediate personal use.	Employee: Three month suspension without pay and mandatory participation in drug abuse program. Student: Three month suspension from classes and mandatory participation in drug abuse program.
10. Second offense of violations 5 through 9.	Employee: Termination. Student: Expulsion.
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.	Employee: Termination Student: Expulsion
12. Aggravated Possession or Trafficking as defined under state or federal law.	Employee: Termination Student: Expulsion
13. Failure to report conviction pursuant to section (b) of this Policy.	Employee: Termination Student: Expulsion
14. Intoxication from use of alcohol.	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.
15. Unauthorized and/or unlawful possession or use of intoxicating beverages.	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.
16. Unauthorized and/or unlawful sale or other transfer of intoxicating beverages.	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.

(h) A description of the health risks associated with the use of illicit drugs is outlined in Appendix C. A description of the health risks associated with the abuse of alcohol is as follows:

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.

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.

Mothers who drink alcohol during pregnancy may give birth to infants with fetal alcohol syndrome. These infants have irreversible physical and mental 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.

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/

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/

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 & FEES

(for the 2018-2019 academic year)

	In-State Students	Out-of-State Students
1-15 credit hours	$149.50 per credit	$373.75 per credit
15+ credit hours	$2,242.50 per semester	$5,606.25 per semester
Registration Fee*	$15.00 per semester	
Student Service Fee*	$20.00 per semester (full-time and part-time students)	
Technology Support Fee*	$10.00 per credit for all credit hours taken.	
Healthcare Program Fee*	$25.00 per semester (if applicable)	
Lab Fees*	Vary by course. The most current lab fees can be found in the class schedule listing.	
Late Registration Fee*	$25.00 per semester (if applicable)	

**Additional information about fees is provided below.*

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

Students registered for 12 credit hours per semester or the equivalent are considered "full-time." Full-time students are encouraged to take at least 15 credits per semester in order to accelerate degree completion.

Tuition may be paid online through the Student Information System or at any of the campus Business Offices.

Tuition for Workforce Development and Community Education classes will be charged on a per course basis. Learn more about Workforce Development and Community Education classes.

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 tuition free in any credit course. Workforce Development and Community Education courses are excluded. Persons eligible for this privilege are not required to pay tuition and registration, late registration, and student services fees. They shall pay the cost of all books, supplies, and other fees. This privilege shall not apply for any course in which competitive admissions is required. This privilege is granted on a space-available basis. Due to limited space availability, the senior citizen registration period for tuition-free courses begins one week before the start of the semester. Senior citizens may request the tuition waiver by submitting the Senior Citizen Registration Form to the Registrar's Office. Registrations submitted prior to one week before the semester start will not be eligible for a tuition waiver. Students are not eligible for the senior citizen tuition waiver for any courses for which they were registered prior to the start of the senior citizen registration period.

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
    - Is utilizing educational assistance under Chapter 31, Vocational Rehabilitation, and Employment; or
    - 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;
        - 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.
        - Enrolls as a Surviving Spouse or Child under the Fry Scholarship (38 U.S.C. §3311(b)(9)).
        - Enrolls using transferred entitlement and the transferor is a member of the uniformed service who is serving on active duty.
    - The policy shall be read to be amended as necessary to be compliant with the requirements of 38 U.S.C. 3679(c) as amended.
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

Delaware Tech has partnered with Nelnet Business Solutions (NBS) as a way to increase affordability and access to education. The Installment Payment Plan (the Plan) allows students to defer the cost of tuition and fees through a payment option that offers installment payments rather than in one-lump sum payment. The Plan is available each semester on the opening day of registration.

Enrollment into the Plan is only available for a limited time each semester (through the drop/add period); however, early enrollment is encouraged because the down payment amount is determined by the date on which the student signs up. Earlier signup results in a lower required down payment and a greater number of installments, resulting in much more affordable monthly payments.

After you register for classes, you can enroll into the NBS Installment Payment Plan to pay your tuition and fees in smaller monthly installments. The specific timeline for these installment payment options are available by logging into the Plan. If you do not wish to enroll in the Plan, you can pay your tuition and fees in full in person at the Business Office or pay online.

Students and parents should review all of the information about the Plan carefully before signing up. Nelnet Business Solutions is a third party, and payment plan agreements are executed between the student and NBS - not Delaware Tech.

View additional installment payment plan FAQs.

PAYMENT DEADLINES

The College publishes payment deadlines in the Academic Calendar to encourage students to pay early so that they can increase affordability through the Installment Payment Plan. Enrollment into the Plan by the payment deadline date provides access to the least expensive monthly payment option. If a student does not make a payment by the payment deadline, Delaware Tech will not delete the registration, and the student will still be responsible to pay.

A student account becomes delinquent when the student has not made payment in full to the College or has not enrolled in the Installment Payment Plan by the second week of the semester. When accounts are delinquent, the College will place a financial hold on the account, preventing future registration, and related services. Accounts that remain delinquent at the end of the semester are referred to a collections agency.

FINANCIAL RESPONSIBILITY STATEMENT

Students are responsible for paying tuition and fees when they enroll. The College will not delete any registration or drop any course for a student's failure to make payment to the College. Additionally, failure to attend any class or failure to receive a bill does not remove the student's financial responsibility. Students who do not plan to attend class(es) are responsible for officially dropping the course(s) to minimize their financial responsibility.

TUITION/FEE ADJUSTMENT POLICY COURSE OR SEMESTER WITHDRAWAL

To receive a tuition/fee adjustment for a course drop, the student must first officially drop the course (see Course Drop/Add/Withdrawal Procedure). Students will not be charged any tuition or refundable fees (lab or technology support) for courses dropped before or during the first week of the session. Students will be responsible for 50% of the tuition and refundable fees for courses dropped during the second week of the session. After the second week, students may officially withdraw from a class, but there is no tuition/fee adjustment. Students are responsible for 100% of tuition and fees for officially withdrawn courses. For courses less than four weeks in length, there is no tuition/fee adjustment period. Students enrolled in these courses on the first day of the session are responsible for 100% of the assessed tuition and fees. The following fees are non-refundable: registration, late registration, student services, healthcare program, credit by examination, evaluation of work experience, and pass-through fees.

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 weeks of a 15 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, 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 and 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

$10.00 per credit for all credit hours taken per semester to support cost of technology, instructional/course materials, and Internet e-mail/access for all credits taken.

HEALTHCARE PROGRAM FEE

Students enrolled in the College's healthcare credit programs on a full-time or part-time basis will pay a non-refundable Healthcare Program Fee of $25 per semester to support operational costs to include healthcare programs' clinical rotation fees and instructional equipment.

LATE REGISTRATION FEE

The starting date for Late Registration is published each semester in the Academic Calendar. Students who initiate their registrations on or after this published date will be charged a Late Registration Fee of $25. Students who have an active registration at the time that Late Registration begins will not be assessed the Late Registration Fee if they add or modify their courses at a later time. The Late Registration Fee is non-refundable.

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.

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
- 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 Financial Aid Web site. 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. 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:

Owens	(302) 259-6080
Stanton	(302) 454-3997
Terry	(302) 857-1040
Wilmington	(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.

Owens	(302) 259-6058
Stanton	(302) 454-3926
Terry	(302) 857-1056
Wilmington	(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 Advanced Credit.. Specific CLEP or DANTES tests which apply to the student's academic program may be granted corresponding Delaware Tech credit.

International Baccalaureate

International Baccalaureate (IB) is a non-profit educational foundation offering programs of international education. Students who are high school graduates with acceptable scores may submit official copies of the IB test results for evaluation for credit for courses.

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 qualify 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.

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)
ITN – Information Technology and Networking	5 years (5/18)
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 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 courses(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).

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 a 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 a bachelor's degree, 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 AND WITHDRAWAL PROCEDURE

Dropping a Course

A course that is dropped will not show on the student's transcript, and the student is eligible for a tuition adjustment as dictated by the Tuition/Fee Adjustment Policy.

Students may drop a course online or by completing and submitting a Drop/Add/Official Withdrawal form at the Registrar's Office. Classes can only be dropped through the end of the second week of the session.

Students will not be charged any tuition or refundable fees (lab or technology support) for courses dropped prior to the end of the first week of the session.

Students will be responsible for 50% of the tuition and refundable fees for courses dropped during the second week of the session.

For classes less than two weeks in length, there is no tuition refund period. Students enrolled on the first day of the session are responsible for 100% of the assessed tuition and refundable fees.

No approvals are required for students to drop a course(s). The day the completed form is received by the Registrar's Office determines the official date of the course drop.

See the Academic Calendar for specific drop dates. See the Tuition/Fee Adjustment Policy for details on tuition and fee refunds.

Officially Withdrawing From a Course

An official withdrawal means the student provided notice that the student would no longer attend the course. A course that is officially withdrawn from shows on the student's transcript as a W, which does not calculate into the GPA. An official withdrawal is not eligible for a tuition adjustment.

Students may officially withdraw from a course online or by completing and submitting a Drop/Add/Official

Withdrawal Form at the Registrar's Office. Students may officially withdraw from a course from the date the drop period ends through approximately the eighty percent point of the semester. Students are responsible for 100% of tuition and fees for officially withdrawn courses. Withdrawing from a course may affect the financial aid award for the current semester and eligibility for future financial aid. Students are responsible for understanding how an official withdrawal affects their schedule bill and financial aid.

After the eighty percent point of the course, students may not officially withdraw from the course. See the Academic Calendar for official withdrawal periods.

No approvals are required for students to withdraw from a course(s). However, students are responsible for discussing the withdraw with their advisor and the Financial Aid Office. The day the completed form is received by the Registrar's Office determines the official date of the course withdraw.

Unofficially Withdrawing From a Course

An unofficial withdrawal means the student stopped attending class, without providing official notice. A course that is unofficially withdrawn from shows on the student's transcript as a U, which is calculated into the GPA as a failing grade. An unofficial withdrawal is not eligible for a tuition adjustment.

Students are expected to attend all class sessions. Students who are not regularly attending class and who do not follow the procedures to drop or officially withdraw from class will be reported as an unofficial withdrawal. Students are responsible for 100% of tuition and fees for unofficially withdrawn courses. Unofficially withdrawing from a course may affect the financial aid award for the current semester and eligibility for future financial aid. Students are responsible for understanding how an unofficial withdrawal affects their bill and financial aid.

See Attendance Policy

COURSE ADD PROCEDURE

Students may add a course online or by completing and submitting a Drop/Add/Official Withdrawal Form at the Registrar's Office. During the first week of the session, students may add a course(s) or change sections if a seat is available. During the second week of the session, students may only add a class or change sections with instructor permission.

After the second week of the session, students may only add a class or change sections in extenuating circumstances. Instructor and dean of instruction approval is required.

Classes added after the fifteenth day of the semester may not be eligible for financial aid. Students should talk with the Financial Aid Office to see how adding a class will affect their financial aid.

For sessions less than ten weeks in length, students cannot be added after the first class session. After the class has begun meeting, students may only add a class or change sections in extenuating circumstances. Instructor and dean of instruction approval is required.

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 COURSES	YR. LIMIT
Human Services	HMS244	10 (June 25, 2014)
Drug and Alcohol Counseling	DAC244	10 (June 25, 2014)
Nursing	BIO120, BIO121,	10 (Aug. 10,

BIO125, MAT129, CHE141 2.0 4.100

Computer Information Systems - CIS	Computer Information Systems Courses*	5 years (9/2014)
Computer Network Engineering Technology - CNE	Computer Network Engineering Technology*	5 years (9/2014)
Computing and Information Science - CSC	Computing and Information Science*	5 years (9/2014)
Information Security - ISY	Information Security*	5 years (9/2014)
Information Technology and Networking - ITN	Information Technology and Networking*	5 years (5/2018)
Medical Laboratory Technician - MLT	Medical Laboratory Technician*	5 years (10/2014)
Web Information Systems - WIS	Web Information Systems*	5 years (9/2014)

*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 Register'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

The Fresh Start policy provides students with an opportunity to request consideration and approval from the College's Deans of Instruction or designee to allow them to recalculate their cumulative grade point average (cumulative GPA).

In order to be eligible, students must:

1. be currently enrolled in a program and not have previously earned a degree (associate, diploma, or certificate) at Delaware Tech.

2. have not attended Delaware Tech for a minimum of five full semesters (not including summer). For example, a student who was last enrolled in fall 2012 would be eligible to begin a Fresh Start in fall 2015.

3. upon readmission, complete a minimum of 12 college-level credits with at least a 2.00 GPA.

4. apply in writing to the Dean of Instruction or designee requesting consideration for a Fresh Start.

The Dean of Instruction or designee will review the student's application, determine if the guidelines have been met, and make a final decision on granting the Fresh Start.

Course grades prior to readmittance that do not fulfill graduation requirements in the student's current major will be excluded from the recalculated cumulative GPA. The excluded courses cannot be used to fulfill graduation requirements. Course grades prior to readmittance that fulfill graduation requirements (passing grades) in the student's current major will continue to be included in cumulative GPA recalculation.

Fresh Start is granted only one time per student and is irreversible. Fresh Start has no impact on financial aid maximum credits allowed.

Although cumulative GPA will be recalculated once the Fresh Start is applied, all attempted hours, grades, and courses will remain on the student's transcript, and a statement will be added to the student's transcript to indicate the Fresh Start effective date.

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 and 4 of the Dean's List criteria.

GRADUATION HONORS

Graduation honors are calculated for diplomas, associate degrees, and bachelor’s degrees. Certificates are not eligible for graduation honors. Diploma and associate degree honors are based on all coursework that is included in the cumulative grade point average (CUM GPA) at the time the diploma or degree is awarded. Bachelor’s degree honors are calculated based on all 300- and 400-level program coursework that is included in the CUM GPA at the time the degree is awarded; general education coursework is not included in bachelor’s degree honors.

Students earning a CUM GPA 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 s*umma cum laude*. Graduation honors are printed on the graduation program and the student's 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 dishonestly, in any form, is not tolerated; therefore, the College has the right and the responsibility to apply the sanctions outlines 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 a dean of instruction from another campus, a dean of student affairs from another campus, and the assistant vice president for academic 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

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.

Minimum CUM GPA for Satisfactory Academic Standing Table

To be in satisfactory academic standing at Delaware Tech, students must meet the minimum CUM GPA for the number of credits attempted. The CUM GPA is calculated using all courses taken. Official withdrawal from courses (W grades) are not counted in the GPA calculation.

Credits	Credits
1 - 15	≥1.5
16 - 30	≥1.6
31 - 45	≥1.8
46+	≥2.0

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 registers for more than 13 credits for a subsequent semester before the end of the current semester and is determined to be on Academic Warning after grades are submitted must adjust the number of credits on their schedule to 13 or fewer credits. If a student does not reduce the number of credits to 13 or fewer credits, the credits will be reduced by the

College.

Academic Probation

If a student does not earn the minimum CUM GPA required for satisfactory academic standing in two successive semesters, the student will be placed on Academic Probation and restricted to a maximum of 9 credits in the next semester of attendance.

A student who registers for more than 9 credits for a subsequent semester before the end of the current semester and is determined to be on Academic Probation after grades are submitted must adjust the number of credits on their schedule to 9 or fewer credits. If a student does not reduce the number of credits to 9 or less, the credits will be reduced by the College.

Status after Break in Enrollment

A student who withdraws or has a break in enrollment from the College while on Academic Warning or Academic Probation will retain that status upon re-enrolling. The student must earn the minimum CUM GPA required for satisfactory academic standing by the end of the semester, or the student will progress to the next level of academic probation.

Appeal of Credit Load Restriction

A student on Academic Warning or Academic Probation may appeal the credit limit restriction by completing the Academic Standing Petition form and submitting it to the dean of instruction/designee for approval to register for more credits than Academic Warning and Academic Probation status allow. If the petition is approved, it is the student's responsibility to submit the approved petition to the Registrar's office in order to update the student's record and allow registration.

Academic Probation-Continuing

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 submits an Academic Standing Petition that is approved by the dean of instruction/designee to the Registrar's office. The dean/designee may approve any number of credits for registration, including none, for that semester.

A student who registers for a subsequent semester before the end of the current semester and remains on Academic Probation after grades are submitted must submit an approved Academic Standing Petition. After a petition is approved by the dean of instruction/designee, it is the student's responsibility to submit the approved petition to the Registrar's office. If an approved petition is not submitted, the student's registration will be deleted by the College.

Academic Suspension

Academic Suspension status was eliminated at the conclusion of summer semester 2012 (2012-53.) Students who would have been in Academic Suspension status under the previous policy will be treated as students who are on Academic Probation-Continuing.

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 Credits Allowed" requirements and "Percentage of Courses Completed" requirements.

DEVELOPMENTAL HOLD POLICY

The Developmental Hold Policy 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 corresponding hold and actions.

- One (1) FE (fail) or UE (Unofficial Withdraw) grade in a developmental course
  - *Developmental Hold Math* or *Developmental Hold English* placed on account.
  - Requires the math or English department advisor's approval signature for the student to register for classes.
- Two (2) or more FE or UE grades in the same course
  - *Developmental Hold Program Advisor* placed on account.
  - Requires the program advisor's approval signature for the student to register for classes.

When a student is concurrently enrolled in college credit and developmental courses, both the Academic Standing Policy and the Developmental Hold Policy apply.

FINANCIAL AID SATISFACTORY ACADEMIC PROGRESS

Students must maintain satisfactory academic progress toward degree, diploma, and certificate completion in order to receive federal, state, or Delaware Tech financial aid. Students must meet all three satisfactory academic progress requirements:

1. Maintain the minimum cumulative grade point average (CUM GPA). (See the Academic Standing Policy in the *College Catalog*)
2. Maintain a 67% cumulative completion rate by successfully completing 67% of all credits attempted
3. Complete the program of study within the maximum time frame for the program. The maximum credits allowed is 150% of the number of credits required to earn the award.

These requirements apply to the student's entire period of attendance at Delaware Tech, including any periods during which the student does not receive any financial aid. Satisfactory academic progress is one eligibility requirement for financial aid; view a complete list of financial aid eligibility requirements.

Satisfactory academic progress is calculated at the end of each semester to determine eligibility for the student's next semester.

Students who do not meet the satisfactory academic progress requirements for cumulative GPA and/or completion rate will be placed on financial aid warning. A student must meet these requirements at the end of the next semester, or the student will be ineligible for financial aid until satisfactory academic progress requirements are met. Students on financial aid warning are required to successfully complete financial aid counseling before financial aid can be disbursed.

Students who have not completed the program within the maximum credits allowed will be ineligible for financial aid. They may appeal to have financial aid eligibility reinstated if extenuating circumstances prevented them from maintaining satisfactory academic progress. Such circumstances include:

- Medical condition, illness, or injury to the student or an immediate family member
- Death of an immediate family member
- Change or loss of employment for you or an immediate family member
- Other special circumstances

Documentation must be provided, and the student must complete a financial aid appeal explaining the reason(s) the student did not maintain satisfactory academic progress and what has changed in the student's situation that would allow the student to regain satisfactory academic progress.

The appeal process also requires the student to submit an academic plan that sets forth the requirements the student must meet to make satisfactory academic progress. Students must also successfully complete financial aid counseling before the appeal will be considered.

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

If the appeal is not approved, then the student is ineligible for financial aid until satisfactory academic progress is achieved at the student's own expense.

If the appeal is approved by the Financial Aid Office, the student is then placed on *Financial Aid Probation* for the authorized enrollment status. A student placed on *Financial Aid Probation* may receive financial aid as long as the student is satisfying the requirements of an approved academic plan.

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

If after the one semester of *Financial Aid Probation,* the College determines the student met all the requirements of the student's academic plan, but did not achieve satisfactory academic progress, the student will be permitted to continue to receive financial aid for the next semester and subsequent semesters of attendance for the authorized enrollment status provided that the student continues to meet all of the requirements of the academic plan. A student who meets the academic plan requirements may request to increase the authorized enrollment status by submitting a new 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 **and did not** successfully achieve satisfactory academic progress, the student will lose financial aid eligibility until the student achieves satisfactory academic progress at the student's 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 extenuating circumstances as determined by the Financial Aid Office

Financial Aid Satisfactory Academic Progress Requirements

In order to be eligible for federal, state, or institutional financial aid, each student at the College must make satisfactory academic progress toward the attainment of the selected degree, diploma, or certificate according to the following three requirements that comprise financial aid satisfactory academic progress. (Other eligibility requirements also apply.)

1. Minimum Cumulative Grade Point Average:

The table below represents the minimum CGPA needed to be eligible for federal/state financial aid. The CUM GPA is calculated using all courses taken. Official withdrawal from courses (W grades) are not counted in the GPA calculation. Students enrolled in bachelor's degree programs must meet the minimum 2.0 cumulative GPA at the end of each semester of enrollment.

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

2. Completion Rate:

Students at the College must successfully complete, on a cumulative basis, 67% of all credits attempted. All non-completion grades ("W," "U," "R,"/ "F," and "I") are used in the calculation of completion rates. As an example, the following table shows the minimum number of credits a student must successfully complete (with an "A," "B," "C,") **on a cumulative basis** to be eligible for federal/state financial aid**. Developmental (remedial) credits are not calculated in the completion rate.**

Completed Credits Required To Achieve Satisfactory Completion Rate

Attempted Credits	Completed Credits	Attempted Credits	Completed Credits
1	1	16	11
2	2	17	11
3	2	18	12
4	3	19	13
5	3	20	13
6	4	21	14
7	5	22	15
8	5	23	15
9	6	24	16
10	7	25	17
11	7	26	17
12	8	27	18
13	9	28	19
14	9	29	19
15	10	30	20

2. Maximum Credits Allowed (MCA) for a Degree/Diploma or Previous Associate Degree:

A financial aid recipient is restricted to a maximum number of credits for which the student can receive financial aid. The maximum credits allowed (MCA) 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 MCA for the degree program would be 90 credits (60 x 150% = 90). The published program lengths are available on the College website 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 MCA for the new degree program.

Students may receive financial aid for a second diploma or degree providing they are meeting other satisfactory academic progress and financial aid eligibility requirements. An appeal must be completed in order for the student to be considered for financial aid.

Maximum Credits Allowed (MCA) for Remedial Courses:

Developmental (0 and 00 level) classes are considered remedial courses. Basic classes (00 level) are not eligible for federal financial aid payment, but are used in calculating the remedial MCA.

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

English as a Second Language classes are not remedial classes and do not count in the 30 credit hour remedial limit.

Repeat Coursework:

Students may receive financial aid for repeating failed coursework if all other eligibility requirements are met. 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 CUM GPA, but each attempt impacts the completion rate and maximum credits allowed.

Transfer Students:

Coursework completed at another institution that is officially accepted as transfer credit by the College counts toward the cumulative completion rate and MCA. Transferred grades are not calculated in CUM GPA and,

therefore, are not included in the satisfactory academic progress calculation.

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. For the Associate in Applied Science or Associate of Arts, at least twelve (12) credits of the residence requirement must be major courses from the program in which the degree is awarded. For the Associate of Science degree, at least twelve (12) credits of the residence requirement must be core courses. 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.

Candidates for the RN to BSN program must complete a minimum of 75% of the 300 and 400 level nursing courses at Delaware Tech.

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 will graduate when the student has:

- satisfactorily completed the courses required for a degree, diploma, or certificate in the program/major area as certified by the department chairperson and the dean of instruction and verified by the registrar,
- and the credits in residence requirements have been met.

No Delaware Technical Community College degree, diploma, or certificate is to be awarded or the student allowed to participate in official graduation ceremonies unless that student has completed all requirements for said degree, diploma, or certificate. Degree and diploma students may participate in the commencement ceremony as long as all required steps are completed.

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 bachelor of science degree, associate degree, diploma or certificate programs.

ASSOCIATE DEGREE PROGRAMS

The Associate in Applied Science curricula prepares students for immediate employment upon graduation by emphasizing applied knowledge and skills through program courses. The AAS degree can also serve as a transfer degree to a senior institution.

The Associate of Arts in Teaching curricula prepares students who are interested in education with the foundational knowledge needed to transfer to a senior institution in order to complete a bachelor's degree in teaching.

The Associate of Science curricula prepares students who wish to transfer within the College to an allied health or nursing program once competitive admissions requirements are met, or to a senior institution to pursue a bachelor's degree.

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/) 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.

BACHELOR OF SCIENCE PROGRAM

The Bachelor of Science curricula prepares students who hold a nursing diploma or an associate degree in nursing and are licensed as a registered nurse with increased knowledge in the field of nursing. Students gain additional practicum experience and leadership skills.

DIPLOMA & CERTIFICATE PROGRAMS

Diploma and certificate programs prepare students with marketable skills for specific employment opportunities. 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.

GENERAL EDUCATION

General Education at Delaware Tech encompasses English, mathematics, science, social science, humanities, communication, critical thinking and problem-solving, collaboration, professional and ethical conduct, information literacy, quantitative and scientific reasoning courses. These courses impart knowledge and develop skill in areas commonly required for post-secondary credentials and expected of educated individuals: communication, critical thinking and problem-solving, collaboration, professional and ethical conduct, information literacy, quantitative and scientific reasoning.

Completion of general education courses is required for completion of all degree and diploma programs offered by Delaware Tech. These courses, in conjunction with the major courses required by academic programs, prepare students for success in the workplace and/or for transfer to other degree programs at higher education institutions. Students attending Delaware Tech for transfer purposes only or for their own personal fulfillment may also take advantage of the College's general education course offerings.

The six Core Curriculum Competencies (CCCs) that identify what all degree graduates will be able to do upon completion of their degrees (regardless of academic program major) are addressed through General Education course objectives. General Education courses introduce, reinforce, and may apply content and learning experiences that enable students to master the CCCs.

The specific General Education courses required for each academic program are identified by faculty and advisory committee members and guided by accreditation standards.

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

Mission Statement

The mission and purpose of distance education at the College is to improve access, enable learning experiences that promote student satisfaction and success, and achieve excellence through student engagement. Delaware Tech seeks to provide a high quality student experience by expanding the times and places of program offerings and embracing technological innovation.

Distance Education Course Definitions

Distance education is a formal educational process in which a percentage of the learning occurs when students and the instructor are not in the same location. Distance education courses employ a wide variety of interactive learning technologies to deliver synchronous (occurring simultaneously) and asynchronous (occurring at different times) instruction.

Online — All course activity is done online; no required in-person sessions or on-campus activities are required within the course. Online courses consist entirely of online elements that facilitate the three critical student interactions: with content, the instructor, and other students. Students taking an online course may be required to take proctored tests at a testing center or through an online proctoring system. Additionally, students may be required to complete a practicum, residency, or internship depending on the requirements of the course/program.

Hybrid — Online activity is mixed with classroom meetings, replacing up to 75% of in-person instruction. In addition to classroom meetings, students may be required to participate in online synchronous meetings. Additionally, hybrid courses require that students meet in-person for the first day of class and receive instruction during all subsequent in-person meetings. Students may be required to take exams during some scheduled class meetings.

Web Conferencing — Web-based technologies are used to extend classroom lectures and discussions to students at remote sites in real time. These courses use web conferencing or other synchronous e-learning media to provide access to the classroom experience to students at off-campus locations (such as their homes, places of employment, other campuses, etc.) while otherwise maintaining a traditional classroom structure.

Video Conferencing — Course meetings are held in a campus-based video conference room (e.g. Distance Learning Classrooms) at designated times.

Distance Education Support Services

Students in online learning programs have access to student services, financial aid, course registration, advisement, library services, technology support, career, and placement counseling as traditional classroom students. Contact information for each of these services is available on the College’s website, portal, and/or learning management system.

Distance education students have access to learning

resources including but not limited to the library, research databases, bookstores, laboratories, tutoring centers, writing centers, testing centers, and computer labs. Many library resources are available online.

Computer Access

It is required that distance education students have consistent access to a personal computer with reliable high-speed internet access. Additionally, the student should have a back-up plan should the primary equipment fail or become unavailable. Many public libraries have public use computers, as do the computer labs and libraries at each of the Delaware Technical Community College campuses. For some courses, a cell phone may not meet the minimum technology requirements for performing the work for distance education courses.

Information regarding minimum technology requirements for distance education is available on the College's website. There may be additional hardware/software requirements that are course specific. This information will be provided to the student by the course instructor at the start of the course.

Learning Management Systems

A learning management system, or LMS, is a web-accessible software application that provides for the administration of course content, delivery of assessments, communication and collaboration between students and instructors, and the ability to track grades and other relevant performance data. To be successful in distance education courses, students must be able to effectively navigate and utilize the LMS for their course.

All students at the College can access their LMS courses through the MyDTCC portal. Students also have access to 24-7 learning management system technology support. Information on how to contact support can be found in the learning management system. Additional information can be found on the College's Information & Instructional Technology website.

Testing and Proctored Exams

Testing in distance education courses can be conducted in a variety of ways, depending on the course. Some distance education courses may require proctored exams. A proctored exam is one that is overseen by an impartial individual, called a proctor, who monitors a student during the exam. The proctor ensures the security and integrity of the exam. Students may be given the option of taking the proctored exams in an approved testing center (either a Delaware Tech campus testing center or one approved by the instructor) or via the College's supported online proctoring service (e.g., Examity). Be advised that some proctoring services may charge a fee, which is the responsibility of the student. All distance education exam and proctoring policies will be clearly indicated in the course policies at the start of the course.

Student Complaint Process

Distance education students follow the same process for filing complaints as do traditional classroom students. For more information on this process, please refer to this section of the student handbook.

This complaint resolution process is applicable to all students, whether Delaware residents or nonresidents, and regardless of the state's NC-SARA membership.

For online distance education students that live outside of Delaware, all students are strongly encouraged to utilize the internal complaint resolution process established by the College under section IV.B. of the College's Student Rights And Standards Of Student Conduct.

If an online student who resides outside of Delaware is dissatisfied with the outcome of their complaint under the College's Student Rights and Standards Of Student Conduct process, the student may file a complaint with the Delaware Department of Education.

The College is accredited by the Middle States Commission on Higher Education which also provides a process for complaints against Member institutions.

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

Owens, Terry and George 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 or www.dtcc.edu for more information.

DELAWARE TECHNICAL COMMUNITY COLLEGE ACCREDITATIONS AND CERTIFICATIONS

CAMPUS	TECHNOLOGY	AGENCY
Collegewide	Baccalaureate Nursing	Accreditation Commission for Education in Nursing (ACEN)
Owens	Aviation Maintenance Technology General Airframe Maintenance Certificate, General Powerplant Maintenance Certificate	Federal Aviation Administration (FAA)
Owens	Associate Degree Nursing	Accreditation Commission for Education in Nursing
Owens	Automotive Technology	National Automotive Technicians Education Foundation (NATEF) for Automotive Service Excellence (ASE)
Owens	Diagnostic Medical Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Owens	Early Childhood Education Early Care and Education Birth to Second Grade)	Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children
Owens	Early Childhood Education Early Care and Education (Birth to Second Grade)	Delaware Department of Education
Owens	Early Childhood Education Early Childhood Development	Delaware Department of Education
Owens	Early Childhood Education Early Childhood Development	Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children
Owens	Education* Math Secondary Education	Delaware Department of Education
Owens	Education* Elementary Education Option	Delaware Department of Education
Owens	Education* Paraeducator	Delaware Department of Education
Owens	Medical Laboratory	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
Owens	Occupational Therapist Assistant	Accreditation Council for Occupational Therapy Education (ACOTE)
Owens	Paralegal	American Bar Association Standing Committee on

		Paralegals Approval Commission
Owens	Physical Therapist Assistant	Commission on Accreditation in Physical Therapy Education (CAPTE)
Owens	Practical Nursing	Accreditation Commission for Education in Nursing
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	Commission on Accreditation for 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 ABET
Stanton	Culinary Arts	American Culinary Federation, Foundation Inc.'s Accrediting Commission
Stanton	Electronics Engineering Technology	Engineering Technology Accreditation Commission of ABET
Stanton	Energy Management	Association of Energy Engineers (AEE)
Stanton	Food Service Management	American Culinary Federation, Foundation Inc.'s Accrediting Commission
Stanton	Mechanical Engineering Technology	Engineering Technology Accreditation Commission of ABET
Terry	Culinary Arts	American Culinary Federation Education Foundation
Terry	Early Childhood Education Early Care and Education (Birth to Second Grade)	Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children
Terry	Early Childhood Education Early Care and Education (Birth to Second Grade)	Delaware Department of Education
Terry	Early Childhood Education Early Childhood Development	Commission on the Accreditation of Early Childhood Higher Education

		Programs of the National Association for the Education of Young Children
Terry	Early Childhood Education	Delaware Department of Education
Terry	Early Childhood Development 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	Delaware Department of Education
Terry	Energy Management	Association of Energy Engineers (AEE)
Terry	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)
George	Cardiovascular Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
George	Dental Hygiene	American Dental Association, Commission on Dental Accreditation
(Terry/Owens Extension)	Dental Hygiene	American Dental Association, Commission on Dental Accreditation
George	Diagnostic Medical Sonography, General Concentration	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
George	Human Services	Council for Standards in Human Service Education

		(CSHSE)
George	Early Childhood Education Early Care and Education (Birth to Second Grade)	Delaware Department of Education
George	Early Childhood Education: Early Care and Education (Birth to Second Grade	Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children
George	Early Childhood Education: Early Childhood Development	Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children
George	Early Childhood Education: Early Childhood Development	Delaware Department of Education
George	Education* Math Secondary Education	Delaware Department of Education
George	Education* Elementary Education Option	Delaware Department of Education
George	Education* Paraeducator	Delaware Department of Education
George	Early Childhood Education, Child Development Center	National Association for the Education of Young Children (NAEYC)
George	Histotechnician	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
George	Human Services	Council for Standards in Human Service Education (CSHSE)
George	Health Information Management	Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
George	Medical Assistant	Commission on Accreditation of Allied Health Education Programs (CAAHEP) Curriculum Review Board of American Association of Medical Assistants' Endowment (AAMAE)
George	Nuclear Medicine	Joint Review Committee on Education Programs in Nuclear Medicine Technology (JRCNMT)
George	Occupational Therapy Assistant	The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association (ACOTE)

George	Physical Therapist Assistant	Commission on Accreditation in Physical Therapy Education (CAPTE)
George	Radiologic Technology	Joint Review Committee on Education in Radiologic Technology (JRCERT)
George	Respiratory Care	Commission on Accreditation for 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 Instruction, 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
PHL Philosophy
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

ACC 100 - Introduction to Accounting ..... **(3:2:2)**
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. Prerequisite: (Test score or ENG 006 or ENG 007 or EAP 093 or higher) and (Test score or MAT 005 or higher)

ACC 101 - Accounting I ..... **(3:3:1)**
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 EAP 093 or higher) and (Test Scores or MAT 020 or higher)

ACC 112 - Accounting II ..... **(3:3:1)**
This course expands upon the principles of accounting to include the principles and procedures of partnerships, corporations, bonds, retained earnings, corporate securities, and cash flow statements. The course also includes an introduction to managerial accounting with job order costing, cost-volume-profit (CVP) and incremental analysis, responsibility accounting, budgets, and standard costing. Prerequisites: ACC 101 and CIS 107

ACC 162 - Computerized Accounting ..... **(3:2:2)**
This course prepares students with the workplace skills necessary to use automated accounting software. Topics include data entry by interpreting accounting information, creating financial statements and other financial reports, creating payroll and the related payroll reporting requirements, and creating and managing customer invoices and vendors' bills. This course reinforces the concepts learned in Accounting I and applies these concepts to computer software used to make business decisions. Prerequisites: ACC 101 and (CIS 107 or OAT 152)

ACC 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ACC 211 - Tax Accounting I ..... **(3:3:1)**
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 score or ENG 102 or higher (concurrent)) and (Test score or MAT 145 or higher) and ACC 101

ACC 221 - Cost Accounting ..... **(3:3:1)**
This course covers cost concepts, cost accounting information systems, and the role of the cost accountant. Topics include the elements of cost, job order costing, process costing, by-products, joint products, activity-based costing, and variance analysis. Prerequisites: (Test score or ENG 102 or higher concurrent) and ACC 112 and CIS 107

ACC 231 - Intermediate Accounting I ..... **(3:3:1)**
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 or concurrent) and (Test scores or MAT 145 or higher) and ACC 112

ACC 232 - Intermediate Accounting II ..... **(3:3:1)**
This course provides an in-depth examination of principles and procedures emphasizing the following topics: current and long-term liabilities, stockholders' equity, investments, leases, pensions, income measurement, and analysis of financial statements with full disclosures. Prerequisites: ACC 231

ACC 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chair.

ACE 025 - Language, Grammar & Writing ..... **(2.25:2.25:0)**
In this course, students learn the fundamentals of language, grammar, and writing. This course concentrates on improving these skills through the use of literary texts and relevant fiction. Prerequisites: Academic Challenge Qualification Requirements

ACE 026 - Writing Research& Presentation ..... **(2.25:2.25:0)**
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. Prerequisite: ACE 025

ACE 033 - World Literature ..... **(2.25:2.25:0)**
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. Prerequisite: ACE 026

ACE 034 - British Literature ..... **(2.25:2.25:0)**
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. Prerequisite: ACE 033

ACE 035 - American Literature ..... **(2.25:2.25:0)**
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. Prerequisite: ACE 034.

ACE 040 - Writing & Research ..... **(2.25:2.25:0)**
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. Prerequisite: ACE 035

ACE 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ACE 196 - Advanced Credit/Poetry ..... **(3:3:0)**
Advanced credit for approved Academic Challenge college level English instruction in poetry. Prerequisites: None

ACE 197 - Advanced Credit/Novel ..... **(3:3:0)**
Advanced credit for approved Academic Challenge college level English instruction in novels. Prerequisites: None

ACE 198 - Advanced Credit/Drama ..... **(3:3:0)**
Advanced credit for approved Academic Challenge college level English instruction in drama. Prerequisites: None

ACE 199 - Advanced Credit/Short Story ..... **(3:3:0)**
Advanced credit for approved Academic Challenge college level English instruction in short story. Prerequisites: None

ACE 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have

written prior approval of the department chairperson.

ACM 011 - Algebra I ..... **(2.25:2.25:0)**
This course focuses on elementary algebra terminology, properties, polynomial operations, factoring, fractional simplification, exponents, roots, coordinate graphing and solving of linear equations, linear inequalities, and quadratic equations. Prerequisite: Qualifying scores for admission to Academic Challenge.

ACM 012 - Algebra II ..... **(2.25:2.25:0)**
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

ACM 021 - Geometry ..... **(2.25:2.25:0)**
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

ACM 023 - Trigonometry & Pre-Calculus B ..... **(2.25:2.25:)**
This course integrates intermediate algebra, analytic geometry, and trigonometry with other college algebra topics through a functional approach as preparation for calculus. Prerequisite: ACM 032

ACM 024 - Functions, Statistics & Trig ..... **(2.25:2.25:)**
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

ACM 032 - Pre-Calculus ..... **(2.25:2.25:0)**
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

ACM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ACM 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ACR 101 - HVAC Electricity ..... **(5:4:4)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

ACR 102 - Fundamentals of Refrigeration ..... **(5:4:4)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

ACR 104 - Residential Climate Control ..... **(5:4:4)**
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

ACR 105 - Residential Heating I ..... **(5:4:4)**
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 EAP 093 or higher) and ACR 101

ACR 114 - EPA Seminar and Exam ..... **(1:1:0)**
This course prepares students to take the Environmental Protection Agency (EPA) Section 608 Technician Certification for stationary equipment. Prerequisite: ACR 102 or concurrent

ACR 115 - Air Distribution & Balancing ..... **(3:3:1)**
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

ACR 120 - Employee Development Seminar ..... **(2:2:1)**
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 EAP 093 or higher)

ACR 150 - Industry Competency Exam I ..... **(1:1:0)**
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. Prerequisite: ACR 105 or concurrent

ACR 151 - Industry Competency Exam II ..... **(1:1:0)**
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. Prerequisite: ACR 104 or concurrent

ACR 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ACR 202 - Commercial Refrigeration ..... **(3:2:4)**
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. Prerequisites: ACR 101 and ACR 102 and ACR 120 and (Test score or ENG 101 or higher) and (Test score or MAT 120 or higher)

ACR 204 - Residential Heating II ..... **(3:2:2)**
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 (Test score or ENG 102 or concurrent) and (Test score or MAT 120 or higher)

ACR 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AET 123 - Arch Drafting/Design I ..... **(4:3:3)**
This course provides training and experience in modern drafting room procedure, practice and principles. Topics include basic skills and techniques of drafting, 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 EAP 093 or higher) and (Test score or MAT 010 or concurrent)

AET 125 - Arch Drafting/Design II ..... **(4:3:3)**
This course presents basic architectural design, drafting, and documentation techniques through the drawing of plot, floor, and elevation plans that contain sections, details, and schedules as used in residential construction documents. Quality line work, dimensioning, and drawing accuracy are emphasized for traditional techniques as well as computer-aided design (CAD). Prerequisite: AET 123 and EDD 171 and (CET 135 or concurrent)

AET 164 - Architectural CAD Applications ..... **(3:2:2)**
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. Topics include creation of 3D pictorial representations of interiors and exteriors, including materials, lighting, rendering, and animation. Prerequisites: (Test score or ENG 090 or ENG 091 or EAP 093 or higher) and (Test score or MAT 010 or higher)

AET 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AET 232 - Contracts/Specifications ..... **(3:3:0)**
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 CET 135

AET 236 - Building Service Systems ..... **(3:2:2)**
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 score or ENG 101 or higher) and (Test score or MAT 153 or MAT 180 or concurrent or higher) and ((AET 125 and AET 164 and CET 135) or (AET 164 and CET 125 and CET 135) or (ACR 101))

AET 250 - Arch Drafting/Design III ..... **(4:3:3)**
This computer aided design (CAD) based course focuses on commercial building design, documentation, building placement, and site analysis and development, including the use of surveying equipment, field notes, and calculations. Topics include building codes, structural systems, and building components in construction documents. Prerequisites: (Test score or ENG 101 or higher) and (Test score or MAT 180 or concurrent or higher) and AET 125 and AET 164

AET 270 - Arch Drafting/Design IV ..... **(4:3:3)**
In this capstone course, students use multiple computer aided design (CAD) software platforms to develop architectural projects in a collaborative team approach. Emphasis is on research, building codes, building systems, sustainability, and innovative industry practices. Prerequisites: AET 236 and AET 250

AET 275 - Arch Dsgn:Foundation Studies I ..... **(4:3:3)**
This course is an introduction to the design process using abstract and applied projects in three-dimensional form to investigate the relationship among 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 164

AET 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AET 290 - Co-op Work Experience ..... **(3:0:9)**
This course is a paid cooperative educational work experience. Students develop technical skills, investigate career choices, build confidence, network with people in the field, and transition for entry into the workforce. Prerequisites: AET 125 and AET 164

AET 291 - Internship Work Experience ..... **(3:0:9)**
This course is an unpaid internship educational work experience. Students develop technical skills, investigate career choices, build confidence, network with people in the field, and transition for entry into the workforce. Prerequisites: AET 125 and AET 164

AFS 110 - Found of the USAF I ..... **(1:1:)**
A survey course which briefly covers topics relating to the Air Force and defense. Focuses on the structure and missions of Air Force organizations, officership, and professionalism. Introduction into the use of communication skills. This course is taught in the fall semester at the University of Delaware or at the Dover Air Force Base. Prerequisite: None

AFS 111 - Foundations of the USAF II ..... **(1:1:)**
This course is a continuation of AFS 110, Foundations of the United States Air Force I. A survey course which briefly covers topics relating to the Air Force and defense. Focuses on the structure and missions of Air Force organizations, officership, and professionalism. Introduction into the use of communication skills. This course is taught in the spring semester at the University of Delaware or at the Dover Air Force Base. Prerequisite: AFS 110

AFS 150 - Initial Military Training I ..... **(0:0:1)**
This course (to be taken in conjunction with AFS 110) is a weekly laboratory that touches on the topics of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. This course is taught in the fall semester at the University of Delaware. Prerequisite: None

AFS 151 - Initial Military Training II ..... **(0:0:1)**
This course is a continuation of AFS 150 (to be taken in conjunction with AFS 111). Provides instruction on the ROTC program and an overview to Air Force skills and life. This course is taught in the spring semester at the University of Delaware. Prerequisite: None

AFS 210 - Evol of US Air/Space Pwr I ..... **(1:1:)**
This course focuses on the beginning of manned flight and the development of aerospace power in the United Sates, including the employment of air power in World War I, World War II, Korea, Vietnam, the Gulf War, and the peaceful employment of U.S. air power in civic actions, scientific missions, and support of space exploration. This course is taught in the fall semester at the University of Delaware or at the Dover Air Force Base. Prerequisites: Determined by the University of Delaware

AFS 211 - Evol of US Air/Space Power II ..... **(1:1:)**
This course is a continuation of AFS 210, Evolution of United States Air and Space Power I focusing on the beginning of manned flight and the development of aerospace power in the United Sates, including the employment of air power in World War I, World War II, Korea, Vietnam, the Gulf War, and the peaceful employment of U.S. air power in civic actions, scientific missions, and support of space exploration. This course is taught in the spring semester at the University of Delaware or at the Dover Air Force Base. Prerequisites: AFS 210

AFS 250 - Field Training Preparation I ..... **(0:0:1)**
This course (to be taken in conjunction with AFS 210) provides the student with the opportunity to demonstrate fundamental management skills and prepares student for field training. This course is taught in the fall semester at the University of Delaware. Prerequisites: None

AFS 251 - Field Training Preparation II ..... **(0:0:1)**
This course (to be taken in conjunction with AFS 211 provides the student with the opportunity to demonstrate fundamental management skills and prepares student for field training. This course is taught in the spring semester at the University of Delaware. Prerequisites: AFS 250

AGS 101 - Soil Science ..... **(3:2:2)**
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 EAP 093 or higher)

AGS 102 - Agricultural Science ..... **(3:3:0)**
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)

AGS 104 - Intro to Agribusiness Managemt ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

AGS 105 - Prin of Plant Growth ..... **(3:2:2)**
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 EAP 093 or higher)

AGS 106 - Vegetable Crop Production ..... **(3:2:2)**
This course examines general production principles associated with commercial fruit/vegetable production. Topics include fertilization and harvesting practices; home vegetable gardening and greenhouse crop production; and pesticide use, handling, and storage. Students are introduced to Delaware's safe handling practices for vegetable production and sales. Prerequisite: (Test score or ENG 090 or ENG 091 or EAP 093 or higher) and AGS 101 and AGS 105

AGS 123 - Trfgrss Maintenance Practices ..... **(3:2:2)**
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 EAP 093 or higher)

AGS 136 - Turf Equipment Operations ..... **(3:2:2)**
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 EAP 093 or higher)

AGS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AGS 202 - Agronomic Crops ..... **(3:3:0)**
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 010 or higher) and AGS 101

AGS 203 - Plant I.D. and Cultivation ..... **(3:2:2)**
This course introduces principles of identification, cultivation, and maintenance of woody and herbaceous landscape plant materials. Prerequisites: AGS 101 and AGS 105

AGS 204 - Animal Science ..... **(3:2:2)**
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 EAP 093 or higher) and AGS 102

AGS 209 - Farm Records & Accounts ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

AGS 212 - Intro to Agribusiness Marketng ..... **(3:3:0)**
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

AGS 215 - Agriculture Leadership ..... **(3:3:0)**
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

AGS 224 - Turf & Athletic Fld Maintenanc ..... **(3:2:2)**
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

AGS 225 - Agriculture Seminar ..... **(3:3:0)**
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

AGS 226 - Agribusiness Mgmt Work Exper ..... **(3:0:10)**
This course 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

AGS 230 - Production Ag Work Experience ..... **(3:0:10)**
This course provides an opportunity to apply classroom and laboratory knowledge to actual work experiences. Supervised work experiences enhance knowledge and provide experience within the production agriculture industry. Students work at the production agriculture lab as part of the requirements for this course. Prerequisites: AGS 101 and AGS 102 and AGS 104 and AGS 105

AGS 231 - Turf Mgt Work Experience ..... **(3:0:10)**
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

AGS 232 - Horticulture Work Experience ..... **(3:0:10)**
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

AGS 240 - Hydroponics Production ..... **(3:2:2)**
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 EAP 093 or higher) and AGS 105

AGS 241 - Trfgrss Wds Insts/Disease Ctrl ..... **(3:3:)**
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

AGS 242 - Golf Course Operation & Maint ..... **(3:2:2)**
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

AGS 243 - Golf & Turf Irrigation ..... **(3:2:2)**
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

AGS 244 - Landscape Plans & Construction ..... **(3:2:2)**
This course introduces problems in landscape planning, including plant materials and elements of design using computerized programs of design. Topics include 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 an understanding of careers and the employability skills needed to enter the landscape industry. Prerequisites: CIS 107 or concurrent and AGS 101 and AGS 105

AGS 250 - Greenhouse Crop Production ..... **(3:2:2)**
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/foliage 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

AGS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AID 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AID 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ASL 101 - American Sign Language I ..... **(3:3:0)**
This course introduces students to the basics of American Sign Language. Visual and gestural abilities are developed as a foundation for learning to understand and produce simple communications. Information about American deaf culture is introduced. Prerequisite: None

ASL 102 - American Sign Language II ..... **(3:3:0)**
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

ASL 103 - Fingerspelling/Nmbr Use in ASL ..... **(3:3:0)**
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

ASL 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ASL 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AUT 114 - Intro to Automotive Technology ..... **(3:2:2)**
This course provides 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 EAP 093 or higher) and MAT 120 or concurrent.

AUT 116 - Automotive Electrical ..... **(5:4:4)**
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, diagnose, and repair vehicle accessories and chassis wiring. Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and (MAT 120 or higher or concurrent) and (AUT 114 or concurrent).

AUT 118 - Auto Steering & Suspension ..... **(3:2:3)**
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: (ENG 101 or higher or concurrent) and AUT 114 and AUT 116.

AUT 119 - Automotive Brake Systems ..... **(3:2:3)**
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. Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and (MAT 120 or higher or concurrent) and (AUT 114 or concurrent) and (AUT 116 or concurrent).

AUT 122 - Auto Air Conditioning/Heating ..... **(3:2:3)**
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 and ENG 101 or concurrent

AUT 123 - Work Experience Co-op I ..... **(3:0:9)**
In this course, students 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, and ENG 101 or concurrent

AUT 126 - Work Experience Lab I ..... **(3:0:9)**
In this course, students 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. Prerequisites: AUT 118 or concurrent and AUT 119 and AUT 122 or concurrent and ENG 101 or concurrent

AUT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AUT 202 - Automotive Engine Repair ..... **(3:2:4)**
This course introduces 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. Prerequisites: (AUT 123 or AUT 126) and (ENG 102 or concurrent)

AUT 203 - Automotive Engine Performance ..... **(6:3:9)**
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 or concurrent) and (ENG 102 or concurrent)

AUT 205 - Manual Transmissions/Transaxle ..... **(3:2:4)**
This course introduces 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

AUT 208 - Automatic Transmissions ..... **(3:2:4)**
This course introduces 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

AUT 223 - Work Experience Co-op II ..... **(3:0:9)**
In this course, students 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. Prerequisites: (AUT 123 or AUT 126) and AUT 202 and AUT 205 and AUT 208 and (AUT 203 or concurrent).

AUT 226 - Work Experience Lab II ..... **(3:0:9)**
In this course, students 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. Prerequisites: AUT 123 or AUT 126, AUT 202, 205, 208, and (AUT 203 or concurrent)

AUT 253 - Automotive Practicum II ..... **(4:0:12)**
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.

AUT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

AVI 110 - Airframe Maintenance - General ..... **(12:8:12)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

AVI 120 - Airframe Maint - AF Section I ..... **(11:7:13)**
The Airframe Maintenance AF - 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. Prerequisite: AVI 110 and MAT 112

AVI 210 - Airframe Maint AF - Section II ..... **(12:8:12)**
The Airframe Maintenance AF-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. Prerequisite: AVI 120 and ELC 102

AVI 220 - Airframe Maint AF-Section III ..... **(11:7:13)**
The Airframe Maintenance AF-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: AVI 210 or concurrent

AVI 230 - Powerplant Maint - Section I ..... **(14:9:14)**
This course introduces the fundamentals of powerplant maintenance. The units of study include 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. Prerequisite: (AVI 110 and MAT 112 and (ELC 102 or concurrent)) or Possess a FAA Airframe License

AVI 240 - Powerplant Maint - Section II ..... **(13:8:15)**
This course introduces the fundamentals of powerplant maintenance. The units of study include propeller systems, turbine engine theory, turbine engine maintenance, turbine engine systems, turbine ignition and starting systems, turbine engine induction systems, and turbine inspection and troubleshooting. Prerequisite: AVI 230

BIO 100 - Medical Terminology ..... **(3:3:0)**
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 EAP 093 or higher)

BIO 106 - Basic Nutrition Concepts ..... **(1:1:0)**
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 EAP 093 or higher)

BIO 108 - Basic Pharmacology ..... **(2:2:)**
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: (Test scores or ENG 090 or ENG 091 or EAP 093) and (Test scores or MAT 010 or higher) and BIO 100

BIO 110 - Essentls-Anatomy & Physiology ..... **(4:3:2)**
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 EAP 093 or higher)

BIO 115 - Nutrition ..... **(3:3:0)**
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 EAP 093 or higher)

BIO 120 - Anatomy and Physiology I ..... **(5:4:2)**
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 EAP 093 or higher)

BIO 121 - Anatomy and Physiology II ..... **(5:4:2)**
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).

BIO 123 - Clinical Functional Anatomy ..... **(3:2:2)**
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

BIO 124 - Review of Physiology ..... **(2:2:0)**
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

BIO 125 - Introductory Microbiology ..... **(4:3:2)**
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.

BIO 130 - Disease Proc/Pathophysiology ..... **(3:3:0)**
This course examines the physiologic and biologic manifestations of disease and the adaptations that the body makes to the changes produced by the disease process. Prerequisite: BIO 120

BIO 140 - General Biology ..... **(4:3:2)**
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 EAP 093 or higher)

BIO 150 - Biology I ..... **(4:3:2)**
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 EAP 093 or higher)

BIO 151 - Biology II ..... **(4:3:2)**
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 EAP 093 or higher)

BIO 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

BIO 250 - Principles of Microbiology ..... **(4:3:3)**
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).

BIO 262 - Genetics ..... **(4:3:3)**
This course covers basic principles of prokaryotic and eukaryotic genetics including Mendelian and non-Mendelian inheritance, structure and function of chromosomes and genomes, and genotype: phenotype associations. Students use bioinformatics software and DNA techniques such as cloning, PCR, and sequencing. Prerequisites: BIO 250 and CHM 150

BIO 263 - Molecular Biology ..... **(4:3:4)**
This course focuses on the structure and function of DNA, RNA, and protein and the importance of their interactions in cellular processes. Students apply molecular biology techniques to laboratory investigations. Prerequisite: BIO 262

BIO 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

BIT 260 - Biotechnology I ..... **(4:3:4)**
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.

BIT 261 - Biotechnology II ..... **(4:3:4)**
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

BIT 265 - Bioinformatics ..... **(3:2:2)**
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.

BIT 270 - Honors Biotechnlgy Internship ..... **(2:0:7)**
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

BUS 101 - Introduction to Business ..... **(3:3:0)**
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)

BUS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

BUS 203 - Business Law ..... **(3:3:0)**
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

BUS 275 - Portfolio/Experiential Lrning ..... **(3:3:1)**
This course prepares students with the workplace skills necessary for professional job placement. Emphasis is given to self-assessment techniques, career planning tools, and professional workplace behavior. The student constructs a professional portfolio that includes work samples, a job search package, and a reflection on the required experiential learning component. Prerequisites: (ACC 112 and MGT 212 and MKT 212) or (ACC 101 and OAT 152 and OAT 158)

BUS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CEN 100 - Intro Elec & Computer Eng Tech ..... **(3:2:2)**
This course introduces electronic engineering technology concepts. Topics include career opportunities, professional ethics, working in teams, an introduction to engineering problem solving, and the use of calculators and computers as tools for problem solving. Prerequisites: (Test scores or ENG 090 or concurrent or ENG 091 or concurrent or higher or EAP 093 or concurrent or higher) and (Test Score or MAT 020 or concurrent or higher)

CEN 120 - PC Telecommunications ..... **(4:3:2)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

CEN 126 - Industrial Networks ..... **(3:2:2)**
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 010 or higher) and (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

CEN 150 - Computer Assembly/Maint ..... **(4:3:2)**
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 scores or ENG 090 or ENG 090 concurrent or ENG 091 or ENG 091 concurrent or higher) or (EAP 093 or concurrent or higher)

CEN 180 - C/C++ Language Intro ..... **(4:3:2)**
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

CEN 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CEN 200 - Introduction to MATLAB ..... **(2:1:2)**
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)

CEN 220 - Digital Data Comm w/ Networks ..... **(4:3:2)**
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

CEN 222 - Windows Operating System ..... **(4:3:2)**
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

CEN 223 - Unix Opertng System & Networks ..... **(4:3:2)**
A complete coverage of the UNIX operating system, including shells, utilities, x-windows, and networking. Prerequisites: CEN 222

CEN 224 - Computer Networks ..... **(4:3:2)**
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).

CEN 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CEN 290 - Internship ..... **(4:1:9)**
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.

CET 125 - Civil & Envl Drafting & Design ..... **(3:2:4)**
This course introduces drawing and design problems encountered in 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 conceptual commercial site design and produce elements of the drawing set. Prerequisites: (Test scores or ENG 101 or concurrent or higher) and (Test scores or MAT 180 or concurrent or higher)

CET 135 - Engineering Materials ..... **(3:2:2)**
This course introduces construction materials and methods of use as they relate to the overall engineering and building industry. Included are soils, aggregates, asphalt, asphalt paving products, Portland cement, Portland cement concrete, masonry, steel, non-ferrous metals, lumber, timber, and finishing materials. Laboratory testing and investigation of the materials are included. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 020 or higher)

CET 144 - Surveying Principles ..... **(4:3:3)**
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 (test scores or MAT 180 or higher) and (test scores or ENG 101 or higher)

CET 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CET 220 - Civil CAD Basics ..... **(1:1:0)**
This course provides an introduction to computer aided design (CAD) software encountered in the civil engineering field. Basic CAD tools for printing and manipulating CAD drawings are introduced. Prerequisites: (CET 125 or concurrent)

CET 225 - Civil CAD Applications ..... **(3:2:3)**
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 Prerequisite: (Test scores or ENG 101 or higher) and (test scores or MAT 180 or higher) and CET 125, EDD 171, CET 247 or concurrent

CET 236 - Soils ..... **(3:2:2)**
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 180 or higher) and CET 135

CET 240 - Hydraulics and Hydrology ..... **(4:3:3)**
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 190 or higher) and CET 125 and CET 144

CET 244 - Principles of Site Development ..... **(4:3:3)**
This course covers the fundamental concepts of site and subdivision planning. Consideration is given to zoning and subdivision ordinances and governmental regulations. Site design projects include design calculations and complete preliminary construction drawings for a conceptual subdivision. Students work with other related disciplines to model real industry collaboration. Prerequisites: CET 144 and CET 240 and ((CET

225 and GIS 101) or (CET 220 or concurrent)) and (Test score or MAT 190 or higher)

CET 245 - Advanced Surveying Principles ..... **(3:2:2)**
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 include control surveys and geodetic reductions, state plane coordinates, surveys of public lands, photogrammetry, and an introduction to geographic information systems (GIS). This class uses lecture in combination with an opportunity where students may shadow various surveying companies and agencies. Prerequisite: (Test score or ENG 102 or higher) and (test score or MAT 190 or higher) and (CET 125 or (GIS 101 and GIS 110)) and CET 144

CET 247 - Route Surveying and Design ..... **(3:2:3)**
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; vertical curves and alignments. Prerequisite: (Test scores or ENG 102 or higher) and CET 125 and CET 144 and EDD 171

CET 248 - Boundary Surveying and Law ..... **(3:3:0)**
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. Prerequisite: (Test scores or ENG 102 or higher) and (test scores or MAT 180 or higher) and CET 144

CET 258 - Statics with Calculus ..... **(3:3:1)**
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 or concurrent

CET 270 - Solid Mechanics with Calculus ..... **(3:3:1)**
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

CET 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CHM 100 - Basic Chemistry ..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher or MAT 129)

CHM 101 - Introduction to Chemistry ..... **(1:1:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

CHM 110 - General Chemistry ..... **(4:3:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher)

CHM 111 - Intro to Organic & Biochemstry ..... **(4:3:2)**
This course includes a study of organic compounds and reactions and a basic study of biochemical reactions in- volving carbohydrates, lipids, and proteins and their metabolism. Laboratory experiments are used to illustrate theory. Prerequisite: CHM 110

CHM 150 - Chemical Principles I ..... **(5:4:3)**
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 EAP 093 or higher) and (Test scores or MAT 153 or higher) and CHM 110

CHM 151 - Chemical Principles II ..... **(5:4:3)**
This course is a continuation of Chemical Principles I. Topics include solutions, thermodynamics, kinetics, equilibria, acids and bases, electrochemistry, coordination, nuclear, and macromolecular chemistry. Laboratory experiments are used to illustrate theory. Prerequisite: Test scores or MAT 153 or MAT 190 or higher and CHM 150

CHM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CHM 240 - Organic Chemistry I ..... **(4:3:3)**
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. Prerequisite: CHM 150

CHM 241 - Organic Chemistry II ..... **(4:3:3)**
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. Prerequisites: CHM 240

CHM 250 - Analytical Chemistry I ..... **(5:4:4)**
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 are examined. Laboratory experiments are used to illustrate theory. Prerequisite: CHM 151

CHM 251 - Analytical Chemistry II ..... **(4:3:4)**
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

CHM 265 - Biochemistry ..... **(4:3:4)**
In this course, students learn the chemical structures and cellular functions of amino acids, proteins, carbohydrates, lipids, and nucleic acids. Students also use laboratory techniques to separate, characterize, and quantitate biological molecules. Prerequisite: BIO 262 and CHM 151 and CHM 240

CHM 270 - Honors Chem Work Experience ..... **(2:0:7)**
Upon recommendation by the instructor, the student placed in this honors course will gain experience working as a laboratory technician in a research, industrial, service, manufacturing or other facility in chemistry or a related field. Prerequisite: CHM 151 and instructor's permission

CHM 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CIS 107 - Intro to Computers/Application ..... **(3:2:2)**
This course introduces computer information systems concepts. Topics include use of an operating system, a broad range of technology tools, and personal computer (PC) applications such as word processing, spreadsheets, and presentation software. Prerequisites: (Test scores of ENG 090 or ENG 091 or EAP 093 or concurrent or higher) and (Test score or MAT 005 or higher)

CIS 108 - Applied Concepts in Educ Tech ..... **(3:3:0)**
This course prepares future educators to successfully integrate technology into the classroom. A broad range of technology tools that support teaching methods and create meaningful learning experiences in the classroom are explored. This course addresses the national technology standards for teachers and students. Prerequisites: (MAT 211 or concurrent) or ECE 120 or EDC 150 or EDC 115

CIS 112 - Spreadsheet/Graphics Proc ..... **(3:2:2)**
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

CIS 118 - Intro to Relational Databases ..... **(3:3:0)**
This course will focus on the fundamentals of realtional 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 EAP 093 or higher) and (Test scores or MAT 020 or higher) and (CIS 107 or CIS 120)

CIS 120 - Intro to Programming ..... **(4:3:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher)

CIS 125 - Window Based Operating Systems ..... **(4:3:2)**
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. Prerequiaites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

CIS 130 - Computer Organization ..... **(3:2:2)**
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

CIS 141 - Operating Systems I ..... **(3:2:2)**
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. Prequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 020 or higher)

CIS 146 - Computer Networking I ..... **(4:3:2)**
This course covers the fundamentals of design, installation, maintenance, and support of computer networks. Topics examined include Open Systems Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP) networking models. Students learn to perform basic router and switch configurations. Prerequisite: CIS 141

CIS 150 - Intro to Objct-Orntd Prgrmmng ..... **(3:2:3)**
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

CIS 170 - Internet/Web Multimedia ..... **(3:2:2)**
This course introduces the creation of internet/web multi- media objects which are then used in presentations, productions, web publishing, and other multimedia-related applications. Prerequisites: CIS 120 or CIS 125

CIS 180 - Internet/Script Programming ..... **(4:3:2)**
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.

CIS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CIS 190 - Network Inst/Maintenance ..... **(3:2:2)**
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.

CIS 195 - Network Administration ..... **(4:3:2)**
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.

CIS 196 - Computer Networking II ..... **(4:3:2)**
This course is part two of a two-course series that focuses on the terminology, fundamentals, design, installation, maintenance, and support of the local area networks (LAN). Topics include selecting LAN interface cards, cable, wiring plans, server hardware, and operating system software; configuring and installing two or more different LANs; maintaining LANs; integrating LANs into existing networks; and isolating LAN software and hardware problems. Prerequisite: CIS 146

CIS 197 - Network Adv Admin (MS) ..... **(4:3:2)**
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

CIS 199 - Data Comms & Networking ..... **(3:2:2)**
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

CIS 205 - Intro Object Orient Programmng ..... **(4:3:2)**
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

CIS 209 - Visual Programming ..... **(3:2:3)**
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

CIS 210 - Data Comms/Networking ..... **(3:2:2)**
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.

CIS 211 - Data Structures ..... **(4:3:2)**
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

CIS 212 - Internetworking & Support(MS) ..... **(4:3:2)**
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

CIS 238 - Database Design & Programming ..... **(4:3:2)**
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

CIS 240 - Systems Analysis & Design ..... **(3:2:3)**
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

CIS 250 - Operating Systems II ..... **(3:2:2)**
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

CIS 253 - Open Source Software ..... **(4:3:2)**
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

CIS 260 - Internet/Web Commerce ..... **(4:3:2)**
This course illustrates how to configure and maintain a complete intranet or Internet e-commerce website; 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 active server pages (ASP) and extensible markup language (XML); and develop effective secured shopping cart applications using a scalable relational database. Concepts of processing credit card transactions with payment gateway systems are introduced. Prerequisites: CIS 120 and (WEB 160 or CIS 160)

CIS 280 - Applied Programming Workshop ..... **(4:3:2)**
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.

CIS 281 - Topics in Microcomputers ..... **(4:3:2)**
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.

CIS 282 - Mobile App Development ..... **(4:3:2)**
This course introduces mobile programming software. Students develop apps to be used on mobile devices. Prerequisites: CIS 209 or CSC 164

CIS 283 - Topics in Operating Systems ..... **(4:3:2)**
An in-depth treatment of an operating system such as MVS, UNIX, or a current operating system. Prerequisites: CIS 141

CIS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CLT 110 - Cross-Cultural Immersion ..... **(3:3:0)**
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 EAP 093 or higher)

CLT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CLT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CMT 111 - Construction Print Reading ..... **(3:2:2)**
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. Prerequisite: (Test score or ENG 090 or ENG 091 or EAP 093 or higher) and (MAT 010 (concurrent) or higher)

CMT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CMT 224 - OSHA Constr Industry Training ..... **(3:3:0)**
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. Prerequisites: (Test score or ENG 090 or ENG 091or EAP 093 or higher)

CMT 234 - Cost Estimating/Planning ..... **(3:2:2)**
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 score or ENG 101 or higher) and (Test score or MAT 020 or higher) and CET 135 and (AET 125 or CET 125 or CMT 111)

CMT 235 - Adv Cost Estimating/Planning ..... **(3:2:2)**
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

CMT 242 - Constr Project Management I ..... **(3:2:2)**
In this course, students develop 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. Prerequisites: CMT 234

CMT 243 - Co-op Work Experience ..... **(3:0:9)**
In this paid cooperative educational work experience, students develop technical skills, investigate career choices, build confidence, network with people in the field, and transition for entry into the work force. Prerequisites: CMT 111

CMT 244 - Constr Project Management II ..... **(4:3:2)**
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. Prerequisites: (Test Scores or ENG 102 or higher) and (ACC 101 or concurrent or OAT 152) and CMT 235 and CMT 242

CMT 246 - Internship Work Experience ..... **(3:0:9)**
In this unpaid internship, students develop technical skills, investigate career choices, build confidence, network with people in the field, and transition for entry into the work force. Prerequisites: CMT 111

CMT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CNE 180 - Computer Assmbly & Maintenance ..... **(4:3:2)**
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 EAP 093 or higher)

CNE 191 - Router Configuration ..... **(3:2:2)**
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

CNE 192 - Network Administration ..... **(3:2:2)**
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

CNE 215 - Enterprise Server Admin ..... **(3:2:2)**
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

CNE 216 - Open Source Server Admin ..... **(3:2:2)**
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

CNE 280 - Advanced Networking Topics ..... **(3:2:3)**
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

CNE 284 - Cloud Computing ..... **(3:2:2)**
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

COM 011 - Intro to Human Communication ..... **(3:3:0)**
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 EAP 093 or higher)

COM 110 - Intro. to Video Production ..... **(3:2:3)**
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. Prerequisite: Test score or ENG 090 or ENG 091 or EAP 093 or higher

COM 111 - Human Communications ..... **(3:3:0)**
This course focuses on theory and application of both intrapsersonal 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 EAP 093 or higher or concurrent)

COM 130 - Intro to Graphics & Design ..... **(3:3:0)**
This course provides exploration of graphic and design fundamentals by manipulating and combining core elements to create meaning and value. Students learn vocabulary to create a solid foundation for further study and use industry-standard design software to create a body of accomplished visual work. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher)

COM 140 - Digital Storytelling ..... **(3:3:0)**
This course introduces the process of writing and producing visual and/or audio products that report on factual topics for web dissemination. Students learn the basics of news writing, reporting, interviewing, and editing using technology to convert written stories into visual stories. Students produce effective media content for a web-facing and mobile-first audience. Prerequisites: Test score or ENG 101 or higher

COM 150 - Media & Society ..... **(3:3:0)**
This course is designed to enhance analytical skills needed to evaluate media critically and strengthen media literacy. Students learn mass media's function as a cultural industry and are introduced to: Federal Communications Commission (FCC) rules and regulations; impact of media on politics, technology, and society; the economics of media; the role of advertising; and the social and psychological effects of mass media. Prerequisites: Test scores or ENG 090 or ENG 091 or higher

COM 152 - Podcasting ..... **(3:3:0)**
This course introduces students to 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. It includes a study of copyright law and fair use. Prerequisite: COM 140

COM 160 - Intro to Public Relations ..... **(3:3:)**
Designed to introduce students to the history, theories, ethics and practice of public relations, including writing of public relations materials and collateral and the communications planning process. Prerequisites: Test score or ENG 121 or ENG 125

COM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

COM 210 - Advanced Video Production ..... **(3:2:3)**
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. Prerequisites: COM 140 and COM 110

COM 222 - Intercultural Communication ..... **(3:3:0)**
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

COM 240 - Mass Media Law ..... **(3:3:0)**
This course covers the ethical responsibilities and libelous aspects of reporting as illustrated in historic court cases and legal and ethical principles to news activities. Special emphasis is placed on Delaware's Freedom of Information Act, privacy, copyright, libel, and the First Amendment. Prerequisites: COM 140 and COM 150

COM 242 - Digital Newsroom ..... **(3:3:0)**
This course provides students with an overview of multimedia journalism to include current techniques, problems, responsibilities of writing, and the application of these principles assigned to multimedia stories. Prerequisites: COM 140 and (Test score or ENG 102 (or concurrent))

COM 243 - Social Media ..... **(3:3:0)**
This course provides students with an introduction to the history, theory, technology, and uses of social media. Students explore the possibilities and limitations of social media and gain hands-on experience with several forms of social media technology. Prerequisites: (Test score or ENG 101 or higher) and (COM 140 or MKT 212)

COM 246 - Introduction to Film ..... **(4:3:2)**
This course reviews the language concerning the technical structure of film and all its components to include cinematography, sound, lighting, casting, storyboarding and scriptwriting. It also allows students to convey their opinions to an audience as well as analyze a film's impact on society and culture. Prerequisites: Test score or ENG 101 or higher

COM 250 - Photography ..... **(4:3:2)**
This course is designed to teach the concepts photographic theory and practical techniques for creating and understanding photographic images. This course introduces and reinforces the skills of digital SLR camera operations and basic photo software use. Prerequisites: (Test score or ENG 101 or higher)

COM 251 - Layout & Design ..... **(3:3:0)**
This course is designed to teach the concepts of composing and designing visual packages to communicate information. The student experiences pagination techniques and incorporates visual design theory to create print and digital products, including advertisements for maximum effectiveness. Emphasis is on typography, photography, graphic design, use of color, modular design, and layout theory for both print and digital platforms. Prerequisites: COM 140 and COM 130

COM 252 - Advanced Photography ..... **(4:3:2)**
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 .....

COM 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

COM 293 - Internship with Seminar ..... **(5:1:12)**
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

CPO 100 - Intro to Chem Proc Oper Tech ..... **(3:3:0)**
This course introduces process operations in chemical plants. Topics include process technician duties, responsibilities, and expectations; plant organization; and plant process and utility systems. In addition, the course provides an overview of the chemical process operator technology program, including the physical and mental requirements of a process technician. Field trips to nearby chemical plants are also included. Prerequisite: None

CPO 106 - Statistical Procs Cntrl Ovrvw ..... **(1:1:0)**
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 as well as how to determine in-control/out-of-control conditions. Basic problem solving tools such as Pareto analysis and cause and effect (fishbone) diagrams are presented. Prerequisite: (Test score or MAT 010 or higher)

CPO 125 - Safety, Health & Environment ..... **(3:3:0)**
This course provides the student with a basic understanding of safety, health, and environmental standards 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 course covers the requirements for compliance with transportation regulations involving shipment of hazardous materials and wastes. Prerequisite: (Test score or MAT 010 or higher)

CPO 135 - Chem Proc Tech-Equipment ..... **(3:2:2)**
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 010 or higher

CPO 151 - Chem Proc Tech I-Systems ..... **(4:3:2)**
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

CPO 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CPO 240 - Quality ..... **(3:3:0)**
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).

CPO 252 - Chem Proc Tech II-Operations ..... **(4:3:2)**
This course provides an overview into the field of operations within the chemical process industry. Students 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. In addition, bioethanol production processes are highlighted. Laboratory exercises include the operation of two pilot plants. Prerequisites: CPO 151 and ELC 101

CPO 253 - Process Troubleshooting ..... **(4:3:2)**
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.

CPO 260 - Work Experience ..... **(4:1:8)**
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)

CPO 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CRJ 101 - Intro to Criminal Justice ..... **(3:3:0)**
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 federal, state, and local agencies. Public service careers in the criminal justice system are surveyed. Prerequisite: Test scores or ENG 090 or ENG 091 or EAP 093 or higher

CRJ 102 - Criminal Law ..... **(3:3:0)**
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. Prerequisite: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and CRJ 101

CRJ 104 - Drugs, Society, & Human Behvr ..... **(3:3:0)**
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 EAP 093 or higher).

CRJ 105 - Computer Appl in Crim Justice ..... **(3:3:0)**
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 EAP 093 or higher) and CRJ 101 and CRJ 102 and CIS 107

CRJ 115 - Essntls of Intrvwng/Counslng ..... **(3:3:0)**
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)

CRJ 117 - Ethics Prof & Comm in Pbl Sfty ..... **(3:3:0)**
This course prepares students with the workplace skills necessary for professional job placement. Emphasis is given to ethics, professionalism, career planning, and communication skills. Prerequisites: CRJ 101 or HDM 101

CRJ 118 - Corrections in America ..... **(3:3:0)**
This course introduces the American corrections system, including the history and evolution of the system as well as current philosophies and practices. Prerequisite: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and CRJ 101

CRJ 152 - Collct/Analysis Crme Scne Evid ..... **(3:3:)**
Intense study of methods of collection, indentification, preservation, and presentation of crime scene evidence. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and CRJ 101

CRJ 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CRJ 220 - Criminal Judiciary ..... **(3:3:0)**
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 EAP 093 or higher) and (CRJ 101).

CRJ 222 - Constitutional Law ..... **(3:3:0)**
In this course, students focus on legal issues dealing primarily with the relevant amendments and associative case law. The Constitution of the United States and the Bill of Rights are examined and interpreted with emphasis on the criminal justice system. Prerequisite: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and (CRJ 101 or HDM 101)

CRJ 223 - Criminology ..... **(3:3:0)**
In this course, students examine the nature and causes of crime using biological, psychological, and sociological theories. Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAP 093) and (CRJ 101 or HDM 101) and PSY 121

CRJ 226 - Crisis Intervention ..... **(3:3:0)**
A study of short-term crisis intervention and prevention strategies. Prerequisite: (CRJ 115 or HDM 101) and (Test score or ENG101 or higher)

CRJ 235 - Internship ..... **(4:1:8)**
In this course, the student participates in a field experience in a criminal justice agency. Prerequisite: CRJ 102 and CRJ 104 and CRJ 105 and CRJ 115 and CRJ 220 and (Test score or ENG 102 or higher)

CRJ 237 - Law Enforcement Practicum ..... **(13:12:4)**
This course is directed toward students seeking a career in law enforcement and encompasses major topics instructed at a Delaware police academy, in accordance with Delaware Council on Police Training (COPT) requirements. Key topics include traffic laws and collision investigation techniques, criminal law, constitutional law, terrorism, report writing, evidence collection, crime scene processing, and crisis intervention techniques. 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. Prerequisite: (Test score or ENG 102 or higher) and CRJ 101 and CRJ 102 and CRJ 104 and CRJ 105 and CRJ 115 and CRJ 220 and HDM 202

CRJ 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CSC 114 - Computer Science I ..... **(4:3:2)**
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 020 or higher)

CSC 164 - Computer Science II ..... **(4:3:2)**
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

CSC 214 - Computer Science III ..... **(4:3:2)**
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

CSC 264 - Applied Computer Capstone ..... **(4:3:2)**
In this course, students design and program workplace applications using skills and knowledge learned in previous courses. Prerequisites CIS 211 and CSC 214

CTS 101 - Fundmentals-Motor Fleet Safety ..... **(3:3:0)**
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)

CTS 102 - Vehicle Sys/Report Malfunction ..... **(2:2:0)**
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 EAP 093 or EAP 094 or higher) and (Test scores or MAT 005 or higher)

CTS 103 - Tractor Trailer Operations ..... **(3:3:0)**
In this course, students learn driving principles necessary for safe operation of a tractor-trailer vehicle on the highway, and explore the interaction between the vehicle and the highway traffic environment. Topics include hazard perception and response as well as emergency and evasive maneuvers. Students learn to apply safe operating principles and night operation techniques. Prerequisite: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 005 or higher)

CTS 104 - Road Driving Practices ..... **(4:0:13)**
In this course, students establish skills necessary to operate tractor-trailer vehicles on the public roadways. Safe operating principles, perceived hazards, effective communication, and the ability to operate safely at night are competencies gained behind the wheel under direct supervision of an instructor. Prerequisites: CTS 101 and CTS 102 and CTS 103

CTS 105 - Range Driving Practices ..... **(2:0:6)**
This course covers the basic control skills necessary to safely operate tractor-trailer vehicles through a series of maneuvering exercises. Skill development and learning occurs through behind-the-wheel training to include shifting, backing, inspecting, and coupling/uncoupling. Corequisites: CTS 101 and CTS 102 and CTS 103

CTS 108 - Professional Driver Developmnt ..... **(3:3:0)**
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 EAP 093 or EAP 094 or higher) and (Test scores or MAT 005 or higher)

CTS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CTS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CUL 112 - Cake Decorating ..... **(2:1:3)**
This course is designed to teach the basics and fundamentals of professional cake decorating. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

CUL 119 - Food Safety and Sanitation ..... **(2:2:0)**
This course covers practical sanitary techniques and safety in food preparation. At the conclusion of the course, the student will be administered the ServSafe® Food Protection Manager Certification Exam and the ServSafe® Allergens™ Certification Exam. Prerequisite: (Test Score or ENG 090 or ENG 091 or EAP 093 concurrent or higher) and (Test Scores or MAT 010 or higher)

CUL 121 - Food Prep I ..... **(4:3:4)**
This course is designed to introduce the student to culinary arts. Emphasis is placed on the fundamental principles and skills of cooking, food history, industry professionalism, food safety, menu development, and recipe standards. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

CUL 156 - Practicum ..... **(3:0:8)**
This supervised work experience further develops the culinary art student's role as an entry-level worker in a food service operation. Concepts integral to the fundamentals of safe food or baking preparation, cooking, and service build on prior knowledge and are demonstrated by hands-on skills. Practicum experiences emphasize safe food handling; standard culinary procedures using knives, tools, and equipment; and principles of food or baking preparation. Prerequisite: CUL 121

CUL 171 - Garde Manger ..... **(4:3:4)**
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

CUL 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CUL 245 - Applied Hospitality ..... **(2:1:4)**
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 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

CUL 261 - Baking ..... **(4:3:4)**
This course focuses on the basic fundamentals of baking. Students learn and apply a set of highly interrelated techniques and baking skills. Prerequisite: CUL 121 and CUL 119 or concurrent

CUL 262 - Pastry ..... **(4:3:4)**
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

CUL 280 - American Regional Cuisine ..... **(4:3:4)**
This course introduces various American regional cuisines and their ingredients, preparation methods, and cultural influences. Students prepare menus that focus on the taste, flavors, and styles of America's diverse cuisines. Advanced cooking techniques are applied and emphasis on critical thinking skills are demonstrated as students evaluate their completed dishes. In addition, this course reinforces proper kitchen procedures, care and use of equipment, sanitation, and safe and efficient work methods. Prerequisite: CUL 171

CUL 285 - International Cuisine ..... **(4:3:4)**
This course introduces various international cuisines and their ingredients, preparation methods, and cultural influences. Students prepare menus that focus on the taste, flavors, and styles of diverse cuisines. Advanced cooking techniques are applied, and emphasis on critical thinking skills are demonstrated as students evaluate their completed dishes. Prerequisite: CUL 280

CUL 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

CVS 109 - Intro to Clin Internship II ..... **(1:0:4)**
Continuation of DMS 108 Introductory clinical course offers practical experiences in clinical setting for application of previously learned principles. Prerequisites: DMS 108

CVS 201 - Clinical Internship I ..... **(3:0:15)**
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.

CVS 202 - Clinical Internship II ..... **(7:1:30)**
This course, a continuation of CVS 201 Clinical Internship I, provides an expanded clinical environment with emphasis on the comfort and safety of the patient while maintaining quality performance in diagnostic medical sonographic procedures. A review of echocardiography is also included. Prerequisite(s): CVS 201

CVS 203 - Clinical Internship III ..... **(7:1:30)**
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

CVS 210 - Scanning Applications ..... **(1:1:1)**
This course is designed to integrate and apply previously learned knowledge and skills to strengthen sonographic knowledge and scanning techniques. Emphasis is on vascular studies of extremity arteries, extremity veins, and cerebrovasculature. A presentation of sonographic pathology research is also included. Prerequisite(s): ECH 112 and VAS 112

CWE 189 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

CWE 201 - Co-Op Education I-1st level ..... (3:0:10)
A work experience project for independent study with individualized instruction at an instructor approved job site. Requires prior department approval. Prerequisites: none

CWE 202 - Co-Op Education I - 2nd Level ..... (3:0:10)
A work experience project for independent study with individualized instruction at an instructor approved job site. Requires prior department approval. Prerequisites: none

CWE 203 - Co-Op ..... (5:0:15)
Provides students with an opportunity to learn through experience. The student will analyze tasks, duties, responsibilities, and other important elements of their technology. Requires prior department approval. Prerequisites: None

CWE 289 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

CYF 640 - CCNP-America's Promise Grant ..... (24::)
Learn the knowledge and skills needed to plan, implement, secure, maintain and troubleshoot converged enterprise networks. Industry relevant instructional approaches will prepare the students to meet industry requirements for professional IT positions such as CCMP ROUTE: Implementing IP Routing, CCNP Switch: Implementing IP Switching, and CCNP TSHOOT: Maintaining and Troubleshooting IP Networks.

DAC 141 - Intro Drug&Alcohol Counseling ..... (3:3:0)
This introductory course examines the physiological, psychological, and sociological impact of substance use disorders. Emphasis is on the disease concept of addiction and its progressive nature (systems approach). Prerequisites: HMS 121

DAC 189 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

DAC 225 - Drug & Alcohol Counseling II ..... (3:3:0)
This course focuses on practice in the development of client-worker relationship skills with emphasis on clients with substance use or abuse disorders. Prerequisites: ENG 102 and HMS 122 and HMS 123 and DAC 141

DAC 230 - Assessmnt/Trtmnt/D&A Counslng ..... (3:3:0)
This course is an overview of various types of addiction and the resulting characteristics and behavior patterns of the addicted individual. Emphasis is on etiology, assessment, and treatment. Prerequisites: (Test score or ENG 101 or higher) and DAC 141

DAC 240 - Families & Addiction ..... (3:3:0)
This course examines the impact of drug and alcohol addiction on the family. Emphasis is on reviewing models of family dysfunction and methods of treating the addicted family. Prerequisites: DAC 141

DAC 244 - Dir Practice II-Drug/Alcohol ..... (6:1:15)
In this course, students 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 in the work of the agency. Emphasis is placed on individual growth in self-awareness, interpersonal communication, interviewing skills, introduction to the agency, and the client system. Prerequisites: HMS 243

DAC 289 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

DEN 901 - IBEW Apprenticeship Program ..... (47:0:0)
Course credit awarded for successful completion of the electrical workers apprenticeship program through the IBEW Local Union 313. A letter verifying journeyman status from the Joint Apprenticeship and Training Committee IBEW is required.

DEN 902 - Carpenters Apprenticeship Prog ..... (47:0:0)
Course credit awarded for successful completion of the Carpenters Apprenticeship Program through the Carpenters Union Local #626. A letter verifying journeyman status from the Carpenters' Union is required. Prerequisites: None

DHY 101 - Clinical Dental Hygiene I ..... (2:1:6)
This clinical experience course is designed for practical application of the didactic information presented in DHY 111 – Dental Hygiene Fundamentals I. The seminar focuses on problem-solving and sharing clinical experiences. Prerequisite(s): BIO 120

DHY 102 - Clinical Dental Hygiene II ..... (3:1:10)
This clinical experience course is designed for practical application of the didactic information presented in Dental Hygiene Fundamentals I and Dental Hygiene Fundamentals II. The seminar focuses on problem-solving and sharing clinical experiences. Prerequisite(s): DHY 101

DHY 103 - Clinical Dental Hygiene III ..... (2:1:6)
This clinical experience course is designed for students to incorporate knowledge and skills in the treatment of all types of patients. The seminar focuses on problem-solving and sharing clinical experiences. Prerequisite(s): DHY 102

DHY 111 - Dental Hygiene Fundamtls I ..... (3:3:0)
This introductory dental hygiene care course focuses on clinic preparation procedures, patient assessment, and principles of instrumentation. Topics also include medical emergencies in the dental setting and initial supplemental procedures for patient care. Prerequisite(s): CHM 110

DHY 112 - Dental Hygiene Fundamentals II ..... (3:2:3)
A continuation of Dental Hygiene Fundamentals I, this course is designed to develop new skills appropriate to dental hygiene treatment. Its focus is on various patient populations, their characteristics, common treatment needs, and patient management in addition to ethical and legal issues of dental hygiene care. Prerequisite(s): DHY 111

DHY 121 - Oral Histology/Embryology ..... (2:2:1.5)
The course covers the oral mucosa, the periodontium, dental tissues, the tongue, and salivary glands. Emphasis is placed on microscopic features of these oral tissues as they relate to their clinical characteristics, their functions, and their embryologic development. Prerequisite(s): BIO 120

DHY 132 - Dental Anatomy ..... (1.5:1.5:0.8)
This course covers 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. Prerequisite(s): BIO 120

DHY 133 - Head and Neck Anatomy ..... (1.5:1.5:0.5)
This course covers the gross anatomy of structures in the head and neck region. Major topics include bones, muscles, the temporomandibular joint, cranial nerves, blood supply, and venous and lymphatic drainage. Prerequisite(s): BIO 120

DHY 141 - Oral Radiography ..... (3:2:2)
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

DHY 151 - Periodontology/Cariology ..... (3:3:0)
This course focuses on the etiology and clinical manifestations of periodontal diseases and dental caries as well as their impact on systemic health. The role of the dental hygienist in the assessment, prevention, and treatment

of these diseases is emphasized. Prerequisite(s): DHY 121

DHY 161 - Oral Pathology ..... **(3:3:0)**
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.

DHY 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

DHY 204 - Clinical Dental Hygiene IV ..... **(4:1:13)**
This clinical experience course incorporates all previous and current knowledge and techniques learned in related dental hygiene courses into treatment for a full spectrum of patients. The course's seminar emphasizes problem solving and sharing of clinical experiences. Prerequisite(s): DHY 103

DHY 205 - Clinical Dental Hygiene V ..... **(4:1:16)**
This final clinical experience course incorporates all previous and current knowledge and techniques learned in related dental hygiene courses into treatment for a full spectrum of patients. The course seminar emphasizes problem-solving and sharing of clinical experiences. Prerequisite(s): DHY 204

DHY 212 - The Compromised Dental Patient ..... **(1.5:1.5:1)**
This seminar and clinic lab course focuses on the needs and treatment of the mentally, physically, and medically compromised patient. The course methods include a variety of lectures, discussions, films, laboratory exercises, field trips, and clinical sessions. Prerequisite(s): BIO 125 and DHY 112

DHY 213 - Adv Clinical Techniques ..... **(3:2:2)**
This course covers additional clinical techniques, building on skills introduced in radiography, periodontology, and previous clinical courses. The laboratory methods supplement the lecture portion and include skills related to oral radiography, periodontology, and clinical dental hygiene practice. Prerequisite(s): DHY 141

DHY 215 - Practice Management ..... **(1:1:0)**
This course is designed to assist the student seeking a professional career in dental hygiene. Emphasis is placed on interview skills, legal implications, professional organizations, alternative practice settings, and dental office management. Prerequisite(s): DHY 212

DHY 271 - Pharmacology for DHY ..... **(1.5:1.5:0)**
This course introduces pharmacologic principles and therapeutic application to healthcare. Special emphasis is placed on therapeutic agents used in dental practice as well as other agents that may impact the practice of dental hygiene. ..... Prerequisite(s): DHY 112

DHY 281 - Operative/Specialty Dentistry ..... **(1:1:0.5)**
This course focuses on the concepts of operative dentistry, including chemical and physical properties of materials, and information on procedures in specialty areas of the dental practice. Prerequisite(s): DHY 213

DHY 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

DHY 290 - Community Dental Health ..... **(2:2:0)**
This course focuses on healthcare problems and systems within the community setting. Content includes addressing health needs through assessment, planning, and evaluation of dental health programs. Prerequisite(s): DHY 112

DHY 291 - Communty Dental Health Fldwrk ..... **(1:0:2)**
This course focuses on fieldwork experiences that provide direct involvement with community members. Content includes addressing dental health needs through assessment, planning, implementation, and evaluation of programs. Prerequisite(s): DHY 290

DMS 104 - Intro to Clinical Internship ..... **(1:0:7)**
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 (Test scores or MAT 153 or higher) and PHY 111

DMS 106 - Intro-Patient Care/Sonography ..... **(3:3:1)**
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)

DMS 107 - Essentials in Pt. Care/Sono ..... **(3:3:1)**
This introductory course covers patient care skills necessary to perform diagnostic sonographic procedures on all patient populations in the field. Prerequisites: (Test Score or ENG 101 or higher) and (Test score or MAT 153 or higher) and BIO 120 and PHY 111.

DMS 108 - Intro to Clin Internship I ..... **(1:0:4)**
This introductory clinical course provides orientation experiences in a clinical setting for application of previously learned principles. Prerequisite(s): DMS 106

DMS 109 - Intro to Clin Internship II ..... **(1:0:4)**
This continuation of Intro to Clinical Internship I offers practical experiences in a clinical setting for application of previously learned principles. Prerequisites: DMS 108

DMS 110 - Acoustical Physics ..... **(3:3:0)**
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: (Test score or MAT 153 or higher) and (DMS 106 or DMS 107)

DMS 112 - OB/GYN Sonography I ..... **(2:2:1.5)**
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: (Test score or ENG 101 or higher) and (Test score or MAT 153 or higher) and BIO 120 and PHY 111.

DMS 113 - Gynecological Sonography ..... **(2:2:1)**
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

DMS 114 - Obstetrical Sonography ..... **(2:2:1)**
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

DMS 121 - Abdominal Sonography I ..... **(2:2:1)**
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

DMS 122 - Abdominal Sonography II ..... **(2:2:1)**
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

DMS 131 - Abd/Small Parts Sono. I ..... **(2:2:1.5)**
This course studies the diagnostic medical sonography of the abdomen to include cross-sectional anatomy, physiology and pathophysiology of abdominal viscera. Prerequisites: (Test Score or MAT 153 or higher) and BIO 120 and PHY 111 and (Test Score or ENG 101 or higher)

DMS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

DMS 201 - Clinical Internship I ..... **(3:0:15)**
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

DMS 202 - Clinical Internship II ..... **(7:1:30)**
This course, a continuation of DMS 201 Clinical Internship I, provides an expanded clinical environment with emphasis on the comfort and safety of the patient while maintaining quality performance in diagnostic medical sonographic procedures. Prerequisite(s): DMS 201

DMS 203 - Clinical Internship III ..... **(7:1:30)**
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

DMS 210 - Scanning Applications ..... **(1:1:1)**
This course integrates 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 112 and VAS 112

DMS 211 - Abdominal Sonography III ..... **(1:1:0)**
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

DMS 214 - Essentials in Vascular U/S ..... **(2:2:1)**
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

DMS 215 - OB/GYN Sonography II ..... **(2:2:1)**
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

DMS 230 - Special Topics ..... **(2:2:0)**
This course integrates knowledge learned in previous courses to produce thorough, sequential information in areas of special topics pertaining to diagnostic medical sonography. Pathology research presentations 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. Prerequisite(s): DMS 202 or CVS 202

DMS 231 - Abd/Small Parts Sono. II ..... **(2:2:1)**
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

DMS 235 - Pediatric Sonography ..... **(1:1:0)**
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.

DMS 240 - Clinical Internship I ..... **(3:0:16)**
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.

DMS 241 - Clinical Internship II ..... **(6:0:32)**
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

DMS 242 - Clinical Internship III ..... **(5:0:24)**
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

DMS 243 - Clinical Internship IV ..... **(5:0:24)**
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

DMS 250 - Selected Topics in U/S ..... **(2:2:0)**
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

DMS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

DVR 001 - DVR Student Enrichment ..... **(0:4:)**
The DVR Student Enrichment course provides additional support to students who receive assistance through the Division of Vocational Rehabilitation. This course is designed to assist in the transition of new students into the college setting and environment through academic support workshops and tutoring assistance. Prerequisites: None

EAP 093 - Academic Reading ..... **(3:3:0)**
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

EAP 094 - Accelerated Academic Reading ..... **(2:2:0)**
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

EAP 095 - Academic Communication ..... **(2:2:0)**
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

EAP 097 - Academic Research ..... **(2:2:0)**
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: (ESL 042 and ESL 044 and ESL 046), EAP 093 or concurrent, or EAP 094 or concurrent, or EAP 095 or concurrent, or ENG 101 or concurrent, or ENG 102 or concurrent

EBZ 220 - Fundamentals of E-Commerce ..... **(3:3:0)**
This course explores electronic commerce concepts, models, and strategies necessary to effectively build and manage e-commerce applications. Students 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, electronic data interchange (EDI), e-commerce payment systems, accounting in e-commerce systems, regulatory and legal issues, and web marketing. Prerequisite: BUS 101

EBZ 221 - Strategic Aspects: E-Business ..... **(4:3:2)**
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

ECE 111 - Childhd Nutrition/Safety ..... **(3:3:0)**
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 EAP 093 or higher)

ECE 120 - Comtemp Issues in Erly Childhd ..... **(3:3:0)**
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 EAP 093 or higher)

ECE 121 - Infant & Toddler Methods & Lab ..... **(4:3:4)**
This course introduces programs designed for infants and toddlers. The emphasis is on child/caregiver interaction, developmentally appropriate practice for infants and toddlers, and managing child care programs. Topics include plans for developmentally appropriate activities for infants and toddlers in the areas of social/emotional development, cognitive and language development, and sensory motor development. The course requires 45 hours of field experience. Prerequisite: ENG 090 or ENG 091or higher

ECE 123 - Early Childhd Methods I & Lab ..... **(4:3:4)**
This course introduces language arts, literacy, science, social studies, and math curricula for children three to eight years of age. Emphasis is on the importance of these various disciplines in the child's overall development and teaching and learning strategies appropriate to each discipline. The course requires 45 hours of field experience at a center. Prerequisite: PSY 125 and ECE 121

ECE 125 - Early Childhd Methods II & Lab ..... **(4:3:4)**
This course introduces art, technology, dramatic play, music, and movement for children three to eight years of age. Emphasis is on the importance of these various areas in the child's overall development and appropriate teaching and learning strategies. The course requires 45 hours of field experience. Prerequisites: PSY 125 and ECE 120 and ECE 121

ECE 127 - Childhood Classroom Mgt ..... **(3:3:0)**
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

ECE 130 - Early Childhood Leadership I ..... **(3:3:0)**
In this course, students examine the leadership role and are introduced to a model of facilitative leadership as a way to empower staff and support shared decision making. Students are introduced to a comprehensive model for hiring and supervising staff, and for promoting ongoing professional development. Students develop and practice the skills needed to nurture a positive work climate that promotes peak performance. Prerequisites: None

ECE 131 - Early Childhood Leadership II ..... **(3:3:0)**
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

ECE 132 - Early Childhood Leadership III ..... **(3:3:0)**
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

ECE 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ECE 222 - Program Planning/Evaluation ..... **(3:3:0)**
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.

ECE 226 - Assessment of Young Children ..... **(3:3:0)**
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

ECE 233 - Intro to Exceptional Learners ..... **(3:3:0)**
This course is an overview of diverse learners with a major emphasis on inclusive and collaborative educational practices. Students examine evidence-based methods for supporting the needs of diverse learners through a family-centered approach. Prerequisites: PSY 121 and (PSY 125 or PSY 126)

ECE 244 - Fld Work - Teaching Practicum ..... **(6:1:14)**
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 concurrent) and ECE 226 and ECE 233 and EDC 120 and (EDC 220 or concurrent)

ECE 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ECH 111 - Echocardiography Techniques I ..... **(3:3:1.5)**
This course introduces the fundamental skills and principles needed to perform echocardiography including technologist and patient safety. Topics include the standard two dimensional (2D) 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. Prerequisite(s): BIO 120 and DMS 106

ECH 112 - Echocardiography Techniques II ..... **(3:3:1.5)**
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 apreviously learned principles. Prerequisites: ECH 111

ECH 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ECH 213 - Echocardiography Technique III ..... **(3:3:1)**
This course is a continued study of Echocardiography Techniques II. Emphasis is on the performance proficiency of Doppler echocardiography. The study of embryology and congenital heart diseases is also included. Prerequisite(s): ECH 112

ECH 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ECO 111 - Macroeconomics ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

ECO 122 - Microeconomics ..... **(3:3:0)**
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 EAP 093 or higher) and (Test Scores or MAT 010 or higher)

ECO 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chair.

ECO 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chair.

EDC 100 - Professional Pre Praxis Core ..... **(1:1:0)**
This course reviews mathematics, reading, and writing concepts and strategies to prepare for the Praxis Core test required for teacher certification. Test taking strategies and stress reduction techniques are included. Prerequisite: (Test scores or ENG 101 or higher) and (Test scores or MAT 020 or higher)

EDC 101 - Intro to Paraeducator Issues ..... **(3:3:0)**
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 is emphasized. Topics include standards-based education, diversity issues, and career opportunities in education. Field experience/observation hours and documentation of ParaPro test scores are course requirements. Prerequisites: (Test score or ENG 090 or ENG 091 or EAP 093 or higher)

EDC 115 - Nature of Science ..... **(1:1:0)**
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 EAP 093 or higher) and (Test score or MAT 010 or higher).

EDC 120 - Foundations of Literacy ..... **(3:3:0)**
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)

EDC 150 - Issues in Elementary Education ..... **(3:3:0)**
This course provides an overview of teaching as a profession. The philosophical, historical, and social foundations of teaching and learning are explored, and national and state curriculum frameworks are examined. Field experience is a course requirement. Prerequisites: (Test scores or ENG 101 or concurrent or higher)

EDC 211 - Classroom Management ..... **(3:3:0)**
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

EDC 220 - Parent/Family/School Interact ..... **(3:3:0)**
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 families and with the community and community agencies. Prerequisites: PSY 121 and ((PSY 125 or concurrent) or (PSY 126 or concurrent)).

EDC 250 - Internship & Seminar ..... **(4:1:9)**
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

EDC 260 - Educational Psychology ..... **(3:3:1)**
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

EDD 131 - Engineering Graphics/CAD ..... **(3:2:4)**
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 EAP 093 or higher) and (Test Scores or MAT 010 or higher)

EDD 141 - Engr Drafting & Design I ..... **(4:2:5)**
In this course, students are introduced to 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 MAT 010 or higher) and (Test Score or ENG 090 or ENG 091 or EAP 093 or higher)

EDD 142 - Engr Drafting & Design II ..... **(3:2:2)**
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

EDD 161 - Intro - CAD using MicroStation ..... **(3:2:2)**
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

EDD 171 - Intro to CAD Using AutoCAD ..... **(3:2:2)**
In this course, students are introduced to computer-aided design (CAD) and how to use AutoCAD software to create quality two-dimensional (2D) designs. Emphasis is placed on AutoCAD's tools and features to create designs, manipulate and modify elements, assemble project data, and create printed output. Prerequisite: (AET 123 or concurrent) or (CET 125 or concurrent) or (EDD 141 or concurrent)

EDD 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EDD 233 - Engr Drafting and Design III ..... **(3:2:2)**
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

EDD 234 - Eng. Drafting - Piping ..... **(3:2:2)**
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

EDD 246 - Eng. Drafting - Structural ..... **(3:2:2)**
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)

EDD 249 - Engineering Design Process ..... **(3:2:2)**
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

EDD 271 - Advanced CAD ..... **(3:2:2)**
This course is a continuation of the Introduction to CAD course. Students elaborate on advanced computer-aided drawing and editing commands, symbol libraries, attributes, and pictorial drawings. Prerequisite: EDD 171

EDD 272 - Solid Modeling ..... **(3:2:2)**
In this course, students are introduced to the concepts and commands of parametric solid modeling. Students create and add relationships to sketches; extrude the sketches to create models; and 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)

EDD 273 - Advanced Solid Modeling ..... **(3:2:2)**
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

EDD 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EDT 128 - Machine Trades Blueprnt Rding ..... **(3:3:0)**
This course covers the interpretation of detail working prints involving multiview, sectional, and auxiliary views as well as more complex assembly drawings. Geometric tolerancing is also studied. Prerequisites: (Test Scores or MAT 010 or higher) and (Test Score or ENG 090 or ENG 091 or EAP 093 or higher)

EDT 152 - Engineering Design II ..... **(4:3:3)**
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. Prerequisite: EDD 141

EDT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EDT 252 - Engineering Design III ..... **(4:3:3)**
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 higher) and MET 123 and (MET 132 or concurrent)

EDT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ELC 101 - Intro to Instrumentation ..... **(3:2:2)**
This course provides the student with instrumentation fundamentals required to understand the measurement and control aspects of plant operations. Prerequisites: (Test Scores or ENG 909 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 020 or higher)

ELC 102 - Basic Electricity for Aviation ..... **(3:2:3)**
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 MAT 010 or higher) and (Test Score or ENG 090 or ENG 091 or EAP 093 or higher)

ELC 125 - Electrical Circuits I ..... **(4:3:3)**
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 EAP 093 or concurrent or higher) and (Test scores or MAT 020 or concurrent or higher)

ELC 126 - Analog Electronics I ..... **(3:2:2)**
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. Prerequisite: ELC 125 and MAT 180 or concurrent

ELC 127 - Digital Electronics ..... **(4:3:3)**
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 EAP 093 or concurrent or higher) and (Test score or MAT 020 or concurrent or higher)

ELC 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ELC 205 - Computer Networks and System I ..... **(4:3:2)**
This course introduces the fundamentals of data communications and computer network principles and applications. Students install, configure, and troubleshoot basic network hardware, peripherals, emphasizing hands-on practical experiences. Topics include network topologies, protocols, cabling systems, wireless transmission, and security. Prerequisites: CEN 150 and CEN 180 and ELC 125

ELC 206 - Computer Networks & Systems II ..... **(3:2:3)**
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

ELC 225 - Electrical Circuits II ..... **(4:3:3)**
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 190 or concurrent)

ELC 226 - Analog Electronics II ..... **(3:2:2)**
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 (FETs), 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 190 or concurrent) and (ELC 225 or concurrent)

ELC 227 - Microcontroller Fundamentals ..... **(3:2:3)**
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

ELC 228 - Microcontroller Applications ..... **(4:3:4)**
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

ELC 236 - Analog Electronics III ..... **(4:3:2)**
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

ELC 243 - Programmable Logic Controllers ..... **(4:3:3)**
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

ELC 248 - Electro-Mech. Systems ..... **(4:3:3)**
This course covers 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. Prerequisite: (Test Scores or MAT 190 or higher) and PHY 205

ELC 260 - Biomedical Instrumentation ..... **(4:3:3)**
This course introduces and applies the operation and maintenance of biomedical equipment in the classroom and laboratory environment. Students learn to evaluate, test, troubleshoot, and repair various types of equipment commonly used in the medical field. Prerequisite: ELC 127 and ELC 226 or concurrent

ELC 261 - Biomedical Instrumentation II ..... **(4:3:3)**
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

ELC 265 - Intro to Digital Systems ..... **(3:2:4)**
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

ELC 266 - Analog Circuits I ..... **(4:3:4)**
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

ELC 270 - Process Instrumentation I ..... **(4:3:2)**
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 measurment. Prerequisites: ELC 101 and (PHY 111 or PHY 205 or PHY 281)

ELC 272 - Electronic Circuit Analysis I ..... **(4:3:4)**
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

ELC 275 - Microprocessor Systems ..... **(4:3:4)**
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

ELC 282 - Signals and Systems ..... **(4:4:0)**
This course is an introduction to signals and systems, with an emphasis on time and frequency characterization of linear, time-invarient 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

ELC 283 - Introduction to LabVIEW ..... **(3:2:2)**
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

ELC 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ELC 290 - Internship ..... **(4:1:9)**
This course offers an applied work experience in a campus repair shop, a computer store, or a related business or industry. Prerequisite: ELC 126 and ELC 127

ELC 291 - Biomed Electronics Internship ..... **(3:0:10)**
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

ELM 130 - Industrial Electricity ..... **(3:2:3)**
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: (Test Score or (MAT 180 or concurrent) or higher)

ELM 155 - Manufacturing Topics ..... **(4:3:2)**
This course introduces product development and production manufacturing. Topics include design requirements and manufacturing processes used in industry such as casting, molding, forming, cutting, and welding. Course topics also includes quality assurance, 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. Prerequisite: (Test score or MAT 180 or higher)

ELM 175 - Process Ctrl & Instrumentation ..... **(4:3:3)**
This course covers the instrumentation fundamentals necessary to understand the process control aspects of industrial plant operations. Topics include the measurement and application of pressure, temperature, flow, and level devices. Prerequisite: (Test Score or MAT 180 or higher) and (ELM 205 or concurrent)

ELM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ELM 205 - Mechanisms and Design ..... **(3:2:4)**
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: (Test score or MAT 180 or concurrent)

ELM 230 - Industrial Electronics ..... **(3:2:3)**
This course covers applications of industrial electronic components, including diodes, unijunction transistors (UJTs), silicone controlled rectifiers (SCRs), photoelectronics, sensors, transducers, operational amplifiers, and motor control circuits. Prerequisites: ELM 130 or CEN 100

ELM 243 - Indust Program Logic Control ..... **(4:3:3)**
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: ELM 230

ELM 250 - Industrial Automation ..... **(3:2:4)**
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: (ELM 243 or concurrent)

ELM 252 - Fluid Power ..... **(3:2:4)**
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.

ELM 253 - Advd Programble Logic Control ..... **(4:3:3)**
This course covers advanced topics of programmable logic controllers (PLC) systems. Topics include conversion of ladder logic programming into sequential function, function block, and structured text languages; analog and digital interfacing; human machine interfaces; and advanced PLC applications. Prerequisite: ELM 243

ELM 289 - Approved Technical Elective ..... **(3:0:0)**
Students may complete technical electives for which they have written prior approval of the department chairperson. Prerequisites: None

ELM 290 - Electromechanical Internship ..... **(3:0:9)**
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

EMT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have prior approval of the department chairperson.

EMT 200 - Intro To Paramedic Technology ..... **(5:3:7)**
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 Corequisites: EMT 201 and EMT 207

EMT 201 - Patient Assessment ..... **(3:3:0)**
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 Corequisites: EMT 200 and EMT 207

EMT 202 - Medical Emergencies I ..... **(3:3:0)**
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, gastronintestinal, 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 CoreqUISITES: EMT 203 and EMT 217

EMT 203 - ALS Skills Lab I ..... **(3:0:10)**
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 CoreqUISITES: EMT 217

EMT 204 - Special Populations ..... **(4:4:0)**
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. Corequisites: EMT 213 and EMT 227

EMT 207 - Paramedic Clinical I ..... **(1:0:4)**
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 Corequisites: EMT 200 and EMT 201

EMT 211 - Cardiology ..... **(4:4:0)**
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. Corequisites: EMT 203 and EMT 217

EMT 212 - Medical Emergencies II ..... **(3:3:0)**
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. Corequisites: EMT 213 and EMT 227.

EMT 213 - ALS Skills Lab II ..... **(3:0:10)**
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 Corequisites: EMT 227

EMT 214 - Legal Issues/Research ..... **(3:3:0)**
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

EMT 215 - Trauma Emergencies ..... **(2:2:0)**
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. Corequisites: EMT 213 and EMT 227.

EMT 217 - Paramedic Clinical II ..... **(3:0:15)**
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. Corequisites: EMT 203.

EMT 224 - Applied Prehospital Research ..... **(2:2:)**
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

EMT 227 - Paramedic Clinical III ..... **(3:0:15)**
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. Corequisites: EMT 213.

EMT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EMT 290 - Paramedic Field Clinical ..... **(4:1:15)**
This course provides a supervised clinical experience in the prehospital setting. Students manage trauma and medical patients across all age groups as a team leader. Prerequisites: EMT 204 and EMT 212 and EMT 213 and EMT 215 and EMT 227

ENG 006 - Introductory Reading & Writing ..... **(7:7:)**
This 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. Prerequisite: None

ENG 007 - Intro Reading & Writing (ACC) ..... **(2:2:)**
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

ENG 090 - Reading & Writing ..... **(5:5:0)**
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. Prerequisite: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher)

ENG 091 - Reading & Writing (ACC) ..... **(2:2:)**
This accelerated 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

ENG 100 - Grammar Essentials ..... **(1:1:)**
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

ENG 101 - Crit Thinking & Acad Writing ..... **(3:3:)**
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. Prerequisite: (Test scores or ENG 090 or ENG 091 or higher or EAP 093 or higher)

ENG 102 - Composition and Research ..... **(3:3:)**
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

ENG 111 - Honors Composition & Research ..... **(3:3:)**
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. Prerequisites: ENG 101 or higher and English department chairperson approval

ENG 122 - Technical Writing-Comm ..... **(3:3:0)**
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

ENG 124 - Oral Communications ..... **(3:3:0)**
This course emphasizes listening and oral communication skills through practice in individual and group activities. Prerequisite: (Test score or ENG 102 or higher)

ENG 126 - American Literature I ..... **(3:3:0)**
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

ENG 127 - American Literature II ..... **(3:3:0)**
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

ENG 128 - African-American Literature ..... **(3:3:0)**
This literature course traces the contributions of African-Americans from the colonial era to the present. Prerequisites: Test score or ENG 102 or higher

ENG 129 - Creative Writing ..... **(3:3:0)**
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

ENG 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have

written prior approval of the department chairperson.

ENG 250 - Research and Technical Writing ..... **(3:3:0)**
This advanced, college-level course reviews and applies primary and secondary research methods in technical communication. Strategies are implemented to identify and solve problems that arise in organizational contexts/workplace environments to create professional reports, both written and oral, for appropriate audiences. Prerequisites: (Test score or ENG 102 or higher) and PHL 103 and (MAT 129 or MAT 153 or MAT 180 or MAT 255) and (BIO 110 or BIO 120 or BIO 140 or BIO 150)

ENG 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ENT 101 - Intro to Entrepreneurship ..... **(3:3:0)**
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 for ENG 090 or concurrent or ENG 091 or concurrent or EAP 093 or concurrent or higher).

ENT 103 - Legal Issues for ENT ..... **(3:3:0)**
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 EAP 093 or higher) and (ENT 101 or BUS 101)

ENT 106 - Business Procedures ..... **(3:3:0)**
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

ENT 211 - Business Start Up Design ..... **(3:3:0)**
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. Prerequisite: (ENT 101 or BUS 101) and ENT 103 or concurrent

ENT 220 - Leadership ..... **(3:3:0)**
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

ENT 225 - Entrepreneurial Experience ..... **(3:3:0)**
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

ENT 240 - Funding & Finance for ENT ..... **(3:3:0)**
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: (Test scores or MAT 145 or MAT 153 or higher) and (ACC 100 or ACC 101) and (BUS 101 or ENT 101)

ENT 285 - Business Plan Development ..... **(3:3:0)**
In this course, students prepare professional, comprehensive business plans that guide student business start-ups and address capital funding. Students present their business plans to community leaders. Prerequisite: ENT 103 or concurrent and ENT 211 or concurrent

ENV 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ENV 190 - Intro to Envtl Science & Tech ..... **(3:3:0)**
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, and solid and hazardous waste management. Prerequisite: (Test scores or ENG 090 or ENG 091 or higher) and (Test scores or MAT 020 or concurrent or higher)

ENV 215 - OSHA Hazardous Waste Operation ..... **(2:2:1)**
This course provides simulation and hands-on exercises as they relate to hazardous materials and hazardous waste. Prerequisites: (CHM 110 or higher)

ENV 240 - Environmental Field Sampling ..... **(3:2:4)**
This course examines theory, application, methodology, and instrumentation used in the sampling and analysis of environmental contaminants. Topics include water sampling, air quality sampling, soil sampling, National Pollution Discharge Elimination System (NPDES) permitting, solid waste management, water treatment, and municipal/industrial wastewater treatment. Prerequisite: BIO 150 and CHM 110

ENV 256 - Process Control ..... **(3:3:0)**
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 MAT 020 or higher)

ENV 260 - Water/Wastewater Process Dsgn ..... **(3:2:2)**
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: MAT 180 and (BIO 150 or concurrent) and CHM 110 and CET 125 and ENV 190

ENV 264 - Wtr Srcs, Trnsmssn & Dstrbtn ..... **(3:3:0)**
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 EAP 093 or higher) and (Test Scores or MAT 010 or higher)

ENV 267 - Water Treatment ..... **(4:3:2)**
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 EAP 093 or higher) and (Test Scores or MAT 020 or higher)

ENV 271 - Principles of Site Assessment ..... **(3:3:0)**
This course is an overview of the major principles and techniques required to conduct a Phase I and Phase II environmental site assessment. The course provides students with the opportunity to examine federal, state, and local government structures as they relate to the site assessment. In addition, students conduct an in-depth assessment of the site in the form of a Phase I Environmental Site Assessment using American Society for Testing and Materials standards (ASTM 1527). Prerequisites: (Test scores or ENG 102 or higher) and ENV 190 and CHM 110.

ENV 275 - Environmental Sustainability ..... **(3:2:4)**
The focus of this course is on sustainable growth, design, and development. Emphasis is on Delaware-specific regulations and environmental issues, including water quality, habitat, stormwater and drainage, sustainable development, and sea-level rise. Students identify and evaluate development options that result in more sustainable places to live and work. Prerequisite: ENV 260 and CET 240 and ENV 271 and ENV 190

ENV 276 - Honors Envrmntl Internship ..... **(2:0:6)**
This course provides work experience in research, industry, service, manufacturing, or other facilities in a related field. Prerequisite: Department Approval

ENV 277 - Envrnmtl Engineering Processes ..... **(3:3:)**
This course applies mathematical and chemical concepts to quantitatively analyze contaminant behavior in natural and engineering environments. Prerequisite: MAT 282 and CHM 151

ENV 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ENV 292 - Wastewater Sys & Solid Hndling ..... **(4:3:2)**
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 091 or EAP 093 or higher) and (Test Scores or MAT 020 or higher)

ENV 293 - Mgmt of Wastewater/Water Fac ..... **(4:3:3)**
This course introduces students to the fundamental practices that are utilized in managing a water or wastewater facility. Topics include the functions of operator, operation and maintenance from a management perspective, regulatory compliance, reporting requirements, audits, safety and financial management. Prerequisites: (Test score or ENG 121 or ENG 125) and MAT 181 and (BIO 140 or BIO 150).

ENV 298 - Instrumentation & Pumping ..... **(3:2:2)**
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 EAP 093 or higher) and (Test Scores or MAT 020 or higher)

ESL 022 - Beginning ESL Reading/Vocab ..... **(4:4:0)**
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

ESL 024 - Beginning Writing ..... **(4:4:0)**
In this beginning-level writing course, students develop the writing and vocabulary skills necessary for basic communication as well as build a foundation for further study. Prerequisite: None

ESL 026 - Beginning Grammar/Comm ..... **(8:8:1)**
This course introduces students to the grammar necessary for communication in basic everyday situations. Prerequisites: none

ESL 028 - Beginning Listenng/Speakng ..... **(4:4:0)**
In this beginning level listening and speaking course, students will listen to simple commands, directions, and limited conversations to do task-oriented activities. Students will use target structures and new vocabulary to talk about the basic topics. Prerequisites: None

ESL 030 - American Cultural Experience ..... **(3:3:0)**
In this course, ESL students explore and experience venues and events important to Delaware culture and history. Students participate in on and off-campus learning activities to become more familiar with the local community. Prerequisites: Test scores or ESL 028

ESL 031 - Personal Computers for ESL ..... **(3:3:0)**
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.

ESL 032 - Intermediate ESL Reading/Vocab ..... **(4:4:0)**
In this intermediate-level course, students read articles in order to expand vocabulary through context and basic comprehension. Students also become acquainted with the college library. Prerequisite: Test score or ESL 022

ESL 034 - Intermediate Writing ..... **(4:4:0)**
In this intermediate-level course, students compose simple, compound, and complex sentences in short paragraphs that show unity, organization, and coherence. Students are introduced to formal letter writing and electronic correspondence. Prerequisites: Test score or (ESL 024 and ESL 026)

ESL 036 - Intermediate Grammar/Comm ..... **(8:8:1)**
In this intermediate-level course, students expand their use of grammatical structures to facilitate communication in a variety of settings. Prerequisite: Test score or ESL 026

ESL 038 - Intermediate Listening/Speakng ..... **(4:4:0)**
In this intermediate-level course, students develop listening and speaking skills through interactive and task-based activities. Emphasis is on communicating in daily life situations. Prerequisites: ESL 026 and ESL 028

ESL 042 - Advanced ESL Reading/Vocab ..... **(4:4:0)**
In this advanced reading course, students expand their vocabulary, build context, and use reading strategies to enhance comprehension of written English. Prerequisite: Test score or ESL 032

ESL 044 - Advanced ESL Writing ..... **(4:4:0)**
In this advanced writing course, students consistently produce grammatically and contextually correct sentences in various tenses. Students also create unified, coherent paragraphs, and short essays as well as short paraphrases and summaries. Prerequisites: Test score or (ESL 034 and ESL 036)

ESL 046 - Advanced Grammar/Communication ..... **(8:8:0)**
In this advanced course, students are introduced to complex grammatical structures and develop mastery of English through a series of carefully sequenced communicative activities. Prerequisites: Test score or (ESL 034 and ESL 036)

ESL 048 - Advanced Listening/Speaking ..... **(4:4:0)**
In this advanced course, students expand listening and speaking skills through interactive and task-based activities. Emphasis is on understanding and expressing ideas and opinions in extended discourse on a broad range of topics. Prerequisite: ESL 036 and ESL 038

ESL 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have prior written approval of the department chairperson.

ESL 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have prior written approval of the department chair.

ESM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

ESM 199 - Advanced Credit Emer Serv Mgmt ..... **(30::)**
Thirty credits of approved course work offered through the Delaware Emergency Management Agency, the Delaware State Fire School, and other emergency management, fire, safety, and police training institutions and academies must be transferred into this program. See the Course Articulation List for training that has been pre-approved as meeting the technical course requirements. Students without ESM relevant work experience must complete a six credit practicum offered through Delaware Technical and Community, College, as part of the 30 credit requirement. When the 30 technical credit requirement is documented through established procedures as met, advanced credit will be awarded through ESM 199. Prerequisites: None

ESM 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EXS 100 - Introduction to Exercise Scien ..... **(4:3:2)**
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

EXS 101 - Functional Kinesiology ..... **(3:2:2)**
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

EXS 105 - Conditioning & Strength Trning ..... **(4:3:2)**
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

EXS 120 - Wellness and Health Promotion ..... **(3:3:1)**
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

EXS 135 - Exercise Science Clinical I ..... **(2:1:5)**
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

EXS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

EXS 200 - Nutrition for Sport & Exercise ..... **(3:3:0)**
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.

EXS 205 - Fitness for Special Populatns ..... **(3:3:1)**
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

EXS 225 - Advanced Exercise Testing ..... **(4:3:2)**
This course presents techniques for assessing cardiovascular fitness, flexibility, body composition, muscular strength, and pulmonary capacity. Emphasis is on safety guidelines and precautions. Prerequisite(s): EXS 135 and MAT 153

EXS 230 - Health Fitness Instruction ..... **(4:3:2)**
This course covers information in the American College of Sports Medicine (ACSM) Health/Fitness Specialist certification examination. Topics examined include methods to assess, design, and implement individual and group exercise and fitness programs for apparently healthy individuals and those with controlled disease. Case studies and coordinated laboratory activities are an integral part of this course. Prerequisites: EXS 135 and (Test scores or ENG 102 or higher)

EXS 235 - Exercise Clinical II ..... **(5:1:21)**
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

EXS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

FIN 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

FIN 221 - Money and Banking ..... **(3:3:0)**
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

FIN 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

FSM 123 - Intro to Food Service ..... **(3:3:0)**
The study and application of supervisory and managerial techniques used in quantity food preparation. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

FSM 151 - Field Experience I ..... **(3:1:5)**
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

FSM 152 - Field Experience II ..... **(3:1:5)**
This Supervised Field Experience will serve to aid the student in understanding the managerial or administrative aspects of food service. Prerequisites: FSM 151

FSM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have

written prior approval of the department chairperson.

FSM 210 - Quantity Food Production ..... **(3:2:3)**
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

FSM 265 - Effectv Food Serv Mrkt & Mngnt..... **(3:3:0)**
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

FSM 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

FSY 100 - Introduction to Food Science..... **(3:3:)**
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 EAP 093 or concurrent or higher)

FSY 110 - Food Safety & Sanitation..... **(3:2:2)**
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 EAP 093 or higher

FSY 120 - Technology of Food Processing..... **(3:2:2)**
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

FSY 205 - Principles of HACCP ..... **(3:2:2)**
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

FSY 210 - Food Safety & Defense ..... **(3:2:2)**
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. Prerequisite: FSY 110

FSY 220 - Food Chemistry..... **(4:3:2)**
This course includes chemical aspects of food composition. Emphasis is placed on the functional properties and chemical reactions of the major components of foods: carbohydrates, lipids, proteins, and water. Prerequisites: CHM 100

FSY 225 - Microbiology of Foods..... **(4:3:2)**
This course introduces cultural and morphological characteristics of microorganisms involved in food spoilage, food-borne disease, and good fermentation with emphasis on analysis of the microbiological quality of foods. Prerequisites: FSY 110 and BIO 140

FSY 290 - Food Safety Internship ..... **(5:1:12)**
The food safety internship applies and combines classroom and laboratory knowledge to actual work experiences. This course provides a supervised work experience for students to gain knowledge and experience related to food science and safety in the food production industry. Prerequisites: FSY 110 and FSY 120 and FSY 210 and FSY 220 and FSY 225

FSY 291 - Seminar in Food Safety..... **(2:2:)**
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

GEO 205 - Geology and the Environment ..... **(3:2:2)**
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. Prerequisite: (Test score or MAT 180 or higher) and (ENG 102 or concurrent)

GIS 101 - Introduction to GIS..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher)

GIS 110 - Spatial Data Analysis & Model ..... **(4:3:2)**
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 (Test score or MAT 180 or higher) and GIS 101.

GIS 120 - Data Acquisition & Management ..... **(4:3:2)**
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 (Test score or MAT 180 or higher) and GIS 101.

GIS 210 - Cartographic Design & Vis..... **(3:2:3)**
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

GIS 220 - Programming for GIS Techs..... **(4:3:2)**
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

GIS 230 - Geospatial Web App & Dev..... **(3:2:3)**
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)

GIS 240 - Emerging GIS Technologies..... **(3:2:3)**
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

GIS 260 - Geospatial Projects ..... **(4:3:3)**
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).

GIS 270 - GIS Co-op ..... **(2:0:7)**
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

GIS 271 - GIS Internship ..... **(2:0:7)**
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

GMM 904 - GM Training Pipefitter ..... **(45:0:0)**
Course credit awarded for successful completion of the GM apprenticeship pipefitter training program. Certification verifying journeyman status from the General Motors training facility is required.

GPS 001 - New Student Orientation ..... **(0:0:)**
The most successful students attend New Student Orientation (NSO)! Many new students are excited about beginning college but are often a little nervous too. NSO will help you become more familiar with campus resources and connect you with other students, faculty, and staff. Prerequisite: None

GPS 002 - Athlete Study Hall ..... **(0::)**
Athlete Study Hall provides a dedicated time and location for all student athletes to come together to prepare coursework and to study. Student athletes who attend study hall have the opportunity to be more successful in their classes. Each student athlete will select and attend two study hall sessions per week during fall and spring semesters. Prerequisite: None

HDM 101 - Intro Hmlnd Sec/Emrgncy Mngt ..... **(3:3:0)**
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 or EAP 093 or higher)

HDM 103 - Info/Intel Shrg in Hmlnd Sec ..... **(3:3:0)**
This course introduces systems and methods used by United States. intelligence agents; the venues and jurisdictional limits of various intelligence agencies; and the legal bases for intelligence gathering, analysis, and dissemination for homeland security purposes. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

HDM 105 - Environmental Hazards ..... **(3:3:)**
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 EAP 093 or higher) and HDM 101

HDM 110 - Issues Hmland Sec & Emg Mgt ..... **(3:3:0)**
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

HDM 202 - First Responders ..... **(3:3:0)**
This course covers the roles and responsibilities of emergency medical responders and law enforcement responders and the proper procedures they should use 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 EAP 093) and (HDM 101 or CRJ 101)

HDM 204 - All-Hzrds/Infra/Protection ..... **(3:3:0)**
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

HDM 225 - Supervision Leadership in E M ..... **(3:3:0)**
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).

HDM 244 - Introduction to Terrorism ..... **(3:3:0)**
This course examines the roots and impact of international and domestic terrorism. It also examines the various typses of terrorism, such as religious, state-sponsored, and individual. Prerequisites: ENG 101 and PSY 121 and SOC 111

HIM 100 - Intro to Health Information ..... **(3:2:2)**
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)

HIM 120 - Coding I ..... **(3:2:2)**
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

HIM 121 - Coding II ..... **(3:2:2)**
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

HIM 122 - Coding III ..... **(3:2:2)**
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

HIM 130 - Legal Aspects of HIM ..... **(3:3:)**
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

HIM 170 - Medical Coding Practicum ..... **(4:2:6)**
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. Prerequisite(s): HIM 120 and HIM 121. Corequisite(s): HIM 122

HIM 189 - Approved Technical Elective ..... **(3:3:0)**
Students may complete technical electives for which they have written prior approval of the department chairperson. Prerequisite: none

HIM 220 - HIM & Healthcare IT ..... **(3:2:2)**
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 255. Corequisite: ISY 143 and HIM 225

HIM 222 - Healthcare Reimbursement ..... **(3:2:2)**
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

HIM 225 - Technical Practicum ..... **(3:1:6)**
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. Corequisite: HIM 220

HIM 230 - Supervision & Organization ..... **(3:3:)**
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

HIM 231 - Quality Assessment ..... **(3:3:)**
This course introduces the principles of quality assessment process and skills in collecting and analyzing data. Topics include quality improvement, risk management, case management, and accreditation quality improvement standards. Prerequisite(s): HIM 225

HIM 250 - Professional Practicum ..... **(4:1:8)**
This is the capstone 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 work-based experience in a healthcare facility. Prerequisite(s): HIM 225. Corequisite(s): HIM 230 and HIM 231

HIM 289 - Approved Technical Elective ..... **(3:3:0)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HIS 111 - U. S. History: Pre-Civil War ..... **(3:3:0)**
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 EAP 093 or higher)

HIS 112 - U. S. History: Post-Civil War ..... **(3:3:0)**
This course surveys United States history through 1877 to present and covers political, social, cultural, and economic factors that shaped life in the United States. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

HIS 113 - History of Architecture I ..... **(3:3:0)**
This course is a survey of historical architectural design styles and the evolution from antiquity and archeological discoveries to modern and postmodern architecture. Students are introduced to formal patterns as well as the technological and cultural dynamics that influenced the development of the built environment in both Western and non-Western examples. Prerequisite: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and SSC 100 or concurrent

HIS 131 - Art History I ..... **(3:3:0)**
This course covers the history of Western art, architecture, and the decorative arts from the height of the ancient art to the Renaissance. The relationship between art of the various periods and their historical and cultural influences are explored. Prerequisites: (Test Score or ENG 101 or higher or concurrent)

HIS 132 - Art History II ..... **(3:3:0)**
This course covers the history of Western art, architecture, and the decorative arts from the height of the Renaissance to the 21st century. The relationship between art of the various periods and their historical and cultural influences are explored. Prerequisites: (Test Score or ENG 101 or higher or concurrent)

HIS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chair.

HIS 200 - World History I ..... **(3:3:0)**
This course surveys world history from antiquity through the sixteenth century. Topics include political, social, economic, and cultural developments that shaped the patterns of life on the African, American, Asian, and European landmasses. Prerequisites: Test scores or ENG 090 or ENG 091 or EAP 093 or higher

HIS 210 - World History II ..... **(3:3:0)**
This course surveys world history from the sixteenth century to the present. Topics include political, social, economic, and cultural developments that shape the patterns of life on the African, American, Asian, and European landmasses. Prerequisites: Test scores or ENG 090 or ENG 091 or EAP 093 or higher

HIS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HLH 100 - Intro To Health Careers ..... **(1:1:0)**
This course introduces the various allied health professions that are in demand in the community. Topics include the characteristics, requirements, and opportunities related to working in the healthcare field. Students compare various healthcare careers to their skills, interests, and goals. Prerequisites: None

HLH 101 - Intro To Patient Care ..... **(2:2:1)**
This course provides the basic concepts of patient care, including consideration of the physical and psychological needs of the patient and family. Topics include routine and emergency patient care procedures as well as infection control procedures using standard precautions. Prerequisite: BIO 120

HLH 102 - Physical Activity for Health ..... **(1:1:1)**
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 heaalthy lifestyle. Prerequisites: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher)

HLH 110 - First Aid, Safety & CPR ..... **(3:2:2)**
Students examine the National Safety Council's principles and guidelines for safety, cardiopulmonary resuscitation (CPR), and first aid. Emphasis is placed on acquiring the skills to administer basic first aid and emergency care. Prerequisites: BIO 110 or BIO 120

HLH 130 - Nurse Assistant Training ..... **(6:5:5)**
Students learn to safely perform basic nursing assistant skills under the supervision of the licensed nurse in a healthcare 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 is qualified to take the Nurse Aid Competency Examination for certification. Prerequisities: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

HLH 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HLH 215 - Cardiovascular Monitoring ..... **(2:2:0)**
This course focuses on cardiovascular monitoring for allied health students with emphasis on the normal and abnormal electrocardiogram (EKG) patterns. Topics include systematic interpretation, dysrhythmias, normal and abnormal 12 lead EKGs, and cardioversion and defibrillation. Prerequisites: BIO 121 and (DMS 106 or NMT 101 or RCT 140)

HLH 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HMS 120 - Direct Support/Cmnty Services ..... **(3:3:)**
This course introduces the field of direct support and community services in relation to working in a variety of settings (e.g., residential programs and day programs) with people who have a disability. The course reviews client needs and services and identifies the skills and attitudes required of the effective direct support professional. Topics include types of disabilities and a brief history of disability services. Prerequisites: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher)

HMS 121 - Introduction to Human Services ..... **(3:3:0)**
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 EAP 093 or higher)

HMS 122 - Theories of Counseling ..... **(3:3:0)**
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)

HMS 123 - Dynamics/Group Communication I ..... **(3:3:0)**
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)

HMS 124 - Comm Living Skills/Supports ..... **(3:3:0)**
This course explores the role of the direct support professional to provide services that enhance opportunities for people who have a disability. Students assess the need for services and provide services that address the client's physical, personal, and household management needs. Community connections, networking, and promoting self-advocacy skills are addressed. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (HMS 120 or concurrent)

HMS 125 - Assessment and Communication ..... **(3:3:0)**
In this course, students learn developmentally appropriate communication skills and how to build rapport with clients, take a person-centered approach, use alternative communication technology, interpret and use assessment, and gather information to provide services tailored to the needs of the client. Students also participate in site visits, interpret assessments, and write plans for practical applications. Prerequisites: (Test scores or EAP 093 or ENG 090 or ENG 091 or higher) and HMS 120

HMS 126 - Desgn/Evaluation of Services ..... **(3:3:0)**
In this course, students review and analyze best practices in services and program design and provision, evaluate existing programs using best practices, identify potential concerns and corresponding solution, and design an activity program to support a client to obtain maximum independence. Additional learning components include a project based on best practices to design a new program or extend an existing program. Prerequisites: (Test scores or ENG 090 or ENG 091 or higher) and HMS 120 and HMS 124 and HMS 125 or concurrent

HMS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HMS 211 - Marriage and the Family ..... **(3:3:0)**
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

HMS 221 - Ethical Problems and Issues ..... **(3:3:0)**
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)

HMS 223 - Social Policy/Program Planning ..... **(3:3:0)**
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)

HMS 225 - Interviewing/Counseling Skills ..... **(3:3:1)**
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

HMS 243 - Directed Practice I ..... **(6:1:15)**
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 010 or higher) and CIS 107 and HMS 122 and HMS 123 and (Test score or ENG 102)

HMS 244 - Directed Practice II ..... **(6:1:15)**
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

HMS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HRI 101 - Introduction to Hospitality ..... **(3:3:0)**
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 010 or higher) and (Test Scores or ENG 090 or concurrent or ENG 091 or concurrent or EAP 093 or concurrent or higher)

HRI 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HRI 210 - Beverage Management ..... **(3:3:0)**
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

HRI 211 - Food Principles/Menu Planning ..... **(3:3:0)**
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)

HRI 212 - Food/Beverage Cost Control ..... **(3:3:0)**
In this course, students investigate 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. Prerequisite: (Test score or ENG 101 or higher) and (Test score or MAT 120 or higher) and (HRI 101 or CUL 121)

HRI 214 - Principles of Hospitality Mgmt ..... **(3:3:0)**
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

HRI 215 - Lodging Operations Management ..... **(3:3:1)**
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 and procurement, staffing requirements, and typical day-to-day operational tasks. Prerequisites: (Test score or MAT 145 or MAT 153 or higher) and (Test score or ENG 102 or higher) and HRI 101

HRI 216 - Property Management ..... **(3:3:0)**
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

HRI 217 - Intro to Event Planning&Manage ..... **(3:3:1)**
In this course, students are introduced to special events. Topics include researching, planning, coordinating, marketing, managing, and evaluating of events. Students observe or facilitate the planning or implementing of at least one on-campus event. Prerequisite: (HRI 101 or CUL 121) and (Test Score or ENG 102 or higher)

HRI 219 - Innkeepers' Law ..... **(3:3:0)**
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. Prerequisite: (Test score or ENG 102 or higher) and (HRI 101 or FSM 123)

HRI 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HRM 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HRM 224 - Training and Development ..... **(3:3:0)**
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.

HRM 289 - Approved technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HTT 100 - Intro To Histotechnology ..... **(3:2:2)**
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

HTT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HTT 201 - Histology ..... **(2:2:1)**
This course is the study of human organs and tissues to develop students' histotechnological skills. Emphasis is placed on recognition, composition, and functions of organs and tissues. Gross and microscopic laboratory examination and evaluation of the specimens are included. Prerequisite(s): BIO 121 and HTT 100

HTT 202 - Histology Internship ..... **(9:1:24)**
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

HTT 211 - Histotechnology Procedures I ..... **(3:2:4)**
This course introduces equipment and basic procedures used in the histology laboratory. Theories and procedures for fixation, processing, embedding, and microtomy are followed by laboratory experience. Prerequisite(s): HTT 100 and MAT 153 and CHM 110

HTT 212 - Histotechnology Procedures II ..... **(3:2:3)**
A continuation of Histotechnology Procedures I, this course focuses on advanced techniques and special procedures. Topics include cytology preparation, and students are introduced to cytogenetics, muscle enzyme histochemistry, immunohistochemistry, and molecular histology. Emphasis is on tissue preparation, staining technology, quality control, and troubleshooting for these advanced techniques. Prerequisite(s): HTT 211

HTT 220 - Histochemistry I ..... **(3:2:3)**
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

HTT 221 - Histochemistry II ..... **(3:2:4)**
This course is a continuation Histochemistry I with instruction in advanced histologic technology procedures and theories. Prerequisite(s): HTT 220

HTT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HVA 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

HVA 289 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

IDT G10 - Foundations of Effect Teaching ..... (3:3:0)
This course prepares professional educators to develop instructional strategies, curriculum, lesson planning, and assessment. Participants self-reflect as they develop and enhance effective teaching practices. Prerequisite: None

IDT G15 - Advanced Teaching Strategies ..... (2:2:0)
This course prepares professional educators in their development and use of advanced teaching strategies. Participants improve existing lesson plans and incorporate professional and field-specific resources into them. In addition, participants practice teaching using advanced methods and techniques. Prerequisites: IDT G10 or IDT G21

IDT G16 - Advanced Assessment ..... (2:2:0)
In this course, participants evaluate the quality of assessments. Participants also revise assessments and create alternative means of assessment. Prerequisites: IDT G10 or IDT G21

IDT G17 - Educational Innovation in Actn ..... (1:1:0)
In this course, participants engage in creative thinking, discussion, and practices to improve student learning and success through innovation. Existing resources, research, and strategies related to creative thinking and innovation are analyzed to inform a specific plan of action.

IDT G18 - Teaching and Assessing Writing ..... (2:2:0)
This course prepares educators to support the student writing process in courses other than English. Participants examine the value of writing across disciplines, create writing assignments, and curate resources for student writers. Evaluation and assessment techniques for student writing are also explored.

IDT G19 - Creating Accessible Content ..... (2:2:0)
In this course, participants discuss and examine accessible content in order to begin creating their own accessible course content. Prerequisites: None

IDT G20 - Essentials of Dist Education ..... (3:3:0)
This course prepares professional educators to design, develop, and deliver distance education courses. Participants apply pedagogical and instructional design principles that foster student and faculty success in a distance education environment. Prerequisite: None

IDT G25 - Advanced Learning Technologies ..... (2:2:0)
This course prepares educators to leverage appropriate technologies to promote student-centered, active learning. Participants develop strategies and skills to effectively integrate social media as well as emerging and synchronous technologies into instruction and professional development. Prerequisites: IDT G10 and (IDT G20 or IDT G31)

IDT G30 - Blackboard Essentials ..... (1:1:)
This course provide participants with the basic skill sets needed to effectively use the Blackboard Learning Management System (LMS). Participants learn to navigate the LMS and use the various tools available in their courses. Prerequisite: None

IDT G32 - Implementing Eff. Learning Com ..... (2:2:0)
This course covers types of learning communities and strategies for marketing learning communities within the larger College community. In addition, students create integrated assignments and prepare assessment tools and strategies to evaluate student performance and the effectiveness of the learning community itself. Prerequisite: None

IDT G42 - Motivational Teaching ..... (2:2:0)
This course focuses on the application of motivational instruction. Participants study learning as a change process and design instructional practices using the foundational theory and methods of motivational interviewing. Prerequisites: None.

IDT G63 - ePortfolio Design ..... (1:1:0)
This course will provide the learner with an overview of electronic portfolio creation, design, development and delivery. The learner will learn to select, categorize and document their achievements and accomplishments for review and assessment related to academic placement and/or employment. The learner will evaluate knowledge and skills acquired from previous experience or training on the job, in the community, in military service, through travel, or through personal development. The learner will demonstrate comprehension and appreciation of life/work experiences and how those relate to prior or on-going experiences and they will demonstrate the ability and skill to develop a comprehensive electronic portfolio.

IDT G81 - Developing the Mindful Teacher ..... (1:1:0)
This course prepares professional educators to create a lesson plan that incorporates mindfulness into the classroom environment. Participants develop an improved sense of well-being and personal life control through the navigation and management of daily stressors. Topics include mindfulness-based stress reduction practices such as meditation, mindful movement, and communication skills. Prerequisite: None

IDT G83 - Teaching Mindfulness ..... (2:2:)
This course provides professional educators the fundamentals of teaching mindfulness in the classroom environment. Participants examine attitudinal qualities of mindfulness and specific mindfulness practices utilized in teaching mindfulness. Topics include mindfulness curriculum and effective learning environments for teaching mindfulness. Prerequisite: IDT G81

IDT G87 - Designing a Flipped Classroom ..... (2:2:)
This course focuses on the fundamental elements of the flipped classroom learning model, including theory and instructional strategies. Participants explore key principles, examine design challenges, develop effective learning activities and assessments, and design a unit of study for use in a flipped classroom. Prerequisites: None

IDT G91 - Peer Observation ..... (1:1:0)
This course is designed to facilitate non-evaluative peer observation among faculty for the purposes of professional development. Faculty enrolled in the course observe colleagues and are observed by colleagues in order to share and reflect on instructional practices. Prerequisites: None

IDT G92 - Peer Observation II ..... (1:1:)
This course facilitates non-evaluative peer observation among faculty for the purpose of professional development. Participants engage in focused research and peer observation on a pedagogical topic of their choice and develop instructional resources to share their findings with other educators. Prerequisite: IDT G91

IDT G99 - Special Topic in Ed Technology ..... (1:1:0)
Special Topic courses are intended to cover advanced material outside of or beyond the scope of current course offerings. The student may take this course a maximum of twice, with an approved change of topic for each instance.

IET 209 - Survey in Prod Plan & Cntrl ..... (3:2:2)
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

INT 189 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

INT 289 - Approved Technical Elective ..... (3::)
Students may complete technical electives for which they have written prior approval of the department chairperson.

ISY 111 - Ethics & the Information Age ..... **(2:2:0)**
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)

ISY 143 - Intro to Information Security ..... **(3:3:0)**
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 EAP 093 or higher)

ISY 150 - Introductory Scripting ..... **(3:2:2)**
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

ISY 201 - Advanced Operating Systems ..... **(3:2:2)**
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

ISY 243 - Information & Network Security ..... **(4:3:2)**
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

ISY 250 - Network Def & Countermeasures ..... **(3:2:2)**
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

ISY 251 - Hardening the Infrastructure ..... **(3:2:2)**
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

ISY 270 - Computer Forensics ..... **(4:3:2)**
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

ISY 275 - Portfolio/Experiential Learn ..... **(3:2:2)**
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

ISY 280 - Advanced Security Topics ..... **(3:2:3)**
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

ISY 291 - Information Security Intern ..... **(3:1:6)**
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

ITN 101 - Intro to IT ..... **(3:3:0)**
This course provides students with the breadth and depth of the information technology (IT) field and introduces basic computer concepts in hardware, software, networking, computer ethics, programming, and algorithms. Students explore emerging technologies and various career opportunities within the IT field. Prerequisite: Test score or ENG 090 or concurrent or ENG 091 or EAP 093 or higher

ITN 103 - Project Dynamics ..... **(2:2:0)**
In this course, students develop a foundation of concepts and skills for successful completion of a project. Students will examine various project management methodologies, strategies, and tools. Prerequisites: Test score or ENG 090 or ENG 091 or EAP 093 or concurrent or higher

ITN 110 - IT Support & Troubleshooting ..... **(3:2:2)**
This course explores installing, configuring, and supporting personal computer hardware and peripherals, and maintaining system performance. Students also learn about the evolving design and operation of personal computer hardware and operating systems. In addition, this course prepares students for related industry certification examinations and applying industry best practices. Prerequisite: (Test scores or ENG 090 or ENG 091 or concurrent or higher) and (Test score or MAT 010 or higher)

ITN 120 - Operating Systems I ..... **(3:2:2)**
This course provides students with fundamental concepts of current popular operating systems such as Windows, Linux, Mac OS, iOS, and Android and operating system security. Topics include the installation, configuration, maintenance, and troubleshooting of various selected operating systems. Prerequisite: (Test scores or ENG 090 or ENG091 or concurrent) and (Test score or MAT 010 or higher)

ITN 150 - IT Networking I ..... **(3:2:2)**
This course provides the essential knowledge and skills to install, administer, and troubleshoot computer network infrastructures. Students are introduced to computer networking principles and technologies, adhere to computer wiring standards, and use network test equipment and software utilities. Topics include emerging technologies such as unified communications, mobile, cloud, and virtualization technologies. This course prepares students for the related CompTIA certification examination. Prerequisite: ITN 120

ITN 160 - Programming I ..... **(3:2:2)**
This course provides students with an introduction to the documentation, design, and implementation of basic computer programming. Concepts include algorithm development, control structures, variables, input/output (both keyboard I/O and text file I/O), memory allocation, and debugging techniques of modern programming. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or concurrent or higher) and (test scores or MAT 010 or higher)

ITN 170 - Information Security ..... **(3:2:2)**
This course provides a basic foundation in information security, including terminology, technologies, planning, and implementation. Students explore risk and legal issues related to information security. Prerequisite: ITN 120

ITN 180 - Database Technology I ..... **(3:2:2)**
This course provides students with an introduction to database technology and foundational concepts. Students learn to design and create databases, create tables with appropriate keys and integrity constraints, modify table structures, design queries using data manipulation language and built-in functions, and create reports. Prerequisite: (Test scoreS or ENG 090 or ENG091 or concurrent or higher) and (Test score or MAT 010 or higher)

ITN 200 - System Administration I ..... **(3:2:2)**
This course provides students with fundamental concepts of system administration, including network administrative tasks, automation, and security. Students build and administer a secure client/server Linux or Windows network. Prerequisite: ITN 150

ITN 251 - IT Networking II ..... **(3:2:2)**
This course provides the essential knowledge and skills to perform the fundamentals of design, installation, maintenance, and support of computer networks. Topics include operation of IP data networks and Transmission Control Protocol/Internet Protocol (TCP/IP) networking models. Students learn to perform router and switch configurations. Additionally, this course prepares students for the related Cisco Certified Entry Networking Technician (ICND1/CCENT) examination. Prerequisite: ITN150

ITN 252 - IT Networking III ..... **(3:2:2)**
This course provides the essential knowledge and skills to perform advanced network design and implementation. Topics include advanced routing and switching technologies, IP services, troubleshooting, and WAN services. Additionally, this course prepares students for the related Cisco Certified Network Associate (ICND2/CCNA) examination. Prerequisite: ITN 251

ITN 253 - System Admin for Windows ..... **(3:2:2)**
This course provides the essential knowledge and skills to perform advanced Windows Server system administration, including common tasks regarding the installation, secure configuration, and maintenance of the Windows Server operating system. Emphasis is placed on administering Active Directory Domain Services (AD DS), including group and organization policies. Additionally, this course prepares students for associated Microsoft certification examinations. Prerequisites: ITN 200

ITN 254 - System Admin for Linux ..... **(3:2:2)**
This course provides the essential knowledge and skills to perform advanced Linux system administration, including common tasks regarding the Linux kernel, system startup, and maintenance. Topics include performing advanced management of block storage and file systems as well as advanced networking and authentication, system security, and Internet and intranet services. Additionally, this course prepares students for associated Linux Professional Institute certification examinations. Prerequisites: ITN 200

ITN 255 - Cloud Computing ..... **(3:2:2)**
This course provides the essential knowledge and skills required to comprehend standard cloud terminologies and methodologies. Students implement, maintain, and deliver cloud technologies and infrastructures while applying industry best practices related to cloud implementations, the application of virtualization, and IT security. Additionally, this course prepares students for an associated CompTIA certification examination. Prerequisite: ITN 251

ITN 261 - Programming II ..... **(3:2:2)**
This course introduces object-oriented programming concepts, graphical user interface design, database connectivity, application and database integration, exception handling, and event-driven programming. Students develop a fault-tolerant application that uses graphical controls and interfaces with a database. Prerequisites: (Test score or MAT 120 or higher) and (Test score or ENG 101 or higher) and ITN 160 and ITN 180

ITN 262 - Programming III ..... **(3:2:2)**
This course explores advanced programming concepts such as stacks, queues, recursion, linked lists, trees, searching, and sorting in order to write effective and efficient code for large-scale problems. Students model real-world scenarios by implementing various data structures within event-driven applications. Prerequisite: ITN 261

ITN 263 - Mobile App Development ..... **(3:2:2)**
This course introduces the fundamentals of mobile app development, security, and deployment. Students discuss fundamentals of secure app development, develop mobile apps, use emulators for testing, and deploy apps to an emulator or mobile device. Prerequisite: ITN 261

ITN 264 - Web App Development ..... **(3:2:2)**
This course explores the use of languages for contemporary web development, in-depth concepts of database implementation, and information organization. Students develop web-enabled database solutions and implement a web-based framework integrating user interface and user experience elements, including content and presentation in a mobile first responsive design. Prerequisite: ITN 261

ITN 265 - Systems Analysis & Design ..... **(3:2:2)**
This course introduces established and evolving methodologies for the analysis, design, and development of solutions for information systems. Emphasis is given to system characteristics, managing projects, prototyping, and systems development life cycle phases. Prerequisites: ITN 103 and ITN 180

ITN 271 - Advanced Security Operations ..... **(3:2:2)**
This course prepares students to maintain and analyze system and network security of on-premise and cloud-based systems. Topics include identity and access management, automation tools for provisioning, deployment, and management of resources, and challenges in securing networked architectures. Prerequisites: ITN 150 and ITN 170

ITN 272 - Digital Forensics ..... **(3:2:2)**
This course prepares students to conduct digital investigations and acquire and analyze digital evidence. Topics include file structures, network forensics, data recovery techniques, data hiding, data preservation techniques, and chain-of-evidence procedures. Prerequisites: ITN 150 and ITN 170

ITN 273 - Ethical Hacking ..... **(3:2:2)**
This course prepares students to conduct ethical hacking within networked environments. Topics include reconnaissance, attack techniques, and compromise of systems. Students use penetration test tools to compromise systems in a lab environment, and prepare a summary of findings. Prerequisites: ITN 150 and ITN 170

ITN 274 - System & Network Defense ..... **(3:2:2)**
This course prepares students to design and implement secure systems and networks. Topics include firewalls, Virtual Private Network (VPN), intrusion detection and prevention systems (IDS/IPS), and incident response. Students simulate architectures of typical corporate network environments. Prerequisites: ITN 150 and ITN 170

ITN 290 - IT Capstone & Work-Based Learn ..... **(4:2:6)**
This course prepares students to integrate their knowledge, skills, behaviors, and abilities acquired in the ITN program into workplace practice. This practical work-based learning experience allows students to apply theory with experience and thought with action. The class meets on a regular basis to evaluate activities, share experiences, and assess professional skills development. Students demonstrate the achievement of program competencies through work-based learning experiences culminating in the presentation of a comprehensive professional portfolio and IT project. Prerequisites: ITN 101 and ITN 103 and ITN 110 and ITN 160 and ITN 170 and ITN 180 and ITN 200

LAS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

LAS 271 - Intro to Lasers ..... **(4:3:2)**
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 190 or higher) and (PHY 205 or PHY 281)

LAS 272 - Geometrical Optics & Lasers ..... **(4:3:2)**
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 190 or higher) and (PHY 205 or PHY 281)

LAS 273 - Wave Optics & Lasers ..... **(4:3:2)**
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)

LAS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

LOM 100 - LOM Management ..... **(4:4:0)**
This course introduces the field of logistics and operations management (LOM). Emphasis is placed on design and management principles commonly used for the successful and efficient operation of an organization with a focus on specific management functions and techniques. Prerequisite: BUS 101

LOM 210 - Accounting for LOM ..... **(3:3:1)**
This course examines internal accounting data and procedures used by management for planning, control, and decision-making in logistics and operations. Topics include accounting fundamentals and theory, cost behaviors, cost management and budgeting, revenue predictions, and alternative management decision-making perspectives. Prerequisite: (Test score or ENG 090 or ENG 091 or EAP 093 or higher) and (Test score or MAT 020 or higher or concurrent)

LOM 230 - Project Management ..... **(3:2:2)**
This course introduces the subject and practical applications of project management, which is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. Students learn the skills necessary to initiate, plan, execute, control, and close small, medium, and large projects. The course combines theory, techniques, and applications of the subject material using a project management software application program. Prerequisite: (Test score or ENG 102 or higher) and (Test score or MAT 145 or MAT 153 or higher) and OAT 152.

LOM 241 - Supply Chain Logistics I ..... **(3:3:1)**
This course focuses on the management of supply chain activities, including supplier and customer relationship management, procurement, transportation, materials handling, and distribution. Emphasis is on the efficient integration of supply chain elements to ensure that the right products in the right quantities reach customers at the right time. Topics also include the strategic role of supply chain management, design and planning methods, and supply chain risk. Prerequisite: (Test score or ENG 102 or higher) and (Test score or MAT 145 or MAT 153 or higher) and LOM 100

LOM 242 - Supply Chain Logistics II ..... **(3:3:1)**
This course adds quantitative analysis to the basic concepts of supply chain management learned in Supply Chain Logistics I. Topics include the integration of inventory strategy and policy through demand management, sales, inventory, and operations planning (SI&OP), master production scheduling (MPS), and materials requirements planning (MRP). Software tools for supply chain management (Excel and Excel OM3) are taught in the lab portion of the course. Prerequisite: LOM 241

LOM 255 - Statistical Quality Management ..... **(4:3:2)**
This course focuses on the application of statistics and probability to quality control requirements found in organizational settings with an emphasis on the development and use of control charts, statistical process control (SPC) software, Six Sigma methodology, ISO 9000 quality standards, and total quality management (TQM) practices. Prerequisite: MAT 255 and LOM 100

LOM 270 - LOM Process Design ..... **(4:3:2)**
This course emphasizes the application of tools for characterizing, analyzing, and optimizing business processes in logistics and operations as a means to improve productivity, profitability, and customer fulfillment. Students learn how effective business process design can provide a competitive advantage to a business and its supply chain partners. The course culminates in a business process improvement capstone project in which students apply the tools learned in the lab to a real business problem or opportunity. Prerequisite: LOM 210 and LOM 230 and LOM 241

MAT 005 - Basic Mathematics ..... **(1:1:0)**
This course is a review of whole numbers arithmetic. Prerequisite: None

MAT 010 - Pre-Algebra ..... **(3:3:0)**
This course is a review of integers, fractions, decimals, ratios and proportions, percentages, measurement, and an introduction to algebra that includes solving linear equations and inequalities. Prerequisite: Test score or MAT 005.

MAT 020 - Elementary Algebra ..... **(4:4:0)**
This elementary algebra course is a review of solving and graphing linear equations and inequalities as well as systems of linear equations and inequalities, polynomials, factoring, rational expressions, radical expressions, and quadratic equations as applied to a variety of applications, including geometry. Prerequisite: Test score or MAT 010.

MAT 110 - Math Course Success Strategies ..... **(1:1:0)**
This class is designed to improve learning and comprehension in mathematics courses. Students will develop strategies to improve listening, note taking skills, study techniques, test anxiety and test-taking skills.

MAT 112 - Aviation Mathematics ..... **(4:4:0)**
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 010 or higher)

MAT 120 - Contemporary Mathematics ..... **(3:3:0)**
This course reviews and applies set theory, ratios and proportions, percentages, consumer mathematics, basic algebraic principles, and introductory statistical concepts. Prerequisite: Test score or MAT 010.

MAT 129 - Math for Health Sciences ..... **(3:3:0)**
This course focuses on health-related mathematical applications using algebraic and arithmetic operations. Topics include basic arithmetic operations on real numbers, conversions, dimensional analysis, algebraic expressions, algebraic equations, exponents, scientific notation, and graphs. Prerequisite: Test score or MAT 010.

MAT 143 - College Geometry ..... **(3:3:0)**
This course covers the elementary concepts of plane Euclidean geometry and supports the transition from algebra to precalculus. Special emphasis is placed on reasoning and proof, geometric constructions, two and three dimensional geometric shapes and measurement, angle relationships, triangle congruency, parallel lines, similarity, and circle relationships. Problem solving in geometry is emphasized throughout the course. Prerequisite: MAT 180

MAT 145 - Math of Finance ..... **(3:3:0)**
This course covers the mathematics of buying and selling, personal finance, conversions, inventory control, payroll, banking, annuities, business statistics, and applied problems. Prerequisite: Test score or MAT 020

MAT 153 - College Math and Statistics ..... **(4:4:0)**
This course builds the relationship between mathematics and real-world applications, particularly in business and health sciences. Students graph and interpret functions to solve applications involving linear, quadratic, exponential, and logarithmic functions as well as systems of linear equations and inequalities. Applications in elementary statistics, organizing and presenting data, measures of central tendency and variation, and normal and sampling distributions are included. Prerequisite: (Test score or MAT 020)

MAT 180 - College Algebra ..... **(4:4:1)**
This course includes the algebra of functions, graphs and applications, absolute value equations and inequalities, polynomial, rational, radical, quadratic and piecewise functions, and the application of basic right triangle trigonometry. Prerequisite: Test score or MAT 020

MAT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MAT 190 - Precalculus ..... **(4:4:1)**
This course includes a study of exponential, logarithmic and trigonometric functions, vector applications, complex numbers, simple curve sketching of algebraic and trigonometric functions, nonlinear systems, matrix methods, polar coordinates, and properties of conic sections. Prerequisite: (Test score or MAT 180)

MAT 200 - Mathematics Internship ..... **(3:2:2)**
This course applies the mathematical skills and knowledge gained from program courses to the process of helping people learn math. Students gain experience in a math tutoring environment to learn through supervised participation. Emphasis is placed on implementing appropriate tutoring strategies, constructing study materials, using technology, managing the classroom, and practicing professional behavior throughout the internship. Prerequisite: MAT 190 or higher

MAT 211 - Math for Teachers I ..... **(4:4:0)**
This course is designed for prospective early childhood or elementary teachers. Students use skills and techniques necessary to apply mathematical concepts to a variety of situations. Topics include techniques of problem solving, set theory, number theory, the real number system, and algebraic equations and inequalities. Prerequisite: (Test score or MAT 010)

MAT 212 - Math for Teachers II ..... **(4:4:0)**
This course is designed for prospective early childhood or elementary teachers. Topics include polynomials, quadratic equations, functions, nonlinear algebra, introductory probability, and statistics. Prerequisite: MAT 211

MAT 213 - Math for Teachers III ..... **(4:4:0)**
This course is designed for prospective early childhood or elementary teachers. Topics include geometry, trigonometry, consumer mathematics, and an introduction to calculus. Prerequisite: MAT 212

MAT 251 - Finite Math ..... **(3:3:0)**
This course covers 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. Prerequisite: Test Score or MAT 153 or MAT 180 or higher

MAT 253 - Discrete Mathematics ..... **(3:3:0)**
This course covers discrete models, sets, functions, logic, mathematical induction, algorithms, relations, graphs, and trees. Prerequisite: MAT 153 or MAT 180 or MAT 190 or MAT 281

MAT 255 - Statistics I ..... **(3:3:1)**
This course covers the 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. This course includes techniques of applied problem solving. Prerequisite: Test score or MAT 020 or MAT 129 or higher

MAT 256 - Statistics II ..... **(3:3:1)**
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

MAT 261 - Business Calculus I ..... **(4:4:0)**
Course 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. Prerequisite: Test Score or MAT 153 or MAT 180 or higher

MAT 263 - Principles of Discrete Math ..... **(4:4:1)**
This course is a study of sets, logic, induction, the integers, functions, sequences, counting, and an introduction to graph theory. Proofs are emphasized throughout the course. Prerequisite: Test score or MAT 190 or MAT 281

MAT 279 - Problem Solving Strategies ..... **(4:4:0)**
This course is a study of the various problem solving strategies used in mathematical problems. Emphasis is 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 portfolio. Prerequisite: MAT 263 or MAT 281 or MAT 282 or MAT 283 or MAT 285 MAT 288 or MAT 291

MAT 281 - Calculus I ..... **(4:4:1)**
This course provides students with a study of limits and continuity and differential and integral calculus of single variable functions with applications. Prerequisite: Test score or MAT 190

MAT 282 - Calculus II ..... **(4:4:1)**
This course provides a study of integral calculus of algebraic, trigonometric, exponential, and logarithmic functions with applications. Topics include methods and applications of integration, infinite series, parametric equations, and polar coordinates. Prerequisite: MAT 281

MAT 283 - Calculus III ..... **(4:4:1)**
This course provides a study of partial derivatives, multiple integrals, line integrals, and vectors. Prerequisite: MAT 282

MAT 285 - Introduction to Proof ..... **(4:4:1)**
This course provides a transition from computational mathematics to abstract, proof-based mathematics. The primary focus of the course is the development of skills to read, understand, and produce proofs of mathematical statements that explore key concepts from number theory, algebra, and analysis. Topics include set theory, functions, relations, order properties of real numbers, least upper bound, greatest lower bound, the completeness axiom, and limits. Prerequisite: MAT 263 and MAT 281

MAT 288 - Linear Algebra ..... **(4:4:1)**
The study of linear equations, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors. Prerequisites: MAT 282

MAT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MAT 291 - Ordinary Differential Equation ..... **(4:4:1)**
This course examines solutions of ordinary differential equations of first and second order using qualitative, numeric, and analytic approaches. Mathematical modeling of real-life phenomena is studied. Prerequisite: MAT 282 or MAT 283

MAT 292 - Engineering Math I ..... **(3:3:1)**
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

MEA 100 - Intro to Medical Assisting ..... **(3:3:1)**
This course provides an overview of the medical assistant profession. The role of the medical assistant, professional behaviors, communication skills, and medicine law and ethics are discussed. Prerequisite(s): (Test score or ENG 090 or ENG 091 or higher). Corequisite(s): MEA 120 and MEA 150

MEA 120 - Medical Office Procedures I ..... **(4:3:2)**
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. Corequisite(s): MEA 100 and MEA 150

MEA 125 - Medical Office Procedures II ..... **(4:3:2)**
This course introduces skills necessary for working in a modern computerized medical office. Students use computers to schedule and monitor appointments to gain experience with the billing process. Prerequisite(s): MEA 120 . Corequisites(s): MEA 151 and MEA 170

MEA 150 - Medical Lab Procedures I ..... **(4:3:3)**
This is the first of two courses covering clinical duties for a medical assistant in a medical office. Topics include infection control, patient assessment, nutrition, vital signs, assisting with primary physical examinations, safety and emergency practices, assisting with ophthalmology, otolaryngology, dermatology, gastroenterology, pediatrics, orthopedic medicine, and neurology. Prerequisite(s): (Test score or MAT 145 or higher) and BIO 100 and (BIO 110 or (BIO 120 AND BIO 121)). Corequisite(s): MEA 100 and MEA 120

MEA 151 - Medical Lab Procedures II ..... **(4:3:3)**
This course covers basic laboratory skills of the profession. Universal precautions are integrated with testing in hematology, chemistry, urinalysis, microbiology, and serology. Competency in phlebotomy is required. Prerequisite(s): MEA 150 . Corequisites(s): MEA 125 and MEA 170

MEA 170 - Pharmacology for Medical Asst ..... **(4:4:1)**
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 Corequisites: MEA 125 and MEA 151

MEA 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MEA 270 - Medical Assistant Seminar ..... **(3:3:0)**
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 and MEA 170. Corequisite(s): MEA 290

MEA 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MEA 290 - Medical Assistant Internship ..... **(4:0:12)**
Students acquire applied experience in an appropriate work situation such as a physician's office or clinic. Prereqisite: MEA 125 and MEA 151 and MEA 170 Corequisite: MEA 270

MET 104 - Geometric Dimens & Tolerance ..... **(2:2:0)**
This introductory course is 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. Prerequisites: MET 123 and EDD 131

MET 105 - Machine Shop Practicum I ..... **(4:2:5)**
In this course, students refine skills learned in other classes and develop basic skills required in modern machine shops. Emphasis is on safety for both the operator and the machine as well as other workers. Prerequisites: MET 123 and EDD 131 or concurrent

MET 106 - Machine Shop Practicum II ..... **(4:2:5)**
In this course, students refine skills learned in previous classes and develop more advanced skills required in modern machine shops. Safety for the operator, the machine, and others is closely monitored. Prerequisites: MET 105 and MET 225

MET 115 - Intro to Mech Eng Tech ..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher)

MET 123 - Modern MFG Techniques ..... **(3:2:4)**
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)

MET 132 - Statics ..... **(3:3:1)**
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: (Test scores or MAT 153 and ((PHY 205 or concurrent) or (PHY 281 or concurrent))

MET 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MET 225 - Adv. Manufacturing Techniques ..... **(3:2:4)**
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. Students apply industry standard allowances and tolerances to manufacture assemblies. Prerequisites: MET 123 and (EDD 131 or EDD 141)

MET 235 - Computer Nmrcl Cntrl Machining ..... **(4:3:2)**
This course is designed for the first-time user of computer numerical control (CNC) equipment. Topics explored include the history, applications programming, and operations of CNC. Prerequisites: MET 225 and EDD 131 and (Test score or MAT 180 or higher)

MET 241 - Fluid Mechanics ..... **(4:3:2)**
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

MET 242 - Strength of Materials ..... **(3:2:2)**
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

MET 243 - Dynamics ..... **(3:3:1)**
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

MET 245 - Machine Design ..... **(3:3:0)**
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. Prerequisites: MET 242 and MET 243 and ELC 248 and (MET 252 or MET 252 concurrent) and (MET 264 or MET 264 concurrent)

MET 264 - Material Science ..... **(4:3:2)**
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 190

MET 271 - Engineering Project ..... **(3:1:5)**
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 225 and MET 241 and MET 242 and ELC 248 . Corequisite: MET 245

MET 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MGT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chair.

MGT 212 - Principles of Management ..... **(3:3:0)**
This course is an introduction to the management field presenting a systemized body of knowledge through the functions of planning, organizing, staffing, motivating, controlling, and using strategies to deal with internal and external environment forces. Prerequisite: (BUS 101 or ENT 101) and (Test score or ENG 102 or higher or concurrent)

MGT 218 - Small Business Management ..... **(3:3:0)**
This course presents practical approaches to managing in a small business environment. Topics include 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. Prerequisite: (Test score or ENG 102 or higher) and (ENT 101 or MGT 212)

MGT 231 - Human Resource Management ..... **(3:3:0)**
This course covers management of the human resources process. Topics include recruitment, training and development, motivation, remuneration, management-unions relationships, and Human Resource (HR) policies. Prerequisites: MGT 212 or HRI 214 or LOM 100 or FET 201

MGT 248 - Culinary Supervisory Develpmnt ..... **(3:3:0)**
In this course, students explore human resource management in the food service industry. Topics include legal issues, training, interviewing, and employee-employer relations. Prerequisite: (Test score or ENG 090 or ENG 091 or higher) and (Test score or MAT 010 or higher) and (CUL 121 or HRI 101)

MGT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MIS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MIS 220 - Management Information Systems ..... **(3:3:1)**
This course presents essential information systems concepts and practices required to manage a modern organization. Topics focus 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. Prerequisite: CIS 107 and ((MGT 212 or concurrent) or (HRI 214 or concurrent) or LOM 100)

MIS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MKT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MKT 212 - Principles of Marketing ..... **(3:3:0)**
This course is an introduction to marketing principles with an emphasis on how they affect both consumer and industrial buying behaviors. Students learn the value of market research in today's global economy and gain an overview of how products and services are developed, implementation of pricing strategies under various market conditions, and distribution both domestically and internationally. Prerequisite: (Test scores or ENG 101 or higher) and (Test scores or MAT 020 or higher) and (BUS 101 or HRI 101 or ENT 101 or COM 140 or VSC 160)

MKT 213 - Problems in Marketing ..... **(3:3:0)**
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

MKT 214 - Advertising and Promotion ..... **(3:3:0)**
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

MKT 217 - E-Marketing Fundamentals ..... **(3:3:1)**
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 sucessful on-line marketing operation. Prerequisites: MKT 212 and CIS 107.

MKT 219 - Sales & Sales Management ..... **(3:3:0)**
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

MKT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MLT 120 - Hematology I ..... **(4:3:3)**
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 score or ENG 090 or ENG 091 or EAP 093 or higher) and (Test score or MAT 020 or higher)

MLT 121 - Hematology II ..... **(4:3:3)**
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

MLT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MLT 220 - Clinical Chemistry I ..... **(4:3:3)**
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. Prerequisite: (CHM 151 or CHM 111) and BIO 121

MLT 221 - Clinical Chemistry II ..... **(4:3:3)**
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

MLT 250 - Clinical Microbiology I ..... **(4:3:4)**
This course covers microbial structure, growth, and control. Pathogenesis of infectious disease and interactions between microbes and humans are studied. The processes of isolation, identification, and susceptibility testing of clinically significant microbes are learned. This course also covers clinically significant pathogens, the diseases associated with them, and the role of the clinical microbiology laboratory in their diagnoses. Prerequisites: BIO 121 and (CHM 110 or CHM 150)

MLT 251 - Clinical Microbiology II ..... **(4:3:4)**
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. Prerequisite: MLT 250

MLT 260 - Immunology ..... **(4:3:3)**
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 and MLT 121

MLT 261 - Blood Banking ..... **(4:3:3)**
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

MLT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MLT 291 - Clinical Practicum ..... **(7:0:36)**
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

MTS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

MTS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

NCC 046 - Grammar for College Comm ..... **(7:7:2)**
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.

NCN 103 - Shop Applications for Computer ..... **(3:2:2)**
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 010 or higher

NCS 005 - Basic Math Review Lecture ..... **(1:1:0)**
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

NCS 010 - Review of Pre-Algebra ..... **(1:1:0)**
This accelerated course is a review of integers, fractions, decimals, ratios and proportions, percentages, measurement, and an introduction to algebra that includes solving linear equations and inequalities. Prerequisite: (Test score or MAT 005)

NCS 107 - Introduction to Computers ..... **(3:3:0)**
This course provides a basic introduction to microcomputers. Emphasis will be placed on students becoming familiar with the hardware, the Windows operating system, and word processing and spreadsheet packages. Prerequisites: None

NCS 110 - Biotechnolgy Summer Exp ..... **(1:1:1)**
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 EAP 093 or higher)

NCS 115 - Topics in Health Care ..... **(1:1:0)**
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 EAP 093 or higher)

NCW 040 - Chemistry Mathematics ..... **(1:1:0)**
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 010 or higher

NFD 101 - New Faculty Development ..... **(2:2:)**
This course provides an orientation to effective instruction at Delaware Technical Community College. Participants will be provided with an overview of our institution's history, mission, values, academic philosophy and standards, and issues/topics important for new faculty to understand. Course topics include but are not limited to: Middle States Characteristics of Excellence, institutional effectiveness (including planning and assessment), effective advisement, student success, student engagement, instructional strategies, emotional intelligence, information literacy, articulation, FERPA, copyright, and HEOA legislation.

NMT 101 - Patient Care for the NMT ..... **(2:2:1)**
This course introduces the basic concepts of patient care in the field of nuclear medicine and includes consideration of the physical and psychological needs of the patient and family. Emphasis is on routine and emergency patient care procedures, infection control procedures, and nuclear medicine techniques and procedures. Prerequisites: (Test score or MAT 153 or higher) and BIO 100

NMT 115 - Intro to NMT with Clinical Lab ..... **(4:3:5)**
This course introduces quality control, radiation measurement, appropriate venipuncture techniques, application of infection control and safety procedures, and computer applications for nuclear medicine. Clinical instruction includes 80 hours of intravenous (IV) training and nuclear medicine procedures. Prerequisite(s): NMT 101

NMT 121 - Computers & Informatics ..... **(2:2:)**
Introduction to nuclear medicine computers, processing, and medical informatics. Prerequisite: NMT 101

NMT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

NMT 201 - Nuclear Medicine I ..... **(4:4:0)**
This course is the study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results, and pathology. Prerequisite(s): (Test score or ENG 102 or higher) and BIO 121 and NMT 222. Corequisite(s): NMT 224 and NMT 295

NMT 202 - Nuclear Medicine II ..... **(3:3:0)**
This course is the continued study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results, and pathology. Prerequisite(s): NMT 201. Corequisite(s): NMT 211 and NMT 223 and NMT 296

NMT 203 - Nuclear Medicine III ..... **(2:2:0)**
This course is the continued study of current uses of radiopharmaceuticals for organ visualization and function, evaluation of results, pathology, and radioassay procedures. Prerequisite(s): NMT 202. Corequisite(s): NMT 212 and NMT 297

NMT 211 - Scan Reading I ..... **(1:0:3)**
This course covers the review and interpretation of nuclear medicine studies and how they contribute to patient diagnosis. Prerequisite(s): NMT 201 and NMT 224 and NMT 295. Corequisite(s): NMT 202 and NMT 223 and NMT 296

NMT 212 - Scan Reading II with PET/CT ..... **(1:0:2)**
This course is a continuation of Scan Reading I that covers the review and interpretation of nuclear medicine studies and how they contribute to patient diagnosis. Students also identify sectional anatomy seen in positron emission tomography (PET) and computed tomography (CT) imaging. Prerequisite(s): NMT 211. Corequisite(s): NMT 203 and NMT 297

NMT 222 - Nuclear Physics ..... **(3:3:0)**
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)

NMT 223 - Nuclear Med Instrumentation ..... **(4:3:3)**
In this course, the basic principles of radiation detection are applied. Topics stressed include imaging systems, radionuclide statistics, quality control, single photon emission computed tomography (SPECT), and computer applications. Prerequisite(s): NMT 115 and NMT 295. Corequisite(s): NMT 202 and NMT 211 and NMT 296

NMT 224 - Radiopharmacy & Pharmacology ..... **(2:2:0)**
This course introduces radiopharmaceutical synthesis, sterility testing, quality control, mechanisms of radionuclide localizations, and governmental regulations. Prerequisite(s): CHM 111 and NMT 115. Corequisite(s): NMT 201 and NMT 295

NMT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

NMT 295 - Clinical Internship I ..... **(4:0:18)**
This course provides initial clinical application in the field of nuclear medicine. Administration, clinical procedures, equipment operations, and health physics are mastered through supervised hands-on experience. Prerequisite(s): ENG 102 and NMT 115 and NMT 222. Corequisite(s): NMT 201 and NMT 224

NMT 296 - Clinical Internship II ..... **(5:0:25)**
This course provides intermediate level clinical application in the field of nuclear medicine. Administration, clinical procedures, equipment operations, and health physics are mastered through supervised hands-on experience. Prerequisite(s): NMT 295. Corequisite(s): NMT 202 and NMT 211 and NMT 223

NMT 297 - Clinical Internship III w/CT ..... **(6:0:32)**
This course provides advance level clinical application in the field of nuclear medicine. Administration, clinical procedures, equipment operations, and health physics are mastered through supervised hands-on experience. Practicum evaluation of computer techniques and programs is emphasized. Prerequisite(s): NMT 296. Corequisite(s): NMT 203 and NMT 212

NRG 101 - Intro to Energy Management ..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher) .....

NRG 108 - Safety Basics ..... **(1:1:1)**
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. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) ..... and (Test scores or MAT 010 or higher)

NRG 109 - Solar Construction & Safety ..... **(1:1:1)**
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

NRG 111 - Res/Light Comm Energy Analysis ..... **(3:2:2)**
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 MAT 020 or higher) and NRG 101

NRG 123 - Fundamentals of Control System ..... **(3:2:3)**
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

NRG 124 - Energy Efficient Methods ..... **(3:2:2)**
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 (Test score and MAT 153 and higher)

NRG 126 - Fundamentals of HVAC systems ..... **(4:3:3)**
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 (Test score or MAT 153 or higher) and PHY 120

NRG 140 - Commercial Building Systems ..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 020 or higher)

NRG 154 - Alternative Energy Tech. ..... **(3:2:2)**
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. Prerequisites: NRG 101 and OAT 152 and (Test scores or MAT 020 or higher)

NRG 201 - Photovoltaic Systems I ..... **(4:3:2)**
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 MAT 153 or higher)

NRG 202 - Photovoltaic Systems II ..... **(4:3:2)**
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. Prerequisites: ELC 125 and NRG 109 and NRG 111 and NRG 201 and (NRG 205 or concurrent) and (Test score or ENG 102 or higher)

NRG 203 - Cncpts of Solar Thermal Design ..... **(3:2:2)**
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

NRG 204 - Work Exp:Renwble Energy Solar ..... **(3::9)**
This course provides students with practical experience in the renewable solar energy field. Prerequisites: NRG 109 and NRG 201

NRG 205 - Solar Policy and Financing ..... **(3:2:2)**
In this course, students explore policy mechanisms related to energy, with a focus on solar energy. Students investigate the impact of policy on the solar and renewable industries in general, and its impact on economic viability of solar photovoltaic (PV) projects. Students investigate and practice technical sales techniques. Prerequisites: NRG 201 and NRG 250

NRG 206 - Work Exp: Energy Mngmt ..... **(3:0:9)**
This course provides students with practical experience in the energy field. Prerequisite: NRG 126

NRG 209 - BAS Co-operative Education ..... **(3:0:9)**
This course provides students with practical experience in the building automation field. Prerequisites: NRG 123 and NRG 126 and NRG 140

NRG 214 - Capstone in Energy Use/Anal. ..... **(6:4:5)**
In this course, students apply skills learned throughout the energy management program to a commercial building energy audit. Students present the results of the audit in a formal report and presentation. In addition, the course includes a review for the Certified Energy Manager (CEM) exam. Prerequisites: NRG 108 and NRG 223 and NRG 226 and NRG 233 and NRG 250 and ENG 122 or concurrent

NRG 223 - Energy Control Strategies ..... **(3:2:2)**
This course covers 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 HVAC equipment and components. Modifications in control sequence of operations are evaluated, and calculations are employed to estimate energy savings. Prerequisites: NRG 126

NRG 226 - Bldg Mech/Elec Systms Analysis ..... **(4:3:2)**
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

NRG 233 - Lighting Applications ..... **(4:3:2)**
This course examines fundamental lighting concepts and their use and application within the built environment. Students identify and evaluate the various quantitative and qualitative characteristics of light sources and luminaires and perform various types of illuminance calculations. Students develop lighting audits with potential energy conservation methods from various lighting measures. Prerequisites: PHY120 and NRG 101 and (Test score or MAT153 or higher)

NRG 245 - Building Systems Integration ..... **(3:2:2)**
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. Prerequisites: NRG 123 and CEN 126

NRG 250 - Energy Accting/Invest Analysis ..... **(4:3:2)**
This course covers the basics of energy accounting and energy investment analysis. Students perform both a full utility bill analysis and a life cycle cost analysis and also quantify environmental benefits for an energy conservation measure. Prerequisite: (Test Score or ENG 101 or higher) and (Test Score or MAT 153 or higher) and NRG 111 and OAT 152

NRG 253 - BAS Capstone ..... **(3:2:4)**
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: ENG 101 and NRG 226 and NRG 245 and NRG 233 or concurrent

NUR 111 - Cultural Competency & Health ..... **(3:3:0)**
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. Prerequisite: (Test score or ENG 101 or higher)

NUR 114 - Pharmacology for Nurses ..... **(3:3:0)**
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.

NUR 131 - Fundamentals of Nursing ..... **(4:2:6)**
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)

NUR 132 - Medical-Surgical Nursing I ..... **(6:3:9)**
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

NUR 133 - Medical-Surgical Nursing II ..... **(6:3:9)**
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

NUR 134 - Essentials-Mental Hlth Nursing ..... **(2:1:3)**
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)

NUR 135 - Essents Maternal/Chld Nursing ..... **(4:2:6)**
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

NUR 170 - Nursing Concepts I ..... **(8:5:9)**
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)

NUR 180 - Nursing Concepts II ..... **(4:2:6)**
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

NUR 181 - Mental Health Concepts ..... **(4:2:6)**
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

NUR 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

NUR 190 - Nursing Transition Course ..... **(6:4:6)**
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)

NUR 199 - Nursing Advanced Credit ..... **(16:0:0)**
This nursing course is advanced credit for students who have an active practical/vocational nurse license or paramedic certification. Prerequisites: Practical nurse license or paramedic certification

NUR 200 - Nursing Concepts III ..... **(4:2:6)**
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)

NUR 201 - Maternal-Child Health Concepts ..... **(4:2:6)**
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)

NUR 210 - Nursing Concepts IV ..... **(4:2:6)**
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

NUR 211 - Community & Profess Concepts ..... **(3:2:3)**
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

NUR 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

NUR 299 - RN to BSN Advanced Credit ..... **(38:0:0)**
This nursing course is advanced credit for students that have an active registered nurse (RN) license. Prerequisites: Registered nurse license.

NUR 300 - RN to BSN Transition ..... **(3:3:0)**
This introductory course builds on prior education and provides foundational knowledge on the role of a baccalaureate-prepared nurse. Emphasis is placed on the expanded role of the professional nurse, including theoretical models, evidence-based practices, and outcomes-driven healthcare. Students begin to create a professional portfolio, which is further developed throughout the curriculum. Prerequisite: None

NUR 310 - Global Health ..... **(3:3:0)**
This course prepares students to explore global health and healthcare issues. Emphasis is placed on global health disparities and an understanding of nursing's role in advocating for health promotion worldwide. Students examine healthcare practices from a multi-cultural and systems perspective. Prerequisite: NUR 300 or concurrent

NUR 320 - Health Assessment ..... **(2:2:0)**
This course prepares students to conduct comprehensive health assessments using a variety of data collection strategies. Emphasis is placed on conducting assessments using a holistic approach. Students interpret assessment data for health promotion and disease prevention. Prerequisite: NUR 300 or concurrent

NUR 330 - Population & Community Health ..... **(4:3:3)**
This course prepares students to collaborate with healthcare professionals and community members to plan, implement, and evaluate interventions for population health, through online and preceptor experiences. Emphasis is placed on facilitating access to community resources to advocate for health promotion and disease management. Prerequisite: ENG 122 and MAT 255 and NUR 300

NUR 340 - Nursing Research ..... **(3:3:0)**
This course introduces foundational concepts of nursing research and information literacy to promote the development of the student as a research-consumer. Emphasis is placed on the critical evaluation and communication of nursing research from relevant sources and its potential application to clinical practice. Prerequisite: ENG 122 and MAT 255 and NUR 300

NUR 400 - Nursing Leadership ..... **(3:3:0)**
This course prepares students to integrate leadership theories and principles into nursing practice. Emphasis is placed on developing the knowledge, skills, behaviors, and abilities of a nurse leader. Students examine leadership using the principles of advocacy, interprofessional communication, collaboration, and delegation. Prerequisite: NUR 300

NUR 410 - Nursing Informatics ..... **(3:3:0)**
This course provides an introduction to nursing informatics and focuses on application to the nursing profession. Emphasis is placed on the integration of nursing practice and information sciences. Students analyze the impact of informatics on nursing practice and the healthcare system. Prerequisite: NUR 300

NUR 420 - Nursing Policy ..... **(4:4:0)**
This course prepares students to examine the foundations of healthcare policy that impact nursing practice. Emphasis is placed on the role of the nurse as an advocate in the legislative and regulatory processes. Prerequisite: NUR 300

NUR 460 - Nursing Capstone ..... **(5:4:3)**
This course prepares students to integrate their knowledge, skills, behaviors, and abilities acquired in the RN to BSN program into nursing practice. Students demonstrate the achievement of program competencies through both online and practicum experiences culminating in the presentation of a comprehensive professional portfolio. Prerequisite: NUR 310 and NUR 320 and NUR 330 and NUR 340 and NUR 400 and NUR 410

OAT 110 - Basic Keyboarding ..... **(2:2:1)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

OAT 121 - Keyboarding ..... **(3:2:2)**
This course develops touch control of the keyboard and proper keyboarding techniques and builds basic speed and accuracy. Student will use word processing software to format letters, reports, tables, memos, and related business communications. Prerequisite: (Test score ENG 006 or ENG 007 or EAP 093 or higher) and (Test scores or MAT 005 or higher)

OAT 151 - Access Level I ..... **(3:2:2)**
This course covers the fundamental concepts of designing and developing database skills necessary to be successful within an organization. Through project-based learning students build their technical knowledge of manipulating query data, developing forms, and reinforce problem-solving abilities through data analysis. Prerequisites: (Test score or ENG 006 or ENG 007 or EAP 093 or higher) and (Test score or MAT 010 or higher)

OAT 152 - Excel Level I ..... **(3:2:2)**
This course covers the fundamental concepts of spreadsheet skills necessary to be successful within an organization. The emphasis is on technical knowledge and reinforcement of problem-solving abilities through project-based learning. This course prepares students for the Microsoft Office Specialist Excel certification. Prerequisites: (Test score or ENG 006 or ENG 007 or EAP 093 or higher) and (Test score or MAT 010 or higher)

OAT 157 - Word Level I ..... **(3:2:2)**
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. Prerequisites: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher) and (Test scores or MAT 005 or higher)

OAT 158 - Word Level II ..... **(3:2:2)**
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

OAT 159 - PowerPoint ..... **(3:2:2)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

OAT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

OAT 240 - Integrated Business Applicatns ..... **(3:2:2)**
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

OAT 242 - Desktop Publishing ..... **(4:3:2)**
This course covers desktop publishing software and concepts to produce professional business publications. Prerequisite: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher)

OAT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

OTA 110 - Intro To Occupational Therapy ..... **(3:3:1)**
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 Corequisite: OTA 120

OTA 120 - Activity Analysis ..... **(2:1:2)**
This course places emphasis on activity analysis, incorporating the Occupational Therapy Practice Framework (OTPF) while introducing the importance of purposeful activities. Prerequisite: BIO 120. Corequisite: OTA 110

OTA 130 - Kinesiology for the OTA ..... **(2:1:2)**
This lecture/laboratory course is the study of joint motion and muscle function. Students learn to analyze functional movement involved in occupational performance. Prerequisites: OTA 120 and BIO 123

OTA 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

OTA 220 - Pediatric Health Conditions ..... **(3:3:0)**
This course provides information related to the study of medical conditions, diseases, and dysfunctions of individuals from birth to 21 years of age. Prerequisites: OTA 110 and BIO 121 and PSY 127

OTA 221 - Adult & Geriatric Health Cond ..... **(3:3:0)**
This course provides information related to medical conditions, diseases, and dysfunctions of adult and geriatric populations. Prerequisite: OTA 220. Corequisites: OTA 223 and OTA 224

OTA 222 - Pediatric Intervention ..... **(4:3:3)**
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. Prerequisites: BIO 121 and OTA 110 and OTA 120

OTA 223 - Adult & Geriatric Intervention ..... **(4:3:3)**
This course introduces evaluation and application of occupational therapy techniques in treating the adult and geriatric populations. Prererquisites: OTA 222 and OTA 130 and MAT 255. Corequisites: OTA 221 and OTA 224

OTA 224 - Psychosocial Intervention ..... **(4:4:1)**
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 Corequisites: OTA 221 and OTA 223

OTA 225 - Clinical Fieldwork Level I-A ..... **(2:1:5)**
This fieldwork experience provides exposure to pediatric and young adult populations and individuals with developmental disabilities across the life span. 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 life span. Students function as participating observers in the clinical setting with emphasis on the development of their professional behaviors. Prerequisite: OTA 110

OTA 226 - Clinical Fieldwork Level I-B ..... **(2:1:5)**
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 Corequisites: OTA 223

OTA 229 - Professional Seminar ..... **(1:1:0)**
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 Corequisites: OTA 226

OTA 231 - Clinical Fieldwork Level II-A ..... **(6:2:20)**
Clinical Fieldwork Level II-A provides supervised practical experience for the student that includes observing, treating, reporting, and recording occupational therapy evaluations and interventions for clients with various conditions. The student experiences treatment of individuals and groups across the life span and in a variety of treatment settings. Continued emphasis is placed on the development of professional behaviors. A seminar class provides additional exposure to roles and responsibilities of the certified occupational therapy assistant (COTA), emerging practice areas, trends that impact service delivery across the life span, preparation for the certification examination and entry into the workforce. Prerequisites: OTA 223 and OTA 224

OTA 232 - Clinical Fieldwork Level II-B ..... **(6:2:20)**
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)

OTA 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PHL 103 - Introduction to Ethics ..... **(3:3:0)**
This course introduces students to the study of morality from a philosophical perspective, including an exploration of classical ethical theories. The nature and basis of moral judgments are investigated and applied to contemporary ethical issues. Prerequisites: (Test scores or EAP 093 or EAP 094 or ENG 090 or ENG 091 or higher)

PHY 110 - Physics Physical Therapy Assnt ..... **(4:3:2)**
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

PHY 111 - Conceptual Physics ..... **(4:3:2)**
A basic course covering the concepts of physics with limited mathematical application. Prerequisites: (Test score or MAT 020 or higher)

PHY 112 - Physics for Allied Health ..... **(4:3:2)**
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 180

PHY 120 - Energy Physics ..... **(3:3:1)**
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)

PHY 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PHY 205 - General Physics I ..... **(4:3:3)**
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 180 or higher)

PHY 206 - General Physics II ..... **(4:3:3)**
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 190 or higher)

PHY 281 - Physics I with Calculus ..... **(4:3:2)**
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

PHY 282 - Physics II with Calculus ..... **(4:3:2)**
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

PHY 284 - Oscillation and Waves ..... **(4:3:2)**
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

PHY 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PLG 160 - Family Law ..... **(3:3:0)**
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 EAP 093 or higher)

PLG 170 - Intro to the Legal System ..... **(3:3:0)**
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. Prerequisistes: (Test scores or ENG 006 or ENG 007 or EAP 093 or higher) and (Test scores or MAT 005 or higher)

PLG 172 - Law of Simple Contracts ..... **(3:3:0)**
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 EAP 093 or higher)

PLG 175 - Estate Admin and Probate ..... **(3:3:0)**
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 scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

PLG 270 - Criminal Law/Invest Procedures ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

PLG 271 - Real Property Law ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

PLG 273 - Civil Procedure ..... **(3:3:0)**
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 EAP 093 or higher)

PLG 274 - Torts ..... **(3:3:0)**
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 EAP 093 or higher)

PLG 276 - Business Entities ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 005 or higher)

PLG 280 - Legal Research & Writing ..... **(3:2:2)**
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 EAP 093 or higher) and OAT 121 and PLG 170

PLG 281 - Legal Research & Writing II ..... **(3:3:0)**
This course builds upon the competencies acquired in PLG 280 Legal Research & Writing. Students gain additional experience and skill in critically analyzing legal issues, locating and evaluating appropriate legal authority, and applying such authority to the resolution of hypothetical fact situations. Emphasis is also placed on proper legal writing and citation. Prerequisite: PLG 280

PLG 285 - Law Office Mgmt & Procedures ..... **(3:2:2)**
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 demostrated through practical application. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and PLG 170

PLG 290 - Paralegal Internship ..... **(4:0:12)**
This course provides training in the legal environment and includes oversight by an advisor. Prerequisite: Department approval

POL 111 - Political Science ..... **(3:3:0)**
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 EAP 093 or higher)

POL 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

POL 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

POS 103 - Poultry Biology ..... **(3:2:2)**
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 scores or ENG 090 or ENG 091 or EAP 093 or higher)

POS 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

POS 205 - Poultry Processing ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

POS 208 - Poultry Health & Diseases ..... **(3:3:0)**
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 scores or MAT 020 or higher).

POS 215 - Poultry Production Management ..... **(3:2:2)**
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 EAP 093 or higher) and (AGS 102 or FSY 100)

POS 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PSY 100 - Human Relations ..... **(3:3:0)**
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 ENG 090 or ENG 091 or EAP 093 or concurrent or higher)

PSY 121 - General Psychology ..... **(3:3:0)**
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 EAP 093 or higher)

PSY 125 - Child Development ..... **(3:3:0)**
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 EAP 093 or higher)

PSY 126 - Child/Adolescent Development ..... **(3:3:0)**
This course introduces the processes of physical, cognitive, emotional, and social development during childhood and adolescence. Prerequisite: PSY 121

PSY 127 - Human Development ..... **(3:3:0)**
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. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher)

PSY 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PSY 223 - Abnormal Psychology ..... **(3:3:0)**
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 EAP 093 or higher) and PSY 121.

PSY 224 - Human Sexuality ..... **(3:3:0)**
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 EAP 093 or higher)

PSY 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PTA 100 - Introduction to PTA ..... **(2:2:1)**
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

PTA 101 - Basic Techniques ..... **(4:2:5)**
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

PTA 102 - Modalities ..... **(3:2:4)**
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

PTA 115 - Kinesiology ..... **(3:2:2)**
This course examines the relationship between the muscular and skeletal systems that provide motion through the biomechanical leverage system. Prerequisite(s): BIO 121 and BIO 123 or concurrent and PTA 100 and (PHY 110 or PHY 112 or PHY 205)

PTA 116 - Intro to Pathology ..... **(3:3:0)**
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

PTA 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

PTA 205 - Path.Treatmnt Orthopedic Conds ..... **(4:3:3)**
This course focuses on orthopedic conditions and their underlying pathology. Emphasis is 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)

PTA 206 - Path/Treat Neurolgcl Conds. ..... **(4:3:3)**
In this course, students study 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)

PTA 208 - Special Topics for the PTA ..... **(3:3:0.5)**
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

PTA 209 - PTA Management Issues ..... **(2:2:0)**
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

PTA 211 - Clinical Practice I ..... **(4:1:13)**
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 Corequisites: PTA 205 and PTA 206

PTA 212 - Clinical Practice II ..... **(3:0:13)**
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

PTA 213 - Clinical Practice III ..... **(4:0:18)**
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

PTA 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RAD 105 - Intro Patient Care/Radiography ..... **(3:2:2)**
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

RAD 130 - Radiographic Procedures I ..... **(4:3:3)**
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

RAD 131 - Radiographic Procedures II ..... **(4:3:3)**
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

RAD 140 - Prin Radiographic Imaging I ..... **(3:3:0)**
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

RAD 141 - Prin Radiographic Imaging II ..... **(3:3:0)**
This course provides the student with an in-depth knowledge of radiographic imaging principles that include image quality factors, anatomic/pathologic variances, exposure systems, and image acquisition methods. Prerequisite: RAD 140

RAD 150 - Radiation Protection/Biology ..... **(2:2:0)**
This course provides 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. Prerequisite: RAD 140

RAD 160 - Clinical Radiography I ..... **(3:0:16)**
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

RAD 161 - Clinical Radiography II ..... **(3:0:16)**
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

RAD 162 - Clinical Radiography III ..... **(5:0:24)**
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 anb BIO 121

RAD 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RAD 222 - Selected Topics in Radiography ..... **(3:3:0)**
This course is a review of program content in preparation for the American Registry for Radiologic Technologists (ARRT) examination. The focus is on content areas relevant to the registry, and the student self-identifies areas where remediation may be necessary. Prerequisite: RAD 260

RAD 230 - Radiographic Procedures III ..... **(3:2:2)**
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

RAD 240 - Rad Equipment Operation & QA ..... **(3:3:0)**
This course provides the student with knowledge of equipment and operating principles for radiographic, fluoroscopic, and mobile imaging. Skills in digital image acquisition and processing are enhanced. Digital image display, quality control, and quality assurance are also discussed. Prerequisite: RAD 141

RAD 250 - Radiographic Pathology ..... **(2:2:0)**
This course introduces disease concepts and various radiographic procedures related to pathology. Prerequisite: RAD 260

RAD 260 - Clinical Radiography IV ..... **(5:0:24)**
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

RAD 261 - Clinical Radiography V ..... **(5:0:24)**
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

RAD 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RCT 120 - Pharm for Respiratory Care ..... **(3:3:0)**
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: (Test score or ENG 101 or higher) and BIO 120 and CHM 110 and MAT 153.

RCT 130 - Intro to Respiratory Care ..... **(7:6:2)**
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

RCT 140 - Pulmonary Physiology ..... **(3:3:0)**
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

RCT 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RCT 210 - Neonatal/Pediatric Resp Care ..... **(3:3:0)**
This course covers neonatal and pediatric diseases and the analysis of effective delivery of respiratory care modalities to these patients. Prerequisite: RCT 231. Corequisites: RCT 232, RCT 252

RCT 231 - Respiratory Care Procedures I ..... **(4:3:2)**
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. Corequisite: RCT 251

RCT 232 - Respiratory Care Procedures II ..... **(7:6:3)**
This course covers the administration of more advanced respiratory care techniques. Topics include artificial airways and mechanical ventilation. Prerequisite: RCT 231. Corequisites: RCT 210 and RCT 252

RCT 233 - Spec Topics in Respratory Care ..... **(4:4:0)**
This course provides the student with advanced concepts in respiratory care associated with support of the critically ill patient. Prerequisite: RCT 232. Corequisite: RCT 253

RCT 241 - Pulmonary Pathophysiology I ..... **(3:3:0)**
This course 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. Prerequisite: RCT 140 and BIO 121

RCT 242 - Pulmonary Pathophysiology II ..... **(4:4:0)**
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

RCT 243 - Pulmonary Function Studies ..... **(2:1:3)**
This course covers pulmonary function and exercise testing with an emphasis on interpretation and clinical application. Prerequisite: RCT 140

RCT 251 - Clinical Respiratory Care I ..... **(2:0:8)**
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 . Corequisites: RCT 231

RCT 252 - Clinical Respiratory Care II ..... **(3:0:16)**
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. Corequisites: RCT 210 and RCT 232

RCT 253 - Clinical Respiratory Care III ..... **(5:0:24)**
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

RCT 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RDG 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RDG 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

RES 150 - Independent Study & Research I ..... **(1:0:3)**
In this course, students conduct research in their area of study with guidance from a faculty mentor. The mentor and student develop a plan and meet regularly to focus on developing proficiency in discipline-specific skills. Students submit a summary of their work at the end of the semester. Prerequisites: (Test score or ENG 090 or ENG 091 or EAP 093 or higher) and (Test score or MAT 010 or higher) and Instructor Approval

RES 200 - Independent Study & Res. II ..... **(1:0:3)**
In this course, students conduct research in their area of study with guidance from a faculty mentor. The mentor and student develop a plan and meet regularly to focus on developing proficiency in data analysis. Students submit a summary of their work at the end of the semester. Prerequisites: RES 150 and Instructor approval

RES 250 - Independent Study & Res. III ..... **(1:0:3)**
In this course, students conduct research in their area of study with guidance from a faculty mentor. The mentor and student develop a plan and meet regularly to focus on developing proficiency in experimental design. Students submit a summary of their work at the end of the semester. Prerequisites: RES 200 and Instructor approval

SCI 100 - Environmental Monitoring Techn ..... **(1::2.5)**
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 051 or ENG 099 or NCS 051 or ESL 100 or ENG 121 or ENG 125) and (Test scores or RDG 051 or NCS 052 or ENG 099 or ESL 100 or RDG 120) and (Test scores 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 141 or MAT 150 or MAT 153 or MAT 182).

SCI 107 - Exploratns on the Delaware Bay ..... **(3:2:3)**
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 EAP 093 or higher) and (Test scores for MAT 010 or higher) and Instructor signature required.

SCI 108 - Research on the DE Bay ..... **(1:0:2)**
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.

SCI 112 - Science Crs Success Strategies ..... **(1:1:0)**
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 EAP 093 or higher)

SCI 130 - Introduction to Research ..... **(2:1:2)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

SCI 141 - Nutrition in the Culinary Fld ..... **(2:2:0)**
This course covers nutritional principles necessary to evaluate and modify menus and recipes for healthy menu planning and development. Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test Score or MAT 010 or higher)

SCI 150 - Earth and Space Science ..... **(3:3:1)**
This course is a general introduction to the four sub-disciplines of earth science: geology, oceanography, meteorology, and astronomy. The processes and features related to the earth's surface, interior, atmosphere, oceans, and astronomical surroundings are actively investigated. Analyses of the interrelationships among the four sub-disciplines are included. Prerequisite: (Test score or ENG 101 or higher).

SCI 206 - Pesticide Principles and Apps ..... **(3:3:0)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher) and AGS 105

SCI 223 - Applied Ecology ..... **(3:3:0)**
This course explores and evaluates basic concepts in the field of ecology with a focus on plant ecology. Topics include plant adaptations to environmental conditions, life history variation, competition, biodiversity, and proper identification of mid-Atlantic plant species. Prerequisites: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (MAT 120 or higher)

SCI 240 - Turfgrass Physiology ..... **(3:2:2)**
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

SGT 100 - Intro to Surgical Technology ..... **(2:1:2)**
This course introduces surgical technology as a technical profession. Topics include professionalism, communication, the biopsychosocial needs of the surgical patient, ethical/legal issues specific to the perioperative setting, and patient and workplace safety. This course also introduces skill development related to sterile technique. Prerequisite: (Test Scores or ENG 090 or ENG 091 or EAP 093 or higher)

SGT 200 - Surgical Technology I ..... **(4:4:0)**
This course highlights the 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. Students are introduced to skill development related to instrumentation, equipment, patient transportation, surgical positioning, and preoperative patient preparation. Prerequisites: BIO 100 and BIO 121 and BIO 125 and MAT 129 and SGT 100 and (Test scores or ENG 102 or higher). Corequisite: SGT 203

SGT 202 - Pharmacology ..... **(1:1:0)**
This course provides a foundation in pharmacology. Students are instructed how to safely and appropriately prepare and manage operating room medications and solutions as well as analyze the principles of anesthesia administration. Students explain the necessity of each component of anesthesia preparation of the surgical patient. Prerequisites: BIO 121 and BIO 125 and SGT 100

SGT 203 - Surgical Technology Lab I ..... **(2:0:5)**
This course highlights the 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. Students develop skills related to instrumentation, equipment, patient transportation, surgical positioning, and preoperative patient preparation. Prerequisites: BIO 100 and BIO 121 and BIO 125 and (Test Score or ENG 102 or higher) and MAT 129 and SGT 100. Corequisite: SGT 200

SGT 210 - Surgical Technology II ..... **(4:4:0)**
This course covers the responsibilities of the surgical technologist in preoperative, intraoperative, and postoperative case management. Topics include the skills for effective performance as a non-scrubbed and scrubbed member of the operating room team. Prerequisite: SGT 200 and SGT 202 and SGT 203. Corequisite: SGT 213

SGT 213 - Surgical Technology Lab II ..... **(2:0:5)**
This course highlights the fundamental techniques necessary for assuming the responsibilities of a surgical technologist. Preoperative, intraoperative, and postoperative patient care concepts with both non-sterile and sterile responsibilities are emphasized. Students reinforce skills associated with patient positioning, draping, and setting up specialty equipment required for surgical procedures in the specialty areas of ophthalmology, otorhinolaryngology, and neurosurgery. Prerequisites: SGT 200 and SGT 202 and SGT 203. Corequisite: SGT 210

SGT 220 - Surgical Technology III ..... **(4:4:0)**
This course covers the responsibilities of the surgical technologist in preoperative, intraoperative, and postoperative case management for procedures in the specialty areas of oral and maxillofacial, plastic and reconstructive, genitourinary, orthopedic, peripheral vascular, and cardiothoracic surgery. Topics include surgical procedures, steps, and special equipment as well as considerations for the surgical technologist unique to each specialty. Prerequisites: SGT 200 and SGT 202 and SGT 203 and (SGT 210 or concurrent) and (SGT 213 or concurrent). Corequisite: SGT 223

SGT 221 - Surgical Technology Internship ..... **(12:0:36)**
In this course, students receive learning experiences in advanced surgical interventions in general and specialty surgery in clinical rotations in the operating room of an affiliated healthcare institution. Students assume the role of surgical technologist during actual surgical procedures in this internship to complete the number of cases required to take the certification exam. Prerequisites: SGT 210 and SGT 213 and SGT 220 and SGT 223

SGT 222 - Surgical Technology IV ..... **(2:2:0)**
This class prepares students for certification as a surgical technologist and entry into the workforce. Students develop employability skills, complete a portfolio, and prepare to take the National Board of Surgical Technology and Surgical Assisting (NBSTSA) certification exam to become a Certified Surgical Technologist (CST). Prerequisites: SGT 220 and SGT 223

SGT 223 - Surgical Technology Lab III ..... **(2:0:5)**
This course highlights the fundamental techniques necessary for assuming the responsibilities of a surgical technologist. Preoperative, intraoperative, and postoperative patient care concepts with both non-sterile and sterile responsibilities are emphasized. Students reinforce skills associated with patient positioning, draping, and setting up specialty equipment required for surgical procedures in the specialty areas of oral and maxillofacial, plastic and reconstructive, genitourinary, orthopedic, peripheral vascular, and cardiothoracic surgery. Prerequisite: SGT 200 and SGT 202 and SGT 203 and (SGT 210 or concurrent) and (SGT 213 or concurrent). Corequisite: SGT 220

SOC 103 - Sustainability and Society ..... **(3:3:)**
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 EAP 093 or higher) and (Test scores or MAT 010 or higher)

SOC 104 - Human Geography ..... **(3:3:0)**
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. Prerequisite: (Test scores or ENG 090 or ENG 091 or EAP 093 or higher) and (Test scores or MAT 010 or higher)

SOC 111 - Sociology ..... **(3:3:0)**
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 EAP 093 or higher)

SOC 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

SOC 213 - Ethical Issues in Health Care ..... **(3:3:0)**
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 EAP 093 or higher)

SOC 215 - Business Ethics ..... **(3:3:0)**
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

SOC 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

SPA 133 - Using Beginning Spanish ..... **(3:3:0)**
This course focuses on the fundamentals of sounds, basic greetings, and simple grammatical structures in speaking the Spanish language. Students communicate in Spanish for real-life experience. This course is recommended for those who have not had prior study of Spanish or who need a basic working knowledge of the language. Prerequisites: None

SPA 135 - Spanish for Healthcare Workers ..... **(3:3:0)**
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

SPA 136 - Spanish Communication I ..... **(4:4:1)**
This course introduces the Spanish language through communicative interaction by developing listening, reading, speaking, and writing skills. Emphasis is placed on basic Spanish grammar and vocabulary necessary for daily communication and an appreciation and awareness of Hispanic/Latino cultures. Prerequisites: None

SPA 137 - Spanish Communication II ..... **(4:4:0)**
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

SPA 138 - Spanish Communication III ..... **(4:4:0)**
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

SPA 139 - Spanish for Heritage Speakers ..... **(4:4:0)**
In this course for native/heritage Spanish speakers, students develop, maintain and enhance their Spanish language proficiencies in the reading, writing, speaking, listening, and cultural competencies. Students use Spanish for a variety of personal, academic, and community interactions with diverse audiences. Prerequisites: Student must be a fluent native/heritage speaker of Spanish with some reading and writing proficiency.

SPA 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

SPA 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

SSC 100 - First Year Seminar ..... **(1:1:0)**
This course orients new students to resources, support, and academic opportunities. Students develop skills that promote holistic success at Delaware Tech. This course provides information on the College and its systems, strategies for academic and career success, and opportunities for college involvement. Prerequisite: None

SSC 104 - Learning Through Service ..... **(1:1:)**
This course introduces students to the value of service learning by combining community service with academic instruction, focusing on critical, reflective thinking and personal and civic responsibilities. Prerequisites: None

SSC 106 - Introduction to Leadership ..... **(1:1:0)**
This course introduces the student to leadership by focusing on what it means to be a good leader with emphasis on the practice of leadership. Topics include the nature of leadership, recognizing leadership traits, developing leadership skills, creating a vision, setting the tone, listening to out-group members, overcoming obstacles, and addressing values in leadership. The course will help students to understand and improve their own leadership performance. Prerequisite: None

SSC 108 - Learning with Technology ..... **(1:1:0)**
This course teaches students successful strategies for learning with technology in face-to-face and distance education (online, hybrid, and web-enhanced) courses. Prerequisites: None

SSC 109 - Manage Stress with Mindfulness ..... **(1:1:0)**
In this course, students develop an improved sense of well-being and personal life control. The emphasis is on managing daily stressors and focuses on navigating the stressors of college life. Topics include mindfulness-based stress reduction practices such as meditation, mindful movement, and communication skills that improve interpersonal and professional relationships. Prerequisite: None

SSC 114 - Cultural Awareness/Diverse Soc ..... **(1:1:0)**
In this course, students explore diversity and cross-cultural communication to comprehend and appreciate cultural differences in today's global society. Students discuss and identify skills and strategies for interacting with people from diverse cultural backgrounds and apply successful strategies for cross-cultural communication in both a personal and professional context.

SSC 115 - Research Success Strategies ..... **(1:1:0)**
This course introduces the student to basic information literacy skills which include how to access, locate, evaluate and use information sources in a variety of formats. Students will gain an understanding of the role of library resources in the research process. Topics include how to create a search strategy for finding information, use print and electronic resources to locate information, critically evaluate and analyze information sources, and how to properly cite the information. Prerequisites: None

SSC 130 - Where's My Money ..... **(1:1:0)**
This course, an overview and application of money management, introduces concepts of financial goals within earning, budgeting, spending, and resources in banking to provide a solid foundation for financial success. Students develop a financial plan to promote a healthy standard of living. Prerequisites: None

SSC 131 - Are You Credit Worthy? ..... **(1:1:0)**
This course covers obtaining and maintaining access to credit using credit cards, bank cards, and other means. Students develop a plan to establish good credit, discuss the advantages and disadvantages of consumer credit, and explore the various sources of consumer loans. Prerequisites: None

SSC 132 - Planning for the Beach ..... **(1:1:0)**
This course allows students to determine what kind of lifestyle they want to have in the future and how much money is needed at that time to maintain it. Students develop an understanding of the power of compounding, the knowledge to select investments based on their own risk/reward preferences, and the ability to calculate how much they need to save today to reach their financial plan. Prerequisites: None

SSC 202 - Strategies to Find/Keep a Job ..... **(1:1:0)**
This course introduces students to the tools necessary for success in their selected career field. Students will understand the skills and tools essential for an effective job search. Professional behaviors expected in the workplace are discussed. Prerequisite: None

SSS 101 - Mastering College Life ..... **(1:1:0)**
This course is designed to provide any Delaware Tech student with the information necessary to understand and use college procedures, policies, and services. These include, but are not limited to, grading policies, study skills and strategies, learning styles, registration procedures, student rights and responsibilities, introduction to technologies, and student services. Prerequisites: None

SSS 106 - Becoming a Peer Helper ..... **(1:1:0)**
The purpose of this course is to build peer helping and leadership skills. Peer helping builds upon the natural helping skills and relationships which exist among students. Peer helpers will be trained to listen, share experiences, assist with decision making and provide support and practical assistance with their fellow students. Prerequisites: None

VAS 111 - Vascular Techniques I ..... **(3:3:1)**
This course introduces the student to basic vascular physical principles and instrumentation, vascular physiology and hemodynamics, and vascular anatomy. Emphasis is on the fundamental skills and principles needed to perform peripheral arterial evaluation of the upper and lower extremities. Prerequisite(s): BIO 120 and DMS 106

VAS 112 - Vascular Techniques II ..... **(3:3:1)**
This course is a continuation of 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 and intracranial Doppler is also included. Prerequisite(s): VAS 111

VAS 189 - Approved Technical elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

VAS 213 - Vascular Techniques III ..... **(3:3:1)**
This course is a continuation of Vascular Techniques II. Emphasis is placed on the fundamental skills and principles needed to perform and evaluate abdominal aorta, inferior vena cava (IVC), liver vasculature, mesenteric arteries, and renal vasculatures. Prerequisite(s): VAS 112

VAS 289 - Approved Technical elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

VET 101 - Intro to Veterinary Technology ..... **(2:2:1)**
This course introduces the fundamentals of veterinary technology and their relationship to veterinary practice. Topics include career opportunities, professional ethics, veterinarian-client-patient-relationships (VCPR), practice management, public health, and regulatory organizations. Students complete 16 hours of supervised observation at an approved veterinary facility. Prerequisites: (BIO 140 or BIO 150) and (CHM 100 or CHM 110) and BIO 100 and (Test score or MAT 153 or higher)

VET 102 - Vet Anatomy & Physiology I ..... **(3:2:4)**
This course, the first of two courses, provides a broad foundation in the structure and function of domesticated animals using a body system approach. Emphasis is on the connection between the study of anatomy and physiology and clinical veterinary medical and surgical nursing. Body systems covered include integumentary, musculoskeletal, respiratory, monogastric digestive, and cardiovascular. Coordinated laboratory includes models, radiographs, and preserved specimens. Prerequisites: (BIO 140 or BIO 150) and (CHM 100 or CHM 110) and BIO 100 and (Test scores or MAT 153 or higher)

VET 110 - Vet Anatomy & Physiology II ..... **(3:2:4)**
This course, the second of two courses, provides a broad foundation in the structure and function of domesticated animals using a body system approach. Emphasis is on the connection between the study of anatomy and physiology and clinical veterinary medical and surgical nursing. Body systems covered include neuroendocrine, urogenital, associated digestive, ruminant digestive, and special senses. Coordinated laboratory includes videos, models, radiographs, and preserved specimens. Prerequisite: VET 101 and VET 102 and VET 120

VET 120 - Breeds And Behavior ..... **(2:2:0)**
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: (BIO 140 or BIO 150) and (CHM 100 or CHM 110) and BIO 100 and (Test score or MAT 153 or higher)

VET 130 - Vet Clinical Pathology I ..... **(3:2:7)**
This course, the first of two courses, provides basic background in veterinary pathology covering theory and techniques in hematology, immunology, serology, and clinical chemistry. Practical application of diagnostic laboratory skills, use of common laboratory equipment, and venipuncture is taught in the clinical rotation. Prerequisite: VET 101 and VET 102 and VET 120

VET 140 - Pharmacology for Vet Techs ..... **(3:2:3)**
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. Prerequisite: VET 110 and VET 130 and VET 205

VET 189 - Approved Technical elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

VET 205 - Small Animal Health & Disease ..... **(2:2:1)**
This course covers infectious and noninfectious disease of companion animals. Topics include the etiology, diagnosis, treatment, and prevention of diseases. The role of the veterinary technician in educating the public on common diseases and their clinical signs is discussed. Prerequisite: VET 101 and VET 102 and VET 120

VET 210 - Vet Clinical Pathology II ..... **(3:2:7)**
This course, the second of two courses, provides basic background in veterinary pathology and covers theory and techniques in urinalysis, cytology, parasitology, mycology, and toxicology. Practical application of laboratory skills and use of diagnostic equipment are taught in the clinical session. Prerequisite: VET 140

VET 220 - Lab/Exotic Animal Care & Mgmt ..... **(3:2:4)**
This course provides an overview into the study of laboratory and exotic animals. Topics include husbandry, nutritional requirements, common diseases, and nursing care. Laboratory sessions provide hands-on training in restraint, drug administration, sample collection, and other nursing techniques. Prerequisite: VET 140

VET 221 - Veterinary Nursing I ..... **(3:2:7)**
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, disinfecting/cleaning, bandaging, and fluid therapy. Clinical sessions provide the student hands-on experience with nursing concepts learned during lecture. Prerequisite: VET 140

VET 222 - Veterinary Nursing II ..... **(3:2:7)**
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. Clinical sessions provide the student hands-on experience with concepts learned during lecture. Prerequisite: VET 221 and VET 220 and VET 210

VET 224 - Lg Animal/Equine Nurs/Hlth Mgt ..... **(3:2:7)**
This course focuses on nursing care and health and disease of food animals and equine. This course introduces techniques and health management that a technician is expected to provide in a large animal veterinary practice. Common diseases of livestock and equine, basic therapeutics or diagnostic approaches, and vaccinations are discussed. The clinical session provides the student with the opportunity to perform basic techniques, including venipuncture, bandaging, physical examination, and medicating cattle, sheep, and horses. Prerequisite: VET 221 and VET 220 and VET 210

VET 235 - Diagnostic Imaging ..... **(3:2:7)**
This course provides theoretical and practical information needed to produce diagnostic radiographs on a wide variety of species, including dogs, cats, horses and exotics.

Other topics include patient/staff safety, ultrasonography, contrast studies, and digital radiography. Clinical sessions provide the student hands-on experience with concepts learned during lecture. Prerequisite: VET 221 and VET 220 and VET 210

VET 250 - Vet Tech Internship ..... **(5:0:15)**
This course requires 240 hours of hands-on experience under the direction of a licensed veterinary technician at a departmentally approved veterinary hospital. Learning experiences include medical and surgical nursing, clinical pathology, pharmacology, and diagnostic imaging. Focus is on the student assuming an independent role as a veterinary technician to facilitate transition from student to graduate. Prerequisites: VET 222 and VET 224 and VET 235

VET 289 - Approved Technical Elective ..... **(3:1:8)**
Students may complete technical electives for which they have written prior approval of the department chairperson. Prerequisite: VET 101 or VET 101 concurrently.

VSC 109 - Drawing I ..... **(3:2:3)**
This course introduces the fundamentals of drawing. Topics include the use of line, form, shape, shading, and pictorial composition through the study of still life and life drawings. Students develop proficiency in the use of basic drawing media using pencil, charcoal, and pen and ink. The use of a beveled matte cutter for preparing presentations is also covered. Prerequisite: None

VSC 115 - Intro To Design ..... **(3:2:2)**
This class introduces principles and techniques of visual communications. Emphasis is placed on the development of problem solving skills required by designers and photographers in all disciplines. Key elements and principles of design are examined in conjunction with training in basic production skills. Prerequisite: None

VSC 160 - Raster Graphics ..... **(3:2:3)**
This course introduces the computer as an artistic medium. Topics include Macintosh operating system basics and a comprehensive overview of Adobe Photoshop in raster and pixel-based imagery manipulation, planning and communication, image editing, digital illustration, publishing, and delivery of Photoshop images. Students complete a series of beginning to intermediate level, concept-based projects using Adobe Photoshop. Upon completion of this course, students are prepared to take the Adobe Certified Associate (ACA) Photoshop Exam. Prerequisites: Test Scores or ENG 090 or ENG 091 or EAP 093 or concurrent or higher

VSC 161 - Vector Graphics ..... **(3:2:3)**
This course introduces the computer as an illustrative medium. Topics include Macintosh operating system basics and a comprehensive overview of Adobe Illustrator in vector imagery manipulation, planning and communication, image editing, digital illustration, publishing, and delivery of Illustrator (vector-based) images. Upon completion of this course, students are prepared to take the Adobe Certified Associate (ACA) Illustrator Exam. Prerequisites: Test Scores or ENG 090 or concurrent or ENG 091 or concurrent or EAP 093 or higher

VSC 165 - Photography I ..... **(3:2:3)**
This course introduces the digital camera, its exposure controls, and the creative decision- making necessary to create quality digital images. Topics include management of shutter speed, ISO, aperture, depth of field, and composition as well as aesthetic and conceptual issues relevant to professional practice. Prerequisites: (Test Scores or ENG 090 or ENG 091 or EAP 093 concurrent or higher)

VSC 166 - Advanced Photography ..... **(3:2:3)**
This course provides a deeper study into camera function mastery and photography techniques as well as professional level use of Adobe Photoshop in photography. Students use these skills to solve industry-standard projects. Prerequisites: VSC 115 and VSC 160 and VSC 165

VSC 189 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

VSC 190 - Intro To Videography ..... **(3:2:3)**
This course introduces the basics of video camera operation, lighting, sound, and editing. Students are introduced to Adobe Premiere software. Prerequisites: VSC 115 and VSC 160 and VSC 165

VSC 210 - Layout Graphics ..... **(3:2:3)**
This course covers the history of type and typesetting and modern methodologies, principles, and aesthetics of good typographic design using Adobe InDesign, Illustrator, and Photoshop. Topics include InDesign document planning and communication, page layout, interactive document design, publishing, and delivery. Upon successful completion of this course, students are prepared to take the Adobe Certified Associate InDesign exam. Prerequisite: VSC 160 or VSC 161

VSC 251 - Portfolio Workshop ..... **(4:3:4)**
This course covers self-promotion and management techniques for the visual communications professional. Students develop materials designed to get the attention of potential clients or employers and culminates with a formal portfolio. Emphasis is placed on showcasing the student's individual talents along with scheduling, pricing, ethical guidelines, and media specification through a series of promotional projects. Prerequisites: VSC 115 and VSC 160 and VSC 165 and VSC 210

VSC 262 - Web Graphics ..... **(3:2:3)**
This course provides an overview of Adobe Dreamweaver as well as planning and implementation of successful website design and construction using hypertext markup language (HTML) and cascading style sheets (CSS) languages. Students develop proficiency in the use of Adobe Dreamweaver along with a continued use of the Adobe Photoshop software through a series of intermediate to advanced level, concept-based projects typical to industry standard. Prerequisite: VSC 115 and VSC 160 and (VSC 210 (or concurrent))

VSC 270 - Project Management ..... **(2:1.5:1)**
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

VSC 271 - Illustration ..... **(3:2:3)**
This course covers the technical and aesthetic aspects of creating illustrations for publication. Topics include rendering in various media and the conceptualization of images for editorial, commercial, and book illustrations. Students explore a variety of digital and traditional techniques while developing critical thinking and problem-solving skills. Prerequisite: VSC 109 and VSC 115 and VSC 160 and VSC 161

VSC 272 - Applied Practice Ad Design ..... **(3:2:3)**
This course prepares students with the workplace skills necessary for professional job placement. Topics include self-assessment techniques, time management tools, and professional workplace behavior. The study of the technical and aesthetic aspects of creating advertising layouts and the conceptualization of imagery are also covered. Students explore a variety of digital techniques while developing critical thinking and problem-solving skills. Students use their knowledge of ad design and/or illustration to communicate ideas graphically for use in a professional portfolio. Emphasis is placed on individual investigation and discovery while remaining open to collaboration. Prerequisite: VSC 115 and VSC 210 and VSC 271

VSC 273 - Applied Practice Multimedia ..... **(3:2:3)**
This course prepares students with the workplace skills necessary for professional job placement. Topics include self-assessment techniques, time management tools, and professional workplace behavior. Technical and aesthetic aspects of creating web layouts and video and the conceptualization of imagery are also covered. Students explore a variety of digital techniques while developing critical thinking and problem-solving skills. Students use knowledge of video production, web development, and style to communicate ideas graphically for use in a professional portfolio. Emphasis is placed on individual investigation and discovery while remaining open to collaboration. Prerequisite: VSC 115 and VSC 210 and VSC 262

VSC 274 - Applied Practice Photo Imaging ..... **(3:2:3)**
This course prepares students with the workplace skills necessary for professional job placement. Topics include self-assessment techniques, time management tools, and professional workplace behavior. Technical and aesthetic aspects of creating photography and video and the conceptualization of imagery are also covered. Students explore a variety of digital techniques while developing critical thinking and problem-solving skills. Students use video production, photography, and style to communicate ideas graphically for use in a professional portfolio. Emphasis is placed on individual investigation and discovery while remaining open to collaboration. Prerequisite: VSC 115 and VSC 160 and VSC 165 and VSC 210

VSC 275 - Self Promotion ..... **(2:1.5:1)**
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

VSC 281 - Project Elective ..... **(3:2:3)**
This course provides individualized work on a practical field assignment or specified series of assignments that prepare students for entry in the visual communications profession. Prerequisite: Permission of the Department Chair

VSC 289 - Approved Technical Elective ..... **(3::)**
Students may complete technical electives for which they have written prior approval of the department chairperson.

VSC 293 - VSC Internship ..... **(3:0:10)**
This course is an unpaid internship educational work experience with oversight by an advisor. Students develop technical skills in the advertising, photography, or web design environment; investigate career choices; build confidence; network with people in the field; and transition for entry into the workforce. Prerequisite: Department Chair Approval

VSC 294 - VSC Cooperative ..... **(3:0:10)**
This course is a paid cooperative educational work experience with oversight by an advisor. Students develop technical skills in the advertising, photography, or web design environment; investigate career choices; build confidence; network with people in the field; and transition for entry into the workforce. Prerequisite: Department Chair Approval

WEB 160 - Internet/Web Construction ..... **(3:2:2)**
This course enables students to create websites using HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Prerequisites: (Test score or ENG 090 or ENG 091 or EAP 093 or higher)

Bachelor of Science Degree Programs (B.S.)

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Bachelor of Science in Nursing	D,G,S

Bachelor of Science in Nursing

Nursing

B.S. Degree (D,G,S)

The Bachelor of Science in Nursing program is an online degree program designed for current RNs who are ready to pursue the next level of their nursing education while working. The program will provide licensed registered nurses with baccalaureate-level education. The RN to BSN program builds upon the foundational knowledge and skills attained in previous nursing courses and experiences. Baccalaureate education prepares professional nurses with a broad knowledge base for practice with expanded roles encompassing advocacy, leadership, and scholarship. Coursework places emphasis on evidence-based nursing practice through a holistic approach enabling graduates to be designers, coordinators, leaders, and managers of collaborative care. The clinical portion contained within two courses focuses on population health and nursing leadership experiences.

CORE COURSES

Courses			Credits
BIO	130	Disease Proc/Pathophysiology	3
ENG	122	Technical Writing-Comm	3
HIS	210	World History II	3
MAT	255	Statistics I	3
PSY	121	General Psychology	3
SOC	213	Ethical Issues in Health Care	3
Select 1 course(s) from:			
ASL	101	American Sign Language I	3
CLT	110	Cross-Cultural Immersion	3
NUR	111	Cultural Competency & Health	3
SOC	103	Sustainability and Society	3
SOC	104	Human Geography	3
SPA	133	Using Beginning Spanish	3
SPA	135	Spanish for Healthcare Workers	3
SPA	136	Spanish Communication I	4

PROGRAM/MAJOR COURSES

Courses			Credits
NUR	300	RN to BSN Transition	3
NUR	310	Global Health	3
NUR	320	Health Assessment	2
NUR	330	Population & Community Health	4
NUR	340	Nursing Research	3
NUR	400	Nursing Leadership	3
NUR	410	Nursing Informatics	3
NUR	420	Nursing Policy	4
NUR	460	Nursing Capstone	5

Associate in Applied Science Degree Programs (A.A.S.)

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Accounting	D,G,W
Advertising Design	D
Agribusiness Management	G
Architectural Engineering Technology	D,G,S
Automotive Technology	G,S
Aviation Maintenance Technology	G
Biological Sciences	G,S
Biomedical Option	D
Biotechnology	G,S
Building Automation Systems Option	D
Business Administration Transfer Option	D,G,W
Cardiovascular Sonography	W
Chemical Process Operator	S
Chemistry	S
Chemistry Math Concentration	S
Civil Engineering Technology	G,S
Civil Transfer Option	G,S
Communications	G
Computer Aided Drafting/Design Technology	S
Computer Engineering Tcy Option	S
Computing and Information Science	W
Construction Management Technology	D,S
Criminal Justice	D,G,S
Culinary Arts	D,S
Dental Hygiene	W
Design Engineering (Mechanical)	G
Diagnostic Medical Sonography: Owens	G
Diagnostic Medical Sonography: Wilmington	W
Drug Alcohol Counseling	D,W
Early Childhood Development	D,G,W
Electrical and Computer Engineering Transfer Option	D,G,S
Electromechanical Engineering Technology	D
Electronics Engineering Tcy	D,G,S
Electronics Engineering Technology Transfer Option	D,G,S
Emergency Medical Technician Paramedic	D
Energy Management	D,S
Entrepreneurship	D,G,W
Environmental Technology: Environmental Engineering Technology	G,S
Exercise Science	W
Food Safety	G
General Business	D,G,W
Geographic Information Systems Technology	S
Health Information Management	W
Histotechnician	W
Homeland Security and Emergency Management	D
Hospitality Management	D,G,W
Human Services	D,G,W
Information Technology & Networking	D,G,W
Instrumentation Option	S
Landscape and Ornamental Horticulture	G
Law Enforcement Option	D,G,S
Logistics, Supply Chain, and Operations Management	G,W
Management	D,G,W
Marketing	D,G,W
Mechanical Engineering Technology	S

Medical Assistant	W
Medical Laboratory Technician	G
Multimedia	D
Nuclear Medicine	W
Nursing	D,G,S
Occupational Therapy Assistant	G,W
Office Administration	G
Paraeducator	D,G,W
Paralegal	D,G
Photo Imaging	D
Physical Therapist Assistant	G,W
Production Agriculture	G
Radiologic Technology	G,W
Refrigeration, Heating, & Air Conditioning	G
Renewable Energy Solar	D
Respiratory Care	G,W
Surgical Technology	D
Surveying and Geomatics Engineering Technology	G,S
Turf Management	G
Veterinary Technology	G

Accounting

Business

A.A.S. Degree (D,G,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. 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

Courses			Credits
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

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
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

Courses			Credits
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		

Advertising Design

Visual Communications

A.A.S. Degree (D)

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 web communications, the program stresses the use of innovative, creative problem solving. A professional in the visual communication industry is involved in a range of projects, including traditional print items such as brochures, informational graphics, illustrations, signage, and branded campaigns. 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

Courses			Credits
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
POL	111	Political Science	3
or			
PSY	121	General Psychology	3
or			
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
VSC	109	Drawing I	3
VSC	115	Intro To Design	3
VSC	160	Raster Graphics	3
VSC	161	Vector Graphics	3
VSC	165	Photography I	3
VSC	210	Layout Graphics	3
VSC	251	Portfolio Workshop	4
VSC	262	Web Graphics	3
VSC	271	Illustration	3
VSC	272	Applied Practice Ad Design	3
or			
VSC	293	VSC Internship	3
or			
VSC	294	VSC Cooperative	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BUS	101	Introduction to Business	3
MKT	212	Principles of Marketing	3
MKT	214	Advertising and Promotion	3
MKT	217	E-Marketing Fundamentals	3
HIS	131	Art History I	3
or			
HIS	132	Art History II	3

Agribusiness Management

Applied Agriculture

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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 Mgmt Work Exper	3
Select 3 course(s) from:			
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

Courses			Credits
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
Select 1 course(s) from:			
BIO	140	General Biology	4
BIO	150	Biology I	4
BIO	151	Biology II	4
CHM	100	Basic Chemistry	3
CHM	110	General Chemistry	4
SCI	223	Applied Ecology	3

Architectural Engineering Technology

Architectural Engineering

A.A.S. Degree (D,G,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

Courses			Credits
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
HIS	131	Art History I	3
HIS	132	Art History II	3

POL	111	Political Science	3
PSY	121	General Psychology	3
SOC	103	Sustainability and Society	3
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
AET	123	Arch Drafting/Design I	4
AET	125	Arch Drafting/Design II	4
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
CET	135	Engineering Materials	3
CMT	234	Cost Estimating/Planning	3
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

Courses			Credits
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 (G,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 performs a variety of preventive maintenance and repair functions on automobiles. Through systematic classroom instruction, completion of required laboratories and structured, mandatory internships, graduates use printed and electronic information, tools, and instruments to diagnose faults and carry out necessary repairs and maintenance procedures.

Graduates of the diploma program 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
CIS	107	Intro to Computers/Application	3
MGT	212	Principles of Management	3
MET	123	Modern MFG Techniques	3
or			
PHY	111	Conceptual Physics	4
ENT	101	Intro to Entrepreneurship	3
or			
BUS	101	Introduction to Business	3
SOC	103	Sustainability and Society	3
or			
ENG	124	Oral Communications	3

Aviation Maintenance Technology

Aviation Maintenance Technology

A.A.S. Degree (G)

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

Biological Sciences

Biotechnology

A.A.S. Degree (G,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	190	Precalculus	4
SSC	100	First Year Seminar	1
Select 2 course(s) from:			
CLT	110	Cross-Cultural Immersion	3
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

Courses			Credits
BIO	150	Biology I	4
BIO	151	Biology II	4
BIO	250	Principles of Microbiology	4
BIO	262	Genetics	4
BIO	263	Molecular Biology	4
CHM	110	General Chemistry	4
CHM	150	Chemical Principles I	5
CHM	151	Chemical Principles II	5

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CHM	240	Organic Chemistry I	4
CHM	241	Organic Chemistry II	4
PHY	205	General Physics I	4
Select 2 course(s) from:			
PHY	206	General Physics II	4
or			
CHM	265	Biochemistry	4
or			
SCI	130	Introduction to Research	2
or			
CHM	250	Analytical Chemistry I	5
or			
CHM	251	Analytical Chemistry II	4
RES	150	Independent Study & Research I	1
RES	200	Independent Study & Res. II	1
RES	250	Independent Study & Res. III	1

Biomedical Option

Electronic Engineering Technology

A.A.S. Degree (D)

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.

CORE COURSES

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	180	College Algebra	4
SSC	100	First Year Seminar	1
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

Courses			Credits
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	291	Biomed Electronics Internship	3
ELC	236	Analog Electronics III	4
or			
ELC	290	Internship	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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 (G,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

Courses			Credits
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
or			
MAT	190	Precalculus	4
Select 2 course(s) from:			
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

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	111	Intro to Organic & Biochemstry	4
CHM	250	Analytical Chemistry I	5
CHM	251	Analytical Chemistry II	4

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

Building Automation Systems Option

Energy

A.A.S. Degree (D)

The Building Automation Systems (BAS) program leads to an Associate in Applied Science (A.A.S.) degree in Energy Management with a Building Automation Systems 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

Courses			Credits
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
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

Courses			Credits
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

Courses			Credits
CEN	126	Industrial Networks	3
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	164	Architectural CAD Applications	3

Business Administration Transfer Option

Business

A.A.S. Degree (D,G,W)

The Business Administration Transfer option enables 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

Courses			Credits
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

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
ACC	221	Cost Accounting	3
BUS	101	Introduction to Business	3
FIN	221	Money and Banking	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

Courses			Credits
CIS	107	Intro to Computers/Application	3
PSY	121	General Psychology	3
or			
SOC	111	Sociology	3
Select 2 course(s) from:			
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
Select 1 course(s) from:			
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 Envtl Science & Tech	3
PHY	111	Conceptual Physics	4

Cardiovascular Sonography

Allied Health

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 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 Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 N., Suite 158, Clearwater, FL 33763, (727) 210-2350, http://www.caahep.org, upon recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS). 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251. 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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 (S)

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

Courses			Credits
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

Courses			Credits
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

Courses	Credits

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 provides the graduate with 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, 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

Courses		Credits
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 190	Precalculus	4
SSC 100	First Year Seminar	1
Select 2 course(s) from:		
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

Courses		Credits
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
CHM 111	Intro to Organic & Biochemstry	4
or		
CHM 265	Biochemistry	4

PROGRAM/MAJOR SUPPORT COURSES

Courses		Credits
BIO 150	Biology I	4
BIO 151	Biology II	4
BIO 250	Principles of Microbiology	4
BIO 262	Genetics	4
LAS 271	Intro to Lasers	4
LAS 272	Geometrical Optics & Lasers	4
PHY 205	General Physics I	4
PHY 206	General Physics II	4

Chemistry Math Concentration

Chemistry

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

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
ENG 122	Technical Writing-Comm	3
or		
ENG 130	Honors Tech. Writing & Comm	3

PROGRAM/MAJOR COURSES

Courses		Credits
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

Courses		Credits
CIS 107	Intro to Computers/Application	3
SCI 130	Introduction to Research	2
PHY 205	General Physics I	4
or		
PHY 281	Physics I with Calculus	4
PHY 206	General Physics II	4
or		
PHY 282	Physics II with Calculus	4
MAT 282	Calculus II	4
or		

ECO	111	Macroeconomics	3
or			
ECO	122	Microeconomics	3

Civil Engineering Technology

Civil Engineering Technology

A.A.S. Degree (G,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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Civil Transfer Option

Civil Engineering Technology

A.A.S. Degree (G,S)

The Civil Engineering Technology, Civil Transfer Option associate degree provides a wide range of rigorous mathematics, science, and engineering courses to prepare students for transfer to a baccalaureate civil engineering program.

CORE COURSES

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	281	Calculus I	4
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
ECO	111	Macroeconomics	3
ECO	122	Microeconomics	3
POL	111	Political Science	3
PSY	121	General Psychology	3
PSY	127	Human Development	3
SOC	111	Sociology	3
Select 1 course(s) from:			
HIS	111	U. S. History: Pre-Civil War	3
HIS	112	U. S. History: Post-Civil War	3

PROGRAM/MAJOR COURSES

Courses			Credits
CET	125	Civil & Envl Drafting & Design	3
CET	144	Surveying Principles	4
CET	220	Civil CAD Basics	1
CET	240	Hydraulics and Hydrology	4
CET	244	Principles of Site Development	4
CET	258	Statics with Calculus	3
CET	270	Solid Mechanics with Calculus	3
CHM	150	Chemical Principles I	5
MET	264	Material Science	4
PHY	281	Physics I with Calculus	4
PHY	282	Physics II with Calculus	4
or			
BIO	150	Biology I	4
and			
CHM	151	Chemical Principles II	5

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ENG	124	Oral Communications	3
MAT	282	Calculus II	4
MAT	283	Calculus III	4
MAT	292	Engineering Math I	3
Select 1 course(s) from:			
HIS	131	Art History I	3
HIS	132	Art History II	3
SPA	136	Spanish Communication I	4
SPA	137	Spanish Communication II	4
SPA	138	Spanish Communication III	4

Communications

Communications Technology

A.A.S. Degree (G)

The Communications program provides essential background for students preparing for careers in the print or broadcasting media. Students learn to write news articles for print and broadcast. They learn 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

Courses			Credits
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

Courses			Credits
COM	110	Intro. to Video Production	3
COM	130	Intro to Graphics & Design	3
COM	140	Digital Storytelling	3
COM	150	Media & Society	3
COM	240	Mass Media Law	3
COM	242	Digital Newsroom	3
COM	250	Photography	4
COM	251	Layout & Design	3
COM	293	Internship with Seminar	5
Select 2 course(s) from:			
COM	152	Podcasting	3
COM	160	Intro to Public Relations	3
COM	210	Advanced Video Production	3
COM	243	Social Media	3
COM	246	Introduction to Film	4
COM	252	Advanced Photography	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ENG	124	Oral Communications	3
ENT	101	Intro to Entrepreneurship	3
HIS	111	U. S. History: Pre-Civil War	3
WEB	160	Internet/Web Construction	3
ENG	129	Creative Writing	3
or			
MKT	212	Principles of Marketing	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 that 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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3

ENG 102	Composition and Research	3
MAT 180	College Algebra	4
SSC 100	First Year Seminar	1
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

Courses		Credits
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

Courses		Credits
AET 164	Architectural CAD Applications	3
MAT 190	Precalculus	4
MET 115	Intro to Mech Eng Tech	3
MET 123	Modern MFG Techniques	3
PHY 205	General Physics I	4
or		
PHY 281	Physics I with Calculus	4

Computer Engineering Tcy Option

Electronic Engineering Technology

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

Courses		Credits
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
MAT 180	College Algebra	4
SSC 100	First Year Seminar	1
Select 2 course(s) from:		
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

Courses		Credits
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

Courses		Credits
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

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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
HIS	111	U. S. History: Pre-Civil War	3
MAT	190	Precalculus	4
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
ECO	111	Macroeconomics	3
POL	111	Political Science	3
PSY	121	General Psychology	3
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
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	281	Calculus I	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ENG	122	Technical Writing-Comm	3
ECO	122	Microeconomics	3
or			
ENG	124	Oral Communications	3
PHY	205	General Physics I	4
or			
PHY	281	Physics I with Calculus	4
Select course(s) from:			
HIS	112	U. S. History: Post-Civil War	3
MAT	282	Calculus II	4
SPA	136	Spanish Communication I	4

Construction Management Technology

Construction Management Technology

A.A.S. Degree (D,S)

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 are 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

Courses			Credits
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
HIS	131	Art History I	3
HIS	132	Art History II	3
POL	111	Political Science	3
PSY	121	General Psychology	3
SOC	103	Sustainability and Society	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
CET	125	Civil & Envl Drafting & Design	3
CET	135	Engineering Materials	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

Courses			Credits
AET	164	Architectural CAD Applications	3
AET	232	Contracts/Specifications	3
AET	236	Building Service Systems	3
NRG	101	Intro to Energy Management	3
ACC	101	Accounting I	3
or			

OAT	152	Excel Level I	3
MAT	190	Precalculus	4
or			
PHY	205	General Physics I	4
or			
PHY	111	Conceptual Physics	4

Criminal Justice

Criminal Justice

A.A.S. Degree (D,G,S)

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

Courses			Credits
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

Courses			Credits
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/Counslng	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

Courses			Credits
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 (D,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.

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

Courses			Credits
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

Courses			Credits
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	280	American Regional Cuisine	4
CUL	285	International Cuisine	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	107	Intro to Computers/Application	3
HRI	210	Beverage Management	3
HRI	212	Food/Beverage Cost Control	3
MGT	248	Culinary Supervisory	3

Develpmnt

SCI	141	Nutrition in the Culinary Fld	2

Dental Hygiene

Allied Health

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. The Commission is 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 Commission's web address is: http://www.ada.org/en/coda. 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

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
SOC	111	Sociology	3
SSC	100	First Year Seminar	1

PROGRAM/MAJOR COURSES

Courses			Credits
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 Fundamtls I	3
DHY	112	Dental Hygiene Fundamentals 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 DHY	1.5
DHY	281	Operative/Specialty Dentistry	1
DHY	290	Community Dental Health	2
DHY	291	Communty Dental Health Fldwrk	1

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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 (Mechanical)

Design Engineering Technology

A.A.S. Degree (G)

The Design Engineering Technology curriculum provides 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 computer-aided drafting and design (CADD), computer numerical control(CNC) machining, and computer-aided manufacturing(CAM). Careers in mechanical design, manufacturing, machining, maintenance, technical sales, and engineering management are likely areas of employment.

CORE COURSES

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	180	College Algebra	4
SSC	100	First Year Seminar	1
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	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
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

Courses			Credits
MET	123	Modern MFG Techniques	3
MET	132	Statics	3
MET	225	Adv. Manufacturing Techniques	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

Diagnostic Medical Sonography: Owens

Allied Health

A.A.S. Degree (G)

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 Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 N., Suite 158, Clearwater, FL 33763 (727) 210-2350, http://www.caahep.org upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS), 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251 phone, (443) 738-3444 fax http://www.jrcdms.org 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

Courses		Credits
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

Courses		Credits
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

Courses		Credits
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

Diagnostic Medical Sonography: Wilmington

Allied Health

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 Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19N., Suite 158, Clearwater, FL 33763, (727) 210-2350, http://www.caahep.org, upon the recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) 6021 University Blvd., Suite 500, Ellicott City, MD 21043, (443) 973-3251 phone, (443)738-3444 fax, http://www.jrcdms.org, 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

Courses		Credits
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

Courses		Credits
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

Courses			Credits
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

Drug Alcohol Counseling

Human Services

A.A.S. Degree (D,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

Courses			Credits
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

Courses			Credits
DAC	141	Intro Drug&Alcohol Counseling	3
DAC	225	Drug & Alcohol Counseling II	3
DAC	230	Assessmnt/Trtmnt/D&A Counslng	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

Courses			Credits
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 Development

Early Childhood Education

A.A.S. Degree (D,G,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. The Early Childhood Education program is accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children, 1313 L Street, NW, #500 Washington, DC 20005, (202) 232-8777.

CORE COURSES

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
HIS	111	U. S. History: Pre-Civil War	3
MAT	120	Contemporary Mathematics	3
PSY	121	General Psychology	3
SSC	100	First Year Seminar	1

PROGRAM/MAJOR COURSES

Courses			Credits
ECE	111	Childhd Nutrition/Safety	3
ECE	120	Comtemp Issues in Erly Childhd	3
ECE	121	Infant & Toddler Methods & Lab	4
ECE	123	Early Childhd Methods I & Lab	4
ECE	125	Early Childhd Methods II & Lab	4
ECE	127	Childhood Classroom Mgt	3
ECE	222	Program Planning/Evaluation	3
ECE	226	Assessment of Young Children	3
ECE	233	Intro to Exceptional Learners	3
ECE	244	Fld Work - Teaching Practicum	6
EDC	120	Foundations of Literacy	3
EDC	220	Parent/Family/School Interact	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	108	Applied Concepts in Educ Tech	3
PSY	125	Child Development	3
Select course(s) from:			
CLT	110	Cross-Cultural Immersion	3

COM	222	Intercultural Communication	3
ENG	124	Oral Communications	3
SOC	111	Sociology	3
SPA	133	Using Beginning Spanish	3

Electrical and Computer Engineering Transfer Option

Electrical and Computer Engineering

A.A.S. Degree (D,G,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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	281	Calculus I	4
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
HIS	111	U. S. History: Pre-Civil War	3
HIS	112	U. S. History: Post-Civil War	3
HIS	131	Art History I	3
HIS	132	Art History II	3
SPA	136	Spanish Communication I	4
Select 1 course(s) from:			
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

Courses			Credits
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

Courses			Credits
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 (D)

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 constructs 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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	180	College Algebra	4
SSC	100	First Year Seminar	1
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

Courses			Credits
ELM	130	Industrial Electricity	3
ELM	155	Manufacturing Topics	4
ELM	175	Process Ctrl & Instrumentation	4
ELM	205	Mechanisms and Design	3
ELM	230	Industrial Electronics	3
ELM	243	Indust Program Logic Control	4
ELM	250	Industrial Automation	3
ELM	252	Fluid Power	3
ELM	253	Advd Programble Logic Control	4
ELM	290	Electromechanical Internship	3
MET	242	Strength of Materials	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CEN	100	Intro Elec & Computer Eng Tech	3
CEN	126	Industrial Networks	3
EDD	131	Engineering Graphics/CAD	3
ENG	122	Technical Writing-Comm	3
MAT	190	Precalculus	4

Electronics Engineering Tcy

Electronics Engineering Technology

A.A.S. Degree (D,G,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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	180	College Algebra	4
SSC	100	First Year Seminar	1
Select 2 course(s) from:			
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

Courses			Credits
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	4
ELC	243	Programmable Logic Controllers	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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 Transfer Option

Electronics Engineering Technology

A.A.S. Degree (D,G,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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	281	Calculus I	4
SSC	100	First Year Seminar	1
Select 2 course(s) from:			
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

Courses			Credits
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
Select 1 course(s) from:			
ELC	236	Analog Electronics III	4
ELC	283	Introduction to LabVIEW	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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
or			
PHY	281	Physics I with Calculus	4
PHY	206	General Physics II	4
or			
PHY	282	Physics II with Calculus	4

Emergency Medical Technician Paramedic

Allied Health

A.A.S. Degree (D)

The Emergency Medical Technician 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 (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs 25400 U.S. Highway 19 North, Suite 158 Clearwater, FL 33763 (727) 210-2350 www.caahep.org To contact CoAEMSP: 8301 Lakeview Parkway Suite 111-312 Rowlett, TX 75088 (214) 703-8445 FAX (214) 703-8992 www.coaemsp.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

Courses			Credits
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
or			
SOC	111	Sociology	3
SOC	213	Ethical Issues in Health Care	3
or			
PSY	223	Abnormal Psychology	3

PROGRAM/MAJOR COURSES

Courses			Credits
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

Courses			Credits
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 Management

Energy

A.A.S. Degree (D,S)

Students will gain an understanding of energy systems in today's "built environment" and the tools to analyze and quantify energy efficiency. Students develop sophisticated skills in multi-level analysis, including human and computer modeling, to improve energy efficiency in commercial spaces. These skills are 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.

CORE COURSES

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Entrepreneurship

Entrepreneurial

A.A.S. Degree (D,G,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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
CIS	107	Intro to Computers/Application	3
MKT	212	Principles of Marketing	3
ACC	100	Introduction to Accounting	3
or			
ACC	101	Accounting I	3
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

Environmental Technology: Environmental Engineering Technology

Engineering

A.A.S. Degree (G,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

Courses			Credits
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

Courses			Credits
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	205	Geology and the Environment	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BIO	150	Biology I	4
CHM	110	General Chemistry	4
EDD	171	Intro to CAD Using AutoCAD	3
GIS	101	Introduction to GIS	3
SCI	223	Applied Ecology	3
MAT	255	Statistics I	3
or			
PHY	205	General Physics I	4

Exercise Science

Allied Health

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Food Safety

Food Safety

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
BIO	115	Nutrition	3
CIS	107	Intro to Computers/Application	3
POS	215	Poultry Production Management	3
BIO	140	General Biology	4
or			
BIO	150	Biology I	4
CHM	100	Basic Chemistry	3
or			
CHM	150	Chemical Principles I	5

General Business

Business

A.A.S. Degree (D,G,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.

CORE COURSES

Courses			Credits
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

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
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	3
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

Courses			Credits
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

Courses			Credits
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
HIS	131	Art History I	3
HIS	132	Art History II	3
SOC	103	Sustainability and Society	3
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
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

Courses			Credits
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	3
or			
CRJ	101	Intro to Criminal Justice	3
and			
CRJ	223	Criminology	3
or			
ENV	190	Intro to Envtl Science & Tech	3
and			
GEO	205	Geology and the Environment	3

Health Information Management

Allied Health

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 prepares 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 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

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
SOC	213	Ethical Issues in Health Care	3
SSC	100	First Year Seminar	1

PROGRAM/MAJOR COURSES

Courses			Credits
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

Courses			Credits
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

Histotechnician

Allied Health

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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 & Biochemstry	4
CIS	107	Intro to Computers/Application	3

Homeland Security and Emergency Management

Criminal Justice

A.A.S. Degree (D)

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

Courses			Credits
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

Courses			Credits
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 Responders	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

Courses			Credits
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

Hospitality Management

Business

A.A.S. Degree (D,G,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.

CORE COURSES

Courses			Credits
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

Courses			Credits
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	215	Lodging Operations Management	3
HRI	217	Intro to Event Planning&Manage	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
MGT	212	Principles of Management	3
or			
MGT	248	Culinary Supervisory Develpmnt	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
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 (D,G,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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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 Technology & Networking

Information Technology & Networking

A.A.S. Degree (D,G,W)

The Information Technology & Networking (ITN) program encompasses a broad range of technology-based areas of study and prepares students with the technical knowledge and skills needed for a career in information technology. Designed to meet the needs of local businesses and industries, the ITN program focuses on crafting hardware and software solutions as applied to networks, security, client-server and mobile computing, web applications, multimedia resources, communications systems, and the planning and management of the technology lifecycle. The program consists of ten program/major courses and five program/major support courses. Students can earn a concentration by completing the designated program/major support courses for Information Security, Programming, or Networking.

CORE COURSES

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
MAT	120	Contemporary Mathematics	3
PHL	103	Introduction to Ethics	3
SSC	100	First Year Seminar	1
COM	111	Human Communications	3
or			
PSY	121	General Psychology	3
or			
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
ITN	101	Intro to IT	3
ITN	103	Project Dynamics	2
ITN	110	IT Support & Troubleshooting	3
ITN	120	Operating Systems I	3
ITN	150	IT Networking I	3
ITN	160	Programming I	3
ITN	170	Information Security	3
ITN	180	Database Technology I	3
ITN	200	System Administration I	3
ITN	290	IT Capstone & Work-Based Learn	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
Select 15 credits from the courses below for a general ITN degree:			
ITN	251	IT Networking II	3
ITN	252	IT Networking III	3
ITN	253	System Admin for Windows	3
ITN	254	System Admin for Linux	3
ITN	255	Cloud Computing	3
ITN	261	Programming II	3
ITN	262	Programming III	3
ITN	263	Mobile App Development	3
ITN	264	Web App Development	3
ITN	265	Systems Analysis & Design	3
ITN	271	Advanced Security Operations	3
ITN	272	Digital Forensics	3
ITN	273	Ethical Hacking	3
ITN	274	System & Network Defense	3

OR select one of the concentrations below:

INFORMATION SECURITY CONCENTRATION COURSES

Courses			Credits
ITN	251	IT Networking II	3
ITN	271	Advanced Security Operations	3
ITN	272	Digital Forensics	3
ITN	273	Ethical Hacking	3
ITN	274	System & Network Defense	3

NETWORKING CONCENTRATION COURSES

Courses			Credits
ITN	251	IT Networking II	3
ITN	252	IT Networking III	3
ITN	253	System Admin for Windows	3
ITN	254	System Admin for Linux	3
ITN	255	Cloud Computing	3

PROGRAMMING CONCENTRATION COURSES

Courses			Credits
ITN	261	Programming II	3
ITN	262	Programming III	3
ITN	263	Mobile App Development	3
ITN	264	Web App Development	3
ITN	265	Systems Analysis & Design	3

Instrumentation Option

Electronic Engineering Technology

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Landscape and Ornamental Horticulture

Applied Agriculture

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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 I.D. and Cultivation	3
AGS	232	Horticulture Work Experience	3
AGS	243	Golf & Turf Irrigation	3
AGS	244	Landscape Plans & Construction	3
AGS	250	Greenhouse Crop Production	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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	140	General Biology	4
BIO	150	Biology I	4
BIO	151	Biology II	4
CHM	100	Basic Chemistry	3
CHM	110	General Chemistry	4
SCI	223	Applied Ecology	3

Law Enforcement Option

Criminal Justice

A.A.S. Degree (D,G,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 are 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

Courses			Credits
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

Courses			Credits
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/Counslng	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

Courses			Credits
CIS	107	Intro to Computers/Application	3
ENG	122	Technical Writing-Comm	3
HDM	202	First Responders	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 (G,W)

The Logistics, Supply Chain, and Operations Management program builds 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Management

Business

A.A.S. Degree (D,G,W)

Business Management prepares the graduate to handle supervisory level management positions in different types of organizational settings in all sectors of the business world. The student gains 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.

CORE COURSES

Courses			Credits
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

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
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

Courses			Credits
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

Marketing

Business

A.A.S. Degree (D,G,W)

With an education in Marketing, the graduate is 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.

CORE COURSES

Courses			Credits
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

Courses			Credits
ACC	101	Accounting I	3
ACC	112	Accounting II	3
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

Courses			Credits
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; and prepares engineering drawings, charts, and graphs. The Mechanical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

CORE COURSES

Courses		Credits
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

Courses		Credits
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 225	Adv. Manufacturing Techniques	3
MET 241	Fluid Mechanics	4
MET 242	Strength of Materials	3
MET 243	Dynamics	3
MET 245	Machine Design	3
MET 264	Material Science	4
MET 271	Engineering Project	3

PROGRAM/MAJOR SUPPORT COURSES

Courses		Credits
EDD 131	Engineering Graphics/CAD	3
ELC 248	Electro-Mech. Systems	4
MAT 185	Precalculus	4
MAT 190	Precalculus	4
PHY 205	General Physics I	4
or		
PHY 281	Physics I with Calculus	4

Medical Assistant

Allied Health

A.A.S. Degree (W)

The Medical Assistant is a multiskilled professional who works with other members of the healthcare 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 healthcare 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 Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs(CAAHEP), 25400 US Highway 19 N., Suite 158, Clearwater, FL 33763, (727) 210-2350, http://www.caahep.org, upon recommendation of the Medical Assisting Education Review Board (MAERB). 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

Courses		Credits
ENG 101	Crit Thinking & Acad Writing	3
ENG 102	Composition and Research	3
PSY 121	General Psychology	3
SPA 135	Spanish for Healthcare Workers	3
SSC 100	First Year Seminar	1
MAT 145	Math of Finance	3
or		
MAT 153	College Math and Statistics	4

PROGRAM/MAJOR COURSES

Courses		Credits
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

Courses			Credits
BIO	100	Medical Terminology	3
BIO	110	Essentls-Anatomy & Physiology	4
CIS	107	Intro to Computers/Application	3
OAT	121	Keyboarding	3
SOC	213	Ethical Issues in Health Care	3

Medical Laboratory Technician

Allied Health

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
BIO	120	Anatomy and Physiology I	5
BIO	121	Anatomy and Physiology II	5
Select 1 course(s) from:			
CHM	110	General Chemistry	4
CHM	150	Chemical Principles I	5
Select 1 course(s) from:			
CHM	111	Intro to Organic & Biochemstry	4
CHM	151	Chemical Principles II	5

Multimedia

Visual Communications

A.A.S. Degree (D)

The Multimedia Design Option of the Visual Communications program emphasizes visual media in web pages and interactive formats. Students in this option are able to extend their foundation work in traditional media into the web-based realm. Emphasis is placed on creative problem solving in addition to user experience skills. Presentations are 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, digital advertising firms, web development companies, self-employment, or opt for further study at the baccalaureate level.

CORE COURSES

Courses			Credits
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
POL	111	Political Science	3
or			
PSY	121	General Psychology	3
or			
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses	Credits

VSC	109	Drawing I	3
VSC	115	Intro To Design	3
VSC	160	Raster Graphics	3
VSC	161	Vector Graphics	3
VSC	165	Photography I	3
VSC	190	Intro To Videography	3
VSC	210	Layout Graphics	3
VSC	251	Portfolio Workshop	4
VSC	262	Web Graphics	3
VSC	273	Applied Practice Multimedia	3
or			
VSC	293	VSC Internship	3
or			
VSC	294	VSC Cooperative	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BUS	101	Introduction to Business	3
MKT	212	Principles of Marketing	3
MKT	214	Advertising and Promotion	3
MKT	217	E-Marketing Fundamentals	3
HIS	131	Art History I	3
or			
HIS	132	Art History II	3

Nuclear Medicine

Allied Health

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 Technology (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

Courses			*Credits*
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

Courses			*Credits*
HLH	*215*	*Cardiovascular Monitoring*	*2*
NMT	*101*	*Patient Care for the NMT*	*2*
NMT	*115*	*Intro to NMT with Clinical Lab*	*4*
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 II with PET/CT*	*1*
NMT	*222*	*Nuclear Physics*	*3*
NMT	*223*	*Nuclear Med Instrumentation*	*4*
NMT	*224*	*Radiopharmacy & Pharmacology*	*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

Courses			*Credits*
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 & Biochemstry*	*4*
PHY	*112*	*Physics for Allied Health*	*4*

Nursing

Nursing

A.A.S. Degree (D,G,S)

The Associate in Applied Science nursing degree program 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 healthcare 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 program 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

Courses		Credits
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

Courses		Credits
NUR 200	Nursing Concepts III	4
NUR 201	Maternal-Child Health Concepts	4
NUR 210	Nursing Concepts IV	4
NUR 211	Community & Profess Concepts	3
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	16

PROGRAM/MAJOR SUPPORT COURSES

Courses		Credits
BIO 120	Anatomy and Physiology I	5
BIO 121	Anatomy and Physiology II	5
BIO 125	Introductory Microbiology	4
CHM 100	Basic Chemistry	3

Occupational Therapy Assistant

Allied Health

A.A.S. Degree (G,W)

The Occupational Therapy Assistant (OTA) is an individual who works under the supervision of a certified occupational therapist. The OTA 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 OTA program provides 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 OTA 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 (G)

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	3
ACC	162	Computerized Accounting	3
OAT	121	Keyboarding	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	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
Select 2 course(s) from:			
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	170	Intro to the Legal System	3
SOC	215	Business Ethics	3

Paraeducator

Education

A.A.S. Degree (D,G,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

Courses			Credits
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
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
CLT	110	Cross-Cultural Immersion	3
COM	222	Intercultural Communication	3
ENG	129	Creative Writing	3
SPA	133	Using Beginning Spanish	3

PROGRAM/MAJOR COURSES

Courses			Credits
ECE	111	Childhd Nutrition/Safety	3
ECE	233	Intro to Exceptional Learners	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	250	Internship & Seminar	4
MAT	212	Math for Teachers II	4
SOC	111	Sociology	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	108	Applied Concepts in Educ Tech	3
ENG	124	Oral Communications	3
PSY	121	General Psychology	3
PSY	126	Child/Adolescent Development	3
BIO	140	General Biology	4
or			
BIO	150	Biology I	4

Paralegal

Paralegal

A.A.S. Degree (D,G)

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

Courses			Credits
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

Courses			Credits
PLG	170	Intro to the Legal System	3
PLG	280	Legal Research & Writing	3
PLG	290	Paralegal Internship	4
Select 7 course(s) from:			
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

Courses			Credits
ENG	124	Oral Communications	3
OAT	157	Word Level I	3
POL	111	Political Science	3
ACC	100	Introduction to Accounting	3
or			
ACC	101	Accounting I	3
Select 1 course(s) from:			
ACC	162	Computerized Accounting	3
BIO	100	Medical Terminology	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
SPA	133	Using Beginning Spanish	3
SPA	136	Spanish Communication I	4

Photo Imaging

Visual Communications

A.A.S. Degree (D)

The Photo Imaging Option of the Visual Communications program is an exciting blend of traditional photographic techniques and digital photography. This technology mixes the aesthetics of fine art photography with the speed and flexibility of today?s digital imaging. It is an exciting field with tremendous potential for artistic as well as commercial creativity. Students will utilize traditional photography techniques, direct digital images, and videography 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, social media, and other multimedia formats increases, the demand for skilled digital imaging professionals will continue to rise.

CORE COURSES

Courses			Credits
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
POL	111	Political Science	3
or			
PSY	121	General Psychology	3
or			
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
VSC	109	Drawing I	3
VSC	115	Intro To Design	3
VSC	160	Raster Graphics	3
VSC	165	Photography I	3
VSC	166	Advanced Photography	3
VSC	190	Intro To Videography	3
VSC	210	Layout Graphics	3
VSC	251	Portfolio Workshop	4
VSC	262	Web Graphics	3
VSC	270	Project Management	2
VSC	275	Self Promotion	2
VSC	274	Applied Practice Photo Imaging	3
or			
VSC	293	VSC Internship	3
or			
VSC	294	VSC Cooperative	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BUS	101	Introduction to Business	3
MKT	212	Principles of Marketing	3
MKT	214	Advertising and Promotion	3
MKT	217	E-Marketing Fundamentals	3
HIS	131	Art History I	3
or			
HIS	132	Art History II	3

Physical Therapist Assistant

Allied Health

A.A.S. Degree (G,W)

Physical Therapist Assistants are licensed healthcare 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 healthcare 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 healthcare 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

Courses			*Credits*
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

Courses			*Credits*
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

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*
PHY	*110*	*Physics Physical Therapy Assnt*	*4*
or			
PHY	*171*	*Physics I*	*4*
or			
PHY	*205*	*General Physics I*	*4*

Production Agriculture

Applied Agriculture

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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 Ag Work Experience	3
AGS	240	Hydroponics Production	3
AGS	250	Greenhouse Crop Production	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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

Radiologic Technology

Allied Health

A.A.S. Degree (G,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 (20 N. Wacker Dr, Suite 2850, Chicago, IL 60606-3182; 312-704-5300; mail@jrcert.org; 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

Courses	Credits

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

Courses			Credits
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	Rad Equipment Operation & QA	3
RAD	250	Radiographic Pathology	2
RAD	260	Clinical Radiography IV	5
RAD	261	Clinical Radiography V	5

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
CHM	110	General Chemistry	4

Refrigeration, Heating, & Air Conditioning

Refrigeration, Heating, & Air Conditioning

A.A.S. Degree (G)

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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
CMT	111	Construction Print Reading	3
NRG	101	Intro to Energy Management	3
NRG	108	Safety Basics	1
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

Renewable Energy Solar

Energy

A.A.S. Degree (D)

The Renewable Energy Solar program prepares graduates to work as technicians in the renewable energy industry. Students develop energy analysis skills to improve energy efficiency and application of renewable energy solar systems. Students learn solar photovoltaic installation and design and solar thermal applications. They 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 is integrated with applied practice related to solar photovoltaic and thermal installation. Students study and work with both grid-tied and stand-alone

photovoltaic systems.

CORE COURSES

Courses		Credits
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

Courses		Credits
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

Courses		Credits
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 164	Architectural CAD Applications	3
BUS 101	Introduction to Business	3
or		
ENT 101	Intro to Entrepreneurship	3

Respiratory Care

Allied Health

A.A.S. Degree (G,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), P.O. Box 54875, Hurst, TX 76054-4876, (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

Courses		*Credits*
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

Courses		*Credits*
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 Respratory 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

Courses		*Credits*
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*

Surgical Technology

Allied Health

A.A.S. Degree (D)

The Surgical Technology program helps meet the employment demands for highly skilled surgical technologists. The program provides 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 (https://www.caahep.org) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting. Commission on Accreditation of Allied Health Education Programs 25400 U.S. Highway 19 North, Suite 158 Clearwater, FL 33763 Phone: 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

Courses			Credits
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

Courses			Credits
SGT	100	Intro to Surgical Technology	2
SGT	200	Surgical Technology I	4
SGT	202	Pharmacology	1
SGT	203	Surgical Technology Lab I	2
SGT	210	Surgical Technology II	4
SGT	213	Surgical Technology Lab II	2
SGT	220	Surgical Technology III	4
SGT	221	Surgical Technology Internship	12
SGT	222	Surgical Technology IV	2
SGT	223	Surgical Technology Lab III	2

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	125	Introductory Microbiology	4
CHM	100	Basic Chemistry	3
or			
CHM	110	General Chemistry	4

Surveying and Geomatics Engineering Technology

Civil Engineering Technology

A.A.S. Degree (G,S)

This program option prepares 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 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

Courses			Credits
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

Courses			Credits
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	3
CET	247	Route Surveying and Design	3
CET	248	Boundary Surveying and Law	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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

Turf Management

Applied Agriculture

A.A.S. Degree (G)

The Turf Management 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 are required to take certain course at the Owens Campus Turf Grass Lab

CORE COURSES

Courses			Credits
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

Courses			Credits
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	Turf Mgt Work Experience	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

Courses			Credits
CIS	107	Intro to Computers/Application	3
OAT	157	Word Level I	3
SCI	240	Turfgrass Physiology	3
CHM	100	Basic Chemistry	3
or			
CHM	110	General Chemistry	4
or			
SCI	223	Applied Ecology	3
or			
BIO	140	General Biology	4
or			
BIO	150	Biology I	4
or			
BIO	151	Biology II	4

Veterinary Technology

Allied Health

A.A.S. Degree (G)

The Veterinary Technology program provides students with the theoretical and technical skills essential for a wide-range of career options in animal health and management. The curriculum prepares 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

Courses			Credits
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
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

Courses			Credits
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

Courses			Credits
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

Associate of Arts in Teaching Degree Programs (A.A.T.)

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Early Care and Education (Birth to Second Grade)	D,G,W
Elementary Education	D,G,W
Math Secondary Education	D,S
Middle-Level Math Education	G,W
Science Education: Chemistry/Physics	D,G,S

Early Care and Education (Birth to Second Grade)

Early Childhood Education

A.A.T. Degree (D,G,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. The Early Care and Education (Birth to Second Grade) program is accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children, 1313 L Street, NW, #500 Washington, DC 20005, (202) 232-8777.

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	111	Childhd Nutrition/Safety	3
ECE	120	Comtemp Issues in Erly Childhd	3
ECE	121	Infant & Toddler Methods & Lab	4
ECE	123	Early Childhd Methods I & Lab	4
ECE	125	Early Childhd Methods II & Lab	4
ECE	127	Childhood Classroom Mgt	3
ECE	226	Assessment of Young Children	3
ECE	233	Intro to Exceptional Learners	3
EDC	120	Foundations of Literacy	3
EDC	220	Parent/Family/School Interact	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	108	Applied Concepts in Educ Tech	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

Elementary Education

Education

A.A.T. Degree (D,G,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
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	108	Applied Concepts in Educ Tech	3
ECE	233	Intro to Exceptional Learners	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
MAT	212	Math for Teachers II	4
MAT	213	Math for Teachers III	4
PSY	125	Child Development	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BIO	140	General Biology	4
ENG	124	Oral Communications	3
PHY	111	Conceptual Physics	4
SPA	136	Spanish Communication I	4
HIS	131	Art History I	3
or			

HIS	132	Art History II	3
SPA	137	Spanish Communication II	4
or			
ECO	111	Macroeconomics	3

Math Secondary Education

Education

A.A.T. Degree (D,S)

This associate degree program prepares 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

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
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

Courses			Credits
ECE	233	Intro to Exceptional Learners	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

Courses			Credits
CIS	120	Intro to Programming	4
PHY	281	Physics I with Calculus	4
PSY	127	Human Development	3
SPA	136	Spanish Communication I	4

Middle-Level Math Education

Education

A.A.T. Degree (G,W)

The Middle-Level Mathematics Education Associate of Arts in Teaching degree program prepares students for transfer to a baccalaureate degree program that leads to a teaching career in middle school mathematics. The program provides rigorous math course work, integrated educational technology, and experiences in a math center and a middle school environment.

CORE COURSES

Courses			Credits
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

Courses			Credits
ECE	233	Intro to Exceptional Learners	3
MAT	143	College Geometry	3
MAT	190	Precalculus	4
MAT	200	Mathematics Internship	3
MAT	251	Finite Math	3
MAT	253	Discrete Mathematics	3
MAT	255	Statistics I	3
MAT	281	Calculus I	4
MAT	282	Calculus II	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BIO	140	General Biology	4
ENG	124	Oral Communications	3
PSY	126	Child/Adolescent Development	3
SCI	150	Earth and Space Science	3
SPA	136	Spanish Communication I	4

Science Education: Chemistry/Physics

Education

A.A.T. Degree (D,G,S)

The Science Education program will use 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. The major electives and physics course selections allow students to complete courses that articulate to a physics or chemistry bachelor degree program.

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
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

Courses			Credits
CHM	110	General Chemistry	4
CHM	150	Chemical Principles I	5
CHM	151	Chemical Principles II	5
EDC	115	Nature of Science	1
EDC	260	Educational Psychology	3
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
MAT	283	Calculus III	4
and			
MAT	291	Ordinary Differential Equation	4
or			
MAT	288	Linear Algebra	4
or			
BIO	150	Biology I	4
and			
CHM	240	Organic Chemistry I	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
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

Associate of Science Programs (A.S.)

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Associate of Science	D,G,S,W

Associate of Science

General

A.S. Degree (D,G,S,W)

The Associate of Science General degree program is a 60-credit transfer degree designed to prepare students to either transfer internally to the College's existing nursing and allied health programs after competitive admission requirements are met, or to transfer to a four-year institution upon completion. The curriculum provides students with a foundation in biology, chemistry, physics, and/or mathematics supplemented by electives in English, humanities, and social sciences.

CORE COURSES

Courses			Credits
CIS	107	Intro to Computers/Application	3
ENG	101	Crit Thinking & Acad Writing	3
ENG	102	Composition and Research	3
ENG	250	Research and Technical Writing	3
PHL	103	Introduction to Ethics	3
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
MAT	129	Math for Health Sciences	3
MAT	153	College Math and Statistics	4
MAT	180	College Algebra	4
MAT	255	Statistics I	3
Select 2 course(s) from:			
ECO	111	Macroeconomics	3
ECO	122	Microeconomics	3
PSY	121	General Psychology	3
PSY	127	Human Development	3
SOC	103	Sustainability and Society	3
SOC	104	Human Geography	3
SOC	111	Sociology	3
or			
SOC	213	Ethical Issues in Health Care	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
Select 1 course(s) from:			
CLT	110	Cross-Cultural Immersion	3
COM	111	Human Communications	3
ENG	124	Oral Communications	3
ENG	128	African-American Literature	3
HIS	111	U. S. History: Pre-Civil War	3
HIS	112	U. S. History: Post-Civil War	3
HIS	131	Art History I	3
SPA	136	Spanish Communication I	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
Select 28 credits from:			
BIO	100	Medical Terminology	3
BIO	108	Basic Pharmacology	2
BIO	115	Nutrition	3
BIO	121	Anatomy and Physiology II	5
BIO	125	Introductory Microbiology	4
BIO	130	Disease Proc/Pathophysiology	3
BIO	151	Biology II	4
BIO	250	Principles of Microbiology	4
BIT	260	Biotechnology I	4
BIT	261	Biotechnology II	4
CHM	100	Basic Chemistry	3
CHM	110	General Chemistry	4
CHM	111	Intro to Organic & Biochemstry	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
HLH	101	Intro To Patient Care	2
HLH	110	First Aid, Safety & CPR	3
HLH	130	Nurse Assistant Training	6
MAT	251	Finite Math	3
MAT	253	Discrete Mathematics	3
MAT	263	Principles of Discrete Math	4
MAT	281	Calculus I	4
MAT	282	Calculus II	4
MAT	283	Calculus III	4
MAT	288	Linear Algebra	4
MAT	291	Ordinary Differential Equation	4
MAT	292	Engineering Math I	3
MLT	120	Hematology I	4
OAT	121	Keyboarding	3
PHY	111	Conceptual Physics	4
PHY	205	General Physics I	4
PHY	206	General Physics II	4
PHY	281	Physics I with Calculus	4
PHY	282	Physics II with Calculus	4
PSY	223	Abnormal Psychology	3
PSY	224	Human Sexuality	3
SGT	100	Intro to Surgical Technology	2

Diploma Programs

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Automotive Technician Studies	G,S
Baking and Pastry Skills Studies	D,S
Chemical Process Operator Studies	S
Commercial Transportation Studies	G
Early Childhood Studies	D,G,W
Kitchen Skills Studies	S
Medical Coding Studies	W
Practical Nursing Studies	D,G
Refrigeration, Heating, & Air Conditioning Studies	G

Automotive Technician Studies

Automotive Technology

Diploma (G,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 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
CIS	107	Intro to Computers/Application	3
ENT	101	Intro to Entrepreneurship	3
or			
BUS	101	Introduction to Business	3

Baking and Pastry Skills Studies

Culinary Arts

Diploma (S,D)

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 my 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
HRI	212	Food/Beverage Cost Control	3
MGT	248	Culinary Supervisory Develpmnt	3
SCI	141	Nutrition in the Culinary Fld	2

Chemical Process Operator Studies

Chemical Process Operator

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

Courses			Credits
ENG	101	Crit Thinking & Acad Writing	3
MAT	120	Contemporary Mathematics	3
SSC	100	First Year Seminar	1
Select 1 course(s) from:			
ECO	111	Macroeconomics	3
POL	111	Political Science	3
PSY	121	General Psychology	3
SOC	111	Sociology	3

PROGRAM/MAJOR COURSES

Courses			Credits
CPO	106	Statistical Procs Cntrl Ovrvw	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

Courses			Credits
CHM	110	General Chemistry	4
CIS	107	Intro to Computers/Application	3
ELC	101	Intro to Instrumentation	3

Commercial Transportation Studies

Automotive Technology

Diploma (G)

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

Courses			Credits
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

Courses			Credits
CTS	101	Fundmentals-Motor Fleet Safety	3
CTS	102	Vehicle Sys/Report Malfunction	2
CTS	103	Tractor Trailer Operations	3
CTS	104	Road Driving Practices	4
CTS	105	Range Driving Practices	2
CTS	108	Professional Driver Developmnt	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	107	Intro to Computers/Application	3
Select 1 course(s) from:			
BUS	101	Introduction to Business	3
ECO	111	Macroeconomics	3
ENT	101	Intro to Entrepreneurship	3

Early Childhood Studies

Early Childhood Education

Diploma (D,G,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

Courses			Credits
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

Courses			Credits
ECE	111	Childhd Nutrition/Safety	3
ECE	120	Comtemp Issues in Erly Childhd	3
ECE	121	Infant & Toddler Methods & Lab	4
ECE	123	Early Childhd Methods I & Lab	4
ECE	125	Early Childhd Methods II & Lab	4
ECE	127	Childhood Classroom Mgt	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
CIS	108	Applied Concepts in Educ Tech	3

Kitchen Skills Studies

Culinary Arts

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

Courses			Credits
COM	111	Human Communications	3
ENG	101	Crit Thinking & Acad Writing	3
MAT	120	Contemporary Mathematics	3
SSC	100	First Year Seminar	1

PROGRAM/MAJOR COURSES

Courses			Credits
CUL	119	Food Safety and Sanitation	2
CUL	121	Food Prep I	4
CUL	171	Garde Manger	4
CUL	261	Baking	4
or			
CUL	280	American Regional Cuisine	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
HRI	212	Food/Beverage Cost Control	3
MGT	248	Culinary Supervisory Develpmnt	3
SCI	141	Nutrition in the Culinary Fld	2

Medical Coding Studies

Allied Health

Diploma (W)

The Medical Coding Studies program 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

Courses			Credits
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

Courses			Credits
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

Courses			Credits
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

Practical Nursing Studies

Nursing

Diploma (D,G)

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 healthcare 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 healthcare 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 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.acenursing.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

Courses			Credits
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
SSC	100	First Year Seminar	1

PROGRAM/MAJOR COURSES

Courses			Credits
NUR	131	Fundamentals of Nursing	4
NUR	132	Medical-Surgical Nursing I	6
NUR	133	Medical-Surgical Nursing II	6
NUR	134	Essentials-Mental Hlth Nursing	2
NUR	135	Essents Maternal/Chld Nursing	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
BIO	110	Essentls-Anatomy & Physiology	4

Refrigeration, Heating, & Air Conditioning Studies

Refrigeration, Heating, & Air Conditioning

Diploma (G)

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.

CORE COURSES

Courses			Credits
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

Courses			Credits
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
ACR	151	Industry Competency Exam II	1

Certificate Programs

CAMPUS KEY: D = Dover; G = Georgetown; S = Stanton; W = Wilmington

Program	Campus
Baking and Pastry Skills Certificate	D,S
Chemical Process Operator Certificate	S
Commercial Transportation Certificate	G
Cooking Certificate	S
Correctional Officer Certificate I	D,G,S
Direct Support Professional Certificate	D,G,W
Drug/Alcohol Counseling Certificate	D,W
EMT Paramedic Certificate	D
English as a Second Language Certificate	D,G,W
Entrepreneurship Certificate	D,G,W
Food Safety Certificate	G
General Airframe Maintenance Certificate	G
General Powerplant Maintenance Certificate	G
Instruction, Design, and Technology Certificate	D,G,S,W
Instrumentation Certificate	S
Machinist Training Level I Certificate	S
Machinist Training Level II Certificate	S
Paralegal Certificate	D,G

Baking and Pastry Skills Certificate

Culinary Arts

Certificate (D,S)

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 prepares 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 credits earned in this program may be applied to the Baking and Pastry Skills Studies diploma or the associate degree in the Culinary Arts programs. Industry professionals and students will also acquire the mandatory classes required by the American Culinary Federation to begin the certification process.

PROGRAM/MAJOR COURSES

Courses			Credits
CUL	112	Cake Decorating	2
CUL	119	Food Safety and Sanitation	2
CUL	261	Baking	4
CUL	262	Pastry	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
MGT	248	Culinary Supervisory Develpmnt	3
SCI	141	Nutrition in the Culinary Fld	2

Chemical Process Operator Certificate

Chemical Process Operator

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.

PROGRAM/MAJOR COURSES

Courses			Credits
CPO	106	Statistical Procs Cntrl Ovrvw	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

Courses			Credits
CIS	107	Intro to Computers/Application	3
ELC	101	Intro to Instrumentation	3
CHM	100	Basic Chemistry	3
or			
CHM	110	General Chemistry	4

Commercial Transportation Certificate

Automotive

Certificate (G)

Do you enjoy the freedom of the open road and want a career that doesn't involved 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.

PROGRAM/MAJOR COURSES

Courses			Credits
CTS	101	Fundmentals-Motor Fleet Safety	3
CTS	102	Vehicle Sys/Report Malfunction	2
CTS	103	Tractor Trailer Operations	3
CTS	104	Road Driving Practices	4
CTS	105	Range Driving Practices	2
CTS	108	Professional Driver Developmnt	3

Cooking Certificate

Culinary Arts

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 credits earned through this program may be applied to the Kitchen Skills Studies diploma and ultimately the associate degree in the Culinary Arts. 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 the program is accredited by the Accreditation Commission of the American Culinary Federation.

PROGRAM/MAJOR COURSES

Courses			Credits
CUL	119	Food Safety and Sanitation	2
CUL	121	Food Prep I	4
CUL	171	Garde Manger	4

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
MGT	248	Culinary Supervisory Develpmnt	3
SCI	141	Nutrition in the Culinary Fld	2

Correctional Officer Certificate I

Criminal Justice

Certificate (D,G,S)

This certificate targets Department of Corrections applicants with no prior correctional officer experience. Applicants who have completed the Delaware Technical Community College certificate will receive priority employment consideration by the Department of Correction. Students matriculating into this certificate will be expected to complete prerequisite courses, if necessary.

PROGRAM/MAJOR COURSES

Courses			Credits
CRJ	101	Intro to Criminal Justice	3
CRJ	115	Essntls of Intrvwng/Counslng	3
CRJ	117	Ethics Prof & Comm in Pbl Sfty	3
CRJ	226	Crisis Intervention	3

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
SOC	111	Sociology	3

Direct Support Professional Certificate

Human Services

Certificate (D,G,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.

PROGRAM/MAJOR COURSES

Courses		Credits
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

Drug/Alcohol Counseling Certificate

Human Services

Certificate (D,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 certificate program is designed to supplement an existing associate degree in a relevant area of study.

PROGRAM/MAJOR COURSES

Courses		Credits
DAC 141	Intro Drug&Alcohol Counseling	3
DAC 225	Drug & Alcohol Counseling II	3
DAC 230	Assessmnt/Trtmnt/D&A Counslng	3
DAC 240	Families & Addiction	3
DAC 244	Dir Practice II-Drug/Alcohol	6

EMT Paramedic Certificate

Allied Health

Certificate (D)

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 certificate program prepares students 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. The EMT Paramedic Certificate is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs 25400 U.S. Highway 19 North, Suite 158 Clearwater, FL 33763 (727) 210-2350 www.caahep.org To contact CoAEMSP: 8301 Lakeview Parkway Suite 111-312 Rowlett, TX 75088 (214) 703-8445 FAX (214) 703-8992 www.coaemsp.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.

PROGRAM/MAJOR COURSES

Courses		Credits
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

Courses		Credits
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

English as a Second Language Certificate

Specialized Occupations

Certificate (D,G,W)

The English as a Second Language (ESL) program offers courses to meet the varied communication and academic needs of persons for whom English is not a native language. Through these courses,

students can prepare 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 proficient communication in their social, academic, and professional lives. Students earn a certificate for program completion.

PROGRAM/MAJOR COURSES

Courses			Credits
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 ESL Reading/Vocab	4
ESL	034	Intermediate Writing	4
ESL	036	Intermediate Grammar/Comm	8
ESL	038	Intermediate Listening/Speakng	4
ESL	042	Advanced ESL Reading/Vocab	4
ESL	044	Advanced ESL Writing	4
ESL	046	Advanced Grammar/Communication	8
ESL	048	Advanced Listening/Speaking	4

Entrepreneurship Certificate

Entrepreneurial

Certificate (D,G,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 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 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!

PROGRAM/MAJOR COURSES

Courses			Credits
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	3

Food Safety Certificate

Food Safety

Certificate (G)

Food safety is defined as a scientific discipline to handle, prepare, and store foods properly to prevent foodborne illness and disease. Employment in this vast field requires a need for a basic understanding of proper food safety techniques currently used in the food industry; these important skills will continue to increase over the next decade. Certificate completers will have the knowledge, skills, and ability to apply basic food safety practices, food laws, and regulations necessary to obtain entry to mid-level employment in the food industry.

PROGRAM/MAJOR COURSES

Courses			Credits
FSY	100	Introduction to Food Science	3
FSY	110	Food Safety & Sanitation	3
FSY	205	Principles of HACCP	3
FSY	210	Food Safety & Defense	3

General Airframe Maintenance Certificate

Aviation Maintenance Technology

Certificate (G)

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.

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

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ELC	102	Basic Electricity for Aviation	3
MAT	112	Aviation Mathematics	4

General Powerplant Maintenance Certificate

Aviation Maintenance Technology

Certificate (G)

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.

PROGRAM/MAJOR COURSES

Courses			Credits
AVI	110	Airframe Maintenance - General	12
AVI	230	Powerplant Maint - Section I	14
AVI	240	Powerplant Maint - Section II	13

PROGRAM/MAJOR SUPPORT COURSES

Courses			Credits
ELC	102	Basic Electricity for Aviation	3
MAT	112	Aviation Mathematics	4

Instruction, Design, and Technology Certificate

Instruction, Design, and Technology

Certificate (D,G,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 Instruction, 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

Courses			Credits
IDT	G10	Foundations of Effect Teaching	3
IDT	G20	Essentials of Dist Education	3
Select 9 credits from:			
IDT	G15	Advanced Teaching Strategies	2
IDT	G16	Advanced Assessment	2
IDT	G17	Educational Innovation in Actn	1
IDT	G18	Teaching and Assessing Writing	2
IDT	G19	Creating Accessible Content	2
IDT	G25	Advanced Learning Technologies	2
IDT	G32	Implementing Eff. Learning Com	2
IDT	G42	Motivational Teaching	2
IDT	G63	ePortfolio Design	1
IDT	G81	Developing the Mindful Teacher	1
IDT	G87	Designing a Flipped Classroom	2
IDT	G91	Peer Observation	1
IDT	G99	Special Topic in Ed Technology	1

Instrumentation Certificate

Electronic Engineering Technology

Certificate (S)

The Instrumentation Certificate provide students with an introduction to the technical and practical knowledge required in this field. Classroom studies and hands-on experience in this program prepare graduates for real-life applications. Taking part in this certificate program, also offers advancement options for individuals already employed in the field; or graduates could choose to continue 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.

PROGRAM/MAJOR COURSES

Courses		Credits
ELC 101	Intro to Instrumentation	3
ELC 270	Process Instrumentation I	4

PROGRAM/MAJOR SUPPORT COURSES

Courses		Credits
PHY 111	Conceptual Physics	4
or		
PHY 205	General Physics I	4

Machinist Training Level I Certificate

Mechanical Engineering Technology

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 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 courses through full- or part-time study, in the day or the evening.

CORE COURSES

Courses		Credits
MAT 180	College Algebra	4

PROGRAM/MAJOR COURSES

Courses		Credits
EDD 131	Engineering Graphics/CAD	3
MET 105	Machine Shop Practicum I	4
MET 123	Modern MFG Techniques	3

Machinist Training Level II Certificate

Mechanical Engineering Technology

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 courses through full- or part-time study, in the day or the evening.

PROGRAM/MAJOR COURSES

Courses		Credits
MET 104	Geometric Dimens & Tolerance	2
MET 106	Machine Shop Practicum II	4
MET 225	Adv. Manufacturing Techniques	3
MET 235	Computer Nmrcl Cntrl Machining	4

Paralegal Certificate

Paralegal

Certificate (D,G)

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 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.

PROGRAM/MAJOR COURSES

Courses			Credits
PLG	170	Intro to the Legal System	3
PLG	280	Legal Research & Writing	3
PLG	285	Law Office Mgmt & Procedures	3
or			
PLG	290	Paralegal Internship	4
Select 5 course(s) from:			
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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