Academic Catalog

2024-2025

Thaddeus Stevens
College of Technology

Thaddeus Stevens College of Technology
2024-2025 Student Handbook & Academic Catalog

Student Handbook Acknowledgment Form

This College handbook and catalog has been compiled to inform students about the policies of Thaddeus Stevens College of Technology (hereafter "Thaddeus Stevens College" or "the College"). The handbook/catalog is available on the website of Thaddeus Stevens College. After reviewing the handbook/catalog, please sign below to acknowledge receipt of the handbook/catalog and your understanding of the policies as stated in this document. The President of the College reserves the right to amend the handbook/catalog as needed.

The provisions and conditions of this handbook/catalog are not to be considered an irrevocable contract between the student and Thaddeus Stevens College. The College reserves the right to change any fees, requirements, and/ or regulations at any time during the student's term of enrollment. Approved curriculum changes may be implemented the semester following approval, provided they do not impact the student unfairly.

Key Policies:

- Stevens is a dry campus and strives to promote an alcohol and drug-free learning environment.
- Reasonable suspicion of substance or alcohol use could lead to a student being required to take a drug test after enrollment. Random testing may also occur during the academic year.
- Students are expected to attend every class. Any student absent for five days is subject to dismissal.

Please sign and return this page to the Thaddeus Stevens College Student Services Office after you have read the handbook/catalog.

Date: _____

Print Student's Name: _____

Student's Signature: _____

The College will not discriminate in its educational programs or employment practices based on race, color, national origin, sex, sexual orientation, gender identity, disability, age, religion, ancestry, union membership, or any other legally protected classification. Announcement of this policy is in accordance with state and federal laws, including Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and the American Disabilities Act of 1991.

Employees and participants who have an inquiry or complaint of harassment or discrimination or who need information about accommodations for persons with disabilities, should contact Marian V. Wilson, Ph.D. Chief Diversity, Equity and Inclusion Officer for Thaddeus Stevens College of Technology, 750 East King Street, Lancaster, PA 17602. (717) 391-1365

Search and Seizure

Students, as citizens of the Commonwealth of Pennsylvania, are protected against unreasonable search and seizure. However, this does not prohibit College authorities from conducting searches of residence hall rooms, shop lockers, or vehicles if the College has reason to believe a student is using the room, locker, or vehicle for a purpose that is either illegal or would otherwise seriously interfere with the education of the College or is in violation of the College's Code of Conduct. After reviewing the handbook/catalog, please sign below to acknowledge receipt of the handbook/catalog and your understanding of the policies as stated in this document.

When a comprehensive room search occurs, two of the following individuals will be present: Residence Hall Director, Director/Assistant Director of Residence Life, Vice President of Student Services, and/or Campus Security. The student(s) of the room being searched should be present if they are available. Such all-encompassing searches are most likely to occur during the week, when most students and the Residence Hall Directors are present. Searches are completed with discretion in cases where there is reasonable evidence that a person is engaged in illegal activities or behaviors contrary to the College's Code of Conduct, or in emergency situations. For vehicle or locker searches, Campus Security, the student, and/or the Vice President of Student Services will be present during the search, or their designee.

Understanding Search and Seizure

"Reasonable Cause" or "Just Cause" for a search consists of the following:

- Smoke, whether caused by a fire, a cigarette, incense, candle, or the burning of an illegal substance.
- The strong smell of alcohol or marijuana coming from a residence hall room, vehicle, or locker.
- Considerable evidence, gathered from a variety of sources, regarding possible illegal activity or activity contrary to the College's Code of Conduct in a residence hall room, or vehicle.
- Considerable evidence indicating the presence of a weapon(s) in a residence hall room, locker, or vehicle.
- Considerable evidence indicating an activity in the residence hall, a classroom, vehicle, or locker that potentially threatens the health, safety, and welfare of fellow students (e.g., possible presence of explosives).

This listing is simply to indicate some of the reasons, once confirmed, that would produce "Reasonable Cause" or "Just Cause" for a search. (Please note: This listing is not all-inclusive.) It is not the intent of the College to do unreasonable and unwarranted searches. The only intent of the College is to ensure a safe and secure environment for all who come to learn and work at the College.

I have read and understand the Search and Seizure Policy of Thaddeus Stevens College of Technology.

Date: _____ Print Student's Name: _____

Student's Signature: _____

Thaddeus Stevens College of Technology Calendar 2024-2025

SUMMER SEMESTER 2024

June 17 Summer Term Classes/Bridge Program Begins
June 19 Holiday-College Closed
June 20 Summer Term Officially Enrolled Census Date
July 4 Holiday-College Closed
July 19 Summer Term last day to withdraw
July 26 Summer Term classed end
July 29 Summer Term grades Due—12:00pm via College Portal

FALL SEMESTER 2024

August 15	New Faculty Orientation
August 16	Faculty Professional Development
August 13-16	New Student Orientation
August 22-Oct. 4	Pre-Assessment Testing [NOCTI & ASE]
September 2	Holiday-College Closed
Sept 30 – October 5	Homecoming Week
October 4	Review/Approval of Spring Schedule
October 5	Homecoming
October 5	Open House
October 14	Faculty/Staff Development-No Classes
October 18	Mid-Term Grades Due by Noon
November 12	Sophomore Registration for Spring 2024
November 13	Freshman Registration for Spring 2024
November 14	Pre-Major Registration for Spring 2024
November 18 – Dec 6	Student Academic Opinion Survey (SAOS)
November 28-29	Fall Break—No Classes
December 2	Faculty Professional Dev.-No Classes
December 20	Course Assessments due to PAAIR Office

SPRING SEMESTER 2025

January 10	Spring Orientation
February 13	Transportation Center Career Fair
February 14	Review/Approval of Summer Schedule
February 17	Faculty/Staff Development—No Classes
February 26	First Year Student Career Fair
February 27	Second Year Student Career Fair
March 7	Review/Approval of Fall Schedule
March 10-14	Spring Break-No Classes
April 1- May 14	Post-Assessment Testing [ASE & NOCTI]
April 8	Currently Enrolled Pre-Major/Freshman Registration for Fall 2025
April 8	Currently Enrolled Pre-Major/Freshman Registration for Summer 2025
April 12	Spring Open House
April 21	Faculty/Staff Development—No Classes
April 22	Sports Banquet
April 28 – May 9	Student Academic Opinion Survey (SAOS)
May 6	Academic Awards Ceremony
May 17	Commencement
May 23	Course Assessments due to PAAIR Office

	Fall 17 Week Term	Fall Sub Term 1	Fall Sub Term 2	Spring 17 Week Term	Spring Sub Term 1	Spring Sub Term 2
Classes Start	August 19	August 19	October 15	January 13	January 13	March 17
Classes End	December 13	October 11	December 13	May 16	March 7	May 16
Drop/Add Ends	August 23	August 20	October 16	January 17	January 14	March 18
Withdraw Deadline	November 27	September 27	November 27	April 25	February 21	April 25
Officially Enrolled	August 26	August 21	October 17	January 20	January 15	March 19
Grade Due	December 16	October 15	December 16	May 19	March 17	May 19

Table of Contents

I. INTRODUCTION

Welcome to Thaddeus Stevens College! You are now a member of one of the finest educational communities in Pennsylvania and, when you graduate, you will become one of the many Thaddeus Stevens College alumni living throughout the country.

The purpose of this Handbook is to acquaint you with the College: its customs, operations, and regulations.

We will do all we can to guarantee your success as a member of this community, but you must do your part, too. Become involved in the activities of the College, both educationally and socially. Bring constructive criticisms and suggestions to the attention of the staff. We have been in the business of educating trade/technical students for over one hundred years, and this institution is a proven leader among technical colleges in America. To continue this strong tradition, we need your assistance and cooperation. Your participation and suggestions contribute to the diversity of campus life that benefits all students. If you have suggestions about how to improve the Thaddeus Stevens College experience or if you have a complaint, please share with your faculty advisor or the Dean of Student Success. The College has maintained a thriving tradition and reputation as a leader in trade/technical education since 1905 by listening to students and responding to their needs. Please use this Handbook as a guide for your success.

II. MISSION STATEMENT

Thaddeus Stevens College of Technology educates Pennsylvania's economically and socially disadvantaged as well as other qualified students for skilled employment in a diverse, ever-changing workforce and for full, effective participation as citizens.

III. VISION STATEMENT

Thaddeus Stevens College of Technology will be the best two-year technical college of its kind by adding value to the lives of our students so that they will find skilled employment, be effective citizens, and reach their full potential.

IV. CORE VALUES

Thaddeus Stevens College of Technology is committed to structuring and maintaining its daily functions around the following core values: integrity, diversity, respect, teamwork, learning and growth, and accountability.

INTEGRITY: We value the commitment to high moral/ethical standards, honesty, and fairness in teaching and learning, social engagements, and professional practices.

DIVERSITY: We value the recognition of the variety of unique individuals within our world and the interdependence upon each other, each other's culture, and the natural environment. We value the differences and respect the qualities and experiences that are different from our own.

RESPECT: We value the unbiased consideration, treatment, and regard for the rights, values, beliefs, and property of all other people.

TEAMWORK (COLLABORATION): We value working cooperatively and collaboratively as part of a group in which there is a shared mission and vision aligned toward a goal.

LEARNING AND GROWTH (LIFELONG LEARNING): We value the relentless dedication to increasing the knowledge and competencies of all individuals associated with the College. We recognize that human resources are the College's only sustainable competitive advantage.

ACCOUNTABILITY: We value the taking of responsibility for actions and the results of those actions; honoring obligations, expectations, and requirements; delivering what is promised; and owning up to shortcomings and mistakes.

V. PEOPLE: ADMINISTRATION AND STAFF

At times it may be necessary for students to contact a member of the administration or staff to ask a question or resolve a problem. The following is a contact list for administrators and staff.

PRESIDENT:
DR. PEDRO A. RIVERA II
Oversees operation of the College.
Mellor Building (First Floor)
(717) 299-7722

VICE PRESIDENT FOR ACADEMIC AFFAIRS:
DR. ANTONIO JACKSON
Supervises academic/technical faculty and staff.
Mellor Building (First Floor)
(717) 391-1364

VICE PRESIDENT OF COLLEGE ADVANCEMENT:
PAM SMITH
Oversees the Thaddeus Stevens Foundation, Alumni Association, Career Services, Champ College Store, grants/development, and strategic community/partner engagement.
Ayres Alumni House and Mellor Building (First Floor)
(717) 391-1366

Board of Trustees

JEFFREY STERNER, CHAIRPERSON

MICHAEL MAGUIRE,

THOMAS BALDRIGE

CHRISTOPHER BUCK

PATRICIA HOPSON-SHELTON

BARRY SCHLOUCH

TODD SHERTZER

MARSHALL SNIVELY

JOSEPH WYSOCK

VICE PRESIDENT FOR FINANCE & ADMINISTRATION:
GEORGE LONGRIDGE
Directs College business and administrative functions and facilities operations.
Mellor Building (First Floor)
(717) 391-6947

VICE PRESIDENT FOR STUDENT SERVICES/ATHLETIC DIRECTOR:
DR. CHRIS METZLER
Directs student services related to campus life, residence life, dining services, health services, campus safety, and intercollegiate athletics.
Mellor Building (First Floor)
(717) 299-7794

CHIEF DIVERSITY, EQUITY & INCLUSION OFFICER & TITLE IX COORDINATOR:
MARIAN V. WILSON, PhD
Coordinates, implements and monitors policies and programs designed to ensure fair and equitable treatment of students, faculty and staff.
Mellor Building (Ground Floor)
(717) 391-1365

DEAN OF STUDENT SUCCESS:
DR. MICHAEL DEGROFT
Oversees student academic issues/concerns and provides direct assistance to the Vice President for Academic Affairs.
Mellor Building (First Floor)
(717) 391-3506

DEAN OF ENROLLMENT SERVICES:
MELISSA WISNIEWSKI
Oversees the Office of Admissions, Financial Aid and Registrar.
Hartzell Building
(717) 391-7234

EXECUTIVE DIRECTOR OF THE THADDEUS STEVENS FOUNDATION:
JENNY GERMANN
Oversees the strategic direction, operations, and fundraising efforts of the Foundation in collaboration with the College. College in order to support student needs, foster relationships with business, industry, the community, and raises awareness about the college and the value of technical education. The Foundation also encompasses the House of Champ College Store.
Ayres Alumni House
(717) 299-7776

DIRECTOR OF ALUMNI ENGAGEMENT AND DEVELOPMENT:
BETH VALENTIN
Develops, oversees and supports alumni programming.
Ayres Alumni House
(717) 753-0263

DIRECTOR OF CAREER SERVICES:
LAURIE GROVE
Directs operations of the Career Services office, which include the College's job site (College Central Network), internship programs, career fairs and other recruiting events.
Hartzell Building
(717) 396-7188

DIRECTOR OF ADMISSIONS AND MARKETING:
MEGAN DANCAUSE
Oversees the admissions process, including student tours, recruiting, and entrance exams.
Hartzell Building
(717) 391-7773

DIRECTOR OF COMMUNICATIONS AND MARKETING:
HOLLY WHITE
Oversees marketing and public relations functions of the College, which include advertising, media relations, Thad's Pad, the website, and social media.
Mellor Building (First Floor)
(717) 299-7210

BUSINESS MANAGER
LISA MIKULA
Supervises and oversees all business office operations.
Mellor Building
717-391-3589

PAYROLL MANAGER
CATHY SANTIAGO
Manages payroll and leave processing for faculty, staff, and student workers.
Mellor Building
717-391-7242

DIRECTOR OF PLANNING, ASSESSMENT & ACCOUNTABILITY, AND INSTITUTIONAL RESEARCH:
DR. PENNI LONGENECKER
Directs the design, development, and management of assessment systems.
Hartzell Building
(717) 391-3548

DIRECTOR OF WORKFORCE AND ECONOMIC DEVELOPMENT CENTER:
VALERIE HATFIELD
Directs the operations of the Workforce and Economic Development Center, which includes the College's non-credit and continuous education training including short-term certificate training, customized job training, certifications, and Registered Apprenticeships.
Hartzell Building
(717) 391-3514

DIRECTOR OF EMPLOYEE ENGAGEMENT:
HEATHER BURKY
Oversees employment and hiring, employee relations and benefits.
Mellor Building (Ground Floor)
(717) 391-6935

DIRECTOR OF FACILITIES AND OPERATIONS:
HECTOR PEREZ
Oversees facilities construction, renovation, fleet operations, and shipping and receiving.
Maintenance Building
(717) 391-7284

DIRECTOR OF ACT 101 AND CARL D. PERKINS PROGRAM:
DR. VALDIJAH AMBROSE BROWN
Oversees the Act 101 program and the Carl D. Perkins Program.
LRC (Third Floor)
(717) 391-7299

DIRECTOR OF THE ACADEMIC CENTER/DIRECTOR OF THE PRE-MAJOR PROGRAM:
SHERI WRIGHT
Facilitates student academic success through direct academic support; supervises academic coaches and coordinates professional and peer tutoring services. Provides oversight and support for the Pre-Major Program.
LRC (Third Floor)
(717) 391-1375

DIRECTOR OF RESIDENCE LIFE:
DAWAN WORSLEY
Directs campus residence halls and all operations of residence life.
MAC (Second Floor)
(717) 299-7681

DIRECTOR OF THE LIBRARY:
KATHERINE PENNAVARIA, MA, MLS
Oversees library services, staff, and resources, which include the College archives.
LRC (First Floor)
(717) 299-7754

ACCESSIBILITY COORDINATOR:
MICHELE CHERUBIN
Oversees student accommodations and campus accessibility.
Brenner Hall 103
(717) 299-7408

COUNSELOR:
MICHELLE MARMO
Provides students with personal, social, educational, wellness, and career counseling.
Griscom Education Center (First Floor)
(717) 391-7213

DIRECTOR OF K-16 & STRATEGIC INITIATIVES:
MELISSA DAY, Ed.D
Conducts K-12 outreach activities and facilitates articulation agreements with other academic institutions.
Mellor Building
(717) 299-7682

DIRECTOR OF INFORMATION TECHNOLOGY SERVICES:
ANDREW CARSON
Oversees information technology policies, practices and staff.
Mellor Building (Ground Floor)
(717) 391-7359

DIRECTOR OF FINANCIAL AID:
EMILY SMOKER
Certifies student eligibility for financial aid awards oversees financial resources to students, and acts as the Department of Veterans Affairs Certifying Official for the College.
Hartzell Building
(717) 391-7206

REGISTRAR:
AMBER DUH
Assists students with course registration, course or College withdrawals, transcripts, enrollment verifications, and other services pertaining to academic records.
Hartzell Building
(717) 391-7231

HEALTH SERVICES:
MELISSA MESHEY, RN
Coordinates health services for students.
Brenner Building
(717) 299-7769

VI. NONDISCRIMINATION AND HARASSMENT POLICY

POLICY STATEMENT

Thaddeus Stevens College of Technology (the College) does not discriminate in its educational programs or employment practices based on race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status, or any other legally protected classification. Announcement of this policy is in accordance with state and federal laws, including Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990 as amended and other applicable laws and policies.

Announcement of this policy is in accordance with the Pennsylvania Department of Education and federal laws (see above). All inquiries or reports of harassment or discrimination should contact the Diversity, Equity, and Inclusion Office (717) 391-1365 on campus, or the Equal Education Opportunity Officer, Pennsylvania Department of Education, 333 Market Street, Harrisburg, PA 17126-0333. (717) 787-1953.

The College is committed to protecting, maintaining, and encouraging both freedom of inquiry, teaching, service, and research. However, raising issues of academic freedom and freedom of expression will not automatically excuse behavior that constitutes a violation of this Policy or the law. The College will balance the enforcement of this Policy with freedom of speech and academic freedom.

The procedures, including the grievance process, set forth in this Policy apply when an employee, student (or applicant for admission) is either a Complainant or Respondent (as the terms are defined in this Policy).

STATEMENT OF PURPOSE

The College's Nondiscrimination Policy establishes guidelines in accordance with its obligations under federal and state nondiscrimination laws.

The purpose of this Policy provides for the orderly resolution of complaints of discrimination or harassment on the basis of race, color, ancestry or national origin, sex, sexual orientation, gender, gender identity, physical or mental disability, religion, age (as applicable), status as a protected veteran, or any other legally protected classification. Such discrimination and harassment are strictly prohibited by the College.

The purpose of this Policy is:

1. To promote an education and work environment that is free from all forms of harassment and discrimination, regardless of race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status, or any other legally protected classification.

2. To assure unlawful harassment or discrimination in any form is unacceptable and of particular concern to an academic community. Therefore, unlawful harassment or discrimination will not be tolerated. Those inflicting such behavior on others are subject to the full range of the College's disciplinary actions, up to and including separation from the College, in addition to any legal action that may accompany such acts.

3. Students, faculty, staff, and all who conduct business on behalf of the College are permitted to file complaints under this policy against non-students. All complaints of discrimination and harassment against students should be filed with the Diversity, Equity, and Inclusion Office.

APPLICABILITY

This Policy applies when:

1. Any employee or student who witnesses or has been subjected to discrimination or harassment on the basis of race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status, or any other legally protected classification;

2. Any former employee or student who witnesses or has been subjected to discrimination or harassment on the basis race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status or any other legally protected classification, if the conduct took place during the time of employment or enrollment at the College;

3. Any employee or student who has knowledge of discrimination or harassment on the basis that apply to the College, against another employee or student, in order to report such offenses; and,

4. All third parties with whom the College has an educational or business relationship who witnesses or has been subjected to discrimination or harassment on the basis of race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status, or any other legally protected classification, and/or any other category protected that applies to the Stevens when the conduct has a reasonable connection to the College.

This Policy applies to all College programs and activities, including, but not limited to, discrimination and harassment in instruction, grading, athletics, College housing, programs and activities, and College employment when:

1. The alleged violations occur on College owned, leased, or otherwise controlled property, while participating in College-affiliated programs;
2. The alleged violations occur off campus, and the conduct impairs, interferes with, or obstructs any College activity or the mission, processes, and functions of the College;

This Policy also applies to any off-campus behavior that affects a substantial College interest. A substantial College interest is:

1. Any situation where a student's conduct may present a danger or threat to the health or safety of others;
2. Any situation that significantly impinges upon the rights, property, or achievements of others;
3. Any situation that is detrimental to the educational mission and/or interests of the College.

This policy shall not be construed or applied to restrict academic freedom, nor shall it be construed to restrict constitutionally protected expression.

DEFINITIONS

Complainant: An individual making a complaint of discrimination and/or harassment.

Respondent: An individual who is alleged in a complaint to have violated the policy prohibiting discrimination and/or harassment.

Discrimination: Treating an individual differently or less favorably or engaging in conduct that denies an individual the opportunity to participate in or benefit from a College program or activity, or otherwise adversely affects a term or condition of an individual's employment, education, or living environment, because of the individual's race, color, national origin, sex, sexual orientation, gender identity, disability, age (as applicable), religion, ancestry, veteran status, or any other legally protected classification. Unlawful discrimination under any local, state, or federal law.

Harassment: Unwelcome verbal or physical behavior which is directed at a person based on a protected characteristic, when these behaviors are sufficiently severe and/or pervasive to have the effect of unreasonably interfering with an individual's educational experience or working conditions, by creating an intimidating, hostile, or offensive learning or working environment.

Examples of conduct that can constitute harassment if based on an individual's protected characteristic include but are not limited to:

1. Unwelcome comments or jokes about a legally protected characteristic (e.g., racial, or ethnic jokes);
2. Disparaging remarks to a person about a legally protected characteristic (e.g., negative or offensive remarks or jokes about a person's religion or religious garments);
3. Displaying negative or offensive posters or pictures about a legally protected characteristic;
4. Communications, including those conveyed in person, mail, and electronically (email, phone or voicemail, text messaging, or social media or other internet use).

5. Behavior that is sufficiently serious (severe, pervasive, and objectively offensive) to effectively deny or limit a person's ability to participate in, or benefit from, the College's programs, activities, services, or opportunities;
6. Action(s) used as a basis for, or factor in, decisions that tangibly affect that individual's education, employment, or participation in the College's activities, learning or working environment.

Retaliation: Actions taken against the Complainant for: reporting discrimination and harassment; filing a complaint of discrimination or harassment; or participating in, or refusing to participate in, the investigation, grievance, or other procedures of this Policy. Retaliation is also prohibited against persons who assist others in bringing a complaint of discrimination or harassment by offering advice and moral support or by giving testimony or documentary evidence in response to a complaint.

Prohibited retaliation includes conduct that may reasonably be viewed as:

1. An adverse employment action;
2. An adverse action relating to participation in an educational program;
3. Unreasonably interfering with the academic or professional career of another individual;
4. Anything that constitutes stalking, harassment, or assault;
5. Efforts to have others engage in retaliatory behavior on one's behalf.
6. Efforts that affect or discourage a person from filing a report or complaint of discrimination or harassment or participating in an investigation or other proceedings under this Policy, or, reporting to or participating in procedures with any other local, state, or federal complaint process, such as filing a complaint with the Equal Education Opportunity Officer, Pennsylvania Department of Education.
7. Retaliation that also includes, but is not limited to, acts or words that constitute intimidation, threats, or coercion intended to pressure any individual to participate, not participate, or provide false or misleading information during any proceeding under this Policy.
8. Prohibited retaliation against a person who reasonably protests discrimination or harassment practices within the College.

The College will not charge an individual under a separate policy or Code of Conduct for conduct arising out of the same facts or circumstances reported as discrimination or harassment for purposes of interfering with non-discrimination protections. The College will attempt to keep confidential the identity of complainants, respondents, and witnesses, except as may be required by law, permitted under FERPA, or deemed necessary to carry out the non-discrimination process.

PROCEDURES FOR REPORTING DISCRIMINATION

Students and employees who believe they are being harassed or discriminated against regarding any of the above, should contact one of the following:

1. **Office of Diversity Equity and Inclusion**
   (717) 391-1365
2. **Office of Human Resources**
   (717) 391-6935
3. **Vice President of Student Services**
   (717) 299-7794

The following procedures are intended to protect the rights of the reporting party, as well as the party whom a complaint of harassment or discrimination is reported against. Each complaint will be investigated, and appropriate action taken.

Reports under this policy should be brought as soon as possible after the alleged conduct occurs. Prompt reporting will enable the College to investigate the facts, determine the issues, and provide an appropriate remedy or personnel action.

REPORTING AND FILING COMPLAINTS OF DISCRIMINATION OR HARASSMENT

Any incident of unlawful discrimination or harassment in violation of this Policy must be reported to the appropriate College official, Diversity, Equity and Inclusion, Human Resources or Vice President of Student Services. Forms and procedures for reporting these complaints of discrimination or harassment are available in each of these offices or online at Thad's Pad.

ADDITIONAL INFORMATION ON REPORTING

Confidential Employees: Professional licensed counselors, health services professional, and pastoral counselors who provide health and counseling services to members of the College community are *not permitted* to report any information without the victim's permission.

Timing: There is no time limit for reporting prohibited conduct to the College under this Policy: however, the College's ability to respond may diminish over time, as evidence may erode, memories may fade, and Respondents may no longer be affiliated with the College.

Office for Civil Rights: In addition to the procedures in this Policy for reporting, individuals may also contact the Office for Civil Rights (OCR):

U.S. Department of Education
Office for Civil Rights
Lyndon Baines Johnson Department of Education Building. 400 Maryland Avenue, SW
Washington, DC 20202-1100
Phone: (800) 421-3481
Fax: (202) 453-6012
TDD: (800) 877-8339
OCR@ed.gov

COLLEGE RESPONSE

Upon receiving notice of potential discrimination, harassment, or retaliation the College will promptly respond to Complainant to investigate the complaint. The College might respond as follows:

1. In situations that require urgent attention, because of safety or other concerns, the College will take immediate administrative actions pending the outcome of the investigation.

2. In situations that do not require urgent attention, the appropriate responder, Chief Diversity, Equity and Inclusion Officer, Director of Employee Engagement or Vice President of Student Services will respond.

3. The College will follow the grievance process set forth in this Policy before the imposition of any disciplinary sanctions or other actions that are not supportive measures, against a Respondent.

4. The College must not restrict rights protected under the U.S. Constitution, including the First Amendment, Fifth Amendment, and Fourteenth Amendment, when complying with discrimination, harassment, or retaliation.

5. The College will investigate discrimination, harassment, or retaliation allegations in a Complaint, filed pursuant to this Policy.

The College should respect a Complainant's wishes with respect to whether it investigates the reported incident wherever possible unless it is determined by the College official that signing a Complaint to initiate an investigation over the wishes of the Complainant is not clearly unreasonable, considering the known circumstances.

At the time of filing a Complaint, a Complainant must be an employee, a student or attempting to participate in an education program or activity of the College to implicate the College's nondiscrimination complaint and investigation process.

COMPLAINT AND INVESTIGATION PROCESS

Complaint of Discrimination or Harassment. As explained in Section 5 above, reports of discrimination or harassment may be made by anyone, including anonymously, to the appropriate College officials (Chief Diversity, Equity and Inclusion Officer, Director of Employee Engagement, or the Vice President of Student Services). If that occurs, the College official will promptly review the allegations to determine if they may constitute discrimination or harassment in violation of this Policy that may warrant the filing of a Complaint.

A **Complaint** may be filed with the College in person, by Thad's Pad, by U.S. mail, or by electronic mail using the contact information listed in this Policy for the Chief Diversity, Equity and Inclusion Officer, Director of Employee Engagement or Vice President of Student Services. A complaint involving students should be filed with the Vice President of Student Services. A complaint involving faculty or staff should be filed with the Office of Diversity, Equity, and

Inclusion. The College reserves the right to redirect complaints to what it deems to be the appropriate office or department under the circumstances.

NOTICE OF ALLEGATIONS

Upon receiving a Complaint, the College will complete a prompt, fair, and impartial investigation of the allegations. The College's complaint and investigation process is intended to be an equitable process. **Respondents are presumed not responsible** for the alleged conduct and no determination regarding responsibility will be made until the conclusion of the process. The investigation will be handled by an investigator(s) appointed by the College.

The Respondent and Complainant will be promptly provided with a **Notice of Allegations.** At a minimum, such Notice shall include the allegations of conduct potentially constituting discrimination or harassment, including sufficient details known at the time and with sufficient time to prepare a response before any initial interview. Such details include the identities of the parties involved in the incident, if known, the conduct allegedly constituting discrimination or harassment, and the date and location of the alleged incident, if known. The Notice will include a statement that the Respondent is presumed not responsible for the alleged conduct and that a determination regarding responsibility will be made at the conclusion of the investigation process. The Notice will also inform the parties that they may each have an advisor of their choice, who may be, but is not required to be, an attorney, and may inspect and review evidence. The Notice will also inform the parties of any provision in the College policy that prohibits knowingly making false statements to College officials, including the Student Code of Conduct Section XII, Major Violations.

The Notice of Allegations shall be provided as soon as reasonably practicable but no more than seven College Days after the receipt of a Complaint. A college day is defined as a day when classes or examinations are scheduled and held in accordance with the official academic calendar of Stevens, excluding Saturdays and Sundays.

INVESTIGATION BY THE COLLEGE

An investigation shall be promptly conducted by the College, or as soon as reasonably possible, through one or more investigators who will not have a conflict of interest in the matter. The College may utilize an independent investigator when deemed appropriate and has complete discretion to do so. When investigating a Complaint (and throughout the entire investigation process), the College will:

1. Ensure that the burden of gathering evidence is on the College and not on the parties;

2. Provide an equal opportunity for the parties to present witnesses, including fact and expert witnesses, and other evidence;

3. Not restrict the ability of either party to discuss the allegations under investigation or to gather and present relevant evidence;

4. Give the same opportunity to all parties to have an advisor present during any investigation proceeding, including the opportunity to be accompanied to any related meeting or proceeding by the advisor of their choice; *the advisor may not serve as a witness for the investigation and may not speak on behalf of the complainant or respondent in any meeting or investigation proceeding*;

5. Provide, to a party whose participation is invited or expected, written notice of the date, time, location, participants, and purpose of all investigative interviews, or other meetings, with sufficient time for the party to prepare to participate;

6. Prior to completing the investigative report, the College will invite each party to submit supplemental written statements and evidence, and will give all parties at least seven days to submit said information, which the investigator will consider prior to completion of the investigative report.

7. Complete the investigation stage of the process, ending with the issuance of the investigative report, no more than sixty College Days, but may be extended in intervals of fourteen College Days, with written notice explaining the reason for the extension.

OPTIONS FOR INFORMAL RESOLUTION AFTER FORMAL COMPLAINT IS FILED

An informal resolution process may be used only when both the Complainant and Respondent voluntarily agree to participate, and only after a Complaint has been filed. If the parties elect to proceed with an offered informal resolution process, this process would be in lieu of a Formal Investigation Process. No one can be forced to go through the informal resolution process.

If an informal resolution option is offered by the College, both parties, prior to deciding whether to participate in the informal resolution process, will be provided with written notice describing the process and implications of participating. The notice will describe the allegations against the Respondent. It will also describe the informal resolution process, including the right of either party at any time prior to the voluntary agreement to a resolution to withdraw from the informal resolution process and require the matter to resume under the Complaint and Investigation Process.

If in a particular case expulsion is a proposed sanction, it, like all other potential outcomes, can only occur if both parties agree to it as part of resolution.

Any mediators or other individuals offered by the College to facilitate an informal resolution process will be trained, including with respect to, among other things, the definition of discrimination and harassment, how to conduct the process, and how to avoid conflicts of interest and bias in discharging their duties.

An informal resolution process shall be completed within sixty (60) College Days of the agreement of all parties to use the informal resolution process unless an extension of time is agreed to by all parties. If either party withdraws from the informal process, or no mutually agreeable resolution can be reached during the time frame for the informal resolution process,

the formal investigation process shall resume. The timeframes applicable to the formal investigation process shall be put on hold during any informal resolution process and shall restart if the informal resolution process is terminated without an agreed upon resolution.

DISMISSAL OF FORMAL COMPLAINT

If conduct alleged in the Complaint would not constitute discrimination or harassment, even if proven or falls outside of this Policy, then the College will dismiss the Complaint with regard to that conduct for purposes of discrimination or harassment under this Policy and refer the complaint to the appropriate College official; i.e., the Offices of Diversity, Equity, and Inclusion, the Vice President of Student Services or the Office of Employee Engagement or as appropriate, to be reviewed under the Student Code of Conduct or Human Resources policies.

In addition, the College **may dismiss** a Complaint or any allegations therein, if at any time during the investigation a Complainant notifies the investigator in writing that the Complainant would like to withdraw the Complaint or any allegations therein; the Respondent is no longer enrolled at or employed by the College; or specific circumstances prevent the College from gathering evidence sufficient to reach a determination as to the Complaint or allegations therein.

An ***appeal*** may be made by either party from a dismissal of a Complaint or any allegations therein within the timeframe and on any of the three grounds specified in the Appeals section of this Policy.

DETERMINATION OF RESPONSIBILITY

Following the investigation, the investigator shall issue a ***written determination*** of responsibility or non-responsibility. The written determination shall be issued as soon as reasonably practicable at the conclusion of the investigation, but not later than ten College Days after the close of the investigation.

The written determination will include at minimum the following items:

1. An identification of the allegations potentially constituting discrimination or harassment;

2. A description of the procedural steps taken from the receipt of the Complaint through the determination, including any notifications to the parties, interviews with parties and witnesses, site visits and methods used to gather other evidence;

3. Findings of fact supporting the determination;

4. Conclusions regarding the application of the College's Code of Conduct to the facts in the event that the College exercises its discretion to apply any College policies and procedures not otherwise required under discrimination or harassment;

5. A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility, any disciplinary sanctions the College imposes on the Respondent, and whether remedies designed to restore or preserve equal access to the College's education program or activity will be provided by the College to the Complainant; and

6. The applicable procedures and permissible bases for the Complainant and Respondent to appeal (as described below).

APPEAL

Either the Complainant or the Respondent may appeal from either a (1) determination of responsibility/non-responsibility or (2) dismissal of a Complaint or any allegations therein by filing a Notice of Intent, to Appeal on the following three grounds, and no other grounds:

1. A procedural irregularity that affected the outcome of the matter;

2. New evidence that was not reasonably available at the time the determination regarding responsibility or dismissal was made, that could affect the outcome of the matter; and/or

3. The investigator had a conflict of interest or bias for or against Complainants or Respondents generally or the individual Complainant or Respondent that affected the outcome of the matter.

Any such ***Notice of Intent to Appeal*** must be filed by either party within **two College Days** of the issuance of a determination regarding responsibility/non-responsibility or the dismissal of a complaint.

The Notice of Intent to Appeal must be followed **within three additional College Days** by the filing of a detailed written ***"Statement of Appeal"*** identifying grounds for appeal and explaining with specificity the facts supporting the basis of the appeal.

Failure to timely file either the Notice of Intent to Appeal or the Statement of Appeal will result in the appeal being dismissed.

The College will immediately provide a copy of any Notice of Intent to Appeal and of the appealing party's Statement of Appeal to the non-appealing party. **The non-appealing party will have five College Days** from the date the appeal was sent to the party's College email, if desired, to submit a written "**Response to Statement of Appeal**." If such Response to Statement of Appeal is filed, a copy will be immediately provided by the College to the appealing party, but the appealing party shall not have the right to submit an additional statement.

Notices of Intent to Appeal, Statements of Appeal, and Responses to Statements of Appeal must be **submitted in writing to:**

Dr. Pedro Rivera, President

Office of the President
Mellor Building
Thaddeus Stevens College of Technology
750 East King Street
Lancaster, PA 17602

The President or President's designee will review the appeal, including all party submissions, and issue a written decision to all parties involved within thirty College Days, or as soon as is reasonably possible, but not later than forty-five days after receipt of the written Notice of Intent to Appeal.

This is the final step in the College's Formal Complaint procedure.

DISCIPLINARY ACTIONS

Employees and students who violate this Policy are subject to appropriate discipline by the College. If an investigation results in a finding of responsibility that this Policy has been violated, the mandatory minimum discipline is a written reprimand.

Upon the finding of a serious violation of this Policy, the College reserves the right to take disciplinary measures, up to and including, termination of employment, expulsion or suspension, removal from campus, cancellation of contract, and any other appropriate actions necessary to address the violation.

Appropriate disciplinary actions shall be taken against any person found to have participated in any acts of retaliation. Any attempt to penalize or retaliate against a person for filing a complaint or participating in the investigation of a complaint regarding a violation of this Policy will be treated as a separate and distinct violation of the Policy. Specifically:

1. A student found to have retaliated in violation of this Policy shall be subject to discipline up to, and including, suspension and/or expulsion.

2. A College employee found to have retaliated in violation of this Policy shall be subject to discipline up to, and including, termination of employment.

3. A College non-employee found to have retaliated in violation of this Policy shall be subject to measures up to, and including, exclusion from a College relationship and College grounds.

4. Persons who violate this Policy may also be subject to civil damages or criminal penalties.

SUPPORTIVE MEASURES

Supportive measures by the College may include, but may not be limited to:

1. Providing escorts to ensure that individuals can safely move between classes and activities;

2. Where possible and as appropriate, assure that the Respondent and Complainant do not attend the same classes;

3. Moving the Complainant and/or Respondent to a different residence hall;

4. Providing counseling services for the Respondent and Complainant;

5. Providing academic support services, such as tutoring to the Respondent and Complainant.

6. The College may also provide remedies for the broad College community, including additional training and education.

EDUCATION AND PREVENTION

Education is an essential component in the prevention of discrimination and harassment. To accomplish an adequate non-discrimination and harassment educational program, the College shall:

1. Educate members of the College community on what constitutes prohibited conduct under this Policy.
2. Inform members of the College community of this Policy and training programs to assure their implementation.

TRAINING

The Diversity, Equity and Inclusion Officer shall oversee and coordinate training regarding discrimination and harassment prevention education.

DISSEMINATION OF THE POLICY

A copy of this Policy shall be distributed throughout the campus and shall be published on the College's website.

PUBLIC NOTIFICATION OF CLERY ACT STATISTICS

To the extent required by law, including the Clery Act, the College shall collect and annually report statistical information concerning discrimination and harassment reports (Hate Crimes) occurring within its jurisdiction. To promote public safety, the College will alert the campus community of incidents and developments of immediate concern.

RESOURCES

Information on Counseling and Victim Services: For further information on the counseling services available to student victims of discrimination and harassment, contact:

Counseling Services:

(717) 299-7408
Health Services:
(717) 299-7769
Employee Assistance Program:
(800) 692-7459

Recordkeeping
The College shall maintain for a period of seven years records of:

1. Each discrimination and harassment investigation including any determination regarding responsibility and any audio or audiovisual recording or transcript, any disciplinary sanctions imposed on respondents, and any remedies provided to the complainants designed to restore or preserve equal access to the recipient's education program or activity;
2. Any appeal and the result of the appeal;
3. Any informal resolution and the results;
4. Any actions, including supportive measures, taken in response to a report or Formal Complaint of discrimination or harassment, as well as documentation of the bases for the College's conclusions and measures taken.

Questions/Contact

If you have questions or are concerned that the College has not met its obligation under this Policy, please contact the Diversity, Equity, and Inclusion Office.

THADDEUS STEVENS COLLEGE STUDENT/EMPLOYEE DISCRIMINATION AND HARASSMENT REPORTING FORM:

Name: _____
Local Address: _____

Work Phone: _____Local Phone: _____Cell Phone: _____
Date of Incident: _____Time of Incident: _____AM / PM

Location of Incident:

_____
_____

Identify the name(s) of the individual(s) against whom you are submitting this complaint:

_____
_____
_____

Please describe the nature of the incident, providing as much detail as possible to assist with the investigation of this complaint.

_____
_____
_____

Please provide the names and contact information of any witness(es).

If additional space is required, please use an additional form, and put your name in the top section of the form)

Acknowledgement: By signing this form, I understand that this complaint will be investigated, and the alleged harasser(s), any witnesses, and persons of interest will be interviewed. The information provided in this Sexual Harassment Reporting Form is true and accurate to the best of my knowledge.

_____ _____

Complainant Date

Note: Discrimination and Harassment forms should be submitted to the Office of Diversity, Equity, and Inclusion in the Mellor Building. Call (717) 391-1365 for more information

VII. SAFETY INFORMATION

CALL CAMPUS SECURITY IN THE EVENT OF AN EMERGENCY

For Life-Threatening Emergencies
CALL 911 FIRST, then call Campus Security at (717) 391-7225.

For Urgent Situation Requiring Immediate Medical Attention
During office hours, contact the Health Services Center.
After office hours, contact Campus Security

For Non-Urgent Situations
During regular business hours, contact Health Services. After office hours, contact a Residence Advisor.

NON-EMERGENCY

When issues arise on campus that are not emergencies, the Pennsylvania State Police may be called at (717) 299-7650. Please also notify Security.

EMERGENCY NOTIFICATION

The College has an emergency notification system (RAVE) that can email and text information about a College emergency directly to a cell number. On Thad's Pad for current students, there is an application that allows students to enter information on how they wish to be contacted in an emergency.

HEALTH SERVICES

Health Services seeks to promote health education, prevention, and self-responsibility in the College community. All services are provided with the strictest of confidentiality. The registered nurse is usually available Monday through Friday for illness/injury evaluation, screening of medical concerns, health and wellness information, and community referrals. These services are offered at no charge to students. If medical referrals are needed, they can be arranged at offsite locations.

Note: All students must maintain medical insurance coverage, as the College is not, and cannot be held, liable for medical costs resulting from an injury or illness on- or off-campus.

A confidential electronic medical record is maintained on each student at Stevens. It is important that if a student takes daily medications, or if there is a change in health status, the Nurses office is notified immediately so the information can be updated on that student's health record.

All members of the Stevens community are encouraged to take advantage of the services provided by the Health Services Center.

Health Services Center
Melissa Meshey, RN

First floor Brenner Building
Monday–Friday 7:00 am –3:30 pm
meshey@stevenscollege.edu
(717) 299-7769; Fax: (717) 299-7769

SECURITY GUARDS

Thaddeus Stevens College has five components to its security personnel services:

- Personnel who frequently tour all areas of the main campus;
- Personnel responsible for the Main, Greenfield, Greiner, and Griscom Education Center locations;
- Personnel who frequently tour each residence hall for safety purposes;
- Personnel stationed in the MAC and Griscom Education Center Lobby;
- Personnel who conduct motor patrols between Griscom Education Center, Greenfield, Greiner, and Main Campuses.

These personnel are hired to help protect you, the campuses, and residence halls against intruders and possible damage or thefts. Be prepared to show your ID card if requested by the guard. The security personnel are under the supervision of the Vice President of Student Services.

For additional information, an Annual Security Report (ASR) and Crime Statistics brochure is available in the Office of Finance and Administration, Mellor Building, 1st Floor.

CRIME STATISTICS

In accordance with the Student Right to Know, Campus Security Act, College and University Security Information Act (Act 73 of 1988) and the Campus Sex Crimes Prevention Act (CSCPA), a Crime Statistics report is available at stevenscollege.edu to provide both current and prospective students, faculty, and staff with information pertinent to security measures and crime statistics at Stevens.

CAMPUS FIRE SAFETY REPORT

The College's Fire Safety Report, which can be accessed via the website, contains fire safety policies and procedures related to on-campus student housing and statistics for fires that occur in those facilities.

Fire Safety Education and Training

All students are required to watch a Fire Safety video. In addition, all resident students are required to attend a safety workshop conducted by the residence hall director. Residence hall directors have received additional fire safety training and will share relevant information with the students regarding living in a campus residence hall.

Procedures For Fire Alarms

If a fire occurs, sound the building fire alarm by pulling the bar in the red alarm box; if possible, call 911 and Security. Once a fire alarm has been sounded, evacuate the building immediately using the nearest fire exit door or stairwell. Do not use elevators because they may become inoperative. If possible, assist persons with disabilities in exiting the building. Persons with disabilities who cannot use stairs should wait until Security or firefighters arrive.

Notify Security officers or fire authorities of the location of anyone remaining in the building.

The fire alarm may not sound continuously. Even if the alarm stops, continue to evacuate. Warn others not to enter the building after the alarm stops.

Evacuate to at least 500 feet from the building and out of the way of emergency personnel. Do not return to the building until instructed to do so by Security officers or other authorized personnel.

When a fire alarm has been sounded or a fire otherwise reported to Security, the Security officer will initiate the notification procedures for contacting appropriate personnel.

Report That a Fire Has Occurred

Report all fires on campus to Security.

Fire Safety Improvements

The campus Fire Safety Report is reviewed regularly and changes made when appropriate. Any recommendations should be reported to Security.

Fire Statistical Disclosure

A report on campus fires is available on the College's website.

Definitions in the Fire Report

Fire: Any instance of open flame or other burning in a place not intended to contain the burning or in an uncontrolled manner.

Unintentional Fire: A fire that does not involve an intentional human act to ignite or spread fire into an area where the fire should not be.

Intentional Fire: A fire that is ignited, or that results from a deliberate action, in circumstances where the person knows there should not be a fire.

Undetermined Fire: A fire for which the cause cannot be determined.

Fire-related Injury: Any instance in which a person is injured as a result of a fire, including an injury sustained from a natural or accidental cause, while involved in fire control, attempting rescue, or escaping from the dangers of the fire.

Fire-related Death: Any instance in which a person (i) is killed as a result of a fire, including death resulting from a natural or accidental cause while involved in fire control, attempting rescue, or escaping from the dangers of a fire, or (ii) dies within one year of injuries sustained as a result of the fire.

Value of Property Damage: The estimated value of the loss of the structure and contents, in terms of the cost of replacement in like kind and quantity.

Fire Drill: A supervised practice of a mandatory evacuation of a building for a fire.

VIII. PARKING

VEHICLE POLICY

Registering your vehicle
All faculty, staff, and students who operate a vehicle on the College's campus must register their vehicle and obtain a parking permit decal from the Office of Finance and Administration.

Students attending the College must obtain their parking permit decal before the start of classes each academic year. The College has a FREE parking permit for use of the Clark Street, Transportation Center, Greenfield, and the Alms House parking lots. The cost of the parking permit decal to park at Main campus (MAC, Hartzell, Schwalm lots), the Naval Reserve parking lot at Griscom Education Center (GEC) and the Greiner campus is $75.00 per academic year. The $75 permit fee is included in the Resident Student housing fee. The parking permit is valid for one academic year, from the beginning of the Fall Semester to the beginning of the following Fall Semester. Students must apply for and renew their parking permit each Fall Semester before the start of classes. Students at no time are permitted to park in properly identified faculty and staff designated spots. Handicap spots are designated for students who have handicap license plates or placards. Students who have a temporary medical issue or a specific diagnosis must follow the accessibility procedure to be given a blue decal.

The student must always display the parking permit decal on the lower left side of their vehicle's rear window and must adhere to the parking regulations of the College. If car windows are tinted, the decal should be placed in a manner to make it visible from the outside rear of the car.

Should students park on thoroughfares they will be subject to municipality ordinances which can include tickets and towing.

Students needing to purchase a parking permit can do so by filling out the Vehicle Permit Request Form.

Guests
1. Guests of faculty, staff, or students are subject to all parking regulations of the College. Campus Security may issue a temporary parking permit decal that must be displayed from the rearview mirror or placed on their front dashboard.

2. Campus Security may assist the guest/visitor regarding where to park on campus.

NOTE: The Security Office is located at the Griscom Education Center on Orange Street main entrance.

General Rules
1. Parking lots and decals will be assigned a color as follows:

- Grey: use of the Clark Street, Transportation Center, Greenfield location, and the Alms House parking lots.
- Red: use of all grey lots and Main campus MAC, Hartzell and Schwalm parking lots. Griscom Education Center-Naval Reserve Lot
- Students who have a temporary medical issue or a specific diagnosis requesting a blue handicap student parking permit must do the following:

    1. Complete the accommodation request form

    2. Send all documentation to accessibility@stevenscollege.edu

    3. The accessibility office will speak with students and then provide documentation to the Finance and Administration office.

2. The purchase of the parking decal does not guarantee a parking spot is available in the exact location, or at the exact time the student arrives on campus. It only gives the student permission to park in any available spot in the area assigned. The lack of a legal parking space is not a valid excuse for violation of any parking regulation. Parking at the College is on a first-come, first-serve basis.

3. Students are strongly encouraged to follow the Good Neighbor policy and to park in college-owned parking spaces when attending college functions/classes.

4. The absence of a “No Parking” sign does not mean that parking is allowed. Students are not allowed to park their vehicles in the Mellor and Kreider parking lots as they are designated for faculty and staff. Handicap spots are designated for students who have handicap license plates or placards. Students who have a temporary medical issue or a specific diagnosis must follow the accessibility procedure to be given a blue decal.

5. If you receive a parking ticket, Campus Security will place the ticket under the windshield wipers of your vehicle or hand the ticket to you.

6. Thaddeus Stevens College of Technology and the Commonwealth of Pennsylvania assume no responsibility or liability for loss or damage to any vehicle operating or parking on the College’s property.

7. The person registering the vehicle will be responsible for all parking violations of the registered vehicle.

8. The operator/owner of the vehicle shall be responsible for all violations of an unregistered vehicle including boot removal and towing cost.

9. The College reserves the right to restrict parking for special purposes at any time. In addition, students are not allowed to park in a fire lane, handicapped space, or next to trash dumpsters at any time.

10. The operator/owner of the vehicle must report the location of a disabled vehicle to Campus Security immediately. Failure to report a disabled vehicle will be considered a parking violation.

11. Any vehicle, disabled or otherwise, posing a hazard to the safety and security of faculty, staff, and students will be towed from campus at the expense of the owner/operator.

The College reserves the right to restrict parking for special purposes at any time

Offenses and Fines

A person is fined a specified amount when committing any of the violations listed below.

NOTE: In addition to the fines described below, parking violations may result in the disabling or towing of a vehicle as specified in section VII of these regulations.

Parking Offenses/Violations Resulting in a Fine:

1. Parking a motor vehicle anywhere except in a designated parking area.

2. Parking a motor vehicle in an area that is posted.

3. Parking a motor vehicle on grass/lawn or other areas clearly not used for parking.

4. Parking a motor vehicle in a reserved handicapped space without a handicapped license plate or decal. *

5. Parking a motor vehicle on campus without a valid parking permit decal. *

6. Parking in a fire lane *

7. Parking a motor vehicle without a visible parking permit decal. *

***Subject to having vehicle towed on first offense.**

Parking Fines:

- 1st Offense: $10 fine, and subject to having vehicle towed for first offense of parking in a handicapped or for not having a valid decal, or for parking in a fire lane.
- 2nd Offense: $15 fine, and subject to having vehicle towed.
- 3rd Offense: $20 fine, and Violation Sticker* placed on window and subject to having vehicle towed.
- 4th Offense: $20 fine, and Violation Sticker* placed on window subject to having vehicle towed.

All succeeding offenses will be considered a violation of College Policy and may result in disciplinary action and an additional $20 fine per violation.

* The Violation Sticker will require scraping to remove.

Payment of Fines

1. Payment of parking fines or penalties may be made at the Business Office during normal business hours on business days. The Business Office is located on the first floor of the Mellor Building.

2. Fines or penalties must be paid within five (10) business days from the date of issue.

Unpaid Fines or Penalties

Fines not paid by students within five (10) business days will be administered as follows:

1. The College will place a hold on all school records until the fines and penalties are paid.

2. At the end of the academic year, all unpaid fines will be sent to the Attorney General's office for collection

TOWING OF VEHICLES

Vehicles may be towed when:

1. The parked vehicle interferes with the movement of emergency vehicles or endangers the life or property of others.

2. The vehicle is parked in an area reserved for handicapped people.

3. The vehicle is parked in an area that blocks a handicapped ramp.

4. The vehicle is parked in a fire lane.

5. The vehicle does not have a parking permit decal and/or it is not visible.

Towing and storage charges are the responsibility of the owner and/or operator of the towed vehicle. Vehicles that are towed from campus may result in the loss of parking privileges for a period of one semester.

Students must contact the independent towing company to make arrangements for the release of their vehicles

IX. ACCREDITATION & ASSESSMENT

MIDDLE STATES COMMISSION ON HIGHER EDUCATION ACCREDITATION

Accreditation is a means of maintaining accountability through self-regulation and peer review. The Middle States Commission on Higher Education (MSCHE) reviews institutions in their entirety rather than evaluating individual programs of study. Accreditation means that certain standards of quality and excellence have been met by an institution in areas including, but not limited to, the faculty and academic programs, fiscal planning and processes, and the assessment of students' total educational experience. Simply put, the accreditation process provides assurance that an institution is worthy of the public's trust in producing an educational experience that leads to its stated goals as a postsecondary education provider.

Effectively meeting the MSCHE's standards for accreditation safeguards the College's ability to participate in Title IV Federal Student Aid, which allows our students to access loans and grants issued by the federal government. MSCHE accreditation also permits the transfer of Thaddeus Stevens College's credits to other colleges, along with meeting additional criteria. Further, MSCHE accreditation satisfies employers' requirements for credentials earned from an accredited institution, which serves as an endorsement of the quality of education and training students receive in our programs of study.

MSCHE ACCREDITATION & ASSESSMENT

The College's analysis of student learning outcomes for continuous improvement is crucial to the success of our students and mission. As part of our assessment plan, we commit to upholding the MSCHE standards for assessing educational effectiveness. In addition to course assessments, our students participate in institutional-level assessments called pre- and post-assessments.

Pre- and Post-Assessments: The Office of Planning, Assessment, Accountability, and Institutional Research (PAAIR) administers the College's pre- and post-assessments. Participation in pre- and post-assessment testing is required of all enrolled students. In some instances, assessment testing is also linked to sophomore-level course grades. The College uses pre- and post-assessment results to estimate student learning resulting from their enrollment at the College. These assessments include the following:

• National Occupational Competency Testing Institute Assessments (NOCTI): Most freshmen students enrolled in a program take a NOCTI *pre-test* that establishes a baseline of their technical competencies. As students near the completion of their program, they also take a NOCTI *post-test* to illustrate academic growth over time.

• Automotive Service Excellence (ASE) Student Certification: In lieu of participating in NOCTI assessments, newly enrolled students in Automotive Technology (AUTO), Collision Repair Technology (CORT), and Diesel Technology (DETC) take ASE *pre-test* exams to establish a baseline of their technical competencies. ASE *post-test* exams evaluate and certify students' technical competencies and provide data to measure academic growth over time.

• Additional Student Learning Assessments: Some programs, such as Water and Environmental Technology (WET) and Civil Engineering Technology (CIVL), must rely on assessments other than NOCTI and ASE to measure student learning outcomes (e.g., Department of Environmental Protection certification exams). Student participation in these assessments is also mandatory.

Assessment through Surveys

Student Course Evaluations: The College administers a course evaluation each term called the Student Academic Opinion Survey (SAOS). This survey data provides instructors with feedback about the courses they teach and supports the College's continuous improvement efforts to refine teaching and learning practices, policies, and procedures. The identity of the respondents is confidential in the reporting of results.

Graduate Surveys: The online post-graduate survey provides the College with vital career placement and starting salary information that helps us in document outcomes for graduates. Postgraduate surveys are administered one, five, and ten years after graduation.

Other Data Collection Activities: Periodically, the Office of PAAIR collaborates with other College departments to gather data to support our continuous improvement efforts. These other collection activities include surveys regarding campus services (e.g., food, counseling), focus groups and surveys regarding campus climate, and other such surveys to help the College assess student needs and experiences at Thaddeus Stevens College.

Inquiries about assessment and institutional effectiveness should be directed to the Office of PAAIR.

X. ADMISSION TO THE COLLEGE

ADMISSIONS POLICY

Stevens provides educational opportunities that lead to a certificate or Associate of Applied Science (AAS) degree, as well as dual enrollment and college in the high school opportunities.

Applicants must apply directly to a program of study. The College does not offer an “undecided” major or the option to pursue multiple majors simultaneously. Applicants unsure of what to study should visit the College’s website for information on options.

The College receives many applicants each year. At times, meeting the minimum requirements will not be sufficient for admission. Majors are limited in the seats provided; when a program reaches capacity, applicants will be placed on a waitlist. A high school diploma or GED is required for admission.

READMISSION PROCEDURE

Students who have previously attended the College and would like to re-enroll must reapply with the Office of Admissions. Applicants must submit a new application and submit the application fee if more than one year has passed since last attending Thaddeus Stevens College. Several departments will then review the applications; students may be required to complete additional steps before an enrollment decision is made.

Current students interested in pursuing a second degree should also complete the re-admit application.

The College affirms its policy of equal opportunity and non-discrimination. It makes education decisions regarding admission, re-admission, and participation in its educational programs or activities without discrimination based on race, color, creed or religion, sex, national origin, ancestry, age, marital status, physical or mental disabilities, military status, sexual orientation, gender-related identity, pregnancy, or other factors protected by law.

EARLY ENROLLMENT PROCEDURE

Thaddeus Stevens College has agreements with select school districts that allow students to complete their senior year on our campus while simultaneously completing their first year of college-level courses. Anyone interested in applying for our Early Enrollment program must complete all application steps before March 1 of their junior year of high school. Students interested in this opportunity should follow these steps:

1. Complete the application.
2. Provide an applicant waiver code.
3. Provide current high school transcript.
4. Provide one teacher and one counselor recommendation.
5. Complete the College entrance exam.

Applications are reviewed in late March, and students notified in early April.

DUAL ENROLLMENT/COLLEGE IN THE HIGH SCHOOL PROCEDURE

Thaddeus Stevens College has agreements with select school districts that allow students to complete general education coursework while still enrolled in high school. Applicants interested in pursuing dual enrollment or college in the high school should contact their Guidance Office to confirm they are eligible to apply. Steps to apply include:

1. Complete the Dual Enrollment Application Online
2. Submit high school transcript
3. Submit Registration Form (obtained from high school Guidance Office)
4. Submit payment for course

FIRST TIME APPLICATION PROCEDURE

All applicants must complete and submit the following for possible admission to the College:

1) Online application: stevenscollege.edu/apply
   Applicant must be a Pennsylvania resident for a minimum of one year prior to applying. Applicant might be requested to prove residency; active duty and military veterans, as well as their dependents, are the only exception. Students that have recently moved to Pennsylvania and wish to apply for the upcoming academic year may submit a Residency Appeal. Contact the Dean of Enrollment Services for the form: Melissa Wisniewski, wisniewski@stevenscollege.edu

2) Application fee or fee waiver
   a) The $45 application fee is non-refundable.
   b) Fee waivers
      i) The College offers fee waiver forms for high school students and those working through certain agencies and organizations.
      ii) The College will also accept the National Association for College Admission Counseling waiver for current high school students.

3) High school transcript or GED scores
   a) Acceptable methods for submission include:
      i) Email: admissions@stevenscollege.edu
      ii) Parchment or Naviance
      iii) Mail: Thaddeus Stevens College of Technology c/o Admissions Office 750 E. King Street Lancaster, PA 17602

After the required documents are submitted, applicants will be evaluated based multiple factors include their high school GPA, individual high school course grades, college transcripts if applicable and standardized test scores if applicable. Applicants will hear from the Admissions Office about any required next steps in the process. The Admissions Office will communicate updates to applicants via email and the applicant portal. Enrollment decisions are communicated to the applicant via the applicant portal and email.

The following may also be submitted on behalf of an applicant but are considered optional; not submitting them will not hold up an applicant's review:

Optional Submission

2) SAT or ACT scores
   a) Official scores from College Board required.
   b) An unofficial score report from College Board may be sent to admissions@stevenscollege.edu pending receipt of official scores.
   c) Benchmarks for those submitting SAT scores:

	If taken junior year…	If taken senior year…
Reading/writing	460+	480+
Math	510+	530+

   d) Benchmarks for those submitting ACT scores:

Reading	22
Writing	18
Math	22

3) College Transcripts
   a) Official transcripts should be sent to the College for review. Acceptable submissions must come directly from the previous institution.
4) Accessibility Documentation
   a) To disclose a disability and obtain accommodations, please complete our Accommodations Request Form. Review of documentation may take several days, so submit your documentation as soon as possible.

OBTAINING MORE INFORMATION

Students looking for more information should visit stevenscollege.edu/request-information. The Admissions team will follow up with the requested information.

The Admissions team is available via phone and email, Monday through Friday:

Office hours: 8:00am – 4:30pm
Summer hours: 8:00am – 4:00pm
admissions@stevenscollege.edu
(717) 299-7701 (option 2)

XI. ACADEMIC INFORMATION

INSTITUTIONAL LEARNING OUTCOMES (ILOS)

Goals at the program level are combined with General Education goals, extra- and co-curricular goals, information literacy goals, and other goals (e.g., ethical and civil leadership personnel might create institutional goals).

Premise: If ILGs are applied institution-wide, every student should have systematic opportunities to master them regardless of which course/program choices they make.

Purpose: Since the ILGs align to the College's mission and form the basis of its assessment plan, the results help the College gauge how well it is achieving these goals and guide discussions of how it can enhance teaching and learning.

Institutional Learning Outcomes:

- **Mastery of Content**: Students will exhibit career readiness by demonstrating the critical knowledge and skills required in professional and/or collegiate endeavors.
- **Effective Communication**: Students will read, write, speak, and listen to achieve both literal and inferential understanding.
- **Mathematical Reasoning**: Students will apply mathematical methods and concepts to solve problems and make informed decisions.
- **Critical Thinking**: Students will build upon acquired comprehension by employing higher-order thinking skills when questioning current situations, posing an alternative, objectively resolving problems, and/or applying prior knowledge and processes to new situations.
- **Civic Engagement**: Students will develop an appreciation for the value of community through service opportunities.
- **Technological Competency**: Students will demonstrate technical knowledge and practical application.

PRE-MAJOR PROGRAM

Students whose placement evaluation indicates a need to strengthen foundational skills associated with reading, writing, and/or math are required to successfully complete foundational/Pre-Major courses before acceptance in technical programs. Success in a Pre-Major course is indicated by earning a grade of "C" or better and achieving required entrance test scores. Pre-Major students who do not achieve successful entrance test scores may request a waiver for demonstrated academic achievement at the college level.

Pre-Major courses are calculated into the students' overall course load and applicable in determining full-time or part-time status and meeting financial aid standards. However, credit hours earned do NOT count toward graduation because the courses are considered foundational. Pre-Major courses have a 0-level designator. Entry into the Pre-Major program is determined by the Office of Admissions.

ADVANCED PLACEMENT

The College believes that placing students at the proper educational level will contribute to their success. Advanced placement is designed to give students credit for learning acquired prior to entering Thaddeus Stevens College. Students who have acquired skills and knowledge through advanced courses in high school, vocational/technical training, military service, or life/work experience may be eligible for advanced placement.

Credit by Department Examination: Students who have skills superior to those taught in a required course might qualify for this option. Students may opt to take a "final" test to acquire the credit without the cost and time devoted to the course. Credit by department examination is usually pursued by a traditional student, but no grade is assigned.

Credit by Standardized Exams (AP, CLEP, Excelsior, etc.): Students can take a nationally recognized exam for the relevant discipline, and gain credit at a college that recognizes the test. No grade is assigned.

Credit for Life/Work Learning (Portfolio): Students can prepare a portfolio of materials (training certificates, work experiences, seminars, businesses, etc.) that illustrate the acquisition of skills taught in a specific course. Faculty will evaluate the portfolio against the requirements for a specific course. Credit by portfolio for life/work experience is usually pursued by a nontraditional student, and usually no grade is assigned.

Credit for Military Training: College credit can be assigned for specific technical training received during military service (e.g., electronics, auto mechanics). No grade is assigned.

Credit for Formal Apprenticeship Training: College credit can be assigned for the completion of a formal apprenticeship program (e.g., machinist, plumber/pipefitter, electrician). No grade is assigned.

Credit by Articulation: Students can receive College credit for the completion of high school technical training if a formal articulation agreement exists between the high school and Thaddeus Stevens College. No grade is assigned.

Credit by Program of Study (POS): Students can receive College credit for completion of a statewide program of study (POS) if the College has established an agreement with that program. No grade is assigned.

Students interested in advanced placement should consult the College registrar. Eligibility is based on substantial evidence of prior experience or course work. Advanced placement is then possible through testing and/or competency assessment determined by the appropriate department. Advanced credit is not used in calculating the student's cumulative grade point average (GPA). Only the course number, title, and the number of credits are entered on the transcript. No letter grades are shown. Up to a maximum of half the total program requirements may be granted through nontraditional credit evaluation (advanced placement or credit by

exam). Credit is granted only to full-time students in good standing after one semester. Exceptions to this policy are at the discretion of the Vice President for Academic Affairs.

Credit Transfer: Any student who desires to transfer credits to Thaddeus Stevens College must have taken the classes at a college accredited by an agency recognized by the Council for Higher Education Accreditation, and must have earned a grade of "C" or higher. Students may transfer only General Education classes. All classes that are not General Education classes must be taken at Thaddeus Stevens College. Transferred classes are re-coded with a "T" (transfer credit) in place of a merit grade. These classes do not factor into a student's GPA.

Students interested in credit transfer should request an official transcript from the college(s) where courses were taken to be sent to the Registrar's Office. That office will evaluate all materials and might request additional information in determining course transferability. Students can see classes accepted for transfer through the College's Colleague Self-Service portal.

PATHWAYS FOR CREDIT WHILE ENROLLED IN HIGH SCHOOL

Students interested in earning college-level credit while attending high school have two options:

1) College in the High School: College-level courses taught at a high school by high school teachers.

2) Dual Enrollment: College-level courses taught at Thaddeus Stevens College by College faculty.

Please note: These are only available for students enrolled at school districts in which the College and the district have signed MOU on file.

ACADEMIC ADVISEMENT

The Thaddeus Stevens College faculty and staff believe that advisement is a vital ingredient in student success. Academic advisement is a faculty responsibility. Regular meetings between advisors and advisees promote better course selection and less confusion at registration; it also gives students someone to consult for help in other educational and personal matters.

Regular meetings between student and advisor allow for more timely recognition of academic difficulties and personal problems. With earlier recognition comes more immediate help and assistance.

COLLEGE TRANSFER AFTER THADDEUS STEVENS

Students who have earned college credit can sometimes transfer those credits to other colleges/universities since Thaddeus Stevens College is accredited by Middle States. Students should contact the college/university they are interested in transferring to in order to determine what credits will transfer. For more information, please visit the "Continue Your Education" page of our website or contact the Career Services office at careerservices@stevenscollege.edu.

BOOKS AND SUPPLIES

Students are required to buy assigned books and supplies. Students who receive the Thaddeus Stevens Grant will have their books loaned to them; they must return the books or pay for the purchase of them when the course or program of study has been completed. If books are not returned, the cost will be charged to the student's account; remaining unpaid balances will be referred to a collection agency at the conclusion of each academic year. Textbooks are available at competitive prices through the College's bookstore provider online or at the bookstore location. Prices of books and supplies vary by major.

TOOLS

Students accepted into a major are expected to buy all required tools or supplies. Required items must be purchased by the start of the fall semester; they are listed on the website under the appropriate course of study for the current semester. Students who receive the Stevens Grant will have their tools loaned to them by the College.

CREDIT VALUE AND COURSE NUMBERS

The Semester Hour: The credit value of courses is expressed in semester hours. Lecture courses are designed to require approximately the same number of hours of class time per week as the semester hours of credits they are assigned. For technical courses, laboratory-based courses are designed to require three times the number of hours of lab time per week as the semester hours of credits they are assigned. For academic/general education courses, laboratory-based courses are designed to require two times the number of hours of lab time per week as the semester hours of credits they are assigned.

Course Numbers: Course Numbers: Each course taught at the College is coded with a combination of letters and numbers (ex: WELD 125), where the letters identify the subject and the numerical portion indicates the academic level. Numbers between 001 – 099 indicate that a course is taught at a developmental level. Those listed at 100 and above are considered college-level courses.

COURSE SELECTION

Faculty advisors must meet with their advisees at least once during each registration period prior to selection of courses. Advisors evaluate course selections to ensure that:

- Courses selected are required for the students' technical programs.
- Courses selected allow students to meet minimum requirements for graduation.

Advisors will also:

- Recommend, assuming the schedule allows, that all failed or incomplete courses be made up prior to graduation.

ACADEMIC FOLLOW-UP

Advisees will see their academic advisor at least twice during the semester, once at the beginning of the semester and once after midterms, to review their status and register for the following semester.

ACADEMIC STANDING

Full-Time Status: Students enrolled in at least twelve credits during a semester.
Part-Time Status: Students enrolled in fewer than twelve credits during a semester.
Good Academic Standing: Students who

- Earn a “C” (2.0) cumulative grade point average (GPA) AND
- Earn a “C” (2.0) cumulative GPA in their technical majors.

ACADEMIC DISMISSAL

- The Dean of Student Success makes decisions for academic dismissal. Decisions are based on maintenance of full-time status, GPA, and/or student’s demonstrated performance.
- Any student who has not earned a minimum 2.0 GPA by the end of a semester during which he/she is on academic probation is liable for dismissal from the College.
- Any student who fails a prerequisite course in his/her vocational program might be dismissed from the College.
- Any student who earns below a 1.49 overall GPA in their major during a semester is liable for dismissal.

ACADEMIC PROBATION

Any student who does not maintain an overall 2.0 cumulative GPA and a 2.0 cumulative GPA in his/her major at the end of any semester shall be placed on academic probation for the following semester. Students dismissed from the College for reasons listed here are not eligible for probation. If the student is unsuccessful in bringing his/her GPA to a minimum of 2.0 for the semester during which he/she is on academic probation, the student is liable for dismissal.

ADMINISTRATIVE DISMISSAL

Thaddeus Stevens College reserves the right to end the enrollment of any student if, in the opinion of the College, further association is not in the best interest of the student or the College. The following may be causes for administrative dismissal:

- Neglecting to meet financial obligations
- Failing to follow College policies and procedures
- Failing to meet academic requirements
- Exhibiting persistent lack of effort or interest
- Failing to be academically honest

ACADEMIC INTEGRITY

The shared conviction at the College, represented in the procedures that follow, is that academic integrity is best taught and reinforced by faculty as an element of the teaching and learning process. Only in the limited instances in which faculty believe that disciplinary, as well as academic, sanctions are called for should the process move to the Dean of Student Success.

Definitions and expectations

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. It is the guiding principle for all academic activity at Thaddeus Stevens College, and all members of the College community are expected to act in accordance with this principle. Consistent with this expectation, the College's Code of Conduct (section XV) demands that students conduct themselves in a manner that corresponds to acceptable and mature adult standards of behavior and that complies with all College regulations and directives. Students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed.

Academic integrity includes a commitment not to engage in, or tolerate, acts of falsification, misrepresentation, or deception. Such acts of dishonesty violate the fundamental ethical principles of the College community and compromise the work completed by others.
To protect the rights and maintain the trust of honest students and support appropriate behavior, faculty and administrators should regularly communicate high standards of integrity and reinforce those standards by taking reasonable steps to anticipate and deter acts of dishonesty. At the beginning of each course, instructors should provide students with a statement clarifying the application of the College's academic integrity policies to that course.

Academic honesty: Section 7324 of the Crimes and Offenses Code of Pennsylvania makes it a third-degree misdemeanor to sell or offer for distribution any dissertation, thesis, term paper, essay, report, or other written assignment, or to sell or offer for distribution any assistance in the preparation of such assignments, for submission to an educational institution to meet the requirements for a degree, diploma, certificate, or course of study. (Assignment is defined as a written, recorded, pictorial, artistic, or other academic task. To prepare is defined as to create, write, or in any way produce in whole or substantial part any such assignment.)

The law does not prohibit an educational institution or members of its faculty and staff from offering instruction or instructional services as part of its curricula or programs. Neither does the law apply to the sale of certain copyrighted materials described in Section 7324(f).

Plagiarism is one or more of the following:

- Submitting an assignment claiming to be original work but which has been wholly or partially created by someone else.
- Allowing your work to be submitted by another student as if it were that student's original work.

- Presenting as your own the ideas (through paraphrases or summaries of research), organization, or the wording (through direct quotation) of another person's work without appropriate acknowledgement of the sources within the text of your work and a works-cited page done according to the standards of an accepted academic documentation system (e.g., CBE, Chicago, APA, MLA).
- Inaccurate, sloppy, or faulty documentation of sources.

Disciplinary Sanctions: Penalties that might be imposed include, but are not limited to, the following:

1. Faculty may lower the grade or fail that particular assignment, lower the course grade, give a failing course grade, or dismiss that student from the course.

2. Faculty may recommend involvement by the Vice President for Academic Affairs.

3. The Dean of Student Success might impose other measures within the context of the College's policies on academic integrity.

SELF-PLAGIARISM

Work done for one course may not be submitted for another course, even if the class is being repeated. Slightly altered work that has been resubmitted is also considered fraudulent. In some instances, instructors might allow some work from a prior course to be repurposed; students who wish to do this must seek approval from the instructor in advance. Under no circumstances will a complaint be considered if resubmitted work earns a different grade from the original submission.

GRADING POLICY

Each academic year is divided into two semesters. At the end of each semester, instructors submit one grade through Canvas, the College's learning management system. All scholastic information is recorded on the student's transcript.

GRADING SCALE

The College's grading scale is:

A	93 and above
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D+	67 - 69
D	63 - 66

D- 60 - 62
F 59 and below

Instructors are required to maintain grades and attendance according to the College's grading and attendance policy in order to allow transparency regarding student progress during the semester. Students should generally be able to individually track their progress in their classes throughout the semester in Canvas.

Instructors are encouraged to inform students when they have updated grades for assignments throughout the semester.

All grades (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, I, W) are recorded.

The GPA is computed using the following procedure: The number of credits per course is multiplied by the grade point allocation, and then the total number of grade points is divided by the total number of credits attempted. Transfer courses are not calculated into the GPA.

COURSE REPEAT POLICY

Students may repeat a course to earn a higher or passing grade. Only the highest grade earned is used in GPA calculation. To ensure that students fully comprehend the material covered in a course and to protect the academic integrity of the College. The term "repeat" is applied when a student retakes a course that previously was awarded a grade, including a "W." The first time a student attempts a course for a grade is considered the first attempt. The second time a student attempts a course for a grade is considered the second attempt and the first repeat.

Developmental Courses: Students required to successfully complete developmental coursework can repeat a developmental course only once. That includes taking the course at another college or university. Students who cannot successfully pass a developmental course within two attempts will not be permitted to continue into a program of study. Students must pass developmental courses with a C or better and pass specified admissions entrance exams.

Students who obtain a B (83-86) or higher may have the requirement for passing admissions entrance exams waived. Students can appeal this policy to the Dean of Student Success if they feel they have extenuating circumstances that prevent them from adhering to the policy.

College-level Courses: Students may repeat college-level courses to improve a grade, including a "W." Students may repeat a course only twice. Students unable to successfully complete courses required for graduation in their program should discuss alternate graduation plans with their academic advisor. Students can appeal this policy to the Dean of Student Success if they feel they have extenuating circumstances that prevent them from adhering to the policy.

Reported Grade
A 4.0
A- 3.7

B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0.0
I	0.0 (Incomplete)
W	0.0 (Withdrawal)
WS	0.0 (Withdrawal from school)
WP	0.0 (Withdrawal from class passing)
WF	0.0 (Withdrawal from class failing)

DEAN'S LIST

A student with a GPA of 3.25 or above (and no incomplete grades) is placed on the Dean's List at the end of the semester. At graduation, the following distinctions are granted:

3.95 – 4.00 summa cum laude
3.65 – 3.94 magna cum laude
3.35 – 3.64 cum laude
3.25 – 3.34 honors

MIDTERM GRADES

Faculty are required to submit midterm grades in both the fall and spring semesters.

INCOMPLETE GRADES

If, for reasons beyond a student's control, he/she cannot complete a course within the prescribed time, the final grade may be deferred with the instructor's and Dean of Student Success's approval. If a deferment is granted, an "I" appears on the transcript and is not be calculated into the student's GPA. The required work must be completed by the end of the fourth week of the following semester.

This option should not be used to delay inevitable failing grades. To request an incomplete grade, the student must obtain a form from their academic advisor and request the instructor's approval. If the request is approved, the instructor must submit the completed form to the Dean of Student Success for approval. All of this must be done before the end of the semester. In the event an "I" grade is not removed by the fourth week of the following semester, the grade is changed to an "F" unless an alternative arrangement is made with the approval of the instructor and Dean of Student Success.

APPEAL OF ACADEMIC DISMISSAL

Upon the decision to dismiss a student for academic reasons, the Dean of Student Success will prepare written and electronic communication informing the student and College representatives of the student's dismissal. Students have five working days to appeal that decision. If an appeal is not received within five days, the student will be dismissed. If a student wishes to appeal an academic dismissal, the student must submit that appeal in writing (email is preferred) to the Dean of Student Success within five business days of the date on the dismissal letter.

After the Dean of Student Success has rendered a decision, the student may appeal to the Vice President for Academic Affairs, who might choose to refer the student to an Academic Appeals Committee or to uphold the findings. If the Vice President chooses to refer the student to an Academic Appeals Committee, that committee will be made up of three full-time faculty members and two students. The Vice President will appoint one of the faculty members to chair the hearing. The members of this committee must have no vested interest in the matter under review.

The Academic Appeals Committee will hear and review the evidence. The hearing will take place within 72 hours following the student's request for a hearing. A verbatim record, such as a tape recording, will be made of all hearings. This record will remain the property of the College. The student may request and receive a copy of the proceedings at his/her expense. Within 24 hours of the hearing, the Committee will submit a written recommendation to the Vice President for Academic Affairs.

Within 24 hours of receiving the Committee's recommendation, the Vice President for Academic Affairs will render a decision on the case and then inform all parties, in writing, of his/her decision.

APPEAL OF GRADE

- Students wishing to appeal a grade must do so within 30 days of when the final grade was due.
- If a student wishes to appeal a grade, he/she must first meet with the faculty member to discuss the grievance.
- If the student and faculty member do not come to a satisfactory agreement, the student may appeal to the Dean of Student Success.
- If the student chooses to appeal to the Dean of Student Success, a written request (which includes a summary of the grievance) must be submitted. The Dean of Student Success will review the appeal and make a decision within three working days.
- Should the student wish to pursue the matter, the student may appeal to the Vice President for Academic Affairs. The decision of the Vice President for Academic Affairs is final.

AUDITING A COURSE

Auditing a course allows you to take a class without earning a grade or credit. A student who audits a course does not officially register for it. The opportunity to audit is offered on a space-

available basis with the approval of the instructor. An Audit Course form must be completed and returned to the Office of the Registrar by the last day of Add/Drop. Students already enrolled at the College and paying tuition are not required to pay additional fees. Individuals not currently enrolled in courses are required to pay tuition and applicable fees. Audited courses are not included on academic transcripts.

Why a Student Might Want to Audit a Course: You might audit a course for purposes of self-enrichment and academic exploration. There is no penalty when you attempt to broaden your academic base.

How a Student Can Audit a Course: The Audit Course form is available in the Office of the Registrar, Hartzell Building 107. After you complete the form and get the required signatures, return it to the Registrar's Office. Students must meet all prerequisites to audit a course.

ADD/DROP PROCEDURE

Students may add/drop any General Education class through the end of the first week of a semester. Students can obtain an add/drop form from their academic advisor or in the Registrar's Office in Hartzell 102. Students may also add/drop courses on self-service. Courses added or dropped during this period do not need instructor and/or advisor approval.

A student may be admitted to a new course after the first week of classes only by obtaining approval from the course instructor and their advisor. The add/drop form must be signed by both the instructor and advisor and taken to the Registrar's Office in Hartzell 102 in order for the student to be added to the class.

MAXIMUM CREDIT HOURS

The normal full-time course load is 19 credit hours per semester. Students who wish to enroll for more than 19 credit hours should complete the Course Overload Request form available in the Registrar's Office. Students desiring to take more than 22 credits or more than one additional course according to the College Model schedule must receive permission from their academic advisor.

CHANGE OF PROGRAM MAJOR

Students desiring to change program majors must apply to do so through the Admissions Office. Initial paperwork and discussion should be with the Director of the Academic Center. Requests are reviewed by College staff, with final approval by the Dean of Enrollment Services.

GENERAL EDUCATION CORE CURRICULUM

General education courses are required of all majors at Thaddeus Stevens College. These courses support academic work within the major, enhance employment skills, and help prepare students for full, effective lives as citizens.

Students are required to successfully complete twenty-five (25) general education credits for graduation. General education courses include the liberal arts and science core, and general education applied courses.

General education courses are eligible to be taught in person, online (synchronous or asynchronous), or in hybrid format.

Liberal Arts and Science Core

These courses emphasize theoretical concepts, critical and analytical thinking skills, and numerical and verbal literacy. Students are required to successfully complete at least eighteen (18) credits from the liberal arts and science core. Those eighteen (18) credits must include one course from each of the following four core areas:

Mathematics (MATH)
English (ENG)
Science (includes PHYS, CHEM, SCI and BIO)
Humanities and Social Sciences (includes ECON, HIST, SOC, PSY, some ENG)

General Education Applied Courses

These courses emphasize practical application of skills. They are general in scope and content (non-major specific), and designed to support student employability, academic achievement, and student personal development.

Courses include:
Business (BUSN)
Computer Information Systems (CIS)
Health and Physical Education (HEAL)

Students may apply up to seven general education applied course credits to graduation requirements.

Any student who takes Pre-Calculus (MATH 207) or Calculus (MATH 213) instead of the two required math courses in their program must take an additional 3-credit general education elective to meet their general education requirements.

General Education courses are taught in person, online (synchronous or asynchronous), or in hybrid format.

Asynchronous Online Courses: Asynchronous courses, delivered through a course management system allowing 24/7 access, do not require students to be online at specific times; instead, students log in regularly at their convenience to keep up with assignments, due dates, etc. The coursework is monitored by the instructor, who provides support as needed. Documented attendance is required for asynchronous online courses.

Hybrid Courses: Hybrid courses, combining both in person classroom instruction and asynchronous online instruction, meet in the classroom regularly and are supplemented with online independent study material throughout the week. Classroom and documented online attendance are mandatory for all hybrid courses.

Synchronous Online Courses: Synchronous courses require students to receive instruction and interact with their professor and classmates online during regularly scheduled days and times listed. Synchronous classes also include online components such as course materials, homework, and assignments. Online attendance is required for synchronous online courses.

COURSE SELECTION AND GRADUATION REQUIREMENTS

Students are responsible for fulfilling their graduation requirements, whether general education or technical. Academic advisors assist students in planning course selections, but the final responsibility for meeting graduation requirements rests with each student.

With an advisor's help, students should schedule and register for the required general education courses listed on their model schedules. Departures from these requirements must be approved by the advisor and the Vice President for Academic Affairs.

ACADEMIC YEAR/SEMESTERS

The academic year is divided into two sessions of 16 weeks: a fall and a spring semester. Summer sessions might be held from May through August for Pre-Major and program courses.

FINALS WEEK

Final exams are administered in most technical and general education courses during the last week of the semester; the regular class schedule is followed. Students with questions about their final exams or special final projects should discuss them with the instructor of the class.

GRADE REPORT

Throughout the term, all instructors must regularly update grades in Canvas. Individual teacher policies as stated on each course syllabus defines how often teachers update simple and complex assignments, but students always have access to their progress on Canvas.

Final semester grades are available through self-service, after the end of the semester. The grade reports show all coursework completed. To protect the confidentiality of a student's record and in compliance with federal law, no grades will be given over the phone.

WITHHOLDING GRADES/DEGREES

The institution reserves the right to withhold a student's grades and/or degree if any tuition, fees, fines, or institutional loans are unpaid.

ATTENDANCE

Since regular attendance is important for success at Stevens, a strict attendance policy is maintained. Each faculty member keeps his/her own attendance records. Students are required to comply with the attendance policy specific to each class as well as with the related stipulations cited below.

The following are recognized as legitimate excuses to miss class: death in the immediate family; hospitalization; illness verified by a doctor's excuses; College activities as approved by one of the following: Vice President of Student Services, Dean of Student Success, Vice President for Academic Affairs. Also valid: circumstances verified by a campus counselor or Office of Accessibility. Although students may be excused for an absence, they are still responsible for completing all of work and requirements for each course. In situations where a student reaches ten or more excused absences, he/she might be asked to withdraw from the course, receive an incomplete grade, or be dismissed from the College.

Students that have two unexcused absences from a course will receive a warning letter. Once a student has had five unexcused absences from a course, he/she is liable for dismissal from the class and/or the College.

For courses that meet once a week, students will receive a warning letter after one unexcused absence and are liable for dismissal after three unexcused absences.

For courses that are offered remotely, this policy will be applied in a different manner. For synchronous courses, the attendance policy is as stated above. For asynchronous or hybrid courses, the attendance policy is stated below.

Faculty with any student failing to engage, turn in work, participate in real-time instruction or who are not responding to communication must report that student to the Dean of Student Success. The Dean will issue a warning letter to the student. Once a warning letter is issued and the student still fails to engage, the student is liable for dismissal from the course and/or the College. The College will attempt to communicate with the student and provide resources and support needed to avoid dismissal.

Students who are dismissed from a course or the college for attendance have the ability to appeal that dismissal. Students should appeal in writing to the Dean of Student Success within three days of the dismissal. During the appeals process the student should continue to attend classes until a decision has been made. If the appeal is denied, students have the option to further pursue their appeal to the Vice President of Academic Affairs.

GRADUATION REQUIREMENTS

An Associate of Applied Science degree or a Certificate for a one-year program (lasting from August through May) is awarded upon the successful completion of the required number of credits. To satisfy the General Education course distribution requirements, students must take 25 credits. Students must take at least one course in each of four subject areas: English, math, science and humanities.

Failure in any course must be remedied by re-taking and successfully passing that course or an approved related course. If a student has above a 2.00 GPA overall and in their major, they may take remaining general education course requirements at another accredited postsecondary institutions and earn a “C” or higher. Students should then have an official transcript sent to the college to have the completed coursework added to their transcript.

Students may participate in commencement if they have less than 12 credits left in the degree requirements.

The student must earn at least a 2.0 cumulative GPA overall. The student must also earn a 2.0 cumulative GPA in his/her technical major.

The student must have fulfilled all financial and contractual obligations with Thaddeus Stevens College to receive a degree. Degrees are awarded three times a year, at the conclusion of the Fall, Spring and Summer semesters.

OCCUPATIONAL ADVISORY COMMITTEES

Because of the technical nature of the programs at Thaddeus Stevens College, advisory committees undertake an essential role in technical program review and development, equipment purchases, student recruitment, and student job placement. Advisory committees gather at least twice a year; minutes of these meetings are kept in the Office of College Advancement. Members of advisory committees include instructors, administrators, business owners, professional and technical employees, and representatives of industry and labor.

WITHDRAWAL PROCEDURE

Withdrawing from a Course

Students may withdraw from a class between the beginning of the second week and the 14th week of a semester. Withdrawal within this period results in a “W” grade on the transcript but will not impact a student’s GPA. Failure to follow the steps below could result in a student being charged for the semester in which he/she was enrolled but did not attend.

Students should meet with their advisors to discuss what effect withdrawing might have on their continued studies and transcript records. Upon withdrawal from a course, students should return any materials or properties of the College that they have to the appropriate parties to avoid being billed for those items.

Students who earn an “F” for cheating in a course may not withdraw from that course.

Withdrawing from the College

A counselor can help a student develop alternative plans to remain enrolled, as well as help the student understand how withdrawing might affect educational plans, financial aid, etc. All students who wish to withdraw from the College must follow these steps:

- The student must complete the College Withdrawal form available on Thad's Pad or from the Registrar's Office (Hartzell 107).
- The student must visit all College offices with which he/she has outstanding obligations as outlined on the Withdrawal form. The appropriate representative will sign the form, indicating the student has met any obligations.
- Resident students are required to notify their Residence Hall Advisor (RHA) of their departure. The room key should be given to the RHA. If the student's RHA is not available, the room key should be given to the Director of Residence Life or the Vice President of Student Services. Withdrawing students must vacate the campus by 4:30pm the day following notification of withdrawal. In some instances, students will be asked to depart immediately or by the evening of notification of withdrawal.
- After all required signatures are obtained, withdrawal forms must be returned to the Registrar's Office (Hartzell 102) in order for the withdrawal process to be completed.

XII. FERPA (FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT)

The Family Educational Rights and Privacy Act of 1974 (FERPA) restricts the ability of Thaddeus Stevens College of Technology from releasing student information (including financial and academic records) to anyone who has not been authorized by the student. This means that a student must authorize their parent or any other third party to speak with College personnel about non-medical issues relating to their attendance at Thaddeus Stevens College before College personnel can speak with them. Even with FERPA permission, the student remains the primary contact with the College.

The College may disclose, without consent, "directory" information to a third party. Directory information includes:

- Name
- Address
- Email
- Phone
- Date and place of birth
- Major field of study
- Dates of attendance
- Full-time/Part-time status
- Class level
- Enrollment status (graduate/undergraduate)
- Participation in officially recognized activities and sports (including weight and height of members of athletic teams)
- Degrees, honors, and awards received

Eligible students may withhold directory information by notifying the Dean of Enrollment Services in writing within two weeks after the first day of classes of the semester they start at the College. Requests for nondisclosure are honored by the College for one academic year only and must be filed annually in the Registrar's Office.

College officials with legitimate educational interest can access student records without student consent.

Student Rights Under FERPA

FERPA affords you, the student, the following rights with respect to your education records:

- The right to inspect and review your education records within 45 days from the date the College receives the access request.
- The right to request the amendment of your education records that you believe are inaccurate, misleading, or otherwise in violation of your privacy rights under FERPA.

- The right to provide written consent before the College discloses personally identifiable information from your education records, except to the extent that FERPA authorizes disclosure without consent.

Additional information regarding the Family Educational Rights and Privacy Act can be found on the U.S. Department of Education website.

Submitting FERPA Permissions

Via my.stevenscollege.edu, you can assign permissions for specific individuals to access your financial and educational information using the electronic FERPA submission form.

Steps to submit:

- Log in and select the “Student Services” tab at the top of the page
- On the left side of the page, choose “Student Forms Center”
- In the drop-down menu, choose “Required Student Forms”
    - *You must be logged in to submit any forms through Thad’s Pad.

If you have previously submitted permissions and need to make changes or add/remove anyone, contact the Registrar at registrar@stevenscollege.edu

XIII. FINANCIAL AID

Office Location: Hartzell 105
(717) 391-3510
financialaid@stevenscollege.edu

Financial aid resources are available to eligible students attending the College. These resources can include federal grants, Pennsylvania State Grant and Special Programs, employment programs, federal loans and private education loans, internal and external scholarships, and Department of Veterans Affairs education benefits.

To be considered for state and federal aid resources, students must complete the Free Application for Federal Student Aid (FAFSA) each year. The FAFSA is available beginning October 1. To be considered for all types of aid, the College's priority deadline to receive the FAFSA is April 1. To be considered for a PA State Grant, the FAFSA must be filed before May 1.

The amount of financial assistance a student receives is determined by the student's financial need, according to the following formula:

Cost of Attendance minus the Student Aid Index (SAI) = Financial Need

Cost of Attendance (COA) is calculated by academic year and is based on full-time enrollment. A student's aggregate need-based aid will exceed financial need as established by this formula.

TYPES OF AID AVAILABLE

Federal Pell Grant: Federal Pell Grants are awarded by the Department of Education based upon demonstrated financial need and full- or part-time enrollment at the College. To apply for a Federal Pell Grant, students must complete the FAFSA. The College's priority deadline is April 1 of each year. After the College receives the FAFSA and the student has received an offer of admission, the Office of Financial Aid will review the application for accuracy and completeness. The U.S. Department of Education determines the eligibility from information on the FAFSA. All students awarded financial aid must meet Satisfactory Academic Progress (SAP) standards. Funds are disbursed via electronic fund transfer (EFT) to students' accounts each semester.

Federal Supplemental Educational Opportunity Grant (FSEOG): Federal grant funds awarded to students with the greatest financial need who complete the FAFSA application early. Criteria and consideration to be eligible for an FSEOG grant are:

- Federal Pell grant eligibility based on FAFSA.
- Meet Satisfactory Academic Progress (SAP)
- Awarded to students who complete the FAFSA in October of the previous year.
- Preference is given to resident students.
- Awards are generally $3,000 per year, until funds are exhausted.
- Funds are disbursed via EFT to students' accounts each semester.

Pennsylvania State Grant: The Commonwealth of Pennsylvania awards grants to state residents pursuing postsecondary degrees, including associate degrees. The Pennsylvania Higher Education Assistance Agency (PHEAA) might contact the student via mail or email requesting additional information to determine eligibility. The Pennsylvania State Grant award is re-evaluated each year based on continued need, academic progress, and to ensure students are taking at least six credits per semester. Remedial credits might be eligible, depending on how many college-level credits the student is taking.

To be eligible for a Pennsylvania State Grant, students must:

- Complete the FAFSA by May 1 of each year.
- Create an account at www.PHEAA.org to track Pennsylvania State Grant eligibility.
- Graduate from a Pennsylvania high school.
- Be a Pennsylvania resident.
- Be enrolled at least half-time (6 credits).
- Be enrolled in a two-year program.
- Make satisfactory academic progress (as defined by PHEAA).

SPECIAL PROGRAMS THROUGH THE PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY (PHEAA):

Pennsylvania Partnerships for Access to Higher Education (PATH): Students awarded a scholarship or grant by a PHEAA PATH Program Partner might be eligible for additional aid.

Chafee Education and Training Grant (CHAFEE ETG): This federally funded program offers grants to Pennsylvania undergraduate students aging out of foster care who are attending an eligible postsecondary institution.

Pennsylvania National Guard Educational Assistance Program (EAP) and Pennsylvania National Guard Military Family Education Program (MFEP): Together with the Pennsylvania Department of Military and Veterans Affairs, PHEAA administers this tuition assistance program for students and dependents (spouses and children) of Pennsylvania National Guard Members who enter into a service commitment with the Guard for six years.

Pennsylvania Fostering Independence Tuition Waiver (FosterEd): Provides a waiver for tuition and fees charged by most postsecondary institutions in the Commonwealth for youth who are, or were, in foster care. This waiver applies only to charges that remain after all other gift aid (e.g., federal, state, and other scholarships or grants) have been applied to the student's account.

Contact at Thaddeus Stevens College:
Director of Financial Aid
(717) 391-7206
financialaid@stevenscollege.edu

Thaddeus Stevens Grant: Assists those students eligible to receive a Federal Pell Grant. To be eligible for the Thaddeus Stevens Grant, students must:

- Have their FAFSA processed by May 1st. Late applicants might receive a reduced award.
- Complete all required paperwork with the Office of Financial Aid.
- Meet Satisfactory Academic Progress (SAP) standards.
- Be enrolled in twelve or more credits and working towards degree requirements. In some cases, students taking fewer than 12 credits but who are taking a full load of their program courses according to the model schedule and have fulfilled all general education requirements may be eligible on a prorated basis.
- Complete all Pennsylvania State Grant paperwork.

Pell Grant eligibility is determined by the FAFSA.

- **The Stevens Grant covers** remaining costs after Pell and Pennsylvania State Grant, outside scholarships, and Student Aid Index (SAI) as determined by the FAFSA are taken into consideration. Costs can include: tuition, fees, housing and meal plan (seven-day meal plan for resident students and five-day meal plan for commuter and off-campus students).

Textbooks and tools are provided by the College to those receiving the Stevens Grant. All books must be returned at the end of each semester and tools remain with the College.

If the SAI is greater than zero, students are responsible for the amount of the SAI.

- A student loan will be awarded as an option to cover all or a portion of the student aid index.
- If a student withdraws or is dismissed prior to graduation, he/she must return all books, tools and supplies, or the student will be charged a replacement fee.

Length of time:

- Four semester maximum
- Pre-Majors may receive the grant for six semesters

To maintain eligibility, students receiving a Stevens Grant must be enrolled full-time, maintain a minimum 2.0 GPA, uphold the College's Code of Conduct, and be eligible for a Federal Pell grant.

Iraq and Afghanistan Service Grant: If any student's parent was a member of the U.S. Armed Forces and died as a result of military service performed in Iraq or Afghanistan after the events of 9/11, or if a student's parent was a public safety officer and died as a result of active service in the line of duty, that student might be eligible for additional Federal Pell Grant funds if, at the

time of the parent's or guardian's death, the student was under 24 or enrolled in college or career school at least part-time.

If a student meets these requirements and is eligible to receive a Federal Pell Grant, the eligibility will be recalculated as if the SAI were zero. Payments are adjusted if the student is enrolled less than full-time.

If the student meets the requirements above but is not eligible to receive a Federal Pell Grant due to the SAI being too high, the student might be eligible for an Iraq and Afghanistan Service Grant.

Federal Direct Subsidized Loan: This loan is awarded to students with financial need; The U.S Department of Education pays the interest on the loan while the student is in school. Loans with first disbursement on or after October 1, 2020 and before October 1, 2024 have a fee of 1.057%. Fixed interest rate of 5.50% for the loans disbursed on or after July 1, 2023 and before July 1, 2024.

Federal Direct Unsubsidized Loan: Interest accumulates on this loan while students are in school. It is not a need-based loan. Loans with first disbursement on or after October 1, 2020 and before October 1, 2023 have a fee of 1.057%. Fixed interest rate of 4.99% for the loans disbursed on or after July 1, 2022 and before July 1, 2023.

Grade-Level Advancement Policy for Direct Loan Consideration: Students who have completed fewer than 30 credits are considered first-year students. They are eligible to borrow up to $5,500 as a dependent student or up to $9,500 as an independent student. Students who have completed 30 or more credits and are no longer in Pre-Major status are considered second-year students. They are eligible to borrow up to $6,500 as a dependent student or up to $10,500 as an independent student.

Parent PLUS Loan: Parents may qualify for a Federal Direct PLUS Loan to help pay a student's college expenses. This loan enables the parent to borrow up to an amount equal to the total cost of attending Thaddeus Stevens College, minus any other financial aid received. Loans with first disbursement on or after October 1, 2020 and before October 1, 2024, have a fee of 4.228%. Fixed interest rate of 8.05% for the loans disbursed after July 1, 2023 and before July 1, 2024.

Alternative Loans: If additional funds are needed after all federal and institutional aid has been awarded, the student or parent may apply for an alternative student loan. These loans typically require a co-signer and are from a private lending institution; they have either fixed or variable interest rates, and variable fees. Several programs are available for consideration. Loan terms vary, so students should review multiple loan options.

VETERAN EDUCATION BENEFITS

All full-time programs at the College are approved for veteran benefits. If a student is eligible for benefits as a veteran or as the child of a deceased or disabled veteran, he/she should follow these procedures to ensure timely receipt of benefits:

- Contact the local Veterans Administration office, discuss college plans with them, and obtain an application for benefits.
- Provide the VA certifying official at Thaddeus Stevens College with Certification of Eligibility (COE) and a copy of the Member DD214, if applicable.

Once the student has registered for classes, the College will certify enrollment with the Department of Veterans Affairs.

Department of Veterans Affairs Education Benefits

If the student is awarded Post-9/11 GI Bill education benefits, the GI Bill® Statement of Benefits will show how much of the benefits have been used and how much remains use for education or training.

To determine eligibility, students must submit a copy of their Certificate of Eligibility (COE) or Statement of Benefits to the Department of Veterans Affairs certifying official via email, fax, mail, or in person. This document is available approximately 30 days after applying for education benefits with VA. The Statement of Benefits can be accepted if a Certificate of Eligibility is unavailable.

Note: GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the VA website.

School-Certified Benefit Programs

- CHAPTER 30 - Montgomery GI Bill—Active Duty
- CHAPTER 31 - Veteran Readiness & Employment (VR&E)
- CHAPTER 33 - Post 9/11 GI Bill
- CHAPTER 35 - Survivors & Dependents Educational Assistance
- CHAPTER 1606 Montgomery GUI Bill—Selected Reserve (MGIB-SR)
- Federal Tuition Assistance (TA)

Federal and State Benefits Programs

The application for the following programs can be found at www.pheaa.org.

- Educational Assistance Program (EAP)
- Military Family Education Program (MFEP)

Previous Education/Training

Appropriate credit is given for comparable previous education and training and the training period shortened accordingly. Further information is available through the Registrar's Office.

TUITION REFUNDS/CREDITS WHEN CALLED TO ACTIVE DUTY

Whenever students, as members of the Pennsylvania National Guard or reserve component of the Armed Forces of the United States, are ordered to active duty, a leave of absence from the College will be granted. Those students, when released from active duty, are entitled to, and restored to, the educational status previously attained without loss of credits earned. The College will refund tuition and fees paid or credit the tuition and fees to the next semester or term after termination of military leave at the decision of the student.

The College will give students the option of a 100% refund of tuition and fees or a credit for the next semester's tuition and fees. If students take a refund and then return it, the refund shall be at the existing rate.

REFUNDS TO FEDERAL PROGRAMS FOLLOWING WITHDRAWAL

The Higher Education Amendments of 1998 (Public Law 105-244) creates a formula to determine the amount of Federal Student Aid Funds a student has earned when the student ceases attendance without finishing the semester for which the funds were awarded. The Office of Financial Aid is notified of the withdrawal date by the Registrar's Office. The Office of Financial Aid then recalculates the Title IV financial aid award on a prorated basis for the amount of time the student attended classes. The student's withdrawal date is determined by when the College receives the withdrawal form, the student is dismissed from the College, or the College determines the student is no longer attending. Exception: For veterans receiving veteran's benefits, the withdrawal date is the last date of attendance or date of the last documented academically related activity. If a student attends through 60% of the semester, he/she is eligible to keep 100% of the aid for the payment period. The Office of Financial Aid will return funds to the Federal aid program or generate a post-withdrawal disbursement based on the Return to Title IV calculation. The Office of Financial Aid will notify students by letter of the results of the calculation, and the Business Office will notify a student if a balance is due to the College.

What aid is included in the calculation?

Title IV Funds refers to the federal financial aid programs authorized under the Higher Education Act of 1965 (as amended) and includes Federal Direct Subsidized and Unsubsidized Loans, Federal Parent Loans to Undergraduate Students (PLUS), Federal Pell Grants, and Federal Supplemental Educational Opportunity Grant (FSEOG).

The awards will be returned in the following order:

1) Federal Direct Unsubsidized Loan
2) Federal Direct Subsidized Loan
3) Federal Parent Loans to Undergraduate Students
4) Federal Pell Grant

5) Federal Supplemental Educational Opportunity Grant

Pennsylvania State Grant and private loan refunds will be calculated according to the institutional refund policy, and the appropriate amounts returned to PHEAA or loan lender.

POST-WITHDRAWAL DISBURSEMENT

If the total amount of Title IV funds a student was awarded is greater than the total amount of Title IV funds disbursed as of the date the student withdrew, the difference between these amounts will be treated as a post-withdrawal disbursement.

If a student is eligible for a post-withdrawal disbursement, the Office of Financial Aid will award Title IV funds. The post-withdrawal disbursements are made from available grant funds before available loan funds. The Office of Financial Aid will credit any outstanding account charge with all or a portion of any grant or loan funds that make up the post-withdrawal disbursement. The Office of Financial Aid will disburse directly to the student all post-withdrawal funds not credited to the student's account within 45 days after the institution determined that the student withdrew. In the case of Parent Loans to Undergraduate Students, post-withdrawal disbursements, the funds will be disbursed directly to the parent.

Post-withdrawal disbursements of Title IV loan funds will occur only after the College has obtained the student's and/or parent's confirmation (for Parent Loans to Undergraduate Students) that the student still wishes to have the loan funds disbursed. This step is in compliance with the Federal Register.

SATISFACTORY ACADEMIC PROGRESS (SAP)

To maintain financial aid eligibility, students attending Thaddeus Stevens College must be in good academic standing and making satisfactory academic progress (SAP) in their degree or certificate program, plus meet other eligibility criteria. SAP is reviewed at the end of each fall and spring semesters, after grades are posted. If a grade change should occur after this process, the student's progress will be re-evaluated. Students who fail to make progress will first be placed on financial aid warning. Students who fail to make progress after a semester on warning are ineligible for financial aid until they have met SAP requirements. Students may appeal SAP ineligibility. If an appeal is granted, the student is placed on financial aid probation. Any student who fails to meet the requirements of SAP while on probation becomes ineligible for financial aid until they have met all SAP requirements. This status cannot be appealed.

SAP Requirements for Title IV Funding:

- Quality of Progress - "Good Academic Standing"
    - Students requesting aid must maintain a 2.0 GPA. This requirement includes Pre-Major coursework.
    - Students who fall below 2.0 GPA are placed on financial aid warning for the following semester, during which they must bring their GPA up to 2.0.
    - Students who do not achieve at least a 2.0 GPA during the warning period lose their financial aid until they have met the requirement.

- Quantity of Progress - “Pace of Unit Completion”
  Students must complete at least two-thirds (67%) of all units in which they originally enroll, starting from the time of first attendance in their program. For example: A first-term student who originally enrolls in 9 units, withdraws from 3, and successfully completes the remaining 6, would meet the quantitative measure requirement since the student did pass at least two-thirds (67%) of the units in which he/she originally enrolled.
  - Students requesting aid must make progress toward a degree or certificate as follows:

    Full-time: 12 units per term and/or 24 units per year (complete average of 8 per term)

    ¾ time: 9 units per term and/or 18 units per year (complete average of 6 per term)

    ½ time: 6 units per term and/or 12 units per year (complete average of 4 per term)

  - These grades demonstrate satisfactory course completion: A, B, C, D, T and P.
  - These grades do not demonstrate successful course completion: F, I, NP, W, WIP, WF and WP.
  - Incomplete grades do not count toward pace of unit completion in the term in which they are received but are evaluated the following term.
  - If a student falls below the cumulative minimum 67%, the student will be placed on financial aid warning. Such students will be given the following term (semester) in which to raise their pace of unit completion above the required 67%.
  - If a student fails to meet the requirements during the warning period, the student will lose financial aid eligibility until they have met the requirements.
  - Transfer credits will be counted as successful completion in the pace calculation, but do not count in GPA calculation.
  - Repeat courses count as attempted each time they are part of an enrollment. They count as completed the first time a satisfactory grade is earned for that course.
- Quantity of Progress - “Maximum Time Frame”
  - Students must finish their academic program within 150% of the published length of the program. For example, a student in a 61-credit hour Associate Degree program should be able to earn the degree taking no more than 92 credits.

Appeals: Students have the right to appeal SAP-related financial aid decisions. This can be done by completing an appeal form and submitting it to the Office of Financial Aid. A committee will review each case to determine if mitigating circumstances are responsible for poor progress. Mitigating circumstances may include, but are not limited to, a) illness or injury of the student; b) death of a close family member; or c) other unforeseen extenuating circumstances. All

circumstances must be documented. Students will be informed in writing of the appeal outcome.

If a student's 150% appeal is granted, the student will be given an academic plan. That plan will outline what the student must do to regain SAP. Failure to adhere to the academic plan will result in the student becoming ineligible for financial aid in future semesters until SAP is met.

XIV. TUITION AND RELATED COSTS

Thaddeus Stevens College reserves the right to change the tuition and other costs/fees as required. Contact the Business Office for the latest figures. Tuition and related fees are determined by the Thaddeus Stevens College of Technology Board of Trustees.

Students not fulfilling contractual obligations will not be allowed to continue the following semester. Contractual obligations include charges for outstanding fines, residence hall charges, charges for damaged or lost property belonging to the College, bookstore obligations, and payment of tuition, housing, and/or meals.

Semester Rates	
Tuition - Full-Time (12+ Credits)	$4,500
Tuition - 1 Year Pre-Major Program	$4,500
Housing (Double Room)	$3,000
Housing (Single Room)	$3,500
5-Day Meal Plan	$1,850
7-Day Meal Plan	$2,335
Activity Fee	$25
Summer Session Rates	

Tuition - Charged per Credit	$308
Housing	$735
5-Day Meal Plan	$545
7-Day Meal Plan	$685
PER MEAL CHARGE	
Breakfast	$5.00
Lunch	$8.75
Dinner	$9.00
PER CREDIT CHARGE	
Cost Per Credit	$308
OPTIONAL FEES	
Parking Permit (annual)	$15

Cable TV (per year)	NO COST
Computer Network Service	NO COST
FINES	
Parking (First Offense - see Manual)	$10
ASSESSED FEES	
Bounced Check (plus bank fees)	$33
Transcript (first two free)	$4
ID Card Replacement	$5

The Business Office will bill students for all damages to, or loss of, College property as the damages or losses occur, as well as at the end of the academic year. Students must pay these charges within thirty (30) days the date of the billing. The Business Office will assess a late payment fee of $50 per month against any student with a delinquent balance.

The College will seal all student records until claims for damages and/or loss of college property are settled. Students with delinquent accounts will not receive grades, transcripts, or degrees until they pay their outstanding balance in its entirety. Furthermore, the College will turn all delinquent accounts over to the Pennsylvania Attorney General's Office for collection.

Thaddeus Stevens College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individuals

inability to meet his/her financial obligation to the institution due to the delayed disbursement funding from the Department of Veterans Affairs under Chapter 31 or 33.

Tuition Payment Plan: Students may pay their tuition in its entirety by the beginning of the fall/spring term or in three (3) equal installments as follows: approximately one (1) month prior to the start of the semester at registration, or, in the case of the spring semester, on or before the first class day one month after registration, with the final spring payment due one (1) month after the first class day.

To be eligible for the payment plan, the student must make the first payment on time. Exceptions to this will be granted only by the Vice President for Finance and Administration.

Reduction of Charges: In rare situations, students may appeal for a retroactive WD or reversal of tuition charges. In the event of withdrawal or dismissal, tuition (non sub-term), room and meal plan charges will be reduced according to the following:

Institutional Reduction Policy

First week of semester	100% reduction of charges
2nd week of semester	80% reduction of charges
3rd week of semester	70% reduction of charges
4th week of semester	60% reduction of charges
5th week of semester	50% reduction of charges

XV. CODE OF CONDUCT

In keeping with the principles of our founder, Thaddeus Stevens, the College is committed to a Code of Conduct that provides individuals with educational opportunities and promotes common respect for all people. The Code expressly expects all members of the Thaddeus Stevens College community to conduct themselves in a manner which promotes the integrity and legacy of Thaddeus Stevens, and to refrain from behaviors, actions and language meant to demean, harass, or otherwise cause harm to another person. The College seeks to create an inclusive environment consisting of sensitivity, understanding, and an appreciation for the value diversity brings to the College. In this vein, the Thaddeus Stevens College community should understand that racial and other slurs, even within the affected group, are not acceptable and will not be tolerated.

In order to ensure a safe educational environment, the College community is expected to adhere to a strict Code of Conduct for behavior, attendance, and dress, as well as drug and alcohol use. The College believes that properly preparing its students for workforce safety requires that high standards be maintained in all areas of the campuses and for all College-related activities. In keeping with this belief, students are expected to use appropriate language and to dress suitably while in class, while in the dining hall, and while representing the College in other settings on and off campus. Additionally, it is expected that College property will be treated with proper respect.

Students are held responsible for knowing College Rules and Regulations and are further held accountable for conduct violations. This Code is in effect for all members of the Thaddeus Stevens community. A Due Process procedure is in place for students who believe that disciplinary action taken against them is not consistent with established rules and regulations.

Students are accountable for violations of local, state, and federal laws which result in legal and/or punitive action by authorities outside of the Thaddeus Stevens campuses.

The College expects students to behave courteously and respectfully toward all campus personnel, fellow students, and visitors; And to value each member, guest, and prospective member of the Stevens community. The College also expects all clubs, sports teams, and organizations to adhere to the Code of Conduct. Sanctions can be imposed for any violations of the Code of Conduct.

VIOLATIONS OF THE CODE OF CONDUCT

Below are several Code of Conduct violations (not an exhaustive list):

MINOR (more serious instances might be considered major violations)

- Creating, participating in, or being present during a disturbance (e.g., noise pollution).
- Failing to follow parking regulations (could become a major violation if chronic).
- Failing to satisfy contractual obligations (e.g., proper room care).

- Smoking in unauthorized areas.
- Littering on campus.
- Violating any visitation policies.
- Burning incense, candles, or other flammable materials.
- Possessing any form of ammunition (e.g., BB's, pellets, or pistol/rifle rounds).
- Gambling of any kind.
- Possessing a toy or replica weapon.
- Running a business within the residence hall. The use of College facilities, including any residence hall room or common area, for personal or commercial profit, is strictly prohibited.
  Any violation of published rules, policies, or procedures that subjects students to disciplinary action.

MAJOR

- Forging, altering, possessing duplicates, or using documents, records, keys, or identification without authorization of appropriate College officials; includes falsifying or misrepresenting information to a College official.
- Destroying, damaging, or misusing Commonwealth property or property belonging to other individuals.
- Tampering with safety equipment, including security cameras.
- Stealing Commonwealth or private property and/or services.
- Possessing, using, or selling alcoholic beverages. On-campus alcohol possession and/or use by students, regardless of age, is in direct violation of the Code of Conduct (see below for additional information on this topic).
- Entering and/or using a campus facility without authorization.
- Violating civil or criminal law through any on-campus activity.
- Assaulting and/or physically confronting a second party.
- Violating campus safety and motor vehicle policies and/or rules.
- Harassment, stalking, ridicule, and other forms of written, verbal, or physical intimidation. Disciplinary action will be taken when the conduct (i) is so severe or pervasive that it disrupts or interferes with a student's educational experience, (ii) represents a true threat of harm, (iii) is non-expressive, physically harassing conduct, or (iv) otherwise violates applicable law. This includes in-person conduct as well as conduct through use of social media/internet.
- Sexual assault (additional information follows)
- Sexual harassment (additional information follows)
- Domestic violence (additional information follows)
- Dating violence (additional information follows)
- Stalking (additional information follows)
- Unauthorized possession of firearms, other weapons, explosives, and/or chemicals which includes but is not limited to: Guns of any kind, bows and arrows, nunchakus,

brass knuckles, slingshots, machetes, fireworks, and knives (excluding small folding knives with more than one blade that has no blade no longer than three inches). Students may carry Mace or pepper sprays as allowed by the laws of the Commonwealth. Students may not discharge Mace or pepper spray for any reason other than self-defense (additional information follows).

- Possession, use, or sale of any drug or narcotic in any form. Doing so is in direct violation of the College's Drug-Free Campus Policy. Additionally, persons found with any drug paraphernalia are considered to have committed a major violation. That possession includes, but is not limited to, baggies, pipes, and marijuana seeds/scales. (additional information follows).
- Visitation in a residence hall by individuals under 18 except during move-in and Open House, or with the permission of the Director of Residence Life or Vice President of Student Services.
- Disrespectful and disorderly behavior which disrupts or obstructs classes, teaching, labs, seminars, administration, student-conduct proceedings, and other College activities on- or off-campus.
- Failure to identify, or falsely identifying, oneself, including not providing ID when requested to do so by a member of the College community acting in the performance of his/her duty and authority.
- Violation of any published rules, policies, or procedures.
- Failure to comply with the request of, or to show respect to, the residence life staff, security, or any member of the College community acting in the performance of his/her duties and authority.
- Participation in activity which recklessly or intentionally endangers the safety of anyone.

VAPING/TOBACCO

Vaping/tobacco use is prohibited on all College property, including College-owned and operated vehicles, with these exceptions:

Gazebos at the following locations:

- Griscom Education Center entrance
- Main campus between Herrington and Armstrong Halls
- Main campus between Leonard and Woolworth Buildings
- Main campus between Kreider and Leonard Buildings

Designated smoking areas at the following locations:

- Hartzell Parking Lot
- Main campus Bulldog Drive
- Greenfield Parking Lot
- Greiner Campus

Tobacco is defined as any type of tobacco product including, but not limited to, chewing tobacco, snuff, cigarettes, cigars, cigarillos, pipes, and bidis. Electronic cigarettes (e-cigarettes) are also restricted to the designated areas.

Disciplinary sanctions for tobacco use outside designated areas typically include the following, on the understanding that the College reserves the right to impose other sanctions:

- Verbal warning
- Written warning and probationary period
- Loss of privilege
- Suspension from residence halls and/or College

MULTI-STEMMED SMOKING DEVICES

A *hookah*, also called a waterpipe, narghile, shisha, or qualyan, a multi-stemmed instrument for smoking flavored tobacco, is not permitted on Thaddeus Stevens College campus. If you are found in possession of any multi-stemmed smoking device, you will be asked to remove it from the residence hall and from the College campus. Not complying with this request is a major violation of the College's Code of Conduct.

NON-ALCOHOLIC BEER OR ASSOCIATED BEVERAGES

Non-alcoholic beer and other associated beverages are not permitted on any Thaddeus Stevens College campus or residence halls. If you are found with these beverages, you will be asked to dispose of or remove them from the campus. Not complying with this request is a major violation of the College's Code of Conduct.

BEER BOTTLES, LIQUOR BOTTLES, OR SIMILAR CONTAINERS

Thaddeus Stevens College is a dry campus and strives to promote an alcohol-free learning environment. The College also receives grant money exclusively for promoting drug and alcohol-related educational seminars and workshops. With that in mind, it is in the best interests of the College community that empty beer bottles, liquor bottles or associated containers are not permitted anywhere as decorative items. Anyone found to be in possession of these items will be asked to dispose of them or remove them from the campus. If a student chooses not to comply with this request, he/she will be subject to disciplinary action ranging from probation to temporary suspension from the residence halls.

DISCIPLINARY SANCTIONS

The Student Services Office, with substantial input from members of the Thaddeus Stevens College community and with the approval of the President, will determine the charges leading to exclusion (suspension or expulsion) from the College and/or residence halls. Typically, charges resulting in exclusion are major violations indicated under Violations of the Code of Conduct.

Suspension: Defined as exclusion from the College and/or residence halls for one to five consecutive College Days. Suspensions are given by the Vice President of Student Services or the Director of Residence Life. In cases of one to five days of suspension, no student shall be suspended until he/she has been informed of the reasons and given an opportunity to respond to the College official initiating the suspension. Prior notice of the intended suspension need not be given when it is determined by College personnel that the health, safety, or welfare of the College community is threatened. The President of the College will be notified in writing when the student is suspended. In that case, the student is informed in writing of the suspension. The student's parents, guardians, or sponsors may be informed in writing of this action only upon consultation with the student.

Residence Hall Suspension: While a student is suspended from the residence hall, he/she may attend classes; however, the student is not permitted in any residence hall. The student must leave campus after classes during the period of the suspension by 6:00pm or 20 minutes after their last class ends.

College Suspension: While a student is suspended from the College, he/she is not permitted on any of the locations and may not participate in any College-sanctioned extracurricular activities regardless of where they take place (e.g., an away sporting event, student organization activity).

Interim Suspension: The Vice President of Student Services or Director of Residence Life may impose an interim suspension and/or loss of privileges upon any student whose presence on campus constitutes a threat to the safety, welfare, or well-being to himself/herself or to others in the College community. In such cases, a disciplinary hearing shall be scheduled within five College Days if the suspension exceeds ten College Days.

Expulsion: Defined as exclusion from the College and/or residence halls for a period exceeding five College Days and might be permanent expulsion from the College. Prior to the disciplinary hearing and decision of the President, the student may attend classes unless it is determined after an informal hearing that a student's presence in class would constitute a threat to the health, safety, or welfare of others. If it is not possible to hold a formal hearing within the period of a suspension, the student may be excluded from the College for more than ten days.

Warning means a student is informed in writing of his/her violation of the Code of Conduct. Further misconduct will result in additional disciplinary action.

Educational Development means a student is assigned a task or project to enhance understanding about College policies.

Loss of Privilege means a student is not permitted to access any College building, facility, or residence halls, or participate in any College-sponsored event or activity.

A student might lose one or more privileges for a period of time determined by the Vice President of Student Services, the Director of Residence Life, or the President of the College.

Loss of Grant potentially happens when a student violates the Code of Conduct.

Probation is when the student is informed in writing that he/she must show a change in behavior over a specified period of time. If the student engages in other violations of the College's Code of Conduct during the probationary period, further disciplinary action will be taken, ranging from loss of services to suspension to recommendation for expulsion. The period of time will not be fewer than fifteen days and might last up to one calendar year.

Restitution is payment for the loss, damage, or other associated costs of the student(s)' behavior, which can include, but is not limited to, medical bills, fines, service fees, or cleanup cost.

Referral is when a student is required to seek an evaluation from a College counselor or other professional on- or off-campus. The student is required to pay all costs associated with the referral and must comply with the recommendations made by the person who conducts the evaluation.

Community Service/Civic Engagement is when a student is required to take part in a special program based on his/her offense. In this case, the student gives time without receiving compensation to an on- or off-campus organization or department. This community service may not be counted for the student's community service as required by the Thaddeus Stevens Grant or other College requirement or expectation.

A cease and desist order can be imposed for an interim period pending hearing by the Vice President for Student Services or his/her designee as a measure to de-escalate a potentially volatile situation between a student and any other party. A cease and desist order carries with it the expectation that formal charges have been or will be filed, or are deemed in the best interest of the student(s) or College. Continuation of a cease and desist order may be included as part of a judicial/student conduct sanction.

Second offense of the College's Code of Conduct within a year following a suspension may result in a five-day residence halls suspension with recommendation for expulsion. If the student is a resident and retained by the College, he/she might be suspended from the residence halls for the remainder of the semester and continue on probation. In addition, the student will be held to the same constraints outlined below for a commuting student. An individual's return to the residence halls at the outset of another semester will be subject to review and approval of the Vice President of Student Services and Director of Residence Life. If the student is a commuter and retained by the College, then he/she will remain on probation for the remainder of the semester and is not permitted on campus after 6:00pm for the same time period. An individual's return to campus after 6:00pm at the outset of another semester will be subject to review and approval of the Vice President of Student Services and Director of Residence Life.

DRUG-FREE CAMPUS POLICY

Policy Purpose: Thaddeus Stevens College of Technology values its students and its reputation, and is concerned with accident prevention and loss protection. It recognizes that student substance abuse negatively impacts student health and jeopardizes the College's resources. Additionally, substance abuse undermines the College's ability to operate effectively and efficiently. As part of its commitment to protect the safety, health, and well-being of its students and employees, to protect College assets, and to deter illegal use of drugs, including alcohol, controlled substances, inhalants, and/or other substances used as alternatives to illicit drugs, the College has established a Drug-Free Campus Policy (the "Policy").

Scope and Applicability: Compliance with this Policy is a continuous condition of enrollment and it applies to all full-time and part-time students of the College in the following instances:

- while on College premises;
- during all College activities regardless of location;
- during lunch and other breaks;
- while operating tools or machinery on any of the campuses or at a College-sponsored event;
- while operating a motor vehicle on College property;
- while attending College-sponsored events; or
- while conducting business on behalf of, or representing, the College.

Contract Disclaimer: This Policy does not create an express or implied enrollment agreement or alter any existing agreements.

Policy Modification: This Policy supersedes any other College policy or practice on the use by students of any drug, controlled substance, inhalant, other substance used as alternatives to illicit drugs, and alcohol use, abuse, and testing. At any time, the College, with or without notice, may amend, supplement, modify or change any part of this Policy. This Policy shall automatically incorporate any changes to satisfy federal or state laws without notice to students. Any failure to implement the Policy or any part thereof, any variation, addition, or omission to the procedures set forth in the Policy shall not confer any contractual or other rights or claims in favor of the student not otherwise conferred by law.

Designated Information Representative (DIR). An individual at the College will be identified as the DIR. This person will maintain confidential records of student test results and record a student's passing of a drug test as "completed Drug Testing" in the applicant's profile. Questions regarding this Policy can be emailed to the DIR, who will forward the emails to Admissions, Counseling, or Student Services Office as appropriate.

This Policy is effective as of August 1, 2014.

STUDENT RESPONSIBILITIES AND DUTIES

This Section outlines the duties of students as part of the Drug-Free Policy. Failure to comply with these duties constitutes a Policy violation.

- Report to campus, class or activities at all times in a fit-for-duty capacity, which includes being free of the influence of drugs (including medical marijuana), alcohol, controlled substances, inhalants, or other substances used as alternatives to illicit drugs and which pose a threat to campus safety.
- Review and understand: this Policy; the negative effects of the use and/or misuse of drugs, alcohol, controlled substances, inhalants, or other substances used as alternatives to illicit drugs; the College's Policy on testing.
- Voluntarily seek help with such problems prior to problems arising at college.

A student who is convicted of a drug law violation must notify the College's DIR no later than five calendar days after conviction or plea of *nolo contendre*.

Whenever a student is legally prescribed drugs or directed to take over-the-counter medication, the student should ask his/her prescribing physician whether the medication, if taken as directed, is likely to pose a direct threat to campus safety and if so, indicate this on his/her College physical. Students in safety-sensitive programs are prohibited from being on campus under the influence of medical marijuana.

A student shall notify the DIR of prescription or over-the-counter medication use that might pose a direct threat to campus safety or significantly impair the student's fitness-for-duty prior to enrollment or participation in campus- or program-related activities. When required to notify, a student is not required or asked to report his/her medical condition, or the drugs used. The student should merely report that he/she is using medication that might pose a direct threat to campus safety. The student shall provide a copy of the physician's statement regarding the student's ability to perform the essential functions of his/her program of study and function safely on the College campus prior to participating in campus- or program-related activities.

If a student is legally using a prescription or over-the-counter drug that poses a direct threat to campus safety, then the College shall determine whether the student may continue to remain on campus or attend class during the course of treatment. The College might seek a second opinion from a medical professional of its choice and might require the student to undergo an examination by the College's chosen medical professional. The College might rely on the second opinion rather than that of the student's prescribing physician.

Students must participate in and support College-sponsored drug education programs.

Students shall cooperate in any investigation and support the College's efforts to eliminate drug, alcohol, controlled substance, inhalant, other substances used as alternatives to illicit drug abuse among students where it exists.

All student medications must be kept in their original containers while on campus.

PROHIBITED CONDUCT

Illegal Drugs: It is a violation of College Policy for anyone associated with the College to sell, manufacture, distribute, dispense, use, possess, purchase, obtain, transfer, convey, be under the influence of, or test positive for controlled substances in contravention of federal or state law (or to attempt any of the foregoing acts).

Controlled substance is defined in this Policy as a drug which has been declared by federal or state law to be illegal for sale or use but may be dispensed under a physician's prescription.

Prescription Drugs: Prescription medications while the student is subject to the terms of this Policy are not prohibited if taken in standard dosage and/or under a physician's written prescription, provided the prescribed drug would not pose a threat to campus safety or render the student unfit for duty. Abuse of prescription drugs is strictly prohibited, including, but not limited to, exceeding the prescribed dosage, using a prescription medication for a purpose not intended, or using medication prescribed to another individual. Students are prohibited from using or possessing medical marijuana on campus.

Over-the-Counter Drugs: Over-the-counter medication is not prohibited when taken in the standard dosage, provided it is taken as directed and does not render a student unfit to perform essential functions of program of study or otherwise negatively impact campus safety. The College prohibits students from being under the influence of mood-altering over-the-counter drugs used contrary to the product's labeling (i.e., misuse of over-the-counter drugs) while subject to the terms of this Policy.

Alcohol: The College prohibits students from illegally using, possessing, selling, buying, distributing or illegally attempting to distribute, manufacture, or being involved in illegal alcohol-related conduct, including, but not limited to, driving under the influence and underage drinking violations, while subject to the terms of this Policy.

For purposes of this Policy, the term "alcohol" includes any intoxicating agent in beverage alcohol, ethyl alcohol, or other low molecular weight alcohols, and includes any medication or food containing alcohol. Furthermore, the College prohibits its students from the following alcohol-related conduct while subject to the terms of this policy:

- Possessing opened containers of alcohol;
- Using, consuming, distributing, manufacturing, dispensing, or being under the influence of alcohol;
- Operating a motor vehicle on campus property while under the influence of alcohol;
- Using or consuming alcohol within four hours before arriving on campus;
- Participating in any campus-related activities or program-related coursework, or operating any tools or machinery on College property while under the influence of alcohol; and
- Consuming alcohol within eight hours following an accident and/or before a post-accident test, as specified in the Policy.

Inhalants and Legal Substances: Students are prohibited from arriving on campus property or participating in campus-related activities or program-related coursework and operating tools or machinery while under the influence of, or using while at the College, any inhalant. An "inhalant" is defined as glue, paint, aerosol, anesthetic, cleaning agent, solvent, or other substance that, when inhaled or ingested, causes intoxication, euphoria, excitement, exhilaration, stupefaction, or dulling of the senses and that contains chemicals including, but not limited to: toluene, xylene, hexane, acetone, methylene chloride, methanol, Freon(s), benzene, (iso) amyl nitrate, (iso) butyl nitrite, (iso) propyl nitrite, N-butyl nitrite, butane, propane, fluorocarbon, hydrocarbons, ethyl chloride, nitrous oxide, halothane, tetrachloroethylene, trichloroethane, or trichloroethylene.

The College also recognizes that certain legal substances can be used as an alternative to illicit substances to create a condition of intoxication, euphoria, excitement, exhilaration, stupefaction, and/or dulling of the senses. Students are prohibited from arriving on campus property or participating in campus-related activities or program-related coursework and operating tools or machinery while under the influence of, or using while at the College, any such legal substance for these purposes.

The College shall use the concept of "reasonable suspicion" to determine a Policy violation involving a student's use of inhalants or other substances used as alternatives to illicit substances. Reasonable suspicion may be based on, but is not limited to, the direct observation of any of the following:

- Physical symptoms of being under the influence of inhalants, alcohol, or drugs such as bad breath, substance odor on breath or clothes, runny nose, watery eyes, drowsiness or unconsciousness, poor muscle activity, mood swings, irritability, anger, agitation, uncontrolled laughter, nausea, loss of appetite, vomiting, hallucinations, convulsions, facial rashes and blisters, constant sniffing and coughing, slurred speech, depressed reflexes, rapid movement of the eyeballs, and dilated pupils. Observation might include indications of the chronic and withdrawal effects of the use of inhalants or other legal substances;
- A pattern of abnormal conduct, violent or erratic behavior or deteriorating performance in College-related activities which appears to be related to the use of inhalants or other legal substances;
- The identification of a student as the focus of a criminal investigation into the illegal use of inhalants or other legal substances;
- The admission by the student that he/she is involved in the illegal use of inhalants or other legal substances;
- Repeated violations of the College's safety or College rules that pose a substantial risk of physical injury or property damage and that appear to be related to inhalant or other legal substance misuse that may violate the College's Policy; or
- A report of inhalant or other legal substance misuse provided by reliable and credible sources and which has been independently corroborated.

- Possession of drug paraphernalia. Students are prohibited from bringing paraphernalia related to the illegal use of drugs on to College property at any time.

STUDENT DRUG AND ALCOHOL TESTING

Random Drug Testing: Students enrolled in safety-sensitive programs must participate in random drug testing. Students will be selected for a drug test using computer-generated random numbers. Students selected for random drug testing must agree to be tested within twelve hours or test results will be recorded as positive and treated according to the Policy.

Reasonable Suspicion: The College will require a student to submit to drug and/or alcohol testing on the grounds of reasonable suspicion when, in the judgment of the College and based on information known at the time the decision to test is made, the student is unfit for duty or there is a reasonable suspicion to believe that a student is using drugs or alcohol in violation of the College's Policy or exhibits the physical signs and symptoms of substance abuse. The evidence will be drawn from specific, observable facts and reasonable inferences. Such facts and inferences may be based on, but are not limited to, any of the following:

- Observable behavior, such as direct observation of drug or alcohol abuse, possession or distribution, or the physical symptoms of being under the influence of drugs or alcohol such as, but not limited to slurred speech, dilated pupils, odor of alcohol or marijuana, dynamic mood swings, etc. Observation may include indications of the chronic and withdrawal effects of the illegal use of drugs;
- A pattern of abnormal conduct, violent or erratic behavior or deteriorating performance in College-related activities which appears to be related to substance abuse or misuse;
- The identification of a student as the focus of a criminal investigation into unauthorized drug possession, use or trafficking;
- The admission by the student that he/she is involved in the illegal use of drugs or misuse of alcohol;
- Repeated violations of the College's Code of Conduct, safety or College rules that pose a substantial risk of physical injury or property damage and that appear to be related to substance abuse or misuse that may violate the College's Policy;
- A report of drug or alcohol use provided by reliable and credible sources, and which has been independently corroborated;
- Evidence that an individual has tampered with a drug or alcohol test; or
- A student's failure to report an accident.

Post-Accident: The College may require a student involved in a campus-related accident or incident to submit to drug and/or alcohol testing following the accident. The College may also test any individual whose performance created a "near miss or unsafe condition" or was a contributing factor to a campus-related accident. This determination shall be based on the best information available at the time of the accident.

The post-accident test will be administered as soon as possible. In no way is this post-accident test requirement intended to delay the necessary medical treatment for an injured person(s)

following an accident or to prohibit a student from leaving the scene of an accident to obtain medical assistance for others or for personal medical assistance. To ensure appropriate application of this policy, students must report the accidents to an instructor, nurse, residence hall director or other assigned staff within 24 hours of the occurrence and thereafter submit to a post-accident test as directed. Failure to report an accident promptly and to submit to a post-accident test will constitute a refusal to test, subjecting the student to discipline up to and including expulsion. It will also constitute reasonable suspicion to test the student once the College receives notice of said accident.

For purposes of this Policy, a campus-related accident is defined as an unplanned, unexpected or unintended event that occurs on, or involves, College property, or occurs while a students or staff member is representing the College off-campus. A campus-related accident is one that results in any of the following:

- a serious violation of a safety rule or the program standards;
- a fatality of anyone involved in the accident;
- a serious bodily injury requiring medical treatment;
- other serious property, vehicular, or equipment damage occurs.

Return-to-College: The College shall require a student who has violated this Policy and desires re-admission to test negative on a return-to-college drug test before returning to the College. Additionally, the College may require a return-to-college alcohol test if the prohibited conduct involves alcohol or a treatment provider recommends an alcohol test. Inclusion of this paragraph in no way obligates the College to make an offer to re-admit a student.

Follow-up: Following a determination that a student needs assistance resolving problems associated with alcohol misuse and/or the illegal use of drugs, the student might be subject to unannounced follow-up drug and/or alcohol testing as directed by a treatment professional. The number and frequency of such follow-up testing shall be as directed by the treatment professional. The student might be required to undergo follow-up testing for alcohol and drugs if the treatment professional determines that testing to be necessary. Follow-up testing shall remain in place throughout the student's enrollment at the College from the date of the student's return-to-college. Inclusion of this paragraph in no way obligates the College to reinstate the student or conduct follow-up testing.

Testing Procedures for Drugs: Testing for illegal use of drugs normally will be conducted through a nine-panel test plus urine specimens collected at a designated site. The collection site will take the necessary steps to assure that the specimen is not adulterated or tampered with and that a strict chain-of-custody is maintained. Normally, the specimen will then be transported to a U.S. Department of Health and Human Services-certified laboratory for screening and confirmation testing for the following drugs and their metabolites: marijuana (including medical marijuana), amphetamines (including methamphetamines), phencyclidine, opiates, cocaine, barbiturates, methadone, benzodiazepines, and propoxyphene.

Testing Procedures for Alcohol: The initial testing for alcohol normally will be conducted through either a saliva or breath specimen. If the Breath Alcohol Content is less than 0.02, the test is considered negative. If the screening test results show an alcohol concentration of 0.02 or greater, a confirmation test will be conducted. The confirmation test shall be performed by using a breath specimen obtained through an Evidentiary Breath Testing device approved for use in the United States Department of Transportation's Drug and Alcohol Misuse Prevention Program. If the confirmation test reads .02 or greater, the test shall be considered positive and the student subject to disciplinary action as specified in this Policy.

Screen and Confirmation Testing: All urine samples will undergo an initial test. If the specimen tests above the screening cut-off levels set by the U.S. Department of Health and Human Services in its Mandatory Guidelines for Federal Workplace Drug Testing Programs, then the test shall be considered positive. The sample shall then undergo a confirmation test. Test results indicating the illegal use of drugs at levels below the confirmation cut-off limits shall be considered negative and those above the confirmation cut-off levels shall be considered positive.

Review of Test Results by Medical Review Officer. All positive drug test results will be reviewed and interpreted by a Medical Review Officer (MRO) before the test results are reported to the College. An MRO is a licensed physician and is responsible for receiving and reviewing laboratory results generated by an employer's drug testing program and evaluating medical explanations for certain drug test results.

The MRO review of a positive test result may include a review of the tested student's medical history, or review of any other relevant biomedical factors. If the MRO determines that a legitimate medical explanation exists for the test results, he/she will report to the College that the test result is negative.

If, after making all reasonable efforts and documenting them, the MRO is unable to reach a tested student directly, the MRO shall contact the Designated Information Representative (DIR), who will direct the tested student to contact the MRO as soon as possible. The College will use email and/or phone to contact the student. In such circumstances, the College will, to the maximum extent possible, ensure that the requirement for a tested student to contact the MRO is held in confidence. If the tested student does not contact the MRO within three days after being instructed to do so, the MRO will report the test as positive.

Validity Testing: Validity tests, which might also occur, evaluate a urine specimen to determine if it is consistent with normal human urine; it includes testing for creatinine concentration, specific gravity, pH, and substances that may be used to adulterate a specimen.

Direct Observation/Monitoring: The College reserves the right to have its collection site agent conduct a direct observation or monitoring of the urine specimen collection if the collection site personnel observes an attempt to tamper with the specimen, it its temperature is out of range, if it appears to have been tampered with, if the laboratory reports an invalid test and if the MRO

states no medical reason, the result is positive, adulterated or substituted, canceled, and for return-to-duty or follow-up testing.

Dilute Specimens: If the MRO informs the College that a drug test was positive dilute, the College will treat the test as a verified positive result. The College will not direct the student to take another test based on the fact that it was dilute. For negative-dilute test results, the College will require a student to take another test immediately, but it will not be collected under direct observation unless there is another basis for direct observation. If the College directs another test, then the result of the second test, not the original test, becomes the controlling test result.

Re-collections: When the College directs the student to take another test, the student shall be given the minimum possible advance notice, which could be immediately, that he or she must go to the collection site. The result of the second test, not the original test, is the test of record. Any student required to take another test, which is also negative and dilute, will not be permitted to take a third test. If the MRO directs the College to conduct a re-collection under direct observation, the College must immediately do so. If the College directs the student to take a second test and the student refuses, the test will be treated as a positive result.

Verification Testing: For urine drug testing, one portion of the specimen will be preserved for a limited period of time after the student is told the test results. If the portion originally analyzed (the primary sample) is positive, the student has the right to specify a laboratory certified by the U.S. Department of Health and Human Services to which the preserved portion will be sent for independent analysis. The verification test cost is the responsibility of the student. The verification test result shall determine the outcome.

Refusal to Test and Test Tampering. Any student who refuses to submit to testing, tampers with, manipulates, adulterates, or attempts to tamper with the testing will be treated as having a verified positive test result and as being in violation of this policy. A refusal to submit to testing includes, but is not limited to, when a student:

- Fails to report a campus-related accident as outlined in Section 5.1(c) above;
- Fails to appear for any test within a reasonable time, to be determined by the College, after being directed to do so by the College;
- Fails to remain at the collection site until testing is complete;
- Fails to provide a urine specimen when required for a drug test, or a saliva or breath specimen for an alcohol test;
- Refuses to permit directly observed or monitored collection during a drug test;
- Fails to provide a sufficient amount of urine, saliva or breath when directed, and it has been determined through a required medical evaluation, that there was no adequate medical explanation for the failure;
- Fails or declines to take a second test as directed;
- Fails to undergo a medical examination or evaluation, as directed by the MRO as part of the verification process;
- Fails to cooperate with any part of the testing process; or

- Is reported by the MRO as having a verified adulterated or substituted test result.

DISCIPLINE FOR POLICY VIOLATIONS

Any student who is reasonably believed to have violated this Policy is subject to expulsion.

The College encourages its students who are chemically dependent to voluntarily obtain assistance/treatment for substance abuse problems before they cause problems on campus. A student's decision to voluntarily seek assistance for such problems will not be used as the basis for disciplinary action. Students may not avoid imposition of discipline by requesting such treatment or a leave of absence after being selected for testing or by violating the College's Policy.

To determine the appropriate sanctions for violation of this Policy, the following facts associated with a violation will be considered:

- *The location of the violation.* If the violation occurred in a safety-sensitive area (including but not limited to a program lab/shop, class-related job site, internship placement-related location, and/or at a College event), the student will be recommended for expulsion.
- *The amount of drugs/paraphernalia found.* If the amount of marijuana found is greater than a gram, two joints, or a bundle greater than the size of a quarter (US currency), the student will be recommended for expulsion. If the student is found with paraphernalia including, but not limited to, a needle or needles, the student will be recommended for expulsion. A bong or roach clip alone with no other paraphernalia or violations of the Policy and/or College's Code of Conduct would not cause the student to be recommended for expulsion.
- *Other violations of the Policy and/or the Code of Conduct.* Any violations of the College's Code of Conduct in addition to a violation of this Policy would result in the student being recommended for expulsion.

Examples of drug/alcohol Policy violations and corresponding sanctions:

- Student is found smoking marijuana in a car parked on campus with the engine off and no other drugs, drug paraphernalia, or persons in the car. Pennsylvania State Police are called, and no charges filed on the student.
    - Sanction: Student has committed a **minor** violation of the Policy and would be suspended from the residence hall for five days. He/she would also be required to pay for a drug test, attend counseling, and produce a clean drug test within 45 days of the violation.
- Student appears to be high in shop. He/she is taken for a drug test immediately and fails the test for marijuana.

- Sanction: Student has committed a **major** violation of the Policy and would be recommended for expulsion from the College.

- Staff report that a student was in a fight in the residence hall and appeared to be in an altered state. During the investigation, staff enters the student's room and finds drug paraphernalia (e.g., rolling papers and a scale).

    - Sanction: Student has committed a **major** violation of the Policy and would be recommended for expulsion from the College.

- Student is found to be intoxicated in a residence hall. On his/her desk are three unopened cans of beer.

    - Sanction: Student has committed a **minor** violation of the Policy and would be suspended from the residence halls for three days and required to attend counseling.

Referral to Law Enforcement. In addition to imposing discipline, the College might refer information about criminal activities and transfer any suspected illegal drugs or drug paraphernalia to appropriate law enforcement.

Other Discipline Not Precluded. Nothing in this Policy prohibits a student from being disciplined or discharged for other violations and/or performance problems.

Automatic Suspension. If a student is ordered to submit to a post-accident, random, or reasonable suspicion test, he/she may be suspended until the MRO-verified test result is received. If the verified result is positive, the student is subject to discipline as described herein.

SEARCHES

College Property Searches. The College provides housing, lockers, storage areas, equipment, briefcases, computers, desks, or workstations for use by students in order to perform the essential tasks of their programs of study. All such areas and items, along with the data or materials generated using them, remain College property. The College reserves the right to search any College property at any time, with or without notice or cause. No student shall maintain any expectation of privacy on College-owned property. The College also reserves the right to use other investigative methods when reasonable suspicion exists to indicate Drug-Free campus Policy violations. Refusal to cooperate in a search of College property shall be considered a Policy violation.

Personal Property Searches. The College reserves the right to conduct a search of a student's personal property if a violation of this Policy is suspected. A search may include all personal property located in or brought onto College property such as wallets, purses, bags, briefcases, toolboxes, food and beverage containers, or vehicles. Entry onto College property and continued enrollment constitute consent to search. All searches will be conducted in the presence of two College-trained representatives and the student. Refusal to cooperate in a search of personal property shall be considered a Policy violation.

CONFIDENTIALITY

Test Results. The College will make reasonable efforts to ensure that the testing process is as private and confidential. Test results may be provided to:

- the MRO and his/her staff
- the DIR
- the student tested (upon request)
- any person(s) permitted or required by law or regulation to receive such information
- any individual(s) with a student's written authorization
- law enforcement
- decision-maker(s) in a legal action initiated by or on behalf of the student or placed at issue by the student in any legal, administrative or other proceeding, and
- any governmental agency/agencies as required by federal or state law.

Nonspecific statistical information may be provided upon request to a corporation which requires its vendors or subcontractors to maintain drug and alcohol testing programs in accordance with a contract, or to a governmental agency in accordance with the law.

Separate Files. Testing results will be maintained in a locking file cabinet or a secured file room separate and apart from student educational files.

Costs for Testing. Students in the application process who are enrolling for the first time, or students who are requesting re-admission, must pay for if such testing is required for medical clearance and application to safety-sensitive programs of study.

Students requested to participate in drug testing as a result of an accident, random testing, or reasonable suspicion are required to pay for the testing, unless the results are negative, in which case the College will incur the costs.

Students who test positive and require ongoing testing during their enrollment will pay all costs of the testing.

LOSS OF STEVENS GRANT

Below are the infractions of the College's Code of Conduct which will result in the loss of the Stevens Grant:

- Destruction of property
- Failure to show ID (2nd offense)
- Failure to clean room within College expectations (2nd offense)
- Behavior off-campus when representing the College that results in harm or damage to the College's reputation (e.g., at athletic events, organization trips, community service, business visitations)
- Failure to complete community service obligation
- Visitation violation (2nd offense)
- Four minor violations

- Excessive absenteeism not resulting in expulsion
- Committing a major violation of the Code of Conduct while on probation

OFF-CAMPUS CONDUCT POLICY

It is important that all students recognize their responsibilities within the framework of state and local law. Although the College cannot be held liable for the conduct of its students off campus, it has a strong moral and social responsibility to take appropriate action if unlawful off-campus conduct jeopardizes the good name and reputation of the College.

Students are expected to adhere to the College's Code of Conduct, regardless of whether the student is on or off campus. As a result, the College reserves the right to sanction a student up to and including dismissal from the residence halls, and/or College, if it has been determined that major violations of the College's Code of Conduct or unlawful activities have taken place off campus. Any behavior which jeopardizes the educational atmosphere or security of the College, or the health and welfare of the students and/or its employees will not be tolerated.

GOOD NEIGHBOR POLICY

Purpose:
The Good Neighbor Policy aims to foster positive relationships between Thaddeus Stevens College of Technology and the neighborhood residents by promoting mutual respect, understanding and cooperation. It aligns with our College's Mission and Core Values, promoting respect, responsibility, and civic engagement among our students, faculty, and staff.

Scope:
This policy applies to all Thaddeus Stevens College faculty, staff, and students. It is in effect within 400 feet of any College property line and any location where College-related activities occur.

Definition of a Good Neighbor:
A good neighbor is an individual who contributes positively to their community through respectful, considerate, friendly, helpful, and law-abiding behavior.

Expectations:
Thaddeus Stevens College faculty, staff, and students are encouraged to be a Good Neighbor by demonstrating the following behaviors and expectations:

1. Community Engagement:
    a) Participate in local community events when possible
    b) Volunteer for neighborhood improvement projects
    c) Support local businesses and initiatives

2. Respect for Property and Environment:
    a) Maintain cleanliness of personal and shared spaces
    b) Properly dispose of trash and recycling
    c) Respect private property boundaries

d) Participate in College-organized neighborhood clean-up events

3. Noise and Disturbance Control:
    a) Observe quiet hours from 10:00pm to 10:00am on weekdays and 12:00am to 10:00am on weekends
    b) Always keep music and other noise at reasonable levels
    c) College will inform neighbors in advance of any planned events that may cause additional noise

4. Traffic and Parking:
    a) Obey all traffic laws, including but not limited to speed limits and stop signs
    b) Park in designated areas that state Thaddeus Stevens College Parking and correlate with student parking permits. Parking outside of the designated areas is strongly discouraged and will be subject to municipality ordinances.
    c) Avoid blocking driveways, fire hydrants, or pedestrian walkways
    d) Use College shuttle service, public transportation or carpooling, when possible, to reduce traffic congestion

5. Safety and Security:
    a) Report suspicious activities to appropriate authorities (campus security 717 391 7225, Manheim Township Police 717 569 6401) or 911 when needed.
    b) Participate in neighborhood watch programs if available.
    c) Ensure proper lighting and maintenance of college-owned properties

6. Communication:
    a) Maintain open and respectful communication with neighbors
    b) Address conflicts or concerns directly and peacefully
    c) Inform College administration of any ongoing neighborhood issues as it is the goal that all members of the community are cooperating to build an environment of respect

Prohibited Behaviors:
In accordance with other College policies, such as student code of conduct or behavior policy, Thaddeus Stevens College faculty, staff, and students are prohibited from engaging in the following sanctionable acts and behaviors:

1. Nuisance Activities:
    a) Excessive noise at any time, particularly during quiet hours
    b) Public intoxication or disorderly conduct
    c) Hosting large, disruptive gatherings without proper permits

2. Property Violations:
    a) Littering or improper waste disposal
    b) Vandalism or damage to public or private property
    c) Trespassing on private property

3. Traffic and Parking Violations:
    a) Speeding or reckless driving
    b) Parking in unauthorized areas or blocking access
    c) Excessive vehicle noise (e.g., loud music, modified exhaust systems)

4. Substance Abuse:
    a) Use of illegal drugs
    b) Underage drinking
    c) Public consumption of alcohol or legal drugs

5. Harassment and Discrimination:
    a) Any form of harassment or discrimination against community members
    b) Intimidating or threatening behavior

Enforcement and Sanctions:

1. Reporting:
    a) Community members can report violations to the College's Office of Student Affairs or Campus Security
    b) An online reporting system will be available for convenient submission of complaints

2. Investigation:
    a) The Director of Residence Life (or their designee if unavailable) will promptly investigate all reported violations.
    b) Investigations may include speaking with both charged parties, witnesses, and the accusing party.
    c) After the investigation into the claims, appropriate sanctions will be imposed on, any party who is found to be in violation of this policy.

3. Sanctions:
In accordance with the College’s student conduct and/or discipline policy, violations may result in the following sanctions, depending on the severity and frequency of the offense:
    a) Verbal or written warning
    b) Mandatory educational programs on community living
    c) Community service (e.g., 5-20 hours depending on the violation)
    d) Fines (to be used for community improvement projects)
    e) Loss of privileges (e.g., parking, access to certain campus facilities)
    f) Probation
    g) Suspension from College Residence Halls
    h) Suspension or expulsion from the College in severe cases

4. Appeals:
a) Students may appeal sanctions through due process as outlined in the student handbook page 88.

Implementation and Education:

1. Distribution:
- Include the policy in student, faculty, and staff handbooks
- Place policy synopsis in welcome package on each bed in residence halls
- Post the policy on the College website and in campus buildings
- Distribute policy information during new student orientation and employee onboarding
- Place reminders of policy in the campus message board rotation
- Review policy during Residence Life building meetings

2. Education:
- Conduct annual workshops on being a good neighbor and ensure clarity of the expectations
- Have a poster campaign on campus
- Incorporate good neighbor principles into relevant coursework -not sure what this would look like or if faculty would support.
- Provide regular reminders through campus communications

3. Community Outreach:
- Host annual town-gown meetings to discuss community relations
- Establish a community advisory board with local resident representation
- Regularly seek feedback from community members on the effectiveness of the policy

4. Monitoring and Review:
- Conduct annual reviews of policy effectiveness
- Track and analyze violation data to identify trends and areas for improvement
- Adjust the policy as needed based on community feedback and changing circumstances

5. Recognition:
- Establish a "Good Neighbor of the Month" program to recognize exemplary community members
- Provide incentives for student organizations that demonstrate outstanding community engagement

WEAPONS POLICY

All weapons are prohibited on College property. This prohibition includes any item altered to be used as a weapon (e.g., broken hockey sticks, broken or altered baseball bats, metal poles). Any student found with such items will be subject to suspension or expulsion from the College. Other items qualifying as weapons include, but are not limited to, guns of any sort, bow and arrows, nunchakus, brass knuckles, blackjacks, machetes, slingshots, and knives (excluding pocketknives such as folding knives with more than one blade or folding knives with blades no longer than three inches). These items, if discovered, will be confiscated by College personnel and turned over to legal authorities where appropriate. Students may carry Mace or any of the various pepper sprays as allowed by the laws of the Commonwealth, but anyone who

discharges Mace or pepper spray for any reason other than self-defense will be guilty of the unauthorized use of the same and thereby subject to suspension or expulsion from Stevens.

First Offense: Suspension up to five days and a recommendation for expulsion from the College. If the student is a resident and retained by the College, he/she might be suspended from the residence halls for the remainder of the semester and continue to be on probation. In addition, the student will be held to the same constraints as outlined below for a commuting student. An individual's return to the residence hall at the outset of another semester will be subject to review and approval of the Vice President of Student Services and Director of Residence Life. If the student is a commuter and retained by the College, then he/she will remain on probation for the remainder of the semester and not be permitted on campus after 6:00pm for the same time period. An individual's return to campus after 6:00pm at the outset of another semester will be subject to review and approval of the Vice President for Student Services and Director of Residence Life.

DUE PROCESS

Students will be afforded all appropriate elements of due process if they are to be expelled from the College. In a case involving a possible expulsion, the student is entitled to a formal hearing, which is a fundamental element of due process.

This hearing will be held before an internal discipline committee composed of three faculty members and two students, with the Vice President for Academic Affairs or his/her designee presiding and with subsequent recommendation to the President.

The following due process requirements are to be observed for a formal hearing:

- Notification of the charges shall be sent to the student.
- Sufficient notice of the time and place of the hearing will be given.
- The hearing shall be held in private unless the student or parent requests a public hearing.
- The student may have counsel.
- The student may be presented with the names of witnesses against the him/her and copies of statements and affidavits by those witnesses.
- The student may request that witnesses appear in person and answer questions. In most cases, witnesses are questioned in person.
- The student may present his/her case and call witnesses on his/her behalf.
- A record will be kept of the hearing, either by video or by digital recorder. The student is entitled, at his/her own expense, to a copy of the transcript.
- The proceeding will be held with all reasonable speed.
- If a student disagrees with the punishment meted out by a College official or body, he/she may appeal to the next highest authority. If the student finds the punitive action meted out by the Director of Residence Life to be unacceptable, he/she can appeal to the Vice President of Student Services. If the student is not satisfied with the outcome of

the ruling, he/she may appeal. The appeal will be heard by the President or his/her designee. The President is the final appeal opportunity for the student.

At any point in the due process, the student retains the right to waive his/her procedural protections.

APPEALS PROCESS

A student may appeal a decision for the following reasons:

- To determine whether the sanction(s) imposed were appropriate for the violation of policy for which the student was found to be responsible;
- To determine the presence of any procedural error which substantially affected the outcome of the case; and
- To determine if newly discovered information not available at the time of the investigative process could have affected the outcome of the case.

Process for Appealing: A student wishing to appeal should submit a written appeal stating the reasons for the request to the Vice President of Student Services within two days of receipt of the original decision. Appeals are due by 4:30pm on the second day following the original decision. Sanctions will be in effect while a case is under appeal. Appeals are heard by the President or his/her designee. The decision of the President is final.

STUDENT RIGHTS AND RESPONSIBILITIES

The responsibilities of the student include regular attendance, conscientious effort in college work, and conformity to College rules and regulations. Most of all, students share with the administration, faculty, and staff a responsibility to develop a climate within the College conducive to wholesome and safe learning and living.

No student has the right to interfere with the education of fellow students. It is the responsibility of each student to respect the rights of all involved in the educational process. Students should express ideas and opinions in a respectful manner so as not to offend or slander others. Other responsibilities are:

- Be aware of all rules and regulations for student behavior and conduct oneself in accordance with them;
- Be willing to volunteer information in disciplinary cases and cooperate with College staff should one have knowledge of importance in relation to such cases;
- Understand that until a rule is waived, altered, or repealed, it is in full effect;
- Assist College staff in operating a safe environment for all students;
- Be aware of and comply with the federal, state and local laws;
- Protect and care for the College's property; and
- Attend classes daily, except when excused.

The student's rights are:

- The right to see all academic records, including grades, and to retain tests, papers, and work he/she has completed for a specific course;
- The right to privacy;
- The right to live in an atmosphere conducive to studying and learning;
- The right to a hearing, formal or informal, prior to loss of College services;
- The right to file a grievance or appeal; and
- The right to an education free of ridicule or harassment by any member of the Thaddeus Stevens College community.

Thaddeus Stevens College is committed to the principles of free speech and free expression; yet, just as the American people often must subordinate free speech and free expression to the common good, whether voluntarily or legally, the members of the College community have such a responsibility.

COMMITTEES THAT HEAR CASES

Students who have violated any of the rules and regulations of the Commonwealth, Lancaster City, or College are sanctioned by the College according to the nature of the offense committed. All offenses are considered on an individual basis. Disciplinary sanctions range from a warning to suspension for minor offenses, and from restitution, suspension and/or expulsion in cases of serious misconduct.

There are multiple bodies that could hear discipline cases:

- The Vice President of Student Services and/or the Director of Residence Life handles disciplinary procedures for violations of the rules and regulations of the College, or any discipline situations referred by any staff member or student. Either or both may issue appropriate punitive action in accordance with the College's Code of Conduct. This action can include warnings, financial restitution, suspensions, and recommendation for expulsion.
- The Discipline Committee is a body composed of three faculty members and two students. It is organized by the Vice President for Academic Affairs to consider appeals by students who have been involved in major violations of the College's Code of Conduct and are facing expulsion or suspension greater than five College Days.
- Students might be assigned to the restorative justice board if the case does not include police involvement.

The President of the College will receive recommendations from the Discipline Committee. The President can accept the recommendation of the Discipline Committee, reject the recommendation, or issue different penalties. The President acts as the final administrative officer to whom all discipline cases involving student expulsion and/or suspension must be brought.

GRIEVANCE PROCEDURE

Students are encouraged to discuss their grievances informally with the person involved prior to initiating a formal grievance procedure. If the situation cannot be remedied by an informal discussion among the persons involved, then the student is encouraged to discuss the grievance with either the Vice President of Student Services or the Director of Residence Life, or to submit a grievance via the College website. Any student not satisfied with the procedures and/or the results obtained from the meeting with the administrator (appropriate director, Dean, or Vice President) may file a formal grievance in writing to the President of the College.

Students may also make a formal complaint to the state by visiting the Pennsylvania Department of Education at education.pa.gov/

JONES DINING HALL CODE OF CONDUCT

Thaddeus Stevens College is committed to the personal and social development of its students, so the College adheres to a strict Code of Conduct as it relates to behavior in all areas of the campus. The Jones Dining Hall on the Main Campus serves as a focal point for students, faculty, and prospective students and families. It is essential that students understand the impact of their behavior on peers, staff, and visitors alike. Moreover, as the College is a disciplined community, students must accept their obligation to the group and as such, exhibit behavior that enhances the common good of the larger community. In keeping with that philosophy, the following regulations are in effect for the Jones Dining Hall. All Stevens students should:

- Refrain from language that is lewd, indecent, or obscene and that runs counter to a healthy dining environment;
- Treat each other, dining service staff, security, and other personnel with common decency and respect;
- Refrain from loud or unruly behavior that runs contrary to a wholesome dining experience;
- Understand that no manner of physical confrontation will be tolerated;
- Understand that it is their responsibility to return dining trays, eating utensils, and trash to the appropriate deposit area;
- Understand that “jumping the line” is not an acceptable practice;
- Understand that derogatory comments directed at dining hall personnel as they pertain to the quality of food served or food service delivery will not be tolerated;
- Understand their responsibility to treat dining hall furnishings with respect; and
- Understand their responsibility to present a proper ID upon entering the dining facility. Students must have their College-issued ID card for dining services (e.g., Jones Dining Hall, The Campus Grille, and Orange Street Cafe). A meal pass can be issued in the Student Services Office but only once a semester. After that, a student will be required to purchase a replacement card.

Failure to comply with these regulations can result in disciplinary action as presented below:

First offense: Written reprimand with possible loss of dining hall privileges for a period of time.

Second offense: Loss of dining hall privileges for a period of time, possible suspension from the College for a period of time, or a combination of both.

COMPUTER RESOURCES: ACCEPTABLE USE POLICY

The following policy contains the governing philosophy for regulating the use of the College's computing/information network facilities and resources. Access to the College's computing/information network facilities and resources is a privilege granted solely to Thaddeus Stevens College faculty, staff, registered students, and those with special accounts. All users of the computing/information network's facilities must act responsibly and maintain the integrity of these resources. The College reserves the right to limit, restrict, or extend computing/information network privileges and access to its resources.

Those who do not abide by the policies listed below are subject to suspension of computer privileges and possible referral to the appropriate judicial process.

The Office of Student Services should be notified about potential violations of laws and policies governing information use, intellectual property rights, or copyrights. Computer and Network Services should be notified about potential loopholes in the security of its computer systems and information networks as well as in the investigation of misuse or abuse. Should the security of a computer system information network be threatened, suspected user files may be examined.

- An individual may use only the network ID assigned to him/her, unless multiple accesses have been authorized for the ID.
- An individual may not try in any way to obtain a password for another user's network ID.
- A user may not attempt to disguise the identity of the account or machine he/she is using.
- No individual may use the College's network resources to gain or attempt to gain unauthorized access to remote computers.
- No individual may carry out any act which might seriously impact the operation of computers, terminals, peripherals, or networks. Such acts include, but are not limited to: tampering with components of a local area network (LAN) or the high-speed backbone network, blocking communication lines, or interfering with the operational readiness of a computer.
- No person shall knowingly run or install on any College computer systems, or give to another, a program which could result in damage to a file, computer system, or information network, and/or the reproduction of itself. Such programs include, but are not limited to, the classes of programs known as computer viruses, Trojan horses, bitminers, and worms.
- No person shall attempt to circumvent data protection schemes or uncover security loopholes.
- All persons shall abide by the terms of all software licensing agreements and copyright laws. In particular, unauthorized copying of copyrighted software is prohibited, unless the

College has a site license specifically allowing the copying of that software. Furthermore, the copying of site- licensed software for distribution to persons other than Thaddeus Stevens College faculty, staff, and students, or the copying of site-licensed software for use at locations not covered under the terms of the license agreement, is prohibited.

- No individual may perform deliberate acts which are wasteful of computer and/or information network resources or which unfairly monopolize resources to the exclusion of others. These acts include, but are not limited to, sending mass mailings or chain letters, creating unnecessary multiple jobs or processes, obtaining unnecessary output, uploading music and large video files, excessive printing, or creating unnecessary network traffic.

The following types of information or software cannot be placed on any College-owned computer system:

- That which infringes upon the rights of another person;
- That which may injure someone else and/or lead to a lawsuit or criminal charges; e.g., pirated software, destructive software, pornographic materials, or libelous statements; and
- That which consists of any advertisements or commercial enterprises.

No person should use the College's computer resources to engage in conduct otherwise prohibited by the College's Code of Conduct.

No person should use the College's computer/information network resources to monitor another user's data communications, or to read, copy, change, or delete another user's files or software, without permission of the owner.

Use of the College's servers, workstations, or information networks must be related to a Thaddeus Stevens College course, research project, work-related activity, departmental activity, or for interpersonal communications. Use of these resources for personal or financial gain is prohibited. If the non-business usage of computer/information services results in a direct cost to the College for any reason, it is the individual's responsibility to reimburse the College.

Existing College policies such as the Sexual Harassment Policy will be enforced as they relate to a violation of the Computer Resources Acceptable Use Policy. Potential violators may also be subject to criminal prosecution under federal or state law, and should expect the College to pursue such action.

Consequences: Violation of one or more of these published policies will result in a loss of access to the College computing/information network systems with possible referral to the appropriate judicial process.

Student Email: Your College-issued email address (example@stevenscollege.edu) is where we send you important information regarding student life at the College as well as the

communication platform for you and your instructors. It is important that you activate your College-issued student email and check it frequently.

Student Experience: https://experience.elluciancloud.com/tscot is your "one-stop shop" online tool. It is a secured site that introduces single-sign-on access to Thaddeus Stevens College applications, including your College-issued student email. It also offers a variety of customized information and resources to help students track their academic progress and get the most out of their experience at the College. This tool is known as Thad's Pad.

We will regularly send you announcements and reminders essential to your success at Thaddeus Stevens College. Sometimes, we also mail important information to your street address or call your listed phone number.

Social Media: Social media sites can be effective tools for exchanging information. Thaddeus Stevens College embraces and strives to uphold the freedoms of expression and speech guaranteed by the First Amendment of the U.S. Constitution and the Pennsylvania state Constitution. However, any online behavior that violates the College Code of Conduct which is brought to the attention of any College official may be treated as any other violation of the Code. The College reserves the right to adjudicate such violations when the incident involves endangering the lives of others or self, or incidents of an extreme nature.

Students should remember that any information or behavior exhibited or shared on social media sites could affect membership in clubs, organizations, and campus employment as well as internships and jobs outside of Thaddeus Stevens College.

MOBILE DEVICE POLICY

Students are permitted to carry phones, tablets or other devices. However, mobile communication devices may be used in the classroom only with the permission of the instructor. If a student is found on campus processing, using or selling illegal drugs, along with the disciplinary action as outlined in the College's Code of Conduct, that student will forfeit his/her privilege of carrying mobile communication device on any of the Thaddeus Stevens College locations.

DRESS CODE

An important part of the College's mission is to prepare students for success in the workforce upon graduation. In order to provide a professional and safe atmosphere for all students, the following dress code will be applied. In preparing this code, four factors were considered: safety, health, sanitation, and consideration of fellow students, faculty and staff.

- No undergarments showing or displayed as part of outer garments; and
- No clothing displaying lewd, indecent, or obscene languages or images,
- In lab areas: Conform to all safety standards as determined by the individual major, such as the wearing of safety glasses, long pants, steel-toed boots, etc.

Programs of study are authorized to develop additional dress codes, such as the wearing of professional or distinctive clothing that mirrors the future graduate's workforce environment.

Typical sanction: First offense – verbal warning; second offense – progressive discipline

HYGIENE POLICY

As members of the campus community, students are expected to maintain good personal hygiene to reduce the incidence of illness and disease. Students will be asked to correct any behavior related to hygiene and odor.

Typical sanction for violations of the dress code and hygiene policy: First offense – verbal warning; second offense – progressive discipline

STUDENT GOVERNANCE

Student Government Association: Members are elected each fall. This representative body provides a forum for the expression of student opinion on campus, social, cultural, and academic life. It also serves as a means of communication between and among students, faculty, and administration.

Residence Hall Council: The Residence Hall Council serves as a means of communication among students, residence hall personnel and administration. Each building has a council, and any resident can attend meetings within his/her building. The members of each building will elect officers responsible for the initiation and execution of minor policies governing life in the residence hall. Each council plays an important role in establishing activities for residents.

Members of the councils meet as the Joint Residence Hall Council to discuss common issues. Each of the residence halls is responsible for hosting joint meeting at least once during the combined fall/spring semester sessions.

COLLEGE RESPONSIBILITIES IN STUDENT ACCIDENT, ILLNESS, OR LOSS

- The College does not assume responsibility other than routine dispensary treatment for loss or injury.
- The College does not assume responsibility for loss or injury sustained off College property.
- All students must carry medical insurance. The College cannot be held liable for injury or illness which requires external medical services (e.g., emergency room expenses, dental, vision, orthopedic needs).
- Removable objects a student brings to campus cannot be claimed as damaged if lost or broken unless they are essential to the performance of a College activity, and proper safety equipment was being used.
- On questions requiring a decision, a Vice President and/or ultimately the President will determine which activities are College responsibilities and which are not.

XVI – SEX DISCRIMINATION IN EDUCATION

POLICY STATEMENT

Thaddeus Stevens College of Technology does not discriminate on the basis of sex and is committed to providing a safe and healthy educational and workplace environment for all members of the College community. All students and employees have a right to be treated with dignity and respect. These rights extend to application for admission, classrooms, workplaces, residences, and the entire College environment. Accordingly, the College prohibits discrimination, unlawful harassment, including sexual harassment, and any other victimization of individuals based on actual or perceived traits or characteristics. This section outlines the College's policy and procedures regarding sex discrimination in education as prohibited by Title IX of the Education Amendments of 1972, and the Pennsylvania Human Relations Act, including sexual harassment. Title IX states that:

"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

Consistent with Title IX, the College prohibits all forms of sex discrimination as defined by Title IX and Title IX regulations, and as explained in detail in this Policy.

The College is committed to protecting, maintaining, and encouraging freedom of inquiry in teaching, service, and research. However, raising issues of academic freedom and freedom of expression will not automatically excuse behavior that constitutes a violation of this Policy or the law. The College will balance the enforcement of this Policy with freedom of speech and academic freedom concerns.

The procedures, including the grievance process, set forth in this Policy apply when an employee, student (or applicant for admission) is either a Complainant or Respondent (as the terms are defined in this Policy).

The complete policy and procedures for resolution can be found on the college's website under Title IX linked from the homepage at: stevenscollege.edu

Title IX Coordinator: The person responsible for monitoring compliance with all aspects of this Policy. Accordingly, the Title IX Coordinator must be informed of all reports and complaints raising Title IX issues, even if the report or complaint was initially filed with another individual or office, or if the investigation will be conducted by another individual or office.
The Title IX Coordinator's contact information is:

Marian V. Wilson, PhD
Chief Diversity, Equity and Inclusion Officer and Title IX Coordinator
(717) 391-1365
wilson@stevenscollege.edu

750 East King Street
Lancaster, PA 17602

The above contact information shall be provided to all current students and employees of the College, applicants for admission and employment with the College, and must be prominently displayed on the College's website.

Deputy Coordinators have been designated by the Title IX Coordinator to provide assistance with the Title IX process. The Deputy Coordinators are:

Heather Burky
Director of Employee Engagement
(717) 391-6935
burky@stevenscollege.edu
750 East King Street, Lancaster, PA 17602

Dr. Chris Metzler
Vice President of Student Services
(717) 299-7794
metzler@stevenscollege.edu
750 East King Street, Lancaster, PA 17602

Mr. Dawan Worsley
Director of Residence Life
717-299-7681
Worsley@stevenscollege.edu
750 East King Street, Lancaster, PA 17602

Ms. Rosanna Wakley
Engagement, Equity and Inclusion
717-391-3553
wakley@stevenscollege.edu
750 East King Street, Lancaster, PA 17602

In addition to the procedures in this Policy for reporting to the Title IX Coordinator, individuals may also contact the Office for Civil Rights (OCR):

U.S. Department of Education
Office for Civil Rights
Lyndon Baines Johnson Department of Education Bldg., 400 Maryland Avenue SW
Washington, DC 20202-1100
Phone: (800) 421-3481
Fax: (202) 453-6012
TDD: (800) 877-8339
OCR@ed.gov

XVII. EXTRACURRICULAR ACTIVITIES

COMMUTING STUDENTS

Commuting students are encouraged to become involved in the various committees and activities that Thaddeus Stevens College has to offer. They are further urged to avail themselves of the College's library, tutorial, counseling, and medical services as well.

STUDENT CLUBS AND ORGANIZATIONS

Thaddeus Stevens College supports student organizations that can contribute meaningful experiences for students and that can enhance their cultural, social, physical, and spiritual development. Student clubs and organizations are open to all members of the student body. Any student interested in starting a club or organization should contact the Vice President for Student Services for assistance. Here is a list of existing student organizations at the College:

American Design Drafting Association (ADDA): The student chapter of the American Design Drafting Association aims to disseminate technical information for improving the science of graphic communications and design, to initiate and encourage a continued program of education for self-improvement and progress, and to foster a spirit of fellowship among its members.

Architecture Club: The Architecture Club was formed to cultivate a vibrant community of passionate individuals who share a common love for architecture. It celebrates the art and science of architecture, embracing its capacity to shape the world. The Architecture Club leaders envision a community that thrives on creativity, collaboration, and a shared passion for transforming the built environment into meaningful experiences.

Black Student Union (BSU): The Black Student Union encourages Black students and students of all races and ethnicities to engage in cultural enrichment and intellectual growth that center African American culture, lifestyle, and history. BSU is committed to raising awareness about issues impacting the African American experience.

Boxing Club: An opportunity to get an excellent cardio workout and open to anyone who wishes to learn boxing techniques. Offensive and defensive skills are practiced in this club. Students will use bag gloves, heavy bags, hand wraps and other equipment. Sparring is strictly prohibited.

E-sports: E-sports offers competitive tournaments and an online community where students can view tournament broadcasts, share clips from their favorite games, and chat with other College gamers.

Latino Scholars: A representative body of students of Hispanic origin formed to provide a supportive social and academic network of peers as well as to celebrate their cultural heritage throughout the campus community.

Outdoors Club: Dedicated to activities that explore or are based outdoors. Activities have included hiking, fishing, ice fishing, archery, kayaking, snow tubing/skiing, turkey calling, axe throwing, canoeing, camping, and trout raising. The Outdoors Club also endeavors to participate in at least one environmental or conservation service project each year.

Phi Theta Kappa: Invitation to join the Beta Nu Delta Chapter of the Phil Theta Kappa honor society is extended to full-time students maintaining a grade point average of 3.5 or higher. Personal enrichment is gained through the organization's four hallmarks: scholarship, leadership, service, and fellowship.

Power Source: Students meet on a regular basis to fellowship and share faith-based experiences.

Joint Residence Hall Council: The purpose of the organization is to promote the general welfare of residence life at Thaddeus Stevens College; to constitute a medium for expressing student opinions on residence life; to provide a communicative medium between and among students, residence hall personnel and administration; and to provide experience for its members in the principles and practices of democratic government.

SkillsUSA: A high school and postsecondary competition that starts regionally, then moves into state level; winners qualify for a national competition. SkillsUSA's mission is to empower its members to become world-class workers, leaders, and responsible American citizens. Every major at Thaddeus Stevens Collegeis represented in one or more of the nearly 100 competition areas.

Society of Manufacturing Engineers (SME), Chapter S228: Dedicated to inspiring, prepare, and support students for the advancement of manufacturing. See more at sme.org/

Spectrum LGBTQ+ Alliance: Dedicated to building an alliance of understanding and support of LGBTQ+ students and the campus community.

Student Government Association (SGA): A body that represents student opinions on the College and which contributes to the development of College policy. The purpose is to promote the general welfare of the College; to constitute a medium for expressing student opinion on cultural events and academic life; to provide experience for its members in the principles and practices of democratic government; and to provide a communicative medium between and among students, faculty and administration. The SGA president attends the meetings of the Faculty Senate and Board of Trustees.

Tech Phi Tech: Fraternity whose purpose is to encourage activities devoted to the ideals of community service, scholarship, and brotherhood.

Women in Trades and Technology (WITT): An organization that primarily provides support for women in nontraditional fields. WITT also provides female students at Thaddeus Stevens College with social activities, learning opportunities and formal and informal support networks.

Yearbook: An opportunity for students to contribute to various aspects of the *Stevensonian* production process.

Young Lion Mentoring: A supportive club that nurtures students' potential. Through mentorship, guidance, and empowerment, the club aims to cultivate leadership skills, personal development, and academic excellence among its members. By providing a platform for mentorship relationships to flourish, the club strives to inspire confidence, resilience, and ambition in young adults as they navigate their educational, professional, and personal journeys.

ATHLETICS

Thaddeus Stevens College maintains an athletic program for football, men's and women's cross-country, men's basketball, men's wrestling, and men's and women's track and field. Contests are scheduled against other colleges and university junior varsity teams as well as junior and community colleges in the mid-Atlantic states. The basketball, cross-country, wrestling, and track and field programs are presently affiliated with the National Junior College Athletic Association. This affiliation allows college athletes to compete in regional and national competitions when qualifying standards are met. Additionally, the basketball, wrestling, track and field, and cross-country teams have memberships in the Eastern Pennsylvania Athletic Conference. The football team has membership in the Seaboard Conference. Special recognition and awards are given at an annual athletic awards banquet to athletes cited by the coaches for their outstanding athletic achievement and contribution to Thaddeus Stevens College athletics.

INTRAMURALS

The intramural program is one of the most popular student activities at the College. Its goal is to offer a wide variety of sports and recreational activities. Among the activities included: dodgeball, basketball, and volleyball. Play-offs are held in all sports, with a trophy and party for the winners. Student ID cards are needed each night of participation in any intramural sport. Students' guests are not permitted to participate in intramural sports. Student athletes practicing and/or competing on an intercollegiate athletic team may participate in an intramural sport only during the team's off-season.

MULTIPURPOSE ACTIVITY CENTER

The 61,000 square foot Multipurpose Activity Center (MAC) features a spacious gymnasium with a primary basketball arena, flanked by courts on either side. The MAC has two racquetball courts, an elevated 110-meter track, coaching offices, a training center, locker room facilities, and seating for approximately 2,000. Complementing this high-profile facility is the adjoining

Stauffer gymnasium with a state-of-the-art cardio theater and an array of free weights with a separate circuit training area and several cardiovascular apparatuses.

***Students are not permitted to have guests in the MAC and must swipe their ID card each time they enter the building.** Rules for the MAC are posted throughout the building. If MAC rules are broken, disciplinary sanctions will be imposed.

The MAC is available to students at the following days/times during the fall and spring semesters:

Monday – Thursday: 8:00am – 10:00pm
Friday: 8:00am – 9:00pm
Saturdays: 8:00am – 4:00pm
Sundays: 8:00am – 4:00pm

Summer/Holiday Hours:
Monday – Friday: 8:00am – 7:00pm
Saturday/Sunday: 8:00am – 4:00pm

STUDENT CENTER

The Schwalm Student Center is one of the focal points of student activity on the Main Campus. Completely renovated by students, instructors, and alumni, this center has three floors which house The Campus Grille, student lounge areas, and student government meeting hall and offices. Outside of the Schwalm Student Center is a student-built brick fire pit.

XVIII. AVAILABLE SERVICES

COUNSELING SERVICES

Counseling Services help students to develop strategies to succeed in college, work, and life. Interventions build on strengths and encourage healthy lifestyle choices. Counseling and wellness services are provided by Michelle Marmo, Mental Health Counselor, whose office is on the first floor at the Griscom Education Center.

Counseling services are available weekdays and some evenings. Students may be referred by any member of the campus community, or can schedule an appointment with the online scheduler, by email, or by phone. Counseling is provided at no cost and offered in a confidential setting where students may freely discuss any concerns. When appropriate, the counselor might refer students to community-based providers. Students may seek counseling for depression, stress, anxiety, family and relationship difficulties, grief and loss, substance abuse, poor academic performance, disabilities, and career guidance. Local resources and self-help information is available via Thad's Pad. Contact information: Michelle Marmo (717) 391-7213; marmo@stevenscollege.edu

ACCESSIBILITY SERVICES

In accordance with the Americans with Disabilities Act, Amendment Act of 2008, Section 504, Section 508 of the Rehabilitation ACT of 1973, the Accessibility Office of the College helps students with disabilities understand the academic, social, and emotional skills needed to graduate, obtain, and maintain employment, and manage life challenges. Students are eligible for accommodations after they have registered with the Accessibility Office, provided documentation of a disability, and participated in an interview with the Accessibility Coordinator.

Documentation is reviewed by the Accessibility Coordinator; accommodations are approved if they do not alter the pace, content or essential skills required for each course and program. Some accommodations may be available through Universal Design practices or technology. Accommodations are designed to eliminate or reduce disability-related barriers. They do not guarantee success. Disability information is protected under laws such as FERPA and HIPAA, both of which limit the sharing of information to only individuals who have a specific need to know, and to those individuals whom the student has designated through a signed release.

Disclosure: The student, not an individual (i.e., parent, guardian, treatment provider) acting on behalf of the student, must disclose the disability. The student may disclose at any time; however, accommodations are not retroactive.

Accommodations may include:

- Accessibility on campus
- Academic: classroom, laboratories, and shop
- Emotional Support Animal (in residential halls only)

- Service Animal
- Dietary
- Residential
- Transportation and parking

All students seeking accommodations must register with the Accessibility Office.

Documentation examples for academic accommodations must:

- Be current within the last three years.
- Define the disability.
- Show evidence of the disability affecting a major life activity
- Cite the requested accommodations as they relate to the disability.
- Be from a licensed professional, such as a psychologist, or treating physician.

If a student does not have documentation, or documentation is not current, the student must be interviewed by the Accessibility Coordinator to determine eligibility.

An IEP/504 plan and evaluation report from the student's high school from the student's junior or senior year may be used as a form of documentation. IEP and 504s do not carry over to the college. Collection is for documentation purposes only.

Medical Accommodation: Student should notify the Nurses Office and Accessibility Office if they have been injured, are experiencing ongoing medical conditions, or are experiencing a mental health that affects their attendance and/or their completion of coursework.

Note: If student will miss more than 10 consecutive days because of a medical absence. Students may be asked to do a medical withdraw for that semester. All situations will be reviewed individually.

Accommodations Implementation

- Students meet with the Accessibility Coordinator to develop and sign the Approved Accommodations. Students must acknowledge that they are continuing their approved accommodations at the beginning of each semester for implementation.
- Students forward accommodations to instructors and other individuals who need to know prior to accommodations being provided.
- Student who are approved for an ESA on campus must sign ESA agreement each Fall semester.

The student is responsible for requesting a meeting with the Accessibility Coordinator if they want to change accommodations, discuss accommodations delivery, and any other concerns.

The student is also responsible for following through with communication related to accommodations, such as scheduling proctored tests.

Accommodations and support services may be provided by various individuals on campus. The student's signature on the Accommodations form indicates their understanding of procedures to obtain accommodations and acknowledges permission to share information with members of the Retention Team, and those individuals' providing services.

> **Note:** If a student is receiving services provided by a community-based provider while he/she is enrolled, these may be considered accommodations and should be coordinated through the Accessibility Office to assure continuity and appropriate levels of intervention.

Grievance related to approved accommodations: If a student disagrees with the Accessibility Coordinator's determination, or questions how accommodations are being provided, he/she has the right to have the decision or situation reviewed. At this point, the student recognizes and agrees to permit information related to his/her disability to be shared with faculty, staff, administrators, and legal counsel to determine appropriate action.

Steps:

1) Student informs Accessibility Coordinator in writing of request for review. If not resolved at this level.

2) Student submits a written request to the Vice President for Student Services or the Vice President for Academic Affairs to review the situation.

3) The administrators review the decision made by the Accessibility Coordinator, along with the student's concerns, and determine if the student's request is denied or approved. Administrators at this step may also consult with legal counsel if needed.

4) A written decision is provided to the student, and a copy electronically stored in his/her file.

5) The Approved Accommodations form is updated if warranted and redistributed to any other individuals involved in providing accommodations to the student.

STUDENT EMPLOYMENT

Students interested in on-campus employment can apply through the Office of Career Services in the Hartzell Building. Students are encouraged to submit applications for employment as soon as possible upon arrival at Stevens, since student work opportunities are limited. Students might be required to obtain clearances (fingerprinting and child abuse history) before beginning to work.

CAREER SERVICES

Students can get assistance with job placement for full-time employment upon graduation, and full- and part-time internships during college and summer. Working together with technical faculty and industry leaders, the Career Services office helps students get connected starting as early as their first semester via job shadowing, internship workshops, mock interviews, career

fairs, and college transfer events. At the College Central Network (collegecentral.com/stevens), students can upload a resume, search jobs posted for Thaddeus Stevens College students and graduates, and connect directly with employers in their field. The Career Services office is located in Hartzell 106. For additional information, contact Career Services: CareerServices@stevenscollege.edu

LIBRARY

The College library is in the Kenneth W. Schuler Learning Resources Center (LRC) and is open to all members of the College community. The library is staffed by professional librarians who strive to provide students with the information resources they need to complete their technical training programs and earn their degrees. The library is also committed to maintaining substantial collections of supplemental and recreational materials. The collection is open and available to any member of the Stevens community holding a valid, legible ID card, as well as authorized guests.

Library Director: Katherine Pennavaria, MA, MLS
Librarian: Cassandra Dwyer, MLS
Library Assistant: Hailey Crockett, MA

The LRC also has the Math and English Tutoring labs, a computer classroom, private study rooms, the Academic Center, and the Seminar Room.

Hours of Operation during the Academic Year
Monday-Thursday: 7:30am – 7:00pm
Friday: 7:30am – 5:00pm
Saturday and Sunday: Closed
(Holiday, interim and summer hours vary and will be posted.)

Materials: The library lends books, DVDs, calculators, headphones, phone chargers, laptops and more.

Renewing Items: Patrons can renew items by emailing staffLRC@stevenscollege.edu or by stopping by the Library.

Course Reserves: Faculty can place materials on reserve when class assignments necessitate heavy use. Students should ask for reserve materials at the circulation desk.

Online Resources: The library subscribes to many online resources that can be accessed 24/7 at stevenscollege.libguides.com or through the library page of Thad's Pad.

Reference: Professional reference assistance is available during most operating hours. You can also request assistance by emailing staffLRC@stevenscollege.edu.

AV Equipment: The library lends AV equipment for use in presentations.

Computer Lab: Computers are loaded with Microsoft Office and specialized technical software available for student use.

Print/Copy/Scan: Black-and-white printing and copying is available free for College-related projects. Students may also scan items.

Study Rooms: Group study rooms with AV equipment and whiteboards are available.

Lounge Areas: Several seating and study areas can be found throughout the library.

Vending: A vending machine with snacks and drinks is located on the main floor of the library.

Lockers: Free storage lockers for students are available in the library.

ACADEMIC SUPPORT SERVICES

The Academic Center and Learning Commons on Main Campus is on the third floor of the LRC; it is staffed by academic coaches who provide academic services and resources to help students succeed. Each student is assigned an academic coach for their program of study (see chart below). Students are encouraged to connect with their coach early and often. A student can request services by walking in or emailing his/her coach for an appointment. Appointments are not required. Academic support services are available in person, online via live videoconferencing and/or by phone.

Hours of availability: Monday – Friday 8:00am – 4:30pm

Academic Coaches (all on Main Campus)

Yasmine Cooper	coopery@stevenscollege.edu
Spencer Harper	harper@stevenscollege.edu
Paulina Rodriguez	rodriguezp@stevenscollege.edu
Barbara Starin	starin@stevenscollege.edu
Michelle Williams	willilamsm@stevenscollege.edu

Director of the Academic Center and the Pre-Major Program:

Sheri Wright	wright@stevenscollege.edu

Program Coaches:

Yasmine Copper:	PLBG, WELD, MFWT
Valdijah Brown:	ELEC, WET
Spencer Harper:	ARCH, CSET, GRPH, ECAD, MASN, ECM
Paulina Rodriguez:	CNSA, RMDL, BUAD, CABM, CARP
Barbara Starin:	MET, CIVL
Michelle Williams:	AUTO, CORT, DETC, HVAC, CIM
Sheri Wright:	Pre-Major, EET, ELME

Tutors:

Kim Klugh	English Lab	klugh@stevenscollege.edu
Judith Sides	English Lab	sides@stevenscollege.edu
Loren Goloski	Math Lab	goloski@stevenscollege.edu
Barbara Starin	Math Lab	starin@stevenscollege.edu

English Lab:

Monday – Thursday	8:00am – 8:00pm
Friday	8:00am – 12:00pm
Sunday	1:00pm – 5:00pm

Math/Physics Lab

Monday – Thursday	8:00am – 8:00pm
Friday	8:00am – 4:30pm
Sunday	1:00pm – 5:00pm

Academic Advising: Academic advisors are assigned faculty members who provide information to students regarding registration and the requirements for degree or certification within their program. Email your advisor directly with questions.

Academic Coaching: Academic coaches assist with organization, creating a study plan, determining an effective study method, note-taking, and more. Email your academic coach to schedule an appointment or visit the Academic Center at the LRC.

Academic Seminars: Academic seminars are available on topics such as Note-Taking, How to Study, Time Management, Test-Taking Strategies, and more. Seminars are presented live and are also available in voice-narrated PowerPoints.

English and Math Labs (Professional Tutoring): Students may walk in for tutoring during lab hours (appointments are not necessary). Students may also submit a paper for review by a professional tutor and schedule a time to review it. Entrance to the tutoring labs is just before the front entrance of the LRC (the blue door).

Peer Tutoring Support: Peer tutoring availability varies by program. The peer tutor schedule will be posted on Thad's Pad as it becomes available. Consult your instructor for additional details.

Pre-Major Support: Pre-Majors requesting academic support and anyone with questions regarding the Pre-Major Program should contact the program director, Sheri Wright, at wright@stevenscollege.edu.

Study Groups: Students who wish to form an informal study group are invited to use the Academic Center resources. Students who wish to form a facilitated study group should contact an academic coach.

Testing Accommodations: Students with approved testing accommodations through the Accessibility Office should notify their instructor when they wish to use them, and then use the testing link provided to schedule the test at least three days prior to the test date. Email

accessibilityoffice@stevenscollege.edu or stop by the Accessibility Office for assistance using the testing link.

Tutor.com Online Tutoring 24/7: Online 24/7 live tutoring is available for most General Education courses. Students have access to ten free hours of tutoring through a link within their course on CANVAS.

For assistance with technical difficulties or to request additional hours, email Sheri Wright at wright@stevenscollege.edu

General Academic Appointments: For any academic support service not listed above, please contact Sheri Wright at wright@stevenscollege.edu

ACT 101

The College participates in the Pennsylvania Higher Education Assistance Agency's Act 101 program, a statewide initiative established in 1971 to ensure residents of the Commonwealth enjoy equal opportunity to pursue higher education. Potential Act 101 students are identified based on specific educational and economic criteria set forth by the Commonwealth of Pennsylvania. Act 101 staff closely monitors student progress and provides academic, career, and personal coaching designed to facilitate collegiate success. Staff also refer students for peer and professional tutorial support to assist students in mastering academic and technical skills required of their programs. The Act 101 program has been promoting student success at Thaddeus Stevens College since 1976.

Director of the ACT 101 Program:
Dr. Valdijah Ambrose Brown brownv@stevenscollege.edu

XIX. RESIDENCE LIFE HANDBOOK

PHILOSOPHY: RESIDENCE LIFE PROGRAM

The purpose of the institution's residence life program is to foster self-development, good citizenship, and democratic principles in campus residents. These goals are accomplished through various modes of learning inside the residence hall to expand student decision-making skills and through the promotion of values such as respect for fellow students and staff, honesty, and involvement in residence hall activities. Residence life plays an important role in the retention of students. Those involved in establishing and implementing student life policies should always remember that the student voice is an essential element in developing policies for the residence hall.

Given that the residence halls at Stevens are smaller than those on larger campuses, students are given a greater amount of individual attention, which helps their total educational experience. This attention occurs through student interaction with one another as well as with College staff members. The residence life program also seeks to create an environment of understanding and appreciation for the values of those from diverse backgrounds. Developing this sensitivity will help students grow personally, which impacts directly on other educational purposes (e.g., citizenship and emulation of democratic principles) as set forth in the College's mission and purpose.

CONTINUOUS SAFETY & COMPLIANCE IN THE RESIDENCE HALLS

- Get acquainted with your professional staff, neighbors, and the building as quickly as possible. Every resident has a role to play in security. Part of that role is to know who belongs there and who doesn't.
- Always lock your room door upon leaving. Ask your roommates to do the same.
- Secure your personal property, especially expensive and easily transportable items. Lock them in personal safes and use cables to secure laptops and other electronic components. Engrave items with unique identifiers.
- Do not allow entry into your building to anyone you don't know. Don't let anyone "tailgate" when you enter using your access card.
- Do not prop external doors open! Propping doors open is the most abused security issue on college campuses. To prop a residence hall door open is to increase the risk of an attacker situation.
- Do not lend your room key or college ID to anyone. Sharing your room key or college ID is a violation of College policy.
- All drugs and alcohol (*possession, use, paraphernalia, and smell*) are prohibited in the Residence Halls and on campus (See Drug-Free Campus Policy on p.78).
- Any student or guest of a student who fails to comply with a request from, or show respect to, any member of the residence life staff, security staff, or College personnel acting in the performance of his/her authority, will be subject to disciplinary action.

- Hoods, ski masks, Halloween masks, or any material/item that covers the face may not be worn inside the residence halls. This is to ensure that all individuals can be easily identified by staff members and reduce the likelihood of an intruder moving around in the halls. Each student must have a valid College ID to enter his/her residence hall.
- Throwing anything from windows is prohibited. Window screens are not to be unscrewed or removed, nor are windows to be used to exit or enter the building or a room. Sitting in windows at any time is prohibited. Exterior doors must remain locked and must not be propped open or otherwise disabled.
- Students who reside in a particular room are responsible for the behavior of any guests in that room.
- Bicycles must be stored on campus bike racks or directly in resident rooms (space permitting).

Fire safety violations include, but are not limited to, the following:

- Tampering with fire extinguishers, fire alarms, smoke detectors, sprinkler systems, or any fire safety equipment (subject to fines up to/exceeding $500.00).
- Hanging items from, covering with any object, or removing the batteries from any fire safety equipment.
- Having open flames, burning incense or candles, or behaving in a manner that could increase the risk of fire in the residence halls.

Students who fail to leave the building during a fire alarm will be subject to sanctions.

NOISE/DISTURBANCE POLICY

An atmosphere conducive to normal living and study must be maintained 24 hours a day in the residence halls and surrounding areas. Respect for the rights and freedoms of other residents will be the mandated courtesy standard for behavior.

QUIET HOURS:

- Sunday night to Friday morning from 10pm to 10am
- Friday night to Sunday morning from 12am (*midnight*) to 10am
- Finals Week – 24/7, ALL DAY

ROOM ASSIGNMENTS

Stevens Grant students will be given priority in living space on campus. Every effort will then be made to assist non-grant students who desire to reside in a residence hall. The College reserves the right to make residence hall assignments, room and temporary room assignments, consolidations, and reassignments where necessary or when it is believed to be in the best interest of a particular student and/or residence hall.

ROOM CHANGE AND CONSOLIDATION PROCEDURE

Voluntary room changes can be made starting the fourth week of the semester. Information about the room change process will be sent to the students' TSCT email at least one week before the Room Change period begins.

If a resident changes rooms without approval from the Office of Residence Life, the resident will be fined $200.00. In addition, the resident may lose their ability to participate in future room change processes.

Outside of the scheduled room change period, the Office of Residence Life will review room change requests on a case-by-case basis. Please see your Residence Hall Advisor to express interest in changing rooms.

All room changes are dependent on availability and approval from the Director of Residence Life.

Room Consolidations

The Office of Residence Life will also have a room consolidation process during the semester for residents that do not have roommates (*and are not in single rooms*) after each assigned room change period (*or at any point in the semester*). Residents who reside in a double room and do not have a roommate at these times will need to participate in the room consolidation process. Failure to do so will result in the resident being charged the single room rate for the semester.

During the room consolidation process, residents will be given a chance to choose a new roommate or room based on the list of other residents required to consolidate. Failure to notify our office of their selection of a new room or roommate by the assigned deadline will result in the resident being charged the single room rate for the semester.

ROOM CARE

The Office of Residence Life, and other essential college personnel, will inspect all rooms periodically throughout the year, after any break closing, whenever there is a room vacancy, and for reasonable suspicion of policy violations and/or safety concerns. Residents are not obligated to be present for such inspections. Students assigned to the room will be charged for any damages or missing college property—charges are based on materials and labor.

*All costs are subject to change without notice, depending on the actual price of repairing or replacing damaged property.

Any additional damage in the residence hall for which the identity of the person responsible is not known will result in the students who live on a particular floor or the entire residence hall population sharing the cost of repair. Report any observed room or residence hall damages to the Residence Hall Advisor immediately.

It is understood that you may want to personalize your room to a certain degree. Any decorations used in your room should be displayed according to residence hall rules and reflect good taste and decency. If you have questions about whether something meets that standard, speak with your Residence Hall Advisor.

Residence hall room furniture belonging to Thaddeus Stevens College of Technology may not be disassembled, stacked or altered in any way. All College-owned room furnishings must remain in the assigned room, and all lounge furniture must remain in the lounge. Adding to or changing the preset configuration of furniture items in a residence hall room may be done only with authorization from personnel in the Office of Residence Life. Only furniture assigned or approved by Office of Residence Life personnel will be permitted in residence hall rooms.

To protect against potential hygiene problems, students are expected to wash their clothing and bedding regularly, and not store food for long periods of time nor hang food items from the window.

PROHIBITED ITEMS & ACTIVITIES LIST
Please verify with Office of Residence Life personnel any questionable items or activities not listed below, as this list is not all encompassing.

- Microwaves, all toasters, grills, skillets, open coil burning devices, electric cooking devices, portable heaters, air fryers, irons, coffee makers/water heaters without an auto-shut off feature, and all other open heat appliances
- Refrigerators larger than 5.0 cubic feet
- Room decorations deemed offensive or inappropriate by the College
- No adhesive hanging lights or items
- All animals, fish, and creatures not approved by the Office of Accessibilities and the Office of Residence Life
- All lamps that do not have a metal covering
- Candles, incense, fireworks, and all other open flame devices or liquids
- Live-cut Christmas trees, artificial trees, and other flammable decorations
- Electrically amplified instruments, DJ equipment, and drum sets
- Extension cords and multi-prong outlets that are not surge protectors
- Wireless routers (*disrupts the school's provided network connection for others*)
- Weights and associated equipment heavier than 15lbs
- Weapons of any kind (*darts/dartboard, guns/ammunition, toy guns/toy ammunition, BB/paintball guns, swords, etc.*)
- Drug and alcohol paraphernalia and advertisements
- Sports or any outdoor activities (*basketball, football, water balloon fights, snowball fights, roller skating, bike riding, hoverboarding, scooter riding, etc.)*
- Playing music/TV outside your window
- Practicing instruments in common areas/lounges
- Moving rooms without the approval from the Office of Residence Life

ROOM KEY

Each resident student will be issued a key or card to his/her room. In rooms with an electronic card reader, the key (if issued) must be returned to the Residence Hall Advisor upon the activation of the student's ID card. At that point, the card can be used to access the assigned residence hall room.

If you misplace your key or ID card and are locked out of your room, contact your Residence Hall Advisor or Security. Security is available 24 hours a day and will provide admittance to your residence hall room in the case of a misplaced key. However, if this privilege is abused, that information will be forwarded to the Director of Residence Life for review.

If your room is not equipped with an electronic card reader, you must keep the key with you. If you lose your key, the lock core will be changed and new keys issued. Any student who loses a key will be charged accordingly ($55.00) for the new lock core, keys, and associated labor.

GETTING INVOLVED IN YOUR RESIDENCE HALL

The Office of Residence Life staff will periodically call mandatory hall meetings to address concerns or share important information. Notification will be given to residents at least 48 hours in advance whenever possible and will be either an email and/or flyers posted in the residence hall. If a student is unable to attend a mandatory meeting, he/she should notify their Residence Hall Advisor at least 24 hours in advance.

If you're interested in meeting new people, advocating for residents, and impacting change in your Residence Hall, join the Residence Hall Council. Email reslife@stevenscollege.edu with your interests and inquiries.

WIRELESS IN THE RESIDENCE HALLS

All residence halls have wired networking available in each room, and some also have wi-fi. Setting up personal wireless routers/access in a College residence hall is prohibited.

GUEST POLICY

A guest is defined as any person who is not assigned, by contract, to a bed in the Residence Halls. A guest also includes residents who are not assigned, by contract, to the rooms they visit within the Residence Halls. A resident should **NEVER LEND THEIR SCHOOL I.D**. or **ROOM KEY** to **ANYONE**. All residents must receive verbal consent from roommate(s) to have guests in the room. Whenever residents disagree on guests in their room, the whole room may not have visitors until all contracted residents of the room agree.

- NO GUESTS ARE PERMITTED DURING THE FIRST TWO WEEKS OF CLASSES AND THE LAST TWO WEEKS OF CLASSES EVERY SEMESTER (*UNLESS THE RESIDENT IS FULLY MOVING IN OR FULLY MOVING OUT*)

ALL GUESTS MUST:

- Be 18 years or older
- Possess a valid state i.d., driver's license, or thaddeus stevens college i.d.
- Register at a security office at the griscom education center or mac building
    - Upload a clear headshot selfie in the guest registry
    - Upload a valid state i.d., driver's license, or thaddeus stevens college i.d. To the guest registry
    - Complete all other fields of the guest registry
    - Wait at the front door or lobby of the residence hall they are visiting to be escorted by their resident host
    - Stay with the resident host at all times

VISITATION HOURS

- Sunday through Thursday: 10am to 10pm
- Fridays & Saturdays: 10am to 12am (*midnight*)
- Residents are allowed to sign in one guest at a time

OVERNIGHT GUEST POLICY
Standards for Guest Policy still apply in addition to the following:

- No guests are permitted during the first two weeks and the last two weeks of the semester
- Residents must have verbal consent from his/her roommate(s) regarding overnight guests
- Overnight visiting hours are fridays and saturdays only
- Only one visitor can be signed in overnight per resident
- All overnight guests must be in the guest registry and receive a physical guest pass from the security office in the mac or in the griscom education center
- Guests must always stay with resident host and keep physical guest pass on their person
- Guests must sign out of the residence hall by Sunday at 10pm sharp

MISSING RESIDENT STUDENT NOTIFICATION POLICY

In compliance with the Higher Education Authorization Act and consistent with the College's commitment to student safety, this policy provides the procedures for reporting, investigating and making emergency notifications regarding any resident student believed missing.

A student is presumed missing when his/her absence is inconsistent with established patterns of behavior, and the deviation cannot be readily explained. Before presuming that a person is missing, reasonable measures should be taken to determine whether the person is at their off-campus place of residence and whether anyone familiar with the person has seen or heard from them recently or know where they might be.

At the beginning of each academic year, the College will inform residents in on-campus housing that, in the event he/she is presumed missing, it will notify a parent or individual selected by them within 24 hours. Resident students are responsible for ensuring that contact information is current and accurate. Students should register this contact information through the Office of Student Services. If the student is under 18, the College is required to notify a custodial parent or guardian no more than 24 hours after the time he/she is determined to be missing. The College will also notify the appropriate law enforcement agency no later than 24 hours after the time a student is determined to be missing. Once the College receives a missing student report on a resident of on-campus housing via Security, Office of Student Services or other source, the following offices will be notified: College Security, President's Office, Vice President for Finance and Administration, Vice President of Student Services, Director of Residence Life.

The official missing person report relating to this student will be referred immediately to Security. If Security, after investigating, determines that the student has been missing for more than 24 hours, the College will contact the individual identified by the student, the custodial parent (or legal guardian if the student is under 18), or local law enforcement if these do not apply. Upon notification from any source that a student might be missing, the College will use any of the following resources, in any order or combination:

1. College personnel or Security might open the student's room and talk with known associates.
2. Security might search on-campus public locations (library, cafeteria, etc.) Security might issue an ID picture to the campus community.
3. Security, the Vice President of Student Services, or Director of Residence Life might ask known friends, family, or faculty members about their last sighting of the student, or for additional contact information.
4. Security might access ID card logs to determine last use of the card and to track future use.
5. Security might access vehicle registration information.
6. IT might be asked to look up email logs for last login and use of the College's email system.

If there is any indication of foul play, the Pennsylvania State Police will immediately be contacted. If circumstances warrant, this policy and procedure may be implemented in less than 24 hours.

Students will be notified of this policy on the College website, at student orientation, in the annual Campus Security report, via College-issued email, and at Residence Hall meetings.

PERSONAL BELONGINGS

The College assumes no responsibility for students' personal belongings. Residents should protect themselves by carrying fire, theft, and liability insurance. College insurance does not cover students' personal property or personal liability at any time.

Students who withdraw from the residence halls for any reason are responsible for the removal of their belongings from the residence halls as expeditiously as possible. The College will not send these items to the owner but will make a reasonable effort to contact the student regarding items left in the residence halls. This contact will take place by phone, certified mail, or both. If it is impossible to contact a student, the items will be stored for 30 days. **If the student fails to claim these items within that time, they will be declared abandoned and disposed of or donated to a local charity.**

SEARCH AND SEIZURE

It is not the intent of the College to conduct unreasonable and unwarranted room searches. The sole intent of the College is to ensure a safe and secure environment for students to reside, study, and continue the pursuit of their educational goals.
Students, as citizens, are protected against unreasonable search and seizure. However, College authorities may conduct searches of residence hall rooms, lockers, or vehicles if the authority has reasonable or just cause to believe that a student is using the room, locker, or vehicle for a purpose that is illegal or would interfere with the educational atmosphere of the College or is in violation of the College's Student Handbook. If comprehensive room searches occur, two of the following teams will be present: Office of Residence Life and/or Security personnel. The student assigned to the room being searched will be present if he/she is available. Such all-encompassing searches are most likely to occur during the week, when most students and Residence Hall Advisors are present. Searches are completed with great discretion in cases where there is reasonable evidence that a person is engaged in illegal activities or behaviors that are contrary to the College's Code of Conduct, or in emergency situations.

Note: All students, prior to residing in the residence halls, must read and sign a Search and Seizure form indicating that they have read and understand the Search and Seizure Policy as stated in this handbook and as enforced by the College.

Examples of reasonable or just cause for a residence hall room search:

- Smoke, whether caused by a fire, a cigarette, incense, candle, or the burning of an illegal substance.
- The smell of alcohol coming from a residence hall room, vehicle or locker.
- Evidence of possible illegal activity or activity contrary to the College's Code of Conduct within a residence hall room, locker, or vehicle.
- Evidence indicating the presence of a weapon(s) within a residence hall room, locker, or vehicle.

- Evidence indicating an activity in the residence hall, in a classroom, in a vehicle, or in a locker that might threaten the health, safety and welfare of others (e.g., possible presence of explosives)

This listing indicates only some of the reasons that would produce reasonable or just cause for a room search. It is **NOT all-inclusive.**

LAUNDRY FACILITIES

All residence halls have washers and dryers for student use at no cost. Students are expected to stay with their laundry as the College is not responsible for any losses or damage. Students are expected to remove laundry as soon as the machine cycle is completed. Do not use laundry detergent pods in our machines (they can damage the type of machines we have) and do not overload the machines.

RESIDENCE HALL CLOSURES

During Thanksgiving, winter, and spring breaks, the dining hall and residence halls will be closed. **All residents must vacate the residence hall during all scheduled breaks, taking only what they need**. Students with extenuating circumstances during closures should follow all break closing instructions sent via email and have proof of their hardship prepared for review. The Director of Residence Life will deny or approve any request to stay during closures. The dining hall will serve meals up to and including the noon meal on the day the vacation begins and will not serve again until the evening meal prior to classes resuming on the following day. The residence halls will close at 6pm or 60 minutes after the end of the last scheduled class on the day preceding the vacation period. They will normally reopen at 12pm noon upon the return from vacation. **There are no break stays during summer closures. Summer housing may be offered at a weekly rate, space permitting.**

XX. FOOD SERVICES

Jones Dining Hall: Thaddeus Stevens College has a spacious dining hall that serves 19 meals a week. The dining hall is closed during official College recesses and during the summer, except for the summer college-level education programs from late June to early August.

Meal Plans: Stevens Grant students are assigned a Meal Plan based on their housing status; Resident Student = 7-Day Meal Plan, Commuter Student = 5-Day Meal Plan. Non-Grant Resident Students are assigned a 5-Day Meal Plan and are given the option to upgrade to a 7-Day Meal Plan. Students with a Meal Plan will have their student ID Cards activated for use in the Dining Hall and Cafes.

Note: Please refer to the Accessibility Office for dietary accommodations.

Vending: Vending machines with beverages and snacks are in multiple locations around the campus.

The Campus Grille and Orange Street Cafe: The Campus Grille is on the first floor of the Schwalm Student Center on the Main Campus. The Orange Street Cafe is on the first floor of the Griscom Education Center.

L. GENERAL INFORMATION

ADDITIONAL LOCATIONS

In the past ten years, the College has opened the Griscom Education Center, the Greiner Advanced Manufacturing Center, the Transportation Center, and the Greenfield location. These additional locations have allowed the College to expand and provide student services in multiple areas. In addition to residential spaces, there are multiple recreation centers, nursing stations, classrooms and computer/study labs available for student use across the four campuses. Student peer tutors are also available during posted hours for academic programs located at the additional locations.


King Street
Stevens Drive
East End Avenue
Senior Drive
Academic Drive
Student Drive
Dormitory Drive
Athletic Drive
Stadium Circle
Broad Street
New Dauphin St.
Visitor Parking
Griscom Education Center
Greenfield Corporate Center Locations
Grainer Advanced Manufacturing Center
P
1
2
3
4
5
6
1. Mellor Building
2. Kreider Classroom Building
3. Leonard Building
4. Woolworth Classroom Building
5. Snyder Classroom Building
6. Multipturpose Activity Center (MAC)
7. Brenner Hall
8. Schuler Learning Resource Center (LRC)
9. Bourne Hall
10. Metzger Hall
11. Armstrong Hall
12. Herrington Hall
13. Schwalm Student Center
14. Hartzell Building
15. Jones Dining Hall
16. Maintenance Building
17. Bewilacqua Field
18. Alumni Association & Thaddeus Stevens Foundation/College Store
P - Parking Lot

Additional Locations

Greiner Advanced Manufacturing Center
599 Chesapeake Street
Computer Integrated Machining
Heating, Ventilation, Air Conditioning/Refrigeration
Metals Fabrication and Welding Technology

Griscom Education Center
1100 East Orange Street
Lower Level
- Electrical Construction & Maintenance
- Residential Remodeling Technology (2nd Year)

Lobby Level
- Business Administration
- Computer Software Engineering Technology
- Graphic Communications & Printing Technology

1st Floor
- Architectural Technology
- Engineering CAD
- Mechanical Engineering Technology
- Residence Halls

2nd Floor
- Residence Halls

3rd Floor
- Residence Halls

4th Floor
- Water and Environmental Technology

Greenfield Corporate Center Locations

Thaddeus Stevens College at Greenfield
1812 Colonial Village Lane
Civil Engineering Construction Technology
Masonry Construction Technology
Welding Technology

Transportation Center
400 Ben Franklin Blvd.
Automotive Technology
Collision Repair Technology
Diesel Technology

9-22

CAMPUS NUMBERS

Below you will find campus numbers to help you locate a certain major, academic, or service area. All phone numbers use area code 717.

TECHNICAL PROGRAM FACULTY

Architectural Technology

2nd Year (Jana Belack)	299-7633
1st Year (Tedd Williams)	391-7217

Automotive Technology

2nd Year (Martin Christian)	299-7737
2nd Year (Allen Fry)	299-7419
1st Year (Jeffrey Gieniec)	391-3528
1st Year (Naaman Hedge)	299-7737

Business Administration

2nd Year (Danielle Fox)	299-7614
1st Year (Bronwyn Laughner)	391-3521

Cabinetmaking & Wood Technology

2nd Year (Jeremiah Polynone)	391-7205
1st Year (Evan Germann)	299-7745

Carpentry Technology

2nd Year (Dan McCord)	299-7323
2nd Year (Andrew Snavely)	299-7323
1st Year (Tim Draper)	299-7724
1st Year (Dan Noel)	299-7783

Civil Engineering Construction Technology

2nd Year (Mitch Kauffman)	391-7283
1st Year (Steven Simes)	391-1349

Collision Repair Technology

2nd Year ()	391-3533
1st Year (Jason Weiler)	299-7739

Computer Integrated Machining

2nd Year (Jared Keim)	295-7813
1st Year (Kyle Young)	299-7736

Computer & Network Systems Administration

2nd Year (Dr. Jameson McFarlane)	391-6939
1st Year (Rebecca Schultz)	391-1369
2nd Year (Tim Freund)	299-7797
1st Year (Matthew McLaughlin)	299-7774

Computer Software Engineering Technology

2nd Year (Arafat Hassan)	391-7203
2nd Year (Mohammad Ashraful Huq)	391-3557
1st Year (Mainul Chowdhury)	391-7203
1st Year (Fahim Shams)	391-7203

Diesel Technology

2nd Year (Edward Hughes)	
1st Year (Matthew Herr)	391-3543

Electrical Technology

2nd Year (Brian Kochan)	299-7743
2nd Year (Fred Bube)	391-6960
1st Year (Keith Brubaker)	391-6951
1st Year (Andrew Jacobs)	299-7738

Construction Electric

Evan Ducko	299-7407

Electronic Engineering Technology

2nd Year (Bruce Schreiner)	299-7786
1st Year (Thomas Evans)	299-7699

Electro-Mechanical Technology

2nd Year (Caleb Lower)	391-1368
2nd Year (Andrew Friedland)	299-7793
1st Year (Benjamin Harmuth)	391-7211
1st Year (David Thompson	391-3546

Engineering CAD Technology

2nd Year (Donald L. Hart)	391-7215
1st Year (James R. Knapp Sr.)	391-7214

Graphic Communications & Printing Technology

2nd Year (Mike Brady)	299-7767
1st Year (Megan Zettlemoyer)	299-7768

Heating, Ventilation, Air Conditioning & Refrigeration

2nd Year (Ty Christman)	391-3526
2nd Year (Bruce Hrycek)	391-3541
1st Year (Bart Heagy)	391-3542
1st Year (Matthew Bixler)	391-3542
1st/2nd Year (John Sweda)	391-3517

Masonry Construction Technology

2nd Year (Chad Hummel)	299-7735
1st Year (Michael Gardner)	391-3539

Mechanical Engineering Technology

2nd Year (Christopher Way)	299-7697
1st Year (Amy Jo Mumma-Frank)	299-7709

Metals Fabrication & Welding Technology

2nd Year (Christopher Unruh)	299-7766
2nd Year (Stacy Gillis)	391-6968
1st Year (Joseph Battle)	391-6954
1st Year (James Stewart)	391-7219

Plumbing Technology

2nd Year (Kemon Papadimitrou)	299-7765
1st Year (Skyler Major)	299-7784

Residential Remodeling Technology

2nd Year (Charlie Byers)	391-3545
2nd Year (Joseph Kiely)	299-7783
1st Year (Loren Bishop)	391-6955
1st Year (Matthew Krupa)	391-1367

Water & Environmental Technology

2nd Year (Heath Edelman)	391-6948
1st Year (Shannon Butler)	391-7229

Welding Technology

2nd Year (Jeffrey Swoyer)	391-6931
2nd Year (Joshua Seitzer)	391-7233
1st Year (Michael Marino)	391-6931
1st Year (Andrea Biesecker)	391-7202

GENERAL EDUCATION FACULTY

Computer Information Systems

Tara Faro	391-3505
Kelsey Haldeman	391-6939

Economics and Business Management

Heriberto Arjona	295-7819

English and Humanities

Dr. Sarah D'Stair	391-3527
Laura Malone	391-3554
Marla Bucy	299-7759
Patricia Meley	299-7760
Dr. Lisa Marie Middendorf	391-7223
Melissa Weathers	391-7209

Math

Trina Hess	391-7239
Dr. Nora Othman	391-3501
Renee Alshouse	391-3520
Dr. Nasser Bogale	391-3515
Mary Phillips	

Science

Dr. Patricia McKinney	299-7238
David Manning	299-7692

Sociology

Dr. Vincent Miles	299-7763

CAMPUS SECURITY

Main Number	391-7225

RESIDENCE LIFE PHONES

Director: Dawan Worsley	299-7681
Assistant Director: Anja Homberger	299-7664

Residence Hall Advisors

Armstrong Hall
Director: Reggie Minter 391-7325

Bourne, Brenner, and Metzger Halls
Director: Ginene McDowell 606-1542

Herrington Hall (Men)
Director: Anja Homberger 299-7664

Griscom Education Center
Kelly Montgomery 299-7779

Reighard Hall
Dawan Worsley 299-7681

SERVICE AREA PHONES

President	299-7722	Information	299-7730
VP for Academic Affairs	391-1364	Intramurals	391-1357
VP for Finance & Admin	391-6947	Library	299-7754
VP for Student Service	299-7752	Lost and Found	299-7730
Dean of Student Success	391-3506	Maintenance	299-7782
Director of Residence Life	299-7681	Marketing/Public Relations	299-7210
Advancement Office	295-9666	Health Services	299-7769
Alumni Office & Foundation	295-9666	Parking	391-7225
Assessment & Accountability	391-3595-	Personnel	391-6935
Career Services	396-7188	Purchasing	299-7787
Counseling	391-7213	Receiving	299-7781
Accessibility Services	299-7408	Registrar	391-7231
Diversity, Equity & Inclusion	391-1365	Security (Main)	396-7165
Employment (Student)	396-7188	Security (Griscom)	391-7225
Enrollment Services	537-0641	Student Services	299-7752
Financial Aid	391-3510	Student Payroll	391-3518
Athletic Director	299-7752	Student Transcripts	299-7796
Dining Services	299-7740	Veterans Information	391-7206

Associate of Applied Science Degrees

Programs of Study

Architectural Technology

What is Architectural Technology?

The profession of architecture touches everyone's life and is central to solving problems in the creation of a built environment. Architectural technicians are problem solvers who work with clients on the design of buildings. They also create plans and specifications that direct the construction of a building and coordinate the work of other professional consultants and engineers.

Managing information and responding to the many diverse requirements of governments, building conditions, and society is increasingly important in the construction industry. The architectural profession is rapidly integrating the technology of computers and automation to assist in the management of information and to free up time for creative work.

The instruction in Architectural Technology at Thaddeus Stevens College prepares students to become qualified for employment in the architectural profession and to transfer into architectural programs in nationally-accredited universities. The instruction also provides retraining in technological applications for people currently employed in or reentering the profession.

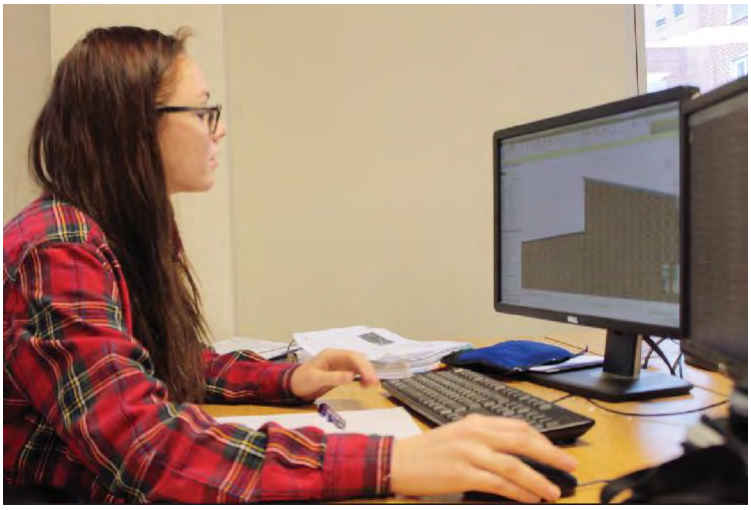
High school prerequisites for this program are Algebra I & II and a GPA of at least 2.5.

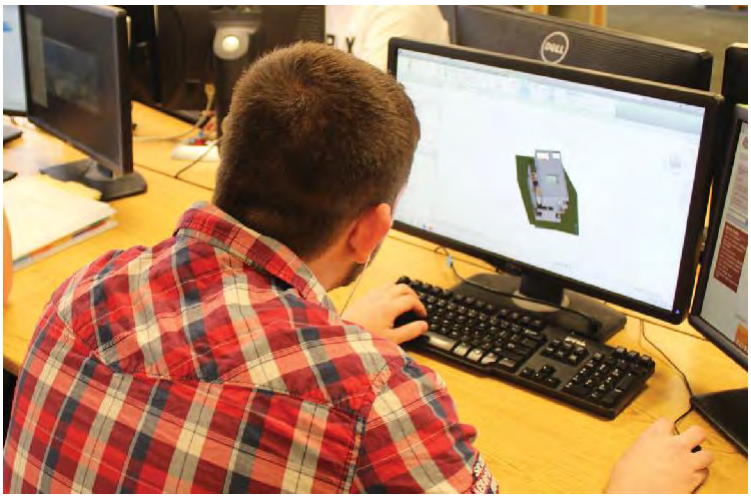
A Graduate of this Program Will be Able to:

- Demonstrate technical proficiency in utilizing industry-standard software and tools for architectural design.
- Apply architectural design principles and methodologies efficiently to create innovative and functional solutions.
- Understand fundamental construction materials, methods, building systems, and structural principles applicable to architectural projects.
- Interpret and apply relevant building codes, zoning regulations, and accessibility standards within the architectural design processes.
- Develop communication skills through visual, written, and oral means, producing comprehensive architectural documentation and presentations suitable for various stakeholders.
- Collaborate effectively within multidisciplinary teams, demonstrating the ability to contribute constructively to project planning, design, and implementation.
- Apply problem-solving, critical-thinking, and mathematical reasoning to analyze architectural challenges, propose creative solutions, and make informed design decisions efficiently.
- Understand ethical responsibilities, professional standards, and the societal impact of architectural decisions.
- Demonstrate the ability to manage projects effectively, optimizing time allocation from conceptualization to execution, considering scheduling and regulatory constraints.
- Engage in lifelong learning, keeping pace with technological advancements, industry trends, and sustainable practices to enhance productivity within the field of architectural technology.

Jana Belack, Instructor
M. Arch: Boston Architectural College
BS: Boston Architectural College
AAS: Thaddeus Stevens College of Technology
Registered Architect, The Commonwealth of Massachusetts
Registered Architect, The Commonwealth of Pennsylvania
American Institute of Architects Member
NCARB Certified
LEED AP BD+C

Tedd R. Williams, Instructor
B. Science: Eastern Mennonite University
AAS: Thaddeus Stevens College of Technology
PA L&I: Uniform Construction Code Certification
ICC: Accessibility Inspector/Plans Examiner
Autodesk: AutoCAD Certified Professional





Model Schedule For
Architectural Technology

Semester 1	
ARCH 106: Fundamentals of Architectural Technology	**3**
ARCH 111: Material of Construction	**3**
ARCH 124: CAD in Architecture	**3**
ARCH 157: Construction Specifications	**3**
†^MATH 137: Intermediate Algebra (or higher)	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 2	
ARCH 116: Residential Details	**3**
ARCH 162: Working Drawings	**3**
ARCH 167: Rendering and Illustrations	**3**
***ARCH 172: Advanced CAD in Architecture**	**3**
***MATH 141: Trigonometry (or higher)**	**3**
ENG 106: English Composition	**3**
Semester 3	
***ARCH 207: Advanced Methods and Materials of Construction**	**3**
ARCH 212: Structural Systems	**3**
ARCH 216: Site and Microclimate Design	**3**
ARCH 262: Life Safety and Building Codes	**3**
***PHYS 113: Statics**	**3**
***ENG 216: Technical Writing**	**3**
Semester 4	
ARCH 257: Environmental Systems	**3**
ARCH 267: Architectural History and Theories of Design	**3**
ARCH 272: Individual Design Studio	**3**
ARCH 277: Group Design Studio	**3**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
General Studies Elective	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Architectural Technology (ARCH)

ARCH 106 (3 credits)
Fundamentals of Architectural Technology
Serves as an introduction to architectural technology, which is the application and study of construction technologies, specific to the design of residential building structures. Focuses on the effective and efficient communication of design concepts to all invested stakeholders. In-depth analysis, exploration, and development of individuals' thoughts, through means of graphic representation, to satisfy performance, production, and procurement criteria.

ARCH 111 (3 credits)
Materials of Construction
Presents fundamental aspects of the design profession. Involves the application and technology of materials. An appreciation of the limits and the potential of materials is fundamental to well-executed designs. Investigation and analysis of actual materials and their application as a means to give form and substance to creative ideas.

ARCH 116 (3 credits)
Residential Details
Research of specific building elements necessary for construction. Application of knowledge and creativity in the development of details. Typical and standard details applicable to residential construction. Learning how to communicate with the construction crew. Involves sketch details and drafted details. Also requires drawings and exercises showing typical details and drafting skills.

ARCH 124 (3 credits)
CAD in Architecture
Intensive introduction to Computer-Aided Drafting (CAD) including computer literacy, hardware, software, input, output, printing, introductory computer drafting skills, and completion of specific drawing exercises. Instruction is based on current industry standard software/applications. Use of CAD to draw architectural elements such as floor plans, building sections, exterior elevations, lighting, furniture, and other related elements.

ARCH 157 (3 credits)
Construction Specifications
This course offers an in-depth exploration into the critical role of construction specifications in architectural technology. Students delve into the creation, interpretation, and implementation of detailed construction specifications pivotal in translating design concepts into tangible structures. Students examine the fundamental principles of construction specifications, encompassing materials, methods, and standards utilized in residential construction. Emphasis is placed on industry standards, regulatory compliance, and ethical considerations embedded within construction documentation.

ARCH 162 (3 credits) Working Drawings
Students design their own houses in this capstone course, creating a complete set of working drawings including site plans, floor plans, elevations, building sections, wall sections, details, and schedules. Students prepare preliminary presentation drawings; create a presentation model and a structural model; and prepare a full set of working drawings. CAD is used to prepare all drawings.

ARCH 167 (3 credits) Rendering and Illustrations
Students learn how to use perspective, color, shadow, and computer-aided animation and rendering to illustrate architectural design. Work in this course builds on skills explored in previous courses.

ARCH 172 (3 credits)
Advanced CAD in Architecture
An intensive follow-up to ARCH 122, this course uses Computer-Aided Drafting (CAD) for efficient production of architectural drawings. Completes the development of a solid foundation of CAD skills, designed to give students an appropriate entry-level skill set.

ARCH 207 (3 credits)
Advanced Methods and Materials of Construction
Detailed investigation of commercial construction systems with a more in-depth review of construction materials than introduced in the first year. Materials considered in a systems approach, including floor, wall, roof, glazing, and finish systems. Selected criteria of cost, installation, long-term material performance, limitations, and whole-building integration are identified for individual materials.

ARCH 212 (3 credits) Structural Systems

Historical development of structures. Includes the loads and stability of structures. Identifies various stresses, including tension, compression, sheer, and bending. Looks at design requirements, characteristics, limitations, and rules of thumb utilizing wood, steel, and concrete systems; analyzes beams, columns, frames, trusses, and connection components and details in structural design.

ARCH 216 (3 credits) Site and Microclimate Design

Specifies site parameters and impact on building design from site investigation to finished project. Reviews initial design concerns, site vegetation, terrain, winds, waterways, solar access, and seasonal effects. Building design issues are landscaping, grading and drainage, site utilities, paving and roadways, and site amenities.

ARCH 257 (3 credits) Environmental Systems

Theory, history, design, and explanation of systems affecting building environmental quality. Includes review of plumbing, water, and sanitary systems; the options available in the selection of heating, ventilating, and air conditioning systems; and an energy overview (thermal control, heat load analysis, utilization of solar alternatives, and understanding of indoor air quality concerns). Electrical equipment requirements and loads, artificial and natural lighting and illumination criteria and fixtures are covered, as well as acoustical control construction practices and vertical transportation impact on building design.

ARCH 262 (3 credits) Life Safety and Building Codes

Philosophy and approaches to life safety, including fire protection systems and the impact of various types of construction on life safety. Traces evolution of building codes and analyzes the building code compliance of various hypothetical case studies. Covers means of egress and construction system assemblies. Reviews barrier-free design requirements and implication on project design.

ARCH 267 (3 credit) Architectural History and Theories of Design

Overview of architecture, from prehistoric to the 20th century and beyond, including Ancient, Middle Ages, Renaissance, Eastern, Colonial, and Modern. Stylistic characteristics of historical architecture reviewed and analyzed with specific concentration on American architecture. Includes history of urban design and the current changing face of the building environment, from city and suburb to farm.

ARCH 272 (3 credits) Individual Design Studio

Utilization of material learned throughout the previous three semesters. Students select commercial/institutional building type and design the entire building, from initial design concept to completion of construction documents. Students are responsible for building programming, square footage requirements, design concept, and integration of site, architectural, structural, mechanical, and electrical considerations. Finished project includes a written building program, construction drawings, outline specification, and presentation graphics.

ARCH 277 (3 credits) Group Design Studio

Project simulates a real-world approach to professional practice by involving the design of a hypothetical renovation and addition to an existing campus building. Small student teams are responsible for delegating all project tasks and monitoring project deadlines and completion dates. At the end, a group effort includes initial design concept, construction budget estimates, construction drawings, outline specifications, and presentation graphics.

ARCH 320 (3 credits) Understanding Greece: Art, Architecture History, Mythology

A twelve-day guided tour of architectural sites in Greece. The focus is on understanding the contribution of Greece to Western architecture. Studying architecture exposes students to the social, political, economic, and technological history of Greece. Introductory lectures prepare students before the course, which is offered at the end of the spring term.

ARCH 340 (3 credit) Understanding Italy's History through Its Art and Architecture

A ten-day guided tour of architectural sites in Italy. The focus is on understanding the contribution of Italy to Renaissance art and architecture. Studying art and architecture exposes students to the social, political, economic, and technological history of Italy. Introductory lectures prepare students before the course, which is offered during the spring break of the spring term.

ARCH 360 (3 credits) Understanding Spain's History through Its Art and Architecture

A ten-day guided tour of architectural and cultural sites of Spain. The focus is on understanding the contribution of Spain to world of art and architecture. Studying art and architecture exposes students to the social, political, religious, economic, and technological history of Spain. Introductory lectures prepare students before the course, which is offered during the spring break of the spring semester.

Automotive Technology

What is Automotive Technology?

Automotive Technology is designed to give students a basic understanding of automotive construction, theory of operation, and standard industry service and repair procedures. This instruction gives them not only the knowledge to perform vehicle service but to develop the skills necessary to diagnose unit malfunctions. Two of the most important skills that will be developed are problem solving and critical thinking.

A Graduate of this Program Will be Able to:

- Diagnose and repair common malfunctions of the following automotive systems: engine lubrication and cooling; brake, suspension, steering, wheels and tires, electrical (including wiring, batteries, starting, charging, and ignition), fuel, onboard electronics/computers, and engine assemblies; and power train components including manual and automatic transmissions and transaxles.
- Develop the knowledge and skills to operate the latest generation of computerized test and diagnostic equipment, including digital storage lab scopes, onboard scan tools, and a chassis dynamometer, as well as develop skills in the safe operation of a chassis dynamometer.
- Develop sound, basic, and safe automotive shop practice skills, including environmental protection.
- Develop good basic shop habits, including demonstrating a good attendance record, punctuality, a willingness to work, and an ability to work with others as a team.
- Apply basic laws of physics/scientific principles to automotive systems and components when performing in-shop testing exercises and diagnosing problems. This includes exam questions containing diagnostic questions.
- Record diagnostic testing data and reports using necessary mathematics; solve basic problems using elementary algebra.
- Locate and interpret technical data represented in shop repair manuals, diagnostic charts, and wiring diagrams. This data will be in hard print and/or various electronic media sources.
- Demonstrate good automotive shop management practices, including student management, customer relations, shop procedures, and writing repair orders.
- Prepare to take and pass the ASE automotive tests series after successful completion of this program and having at least one additional year of on-the-job experience in the particular area or areas that will be tested.
- Prepare to accept the challenge of continuous training in the automotive field, that is, learning to learn, which will be necessary to adapt to new technologies and to become a problem solver and a critical thinker.
- Obtain the Pennsylvania Auto Safety Inspection Certificate and the Pennsylvania Emissions tester certificate.

Martin Christian, Associate Professor
AAS: Thaddeus Stevens College of Technology
PA Vocational Certificate in Automotive Technology from Penn State University
PA Certificate of State Inspection Instructor
PA Certificate of Emission Inspection Instructor
PA Certified Emission Repair Technician
ASE Certified Master Technician, A1-A8
ASE Certified Advanced Engine Performance Specialist L1
ASE Certified Master Engine Machinist
ASE Certified Heavy Truck Technician T2 and T6
ASE Certified Under Car Specialist
GM Certified Technician

Jeffrey Gieniec , Instructor
BS: Eastern Mennonite University
AAS: Reading Area Community College
Ford Senior Master Technician
General Motors World Class Technician
PA Safety Inspector Class 1-4
PA Emissions Inspector
PA Emission Repair Technician
ASE G1, A1-A-8 and L1 Master Technician
ASE ETL Program Evaluator

Allen Fry, Instructor
Certificate in Automotive Technology from Penn State University
PA certificate of state inspection
ASE certified A4R Suspension and Steering
ASE certified A5R Brakes
ASE certified A6R Electrical/Electronic System
G1R Automotive Maintenace and Light Repair
GM Certified Technician

Naaman Hedge, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Automotive Technology

Semester 1	
AUTO 106: Automotive Service Fundamentals	**2**
***AUTO 111: Internal Combustion Engine Service**	**4**
AUTO 116: Chassis Service/Steering & Suspension	**3**
MATH 126: Technical Math I (or higher)	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 2	
AUTO 156: Automotive Brake Systems	**3**
AUTO 161: Automotive Electrical/Electronic Principles	**4**
***AUTO 166: Engine Electrical/Electronic Principles**	**4**
AUTO 171: Fuel and Emission Systems	**4**
PHYS 106: Physics for Everyday Life (or higher)	**3**
ENG 106: English Composition	**3**
Semester 3	
***AUTO 206: Advanced Engine Diagnosis**	**3**
***AUTO 211: Advanced Chassis Service**	**3**
AUTO 216: Independent Diagnosis and Repair	**3**
AUTO 223: Pennsylvania Safety Inspection/Enhanced Emissions Inspection Certification	**3**
ENG 221: Public Speaking OR	**3**
***ENG 216: Technical Writing**	
Humanities Elective	**3**
Semester 4	
AUTO 256: Heating and Air Conditioning	**2**
AUTO 261: Drive Train and Manual Transaxle Service	**3**
AUTO 266: Advanced Engine Computer Control Analysis	**3**
AUTO 271: Automatic Transaxle Service	**4**
***AUTO 276: Fuel Injection Systems**	**3**
General Studies Elective	**3**
General Studies Elective	**3**
Additional General Education Requirements	
HEAL 106 OR HEAL 111	**1**
TOTAL CREDITS	**76**

** Prerequisite or Co-requisite Required. See Course Description.*

Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Automotive Technology (AUT0)

AUTO 106 (2 credits)
Automotive Service Fundamentals
This course presents an overview of the automotive industry, including an introduction to the automobile and its systems. Jobs in the automotive service field are covered as are shop work and service information and how to find it. Electronic information systems Mitchell 1 and ALLDATA are utilized. Safety in the auto shop, including the proper use of basic hand and common power tools, is demonstrated. Environmental protection is taught, including recycling and the proper use and approved disposal methods of common automotive shop chemicals are discussed. Demonstrations and hands-on training in common automotive shop practices, such as tube flaring and thread construction and repair. Fasteners, including torque to yield, are thoroughly covered. Measurement systems, USC and metric, are discussed, including hands-on training using all common automotive precision measurement tools like micrometers, dial indicators, and torque wrenches. The theory and servicing of automotive rolling bearings are covered; wheel bearings are emphasized.

AUTO 111 (4 credits)
Internal Combustion Engine Service
This course covers the basic theory, design, and operating fundamentals of spark ignition piston engines. Extensive mechanical testing and diagnostic procedures are demonstrated, including compression and vacuum testing utilizing wave form analysis with lab scopes. Power balance, including both intrusive and non-intrusive are demonstrated. Running and snap-throttle compression testing are featured. Methods to check valve timing on pushrod and overhead cam engines are demonstrated. Engine lubrication systems and automotive lubricants are studied; diagnostic and test procedures are performed. Engine cooling systems, theory, and standard service procedures are also included. Machining of engine components and restoring of all tolerances are covered. Cylinder head servicing is performed, and the three-angle cut method is used. Complete disassembly, all precession measurements, component servicing, resealing and reassembly on actual engines takes place.
Prerequisite: AUTO 106

AUTO 116 (3 credits)
Chassis Service/Steering and Suspension
The basic theory and operating principles of automotive suspension and steering systems are studied; service, repair and diagnostic procedures are featured. Tire and wheel service and computer balancing are performed by students. The Hunter Road Force wheel balancer and vibration solver, Model 9700 is featured. Even the widest tires mounted on the newest custom wheels will be no problem when learning to use the Hunter Model TS3500 tire changer. The safe and proper method of airbag module handling is taught. Wheel alignment principles are covered, including both the simple basic maintenance wheel alignment and the more complicated diagnostic wheel alignment. Complex alignment factors such as tire scrub radius, included angle and steering axis inclination, is covered in depth. Hands-on tire and wheel servicing, pre-alignment inspections, and wheel alignment measurements are taken on live vehicles.

AUTO 156 (3 credits)
Automotive Brake Systems
Modern automotive brake systems and their operating principles are studied and standard repair and service procedures are performed. Drum, disc/drum, and four-wheel disc systems are featured. Power-assist systems and parking brake systems are included. An introduction to the theory and servicing of antilock brake systems, including first generation Bosch type and the newest non-integral systems, are covered. Trouble code retrieval and onboard diagnostics using scan tools is featured.

AUTO 161 (4 credits)
Automotive Electrical/Electronic Principles
The theory of electricity—including Ohm's Law, Kirchhoff's Law, series and parallel circuits, AC and DC current flow—is studied. Basic test meter procedures are featured, and solid state devices, integrated circuits, and on-board microcomputers are explained. Automotive wiring and common automotive accessory systems are studied, and servicing and repair procedures are performed. Automotive batteries, their construction, theory of operation, and standard service procedures are also included. Hands-on extensive electrical system service is performed using digital volt ohm meters and automotive lab scopes. The PDI DVOM, the Fluke 98 Series II, Vetronix Master Tech, and the cutting-edge Vetronix MTS 5100/5200 lab/ignition scopes are all featured. Low resolution amp clamps from Fluke and Vetronix allows students to experience the latest diagnostics using the latest amp-ramping diagnostic procedures. New material has been incorporated into the electrical and fuel and emissions courses after the instructors attended drive ability training/seminars hosted by such nationally recognized gurus as Jim Linder, Linder Technical Services, Indianapolis; Bill Fulton, Ohio; Jerry Truglia, New York; Dan Marrinucci, Motor Magazine; and Mac Vanden Brink, Michigan.

AUTO 166 (4 credits)
Engine Electrical/Electronic Principles
Cranking circuits and starter motors, charging systems, alternators and voltage regulators, and ignition systems (DIS & EI, including C.O.P./coil on plug) are studied. Simulators are featured to help students better understand system operation. Construction, theory of operation, standard service procedures, and system malfunction diagnosis are covered using the latest test equipment; the new Vetronix MTS 5100/5200 lab scope/engine analyzers, and the Fluke 98 series II is featured. Hands-on comprehensive testing procedures are performed on live vehicles. One of the major goals of this course is for students to gain skills in problem solving through the use of on-car testing and diagnostic procedures. This course culminates with each student performing comprehensive tests on the engine mechanical condition, battery, cranking system, charging system, and the complete ignition system. This is followed by a report analyzing good/bad results.
Prerequisite: AUTO 111

AUTO 171 (4 credits)
Fuel and Emission Systems
The principles of fuel systems are studied. Fuel delivery systems and fuel pump testing are covered. The history of emissions control systems, from their inception up to the present, is included. Control system theory and operating principles are studied. Service and testing procedures are demonstrated, and on-car tests are performed on all the major emissions systems. The latest evaporative leak tester smoke machines that use nitrogen is used for training. Standard and feedback carburetor operating principles are still briefly covered. Introduction to alternative fuels, electric, and hybrid vehicles are presented. Highlights of the latest Pennsylvania Emissions Testing procedures is featured, and the groundwork of 5-gas diagnostic testing is laid.

AUTO 206 (3 credits) Advanced
Engine Diagnosis
Covers the use of the Vetronix MTS 5100/5200 Engine Analyzer, Vacutec Leak Detector, and the Mustang Chassis Dynomometer. Theory-related instruction is given on 5-gas analysis and interpreting the results of the analyzer tests with special emphasis on how they relate to advanced diagnosis of ignition, carburetion, fuel injection, charging, cranking, and engine and emission control systems. Demonstrations on hookup and operation are followed by student practice on shop vehicles, and when possible, by repair of client vehicles.
Prerequisite: AUTO 166

AUTO 211 (3 credits) Advanced
Chassis Service
The Hunter P611 four-wheel aligner featuring the DSP400 Series Sensors (cameras) and the DSP300 Series Sensors are used in this course. Theory-related instruction is given on alignment with special emphasis on 4-wheel alignment. Disc and drum brake machining along with applying non-directional finishes on the AMMCO brake lathe are covered. On-the-car rotor truing is covered featuring the Pro-Cut PFM-900 Smart Lathe. Demonstrations on hook-up and operation are followed by student practice on shop vehicles, and when possible, by repair of client vehicles.
Prerequisites: AUTO 116 and AUTO 156

AUTO 216 (3 credits)
Independent Diagnosis and Repair
Opportunity to diagnose and make repairs on client vehicles in a simulated dealership atmosphere. Experience acting as shop forepersons, using and writing repair orders, ordering parts, and keeping track of hours on the job and using materials. All repairs relate to the courses taken.

AUTO 222 (3 credits)
Pennsylvania Safety Inspection/Enhanced Emissions Inspection Certification
Pennsylvania Department of Transportation Vehicle Equipment and Inspection Regulation /Enhanced Emissions Inspector manuals are covered, as per state requirements. A demonstration of the proper procedure for performing a safety inspection on a vehicle is given. Students practice on shop vehicles. Each student is given the opportunity to take the Pennsylvania Safety Inspection written and performance tests along with the Enhanced Emissions written test and computer-based training/tactile test. The Commonwealth, upon satisfactory completion of these tests, will grant a license for each.

AUTO 256 (2 credits) Heating and Air Conditioning
Covers the theory of refrigeration and the operating principles of manual and automatic temperature control systems, with special emphasis on diagnosis, service, and repair. Refrigerant recovery, recycling, identification, and recharging techniques on R-12 and R-134a systems are covered in accordance with federal law. The Sun Air-Kare charging station, Everco EREC Recovery/Recycle station, and the Robinair Enivro Charge Combination are featured. Demonstrations given on hook-up, operation, and servicing, followed by student practice on shop vehicles, training aids (clutch and seal replacement) and repair of client vehicles.

AUTO 261 (3 credits)
Drive Train and Manual Transaxle Service
Basic operating principles of manual transaxles, differentials, clutches, and universal joints. C-V joints, drive axles, and drive shafts, along with diagnosis and basic service techniques. Demonstrations given on differential set-up, replacing universal and C-V joints, also clutch replacement and adjustment. Students practice disassembly, precision measurements, adjustments and assembly techniques on training aids and work on client vehicles when possible.

AUTO 266 (3 credits)
Advanced Engine Computer Control Analysis
Sensor-related theory, testing procedures, and waveform analysis are studied. OBD-II theory and the related testing procedures are covered. How to use shop manuals to follow manufacturers' procedures for troubleshooting engine drivability problems on computer-controlled cars, along with lab scopes (Fluke 98 Series II), break out boxes, and the Master Tech 3100 hand-held scanner are used to recover trouble codes from the computer's memory and reading sensor stream data. Emphasis is placed on the diagnosis and the interpretation of the results. Students practice on shop vehicles and repair client vehicles when possible.

AUTO 271 (4 credits) Automatic Transaxle Service
Basic principles of automatic transmissions, including lock-up torque converters, diagnosis, and basic service techniques. Chrysler 40TE electronic transaxle theory is covered. Demonstrations given on pressure checks and shift points, using gauges and a chassis dynamometer. Students practice disassembly, precision measurements, testing, adjustments, and assembly techniques on training aids. Where possible, repair on client vehicles is included.

AUTO 276 (3 credits) Fuel Injection Systems
The basic operating principles of the Bosch mechanical fuel injection system along with Chrysler and G.M. throttle body and port systems are covered in this course. Special emphasis is placed on diagnosis and service techniques. The EMI-TECH fuel system analyzer is featured. Cleaning a fuel injection system on the vehicle is covered featuring the Bilstein EFI-800 fuel system service center. Students practice on shop vehicles and work on client vehicles when possible.
Prerequisite: AUTO 171

Business Administration

What is Business Administration?

All employers need highly skilled business personnel to keep their operations running smoothly and successfully. Dynamic careers in business are available in virtually every sector of the economy. Job openings are plentiful, working conditions are comfortable, and opportunities for advancement are within reach for those with a two-year degree.

The Business Administration program at Thaddeus Stevens College provides students with the marketable skills, academic background, and experience required to meet the needs of the workforce or transfer to a four-year university. The broad-based curriculum is designed to prepare recent high school graduates or those re-entering the workforce to reach their full potential in many varied business fields. Faculty are focused on training students to manage rapidly changing technology, to lead and motivate others, to prepare and analyze financial information, and to succeed in the global marketplace. Entry-level job titles for recent graduates include sales and service account manager, accounts payable and receivable clerk, administrative assistant, public relations coordinator, operations coordinator, small business owner, human resources assistant/specialist, and facility supervisor.

A Graduate of this Program Will be Able to:

- Demonstrate excellent communication skills, including the ability to speak and write clearly and effectively, especially for the business setting.
- Demonstrate an understanding of emerging online technologies and trends and their influence on the electronic commerce marketplace.
- Use critical thinking and mathematical skills to analyze and solve accounting and business math problems.
- Demonstrate advanced keyboarding skills as well as spreadsheet, database management, word processing, and presentation applications.
- Assess and influence behavior among peers, subordinates, and managers; work well as an individual, in groups, and on teams.
- Demonstrate an understanding of the marketer's tasks and knowledge in the principles of how those tasks can be accomplished.
- Investigate the basic practices and principles involved in the administration of a modern business, and evaluate various career paths that may be pursued.
- Predict managerial success by studying the primary theories, principles, and processes of management.
- Demonstrate an understanding of the judicial process and business law in areas such as leases, contracts, and employment law, and how they impact various forms of business organizations.
- Display a general knowledge of the social sciences and understand their effect on the workforce and society.

Danielle Fox, Assistant Professor
BBA: Temple University
MBA: LaSalle University

Bronwyn Laughner, Instructor
BA: Lycoming College
MBA: Bloomsburg University of Pennsylvania
PhD: Robert Morris University (Pittsburgh)

Model Schedule For Business Administration

Semester 1	
BUAD 117: Introduction to Business	**3**
BUAD 157: Principles of Marketing	**3**
BUAD 160: Principles of Management	**3**
BUAD 166: Business Computer Applications I	**3**
MATH 137: Intermediate Algebra (or higher)	**3**
BUSN 106: Small Business Management	**3**
Semester 2	
BUAD 180: Intro to Corporate Finance	**3**
BUAD 190: Intro to Supply Chain Management	**3**
BUAD 257: Electronic Commerce	**3**
***BUAD 266: Business Computer Applications II - Data Analytics**	**3**
Science Elective	**3**
ENG 106: Composition	**3**
Semester 3	
BUAD 201: Accounting Principles I	**4**
BUAD 214: Introduction to Law and Business Law	**4**
BUAD 222: Organizational Behavior	**4**
BUAD 226: Business Skills Lab	**1**
MATH 150: Elements of Statistics	**3**
ECON 230: Microeconomics	**3**
Semester 4	
***BUAD 251: Accounting Principles II**	**4**
BUAD 268: Human Resources Management	**4**
BUAD 271: Business Skills Lab	**1**
BUAD 277: Business Communications	**4**
ECON 240: Macroeconomics	**3**
ENG 221: Public Speaking	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**75**

** Prerequisite or Co-requisite Required. See Course Description.*

Students may not take CIS 111 or 211 since this material is covered in BUAD 166 and 266

Business Administration (BUAD)

BUAD 117 (3 credits)
Introduction to Business
This course is designed to introduce students to the primary fields of business and to inform them of the various career paths that they may pursue. The basic principles, forms, and practices involved in the administration of a modern business are examined.

BUAD 157 (3 credits)
Principles of Marketing
An interactive approach to guide students in becoming better business people. The skills and responsibilities of planning, producing, pricing, promoting, and distributing are presented as an art and a science through realistic marketing situations and case studies.

BUAD 160 (3 credits) Principles of Management
This course is designed to prepare BUAD students for management success by studying the primary theories, principles and processes of management. Students will gain valuable insight in issues such as leadership, planning and control, problem solving and creativity, organizational culture and change, ethics and social responsibility, and working in and managing groups.

BUAD 166 (3 credits) Business Computer Applications I
Microsoft Office programs (Excel®, Access®, PowerPoint®, and Outlook®) are studied in order for students to develop intermediate skills in spreadsheet, database, e-mail, and presentation applications.

BUAD 180 (3 credits)
Introduction to Corporate Finance
This course will cover the fundamental principles of Corporate Finance and explore how companies raise funding, structure capital, and manage investments to maximize stakeholder returns. Students will learn about analyzing cash flows, investing in stocks and bonds, evaluating risk and return, and capital budgeting.

BUAD 190 (3 credits)
Introduction to Supply Chain Management
Introduction to the principles of Supply Chain and Operations Management underlying business today. This course is designed to provide students with an understanding of product and process design, inventory management, logistic networks, demand planning, sales and operations planning, material planning, project management, and sustainability.

BUAD 201 (4 credits) Accounting Principles I
Introduction to the principles of accounting, the accounting cycle, the interpretation and recording of financial data, and the summarizing and reporting process. Emphasis is on the sole proprietor of a business. This course provides a foundation for further study in the accounting field.

BUAD 214 (4 credits) Introduction to Law and Business Law
Designed to give students an introduction to the sources of law, judicial process, and an overview of laws including criminal law, tort law, property law (including personal property, real estate, and landlord-tenant law), and wills, estates, and trusts. Also provides a basic understanding of contracts, sales and leases of goods, secured transactions, agency and employment law, and forms of business organizations

BUAD 222 (4 credits) Organizational Behavior
This course is a study of workplace behaviors, structures, and processes. Self-analysis and reflection are practiced in small groups through case studies, surveys, and discussion. Motivational theories and leadership styles are surveyed; decision making and business designs and cultures are investigated.

BUAD 226 (1 credit) Business Skills Lab
Accounting lab for working individually and in groups to complete accounting problems and worksheets. Additional assignments in related business coursework due weekly.

BUAD 251 (4 credits) Accounting Principles II
This course is a continuation of Accounting Principles I. Analysis and discussion of more complex financial concepts and statements are conducted.
Prerequisite: BUAD 201

BUAD 257 (3 credits) Electronic Commerce
Overview of emerging online technologies and trends and their influences on the electronic commerce marketplace. Explores nature and impact of e-commerce on business operations, resources, and management. Upon completion of the course, students will have a firm grasp of global e-commerce business trends and the technologies required to implement them.

BUAD 266 (3 credits)
Business Computer Applications II – Data Analytics
Students will learn to examine data, ask the right questions, perform data analysis, and report the results to enhance business decision making. Students will learn data analytics and data visualization skills, along with a mastery of programs such as Microsoft Excel® and Power BI®, and Tableau©. Excel lessons will build on skills learned in BUAD 166 and prepare students to take the Microsoft certification at the intermediate level (MOS Excel©).
Prerequisite: BUAD 166

BUAD 268 (4 credits)
Human Resources Management
This course prepares students to work in administrative and management positions and serves as a basis of further study in the field of human resources management. In accordance with suggested Society for Human Resource Management (SHRM) guidelines, both personal competencies and business policies are addressed in this course.

BUAD 271 (1 credit) Business
Skills Lab
Learn the fundamentals of QuickBooks, a popular accounting software, which is used in many small businesses. This program provides an opportunity to reinforce fundamental accounting principles and to learn a computerized approach to handling business transactions.

BUAD 277 (4 credits)
Business Communications
A practice in writing, revising, and editing business communications, including memos, business letters, e-mail messages, reports, web-based information, and job search documents. The ability to convey information in a clear, concise manner is developed along with critical thinking and communication skills.

Cabinetmaking & Wood Technology

What is Cabinetmaking and Wood Technology?

Repeated surveys of the woodworking industry have revealed the number one concern facing the industry for the 21st century is the lack of skilled and motivated workers. There is a continual need in the furniture, kitchen cabinet, and architectural millwork industries for persons possessing the skills and knowledge required to produce high quality wood products.

The Cabinetmaking and Wood Technology program is committed to continually providing students with the skills and knowledge required for rewarding jobs in the various woodworking industries. Based upon the belief that students learn best by working on projects, this program is strongly project-oriented.

Hence, students will produce several pieces of fine furniture after which they will further develop and display their skills by producing an advanced wood project of their choosing. Through the use of the College's housing project, students will also learn to list and produce all the millwork items required for a residential house. Additionally, students will design, produce, finish, and install a complete kitchen. Through the use of lectures, demonstrations, and the above projects, the program faculty feel they can best prepare students for careers in any of the three major woodworking fields: fine furniture, architectural millwork, and kitchen cabinetry.

A Graduate of this Program Will be Able to:

- Identify nomenclature and the proper use of hand and portable power tools.
- Apply the knowledge of wood as a material in the proper construction of various fine furniture projects.
- Demonstrate safe practice in the use and setup of trade machinery.
- Demonstrate skill in the use of drafting equipment in order to produce shop drawings.
- Read shop blueprints to develop accurate material lists.
- Demonstrate knowledge of finishing materials along with the skills required for wood finishing including the following: wood preparation, wood coloring using various stains, and top coating using oil finishes, shellacs, varnishes, and lacquers.
- Demonstrate the ability to list and prepare millwork items required for various building projects.
- Demonstrate proficiency in grinding knives for the shaper and moulder and the setup of machines for production.
- Demonstrate the ability to produce jigs and fixtures required for production work.
- Demonstrate the skills and knowledge necessary for kitchen layout, design, construction, and installation.
- Develop the skills and knowledge required for producing various types of countertops.
- Develop a strong work ethic along with the ability to work independently and as a contributing member of a team.

Jeremiah Polynone, Instructor
BS: Millersville University
AAS: Thaddeus Stevens College of Technology
AWI Central PA Chapter Board Member
Furniture Society Member
Member of the Lancaster Designer Craftsmen,
Lancaster Chapter of the PA Guild of Craftsmen

Evan Germann, Instructor
BS: University of Kansas
AAS: Thaddeus Stevens College of Technology
Certificate in Historic Wood Preservation and
Repair / Preservation Trades Technology Program

Model Schedule For
Cabinetmaking & Wood Technology

Semester 1	
CABM 106: Hand Tools and Portable Power Tools	**4**
CABM 111: Furniture Construction I	**4**
CABM 117: Finishing I	**2**
CABM 121: Related Drawing I	**2**
†MATH 126: Technical Math I (or higher)	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 2	
***CABM 151: Advanced Machinery**	**3**
***CABM 156: Furniture Construction II**	**4**
***CABM 162: Finishing II**	**2**
***CABM 166: Job Management**	**1**
***CABM 171: Related Drawing II**	**2**
CIS 105: Drawing with AutoCad	**3**
***MATH 132: Elementary Geometry (or higher)**	**3**
Semester 3	
***CABM 206: Advanced Wood Project**	**6**
***CABM 211: Machine Maintenance**	**1**
***CABM 221: Architectural Millwork**	**4**
***CABM 226: Custom Woodworking Cutters**	**1**
ENG 106: English Composition	**3**
Science Elective	**3**
Semester 4	
***CABM 251: Shop Operations and Management**	**1**
***CABM 261: Kitchen Cabinet Planning and Estimating**	**3**
***CABM 263: Kitchen Cabinet Construction**	**4**
***CABM 265: Cabinet Installation**	**2**
***CABM 267: Countertop Fabrication**	**2**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
General Studies Elective	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Cabinetmaking and Wood Technology (CABM)

CABM 106 (4 credits)
Hand Tools and Portable Power Tools
Students study the wide variety of hand tools, building a thorough foundation in hand tool usage, maintenance, and sharpening. They will learn the basics of hand joinery and develop an understanding for the capabilities and proper usage of portable power tools. This knowledge will be applied to various projects.

CABM 111 (4 credits)
Furniture Construction I
This course provides a foundation for the construction of various types of cabinetry and furniture. The course includes an overview of wood characteristics and joinery methods, assembly, abrasives, adhesives, and veneering basics. Machinery maintenance, safety, and usage is stressed as well. Construction projects will aid in developing an understanding of the subject matter.

CABM 116 (2 credit) Finishing I
This class focuses on surface preparation and the proper use of finish materials. Various methods of application, including wiping, brushing, and spraying, is addressed. During this introductory course, students apply a wax, shellac, and lacquer finish on the projects completed in class.

CABM 121 (2 credits) Related Drawing I
An introduction to basic blueprint reading and drafting techniques applicable to the cabinetmaking profession.

CABM 151 (3 credits)
Advanced Machinery
This course teaches the proper set-up and use of the hollow-chisel and slot mortiser, shaper, single-end tenoner, wide-belt sander, and panel saw. The course also provides an in-depth look at the various types of cutters and cutter-heads available for the shaper. Additional machines are added to fit project requirements and available time.
Prerequisite: CABM 106, CABM 111, and CABM 116

CABM 156 (4 credits)
Furniture Construction II
Students take a more in-depth look at wood properties, joinery, and construction methods. An emphasis is placed on precision machining techniques and strategies for producing molding and other furniture and case components. Other topics include door and drawer construction and styles, hardware and its applications, and an introduction to furniture styles and types. The construction of various furniture projects help solidify the subject matter.
Prerequisite: CABM 106, CABM 111, and CABM 116

CABM 162 (2 credit)
Finishing II
The finishing course involves the final preparation of wood surfaces and the selection and application of appropriate finishing materials. Topics include dyes and pigmented stains, a variety of sealers and top-coating materials, as well as spray finishing techniques.
Prerequisite: CABM 116

CABM 166 (1 credit) Job Management
This course provides an overview of estimating, cost analysis, and methods of job documentation. Students maintain daily time cards as well as job folders for their various furniture projects. Job folders contain drawings; route and cut sheets; time and cost analysis sheets; bill of materials; materials invoice; and a finishing schedule.
Prerequisite: CABM 111

CABM 171 (2 credits)
Related Drawing II
A further study into basic blueprint reading and drafting techniques applicable to the cabinetmaking profession as introduced in CABM 121.
Prerequisite: CABM 121

CABM 206 (6 credits)
Advanced Wood Project
From an existing plan of their choice, students construct and finish advanced pieces of furniture. This course emphasizes individual planning and problem solving. Students construct their own jigs and fixtures as well as machine set-ups. All projects require an existing set of plans and the approval of the instructor before starting. Students are responsible for supplying the necessary materials, hardware, and finishing supplies required for the project.
Prerequisites: CABM 111, CABM 151, CABM 156, and CABM 161

CABM 211 (1 credit)
Machine Maintenance
To develop the skills necessary to grind jointer and planer knives, sharpen shaper cutters, and clean and lubricate a variety of common woodworking machines.
Prerequisite: CABM 151

CABM 221 (4 credits)
Architectural Millwork
This course exposes students to the field of custom architectural millwork. Emphasis is placed on students developing an understanding of the Architectural Woodworking Quality Standards as developed by the Architectural Woodwork Institute. A large portion of the course is devoted to live work in which students produce the millwork items required for the housing project and other related campus work.
Prerequisites: CABM 111, CABM 151, and CABM 156

CABM 226 (1 credit)
Custom Woodworking Cutters
Students learn how to design, draw, make a template, and grind two matching cutters for the shaper and the moulder.
Prerequisite: CABM 151

CABM 251 (1 credit)
Shop Operations and Management
This course stresses the fundamentals of ordering, purchasing, estimating, scheduling production, and general management techniques.
Prerequisite: CABM 151

CABM 261 (3 credits)
Kitchen Cabinet Planning and Estimating
Students learn how to plan, draw, estimate the cost, and list the materials and supplies for the kitchen cabinets and vanities that are used in the housing project.
Prerequisites: CABM 121 and CABM 171

CABM 263 (4 credits)
Kitchen Cabinet Construction
As follow-up to CABM 261, this course emphasizes the machining, construction, and finishing of the kitchen cabinets, vanities, and trim used in the housing project.
Prerequisites: CABM 111, CABM 151, CABM 156, and CABM 206

CABM 265 (2 credits) Cabinet Installation
This course involves site preparation and the installation of kitchen cabinets and bathroom vanities. Emphasis is placed on the installation manuals of the National Kitchen and Bath Association (NKBA).
Prerequisites: CABM 106 and CABM 263

CABM 267 (2 credits)
Countertop Fabrication
This course involves the fabrication of high pressure plastic laminate and solid surface countertops. Exposure to other types of countertop materials is included.
Prerequisite: CABM 106

Carpentry Technology

What is Carpentry Technology?

The Carpentry Technology program provides carpentry students with a positive and professional experience. By using the most up-to-date equipment and the newest technology, program faculty always strive to run parallel with the present-day building industry. Students receive 2 years of excellent training that sufficiently prepares` them for the residential and light commercial construction workforce.

A Graduate of this Program Will be Able to:

- Write clear, concise, legible, and accurate technical reports and be skilled in oral communication related to the construction industry.
- Demonstrate the basic manipulative skills of the trade that are necessary in laying out work, planning, erecting, and framing.
- Interpret and prepare plans, drawings, codes and specifications, lines, symbols, and abbreviations on working drawings or blueprints.
- Analyze specifications and contract drawings as well as make accurate quantity take-offs and labor estimations to develop an estimated construction cost for a building project.
- Demonstrate the ability to lay out and erect a platform or western frame structure.
- Demonstrate basic knowledge and skill in masonry and in the concrete construction trade.
- Describe various types of materials and methods available to the construction trade.
- Describe business organization, financing, labor relations, selling, pricing, customer service, management, and other business principles.
- Describe the complexity of the building construction industry, the interrelationships of the various trades, and methods of communication and coordination among all trades and professions within the industry.
- Encourage the practice of staying current with any new technology or codes related to the building industry.

Timothy B. Draper, Instructor
AAS: Thaddeus Stevens College of Technology
Occupational Safety and Health Administration
(OSHA): Construction Safety & Health Certificate

Daniel McCord, Instructor
BS: Millersville University of Pennsylvania

Daniel B. Noel, Assistant Professor
BS: Lancaster Bible College
AST: Williamson Free School of Mechanical Trades
NCCER Certified Instructor Carpentry Level 4
Occupational Safety and Health Administration
(OSHA): Construction Safety & Health Certificate

Andrew Snavely, Instructor
BS: The Pennsylvania State University

Model Schedule For Carpentry Technology

Semester 1	
CARP 106: Hand Tools and Power Tools	**3**
CARP 111: Building Materials	**3**
CARP 116: Site Work and Foundations I	**3**
CARP 182: Construction Drawings and Blueprint Reading	**3**
†MATH 126: Technical Math I (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
CARP 157: Floor, Wall, and Ceiling Framing	**3**
CARP 161: Stair Construction	**2**
CARP 166: Roof Framing and Materials	**3**
CARP 178: Exterior and Interior Finish	**4**
CIS 111: Intro to Computer Application	**3**
***MATH 132: Elementary Geometry (or higher)**	**3**
Semester 3	
CARP 208: Floor Construction	**3**
CARP 209: Wall Construction	**3**
CARP 218: Roof Construction	**3**
CARP 219: Thermal Insulation	**1**
CARP 222: Exterior Finish and Trim	**2**
***ENG 216: Technical Writing OR ENG 221: Public Speaking**	**3**
BUSN 106: Small Business Management	**3**
Semester 4	
CARP 227: Drywall Installation and Finish	**2**
CARP 257: Stair Trim	**2**
CARP 267: Interior Finish and Trim	**3**
CARP 272: Site Work and Foundations II	**2**
CARP 276: Residential Remodeling	**3**
Humanities Elective	**3**
Science Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Carpentry Technology (CARP)

CARP 106 (3 credits)
Hand Tools and Power Tools
This course is a general introduction to the basic tools that are used by a carpenter with an emphasis on safety, proper usage and procedures, and various applications that are most commonly used in the carpentry trades.

CARP 111 (3 credits)
Building Materials
Covering the wide range of building materials used in carpentry, this course examines the many different types of wood products, including engineered lumber and the newest technology of steel framing. Proper procedures for estimating these building materials and the variety of fastening materials are also discussed and practiced.

CARP 116 (3 credits)
Site Work and Foundations I
In this course, students learn how to set up and operate the transit level and laser level. Building layout and excavation of residential construction will be explained, with particular emphasis on building stake-off. Types of footers, foundations, and concrete forming are also explored. Students will be challenged to practice proper building site layout, constructing concrete stair and sidewalk forms, and installing the form-a-drain system.

CARP 157 (3 credits)
Floor, Wall, and Ceiling Framing
With a strong emphasis on platform framing, students will examine and demonstrate the proper methods of constructing subfloors, walls, and ceilings in the framework of residential and light commercial construction. This includes discussing the basic components and construction methods of light-gauge steel framing.

CARP 161 (2 credits)
Stair Construction
Students learn the different types of stairways and all parts pertaining to them. They also learn how to calculate, lay out, and construct stairway stringers with their proper landings, risers, treads, and railings.

CARP 166 (3 credits)
Roof Framing and Materials
The different types of roof systems and all the material members that are involved in the different roof types are discussed. Students learn theoretically how to calculate rafters to fit their proper situations and practice laying out and cutting common and hip rafters.

CARP 178 (4 credits)
Exterior and Interior Finishes
In this course, students will study and practice installing various types of exterior and interior finish material for residential construction. Exterior finish will include installation procedures for: roofing; siding; soffit; windows and doors; and aluminum trim. Interior finish will include techniques for: hanging drywall; installing prehung doors and door trim; applying trim around a window unit; and other common trim materials.

CARP 182 (3 credits)
Construction Drawing and Blueprint Reading
In this course students will learn the proper techniques necessary to dissect a set of residential blueprints and develop a broad understanding of the language of construction drawings. We will also become involved in duplicating, through the process of mechanical architectural drafting, a few select detailed residential section drawings, with each having different drafting scales.

CARP 208 (3 credits) Floor Construction
Covers both dimensional and engineered lumber applications. To meet current building designs and codes, students perform installation from a detailed blueprint for sill plates, joists, joist hangers, stair beams, sub flooring, and stair stringer construction.

CARP 209 (3 credits) Wall Construction
Covers both dimensional and engineered lumber applications. To meet current building designs and codes, students perform installation and layout from a detailed blueprint for wall plates, stud size and spacing, header design and size, and rough opening sizes for window and door schedules.

CARP 218 (3 credits) Roof Construction
Covers engineered trusses and hand-framed rafters with ceiling joists. The students become familiar with the installation and design criteria of an engineered truss including detailed truss drawings for field applications and the codes applying to field modifications. Students perform layout, cutting, and installing roof rafters from a detailed blueprint including proper ceiling joists, collar ties, and gable overhang construction and codes. Students install roof sheeting and fascia boards.

CARP 219 (1 credit)
Thermal Insulation
Covers the various types of insulation for thermal, noise, and fire protection. Ventilation baffles, vapor barriers, and types of loose fill insulation are detailed. Students perform installation of insulation for wall, ceiling, and fire-stop applications.

CARP 222 (2 credits)
Exterior Finish and Trim
Covers the exterior materials used for siding, roofing, flashing, and aluminum trim. Using accepted methods, students perform siding, soffit, fascia, and fiberglass shingle applications, including proper flashing and counter flashing techniques.

CARP 227 (2 credit)
Drywall Installation and Finish
Covers the types and sizes of drywall installed in construction, as well as proper hanging and finishing. Site techniques are covered. Students perform installation and finishing methods for standard applications.

CARP 257 (2 credits) Stair Trim
Covers the variety and designs of interior custom stair trim. Students are instructed in the different stair designs, building codes and the perspective trim applications. Students install custom stair trim for an open stair and box stair designs including over the tread skirt board applications.

CARP 267 (3 credits)
Interior Finish and Trim
Covers the various interior painting and staining finishes. The proper wood types and species, finishing methods, and applications are detailed. Details of interior pre-hung doors, window trim including extension jambs and sills are covered. Students perform the installation of a standard trim package.

CARP 272 (2 credits)
Site Work and Foundations II
Covers the details associated with site preparation and foundation inspections for a new building. Specifics are for lot size, set back, right of way, and building location. Work includes using various instruments for batter board installations, excavation of foundation, locating footer elevation, and forming and pouring footers. Locating, forming, and pouring of sidewalks and exterior porches.

CARP 276 (3 credits)
Residential Remodeling
Covers the details and techniques used for residential remodeling and restoration. Students perform demolition, and repair and update existing structures to current building codes. The topics covered can include kitchens, bathrooms, flooring and exterior finishes.

Civil Engineering Construction Technology

What is Civil Engineering Construction Technology?

The heavy civil engineering construction profession is a dynamic industry that has untapped potential for career advancement, including transformational financial growth. If you like to work outside with your hands, with innovative technology and equipment, civil construction will provide you with countless opportunities. In addition, there will be opportunities for field experience with a summer on-the-job internship.

The Civil Engineering Construction Technology (CECT) program is committed to provide students with a broad range of skills necessary to thrive, and work in an industry that has been around since early civilization. This industry sector continues to grow, offering job security in a wide range of positions, a meaningful career, and an opportunity to help build our country's infrastructure. The combination of theory, and hands-on in both a lab and field portions of this program will allow students to develop the skills to work in the construction of roadways, municipal and state infrastructure, underground utilities, energy, horizontal site development, materials production and application, and construction of water and wastewater infrastructures. Students will learn how to use and make the most of today's innovations, so you will be prepared when you enter the industry full time. Upon competition of the program, graduates will find a wealth of employment opportunities to invest your future, to build a better America.

A Graduate of this Program Will be Able to:

- Identify the different types of heavy civil construction projects that include earth moving operations, transportation, infrastructure, utility installation, material production, transportation, water and wastewater plant work, and site development;
- Learn and describe the regulations that impact employee job site safety;
- Demonstrate the ability to read and interpret construction documents including drawings, details, materials, specifications, quality standards and apply to field work,
- Demonstrate pipe work installation skills using different pipe products;
- Explain the importance of pipe work as it relates to underground infrastructure;
- Interpret blueprints, benchmarks, elevations, scaling, survey, and apply this information in civil construction projects;
- Explain material production and uses for asphalt, concrete, aggregates, and precast as well as modes for transporting these products;
- Acquire leadership skills, business communications, basic construction finance to become both an internal and external leader for an organization;
- Differentiate heavy equipment types based on usage, weight, classification, safety, and maintenance;
- Demonstrate skills in quality control using best practice, inspection methods involving civil construction projects; and
- Demonstrate good oral communication skills, speak logically, and use various types of oral and written communication techniques to promote sound business, and employer-employee relationships.

Mitch Kauffman, Instructor
B.S.: Kutztown University

Steven Simes, Instructor

Model Schedule For Civil Engineering Construction Technology

SEMESTER 1	
CIVL 101: Principles of Civil Engineering Construction Technology	3
CIVL 105: Job Site & Traffic Safety	3
CIVL 110: Construction Drawings, Site Plans, Specifications	3
*CIVL 115: Construction Survey I	3
ENGLISH 106: English Composition	3
MATH 126: Technical Math I (or higher)	3
SEMESTER 2	
CIVL 150: Erosion & Sediment Control	3
*CIVL 155: Utility Installation I	3
*CIVL 160: GPS Fundamentals	3
*CIVL 165: Construction Survey II	3
MATH 132: Elementary Geometry (or higher)	3
CIS 105: Drawing with Auto Cad	3
SEMESTER 3	
*CIVL 205: Earthwork Fundamentals	3
*CIVL 210: Engineering Materials and Processes	3
*CIVL 215: Utility Installation II	3
*CIVL 220: Site Grading Designs and Grading Types	3
ENGLISH 216 Technical Report Writing OR ENGLISH 222 Public Speaking	3
Science Elective	3
SEMESTER 4	
CIVL 255: Leadership, Ethics, and Legal Issues in Construction Management	3
*CIVL 260: Cost Estimating, Project and Field Construction Management	3
*CIVL 265: Structured Concrete Operations	3
*CIVL 270: Asphalt Paving Operations Humanities	3
Elective	3
General Studies Elective	3
Additional General Education Requirements	
HEAL 106 or HEAL 111	1
TOTAL CREDITS	**74**

** Prerequisite or Co-requisite Required. See Course Description.*

Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Civil Engineering Construction Technology (CIVL)

CIVL 101 (3 credits)
Principles of Civil Engineering Construction Technology
This course, principles of Civil Engineering Construction Technology, while incorporating scientific principles serves as an introduction to the civil construction industry. The history of the industry's impact on society, past and present has met and will continue to meet our needs well into the future. This acceleration of technology has created one of the most emerging construction career fields in our nation.

CIVL 105 (3 credits)
Job Site and Traffic Safety
This course is designed for students to gain knowledge and technical skills related to best practices for jobsite safety. This includes following all personal protective equipment (PPE), Occupational Safety & Health Administration (OSHA), Mine Safety & Health Standards (MSHA), Department of Transportation (DOT), Maintenance of Traffic Control Devices (MUTCD), and underground utility regulations. Applications will include verbal and nonverbal communication, work zone safety, and injury prevention.

CIVL 110 (3 credits)
Construction Drawings, Site Plans, Specifications
This course provides an overview of construction drawings, plans, details, takeoffs, survey, redlines, cut/fills, conflicts, design issues involving a construction project. Emphasis will be placed on applications for reading and interpreting construction drawings in the field, while ensuring materials, scaling, and specifications complying with local, state and federal requirements.

CIVL 115 (3 credits)
Construction Survey I
This course introduces the history of surveying, use of state-of-the-art equipment and blueprint reading. Students will use survey equipment to layout the jobsite prior to the start of construction. Applications will include reading and understand blueprint.
Prerequisite: CIVL105

CIVL 150 (3 credits)
Soil and Erosion Control
This course introduces the history and evolution of erosion & sediment (E&S) control for construction projects. National standards for earth disturbing construction has been determined by the National Pollutant Discharge Elimination System (NPDES). Students will practice construction standards that have improved the quality of tributary streams, wetlands, environment, water quality, and the Chesapeake Bay ecosystem.

CIVL 155 (3 credits) Utility Installation I
This course introduces the history of utility installation, as well as new technology and advancements. The course introduces the basics of utility installation, materials and tools needed for utility construction. As well as construction including sanitary and storm sewer, water, gas, electric and communication lines.
Prerequisite: CIVL105 and CIVL 110

CIVL 160 (3 credits)
Global Positioning System Fundamentals
This course introduces the history and evolution Global Positioning Systems (GPS) technology and its application to civil construction projects. This is an intensive course that builds upon Construction Survey I.
Prerequisite: CIVL105 and CIVL 110

CIVL 165 (3 credits)
Construction Survey II
This course builds upon Construction Survey I. Applications includes utilization of construction drawings and equipment including GPS, modeling, drones, total stations, and lasers to layout a construction project.
Prerequisite: CIVL105 and CIVL 115

CIVL 205 (3 credits)
Earthwork Fundamentals
This course introduces the history and evolution of earthwork operations. Students will learn differences in soil characteristics, work ability, and treatment for certain soil characteristics. Students will also learn about equipment applications used in earthwork operations.
Prerequisite: CIVL105 and CIVL 110

CIVL 210 (3 credits)
Engineering Materials Processes
This course introduces the history and evolution aggregate production, usage and application. Students will also learn usage and manufacturing of aggregate, concrete asphalt, and DOT specifications.
Prerequisite: CIVL105

CIVL 215 (3 credits)
Utility Installation II
This course builds on learning in Utility Installation I. Students will learn best practices of safe assembly and installation various types of pipe. Students will understand step-by-step application to assemble pipe per manufacture specifications in excavated trenches.
Prerequisite: CIVL105 and CIVL 155

CIVL 220 (3 credits)
Site Grading Designs & Grading Types
This course builds upon Earthwork Fundamentals I. Students will be involved with crew and equipment package setup and planning for efficiency, involved in costs, and production calculations.
Prerequisite: CIVL105, CIVL 110, and CIVL 165

CIVL 255 (3 credits)
Leadership in Construction Management, Ethics and Legal Issues

This course will cover a broad range of services construction companies provide to their employees, clients, and general public. The four fundamental principles will include: ethical practice, legal practice, professional excellence, and responsibility to the employee, client, and general public. In addition, students will learn personal leadership styles, good communication and presentation skills, working in a team environment in diverse organizational context.

CIVL 260 (3 credits)
Cost Estimating, Project and Field Construction Management

This course is designed to train students the job estimating fundamentals to determine project construction costs. Construction estimating is tedious, time-consuming and requires a high level of skill. In addition, students will learn to impact of quality management systems (QMS) for company profitability.
Prerequisite: CIVL110 and CIVL 210

CIVL 265 (3 credits)
Structured Concrete Operations

This course introduces the history and evolution concrete. Students will learn materials in concrete production processes, and, transporting from plant to jobsite, and placement applications in the construction industry. Emphasis will be place on hands-on preparation, formwork, and finishing.
Prerequisite: CIVL105 and CIVL 210

CIVL 270 (3 credits) Asphalt Paving Operations

This course introduces the history and evolution asphalt. Students learn best safety practices when working on an asphalt paving jobsite. This course "introduces" the student to the asphalt paving practices, materials, and evaluation including demolition and site preparation, laying subbase and a binder layer, laying butt joints, compaction of asphalt, and installing the top layer of asphalt. In addition, students will learn the composition of asphalt and manufacturing processes.
Prerequisite: CIVL105 and CIVL 210

Collision Repair Technology

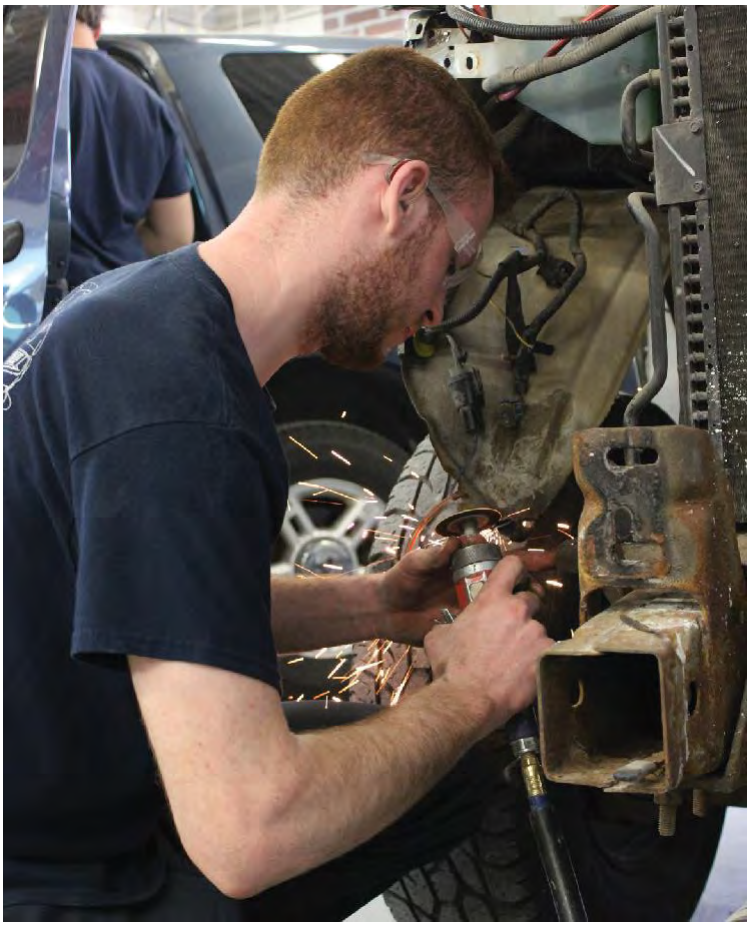
What is Collision Repair Technology?

Students will be instructed in a series of I-CAR courses in Non-Structural ProLevel 1 and Refinishing ProLevel 1, the industry standard for collision repair training. Students graduate with a variety of nationally-recognized platinum certificates from I-CAR. This program aligns with collision repair businesses needing to hire employees to maintain or to become I-CAR Gold Class professionals. This program makes students proficient at entry-level tasks. Students also have the opportunity to become certified as ASE Master Technicians. The Collision Repair Technology program is dedicated to providing the most current and complete information, knowledge, and skills required to perform complete, safe and quality repairs. Thaddeus Stevens College of Technology provides students with comprehensive training and industry recognized credentials for a successful career in collision repair.

A Graduate of this Program Will be Able to:

- Use collision repair tools and equipment safely and effectively.
- Analyze the structural design of a vehicle and its reaction to an impact.
- Repair damaged metal.
- Refinish vehicles.
- Install panels.
- Repair frame damage.

Jason Weiler, Instructor
BA: Ashford University
AAS: Thaddeus Stevens College of Technology



Model Schedule For
Collision Repair Technology

Semester 1	
CORT 107: Details of Body Construction	**4**
***CORT 111: Collision Repair Welding**	**4**
***CORT 116: Repairing Damaged Panels and Metalworking**	**4**
MATH 126: Technical Math I (or higher)	**3**
BUSN 106: Small Business Management	**3**
Semester 2	
***CORT 156: Introduction to Refinishing Procedures**	**4**
***CORT 162: Panel Replacement, Adjustment, Corrosion Protection**	**4**
***CORT 166: Introduction to Frame Alignment and Repair**	**4**
ENG 106: English Composition	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 3	
***CORT 212: Estimating Technology**	**4**
***CORT 222: Aluminum Technology**	**4**
***CORT 232: Non-Structural Technology**	**4**
MATH 111: Business Math	**3**
ENG 216: Technical Writing	**3**
Semester 4	
***CORT 252: Steel Structural Technology**	**4**
***CORT 262: Refinishing Technology**	**4**
***CORT 272: Mechanical Technology**	**4**
Humanities Elective	**3**
Science Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Collision Repair Technology (CORT)

CORT 107 (4 credit)
Details of Body Construction
Different types of automobile bodies and how they are made at the factory. The locations of body joints and parts and the proper methods for parts removal and replacement are also covered.

CORT 111 (4 credits)
Collision Repair Welding
Designed to prepare students in the use of a MIG welder and the various uses of oxyacetylene equipment for cutting and heating to normalize and shrink metal. Proper use of equipment is stressed.
Prerequisite: CORT 107

CORT 116 (4 credits)
Repairing Damaged Panels and Metalworking Methods
Use of proper tools and techniques to bend sheet metal. Direct and indirect damage are explained along with ways damage can be corrected.
Prerequisite: CORT 111

CORT 156 (4 credits)
Introduction to Refinishing Procedures
Refinishing and the use of tools operated by compressed air. Proper use of various finish materials such as primers, sealers, and thinners. Masking and spray painting techniques are also covered.
Prerequisite: CORT 116

CORT 162 (4 credit)
Panel Replacement, Adjustment, and Corrosion Protection
Proper removal and replacement of panels are stressed as well as the proper alignment of panels. A general overview of determining repair procedures, inspecting areas for hidden damage, removal of damaged panels, and corrosion protection.
Prerequisite: CORT 156

CORT 166 (4 credits)
Introduction to Frame Alignment and Repair
Frame alignment and straightening is studied, including the use of gauges and frame straightening equipment needed to restore a damaged frame or body to factory specifications.
Prerequisite: CORT 162

CORT 212 (4 Credits)
Estimating Technology
Estimators inspect and analyze collision-damaged vehicles to create a repair plan. The technician builds relationships with vehicle owners, repairers, and insurance personnel, ensuring satisfaction when repairs are complete.
Prerequisite: CORT 166

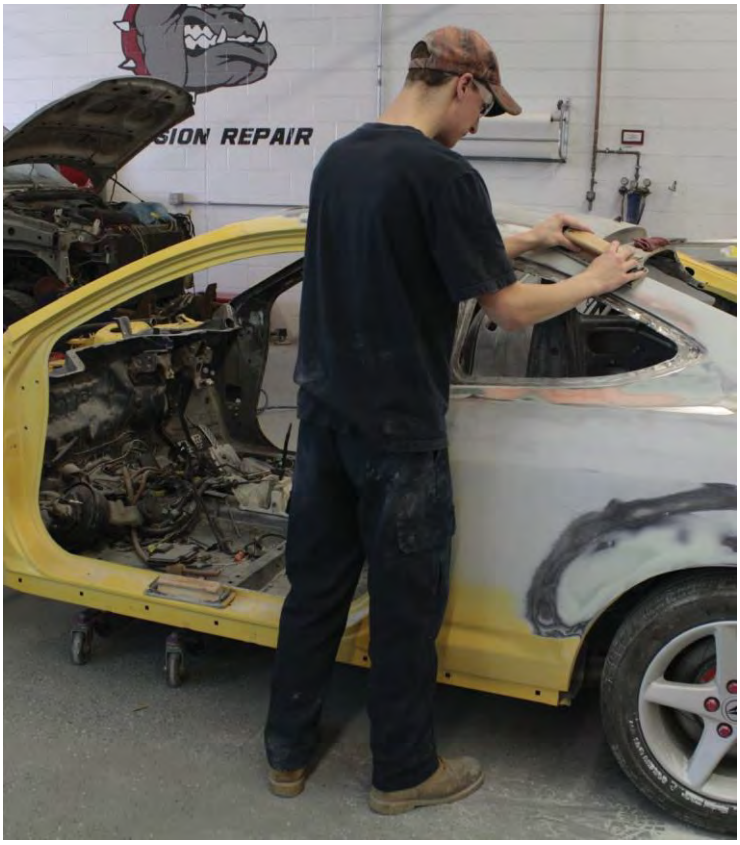
CORT 222 (4 Credits) Aluminum Technology
An aluminum structural technician restores aluminum structural dimensions and structural integrity to collision damaged vehicles. He or she uses measuring and frame equipment to diagnose, damage, and return damaged frame or uni-body parts to manufacturer's specifications.
Prerequisite: CORT 212

CORT 232 (4 Credits)
Non-Structural Technology
Non-structural technicians restore damaged vehicles to their original structural integrity, function, and appearance. These technicians use hand tools and power tools to remove or repair damaged parts, weld as needed, and properly install new parts. They work with a variety of metals and plastics, as well as glass, electrical, and mechanical parts.
Prerequisite: CORT 222

CORT 252 (4 Credits)
Steel Structural Technology
Steel structural technicians restore structural dimensions and integrity to collision damaged vehicles. Technicians use measuring and framing equipment to diagnose damage and return damaged frame or uni-body parts to manufacturer's specifications. Hand tools and power tools are used to remove or repair damaged parts, weld as needed, and properly install new parts. This individual also works with a variety of metals and plastics, as well as glass, electrical, and mechanical parts.
Prerequisite: CORT 232

CORT 262 (4 Credits)
Refinishing Technology
Refinish technicians prepare and apply paint to repaired vehicles. Duties may include final sanding, masking, color mixing and tinting, operating spray booths, and applying primers, sealers, color, and clear coats. They may need to blend color into adjacent panels for a better color match to existing vehicle paint. These individuals work with potentially hazardous materials, so attention to safety and personal protection are essential. Vehicles must be correctly prepared and refinished to ensure proper adhesion, color match, and overall appearance.
Prerequisite: CORT 252

CORT 272 (4 Credits) Mechanical Technology
The mechanical technician diagnoses and repairs collision-related mechanical damage which includes steering and suspension systems. Hand tools and power tools are used to remove or repair damaged parts and properly install new and used parts.
Prerequisite: CORT 262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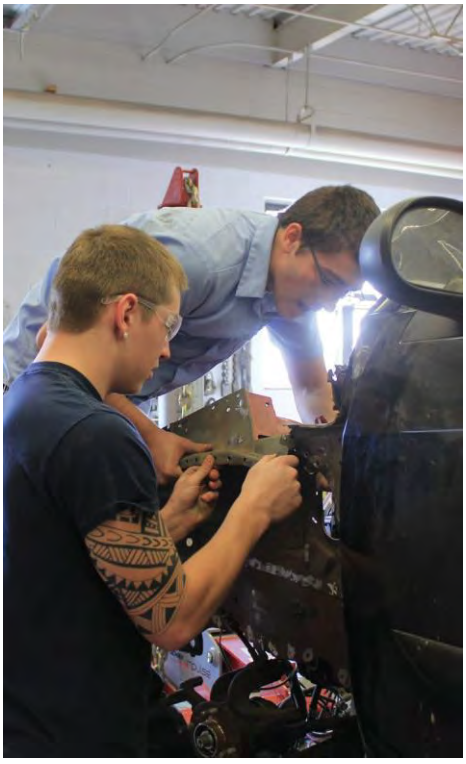


Computer & Network Systems Administration

What is Computer and Network Systems Administration?

The Computer and Network Systems Administration program prepares students for employment in a wide variety of positions in the information technology field. Students work in a live network environment, managing their own servers, clients, routers, and switches by applying concepts learned in the theory classroom. The combination of theory and hands-on lab exercises allows CNSA students to acquire comprehensive skills in the following technical areas: The internal operation of personal and server computer systems; the physical infrastructure of local and wide area networks; the design and management of computer networks; the administration of Microsoft Windows and non-Windows server and client operating systems; the design and development of Windows-based and web-based applications; the management and design of relational databases; and the integration of enterprise software applications to solve business problems.

Upon completion of the program, graduates of the CNSA program have obtained employment in information technology as systems administrators, network administrators, network technicians, PC technicians, help desk analysts, systems engineers, structured data cabling installers, application programmers, web application developers, web administrators, database administrators, and sales engineers. High school prerequisites for this program are Algebra I & II, and a GPA of at least 2.5.

A Graduate of this Program Will be Able to:

- Solve business problems by applying sound information technology principles.
- Implement and administer a broad range of information technology systems, networks, and applications.
- Manage information technology projects from conceptualization through implementation.
- Make significant contributions as a member of an information technology team.
- Explain with authority current technologies and standards in the field.
- Maintain information technology skills through appropriate industry certifications and/or continuing education.
- Demonstrate a strong professional work ethic.
- Protect and preserve a business organization's critical information assets from all threats.

Rebecca Schultz, Instructor
MS Ed: University of Phoenix
BS: Kutztown University
AAS: Silicon Valley College

Tim Freund, Instructor
Matthew McLaughlin, Instructor
BS: Central Pennsylvania College
AAS: Thaddeus Stevens College of Technology

Dr. Jameson McFarlane, Professor
DSc, Towson University MBA,
BSc: York College of Pennsylvania
Advanced Cybersecurity Certificate: Standford University
Certificate in Music Theory: St. Lucia School of Music
Certificate in Teacher Ed. and Ed. Adm.: Sir Arthur Lewis Community College/University of the West Indies

Model Schedule for Computer & Network Systems Administration. (Option #1)

Semester 1	
CNSA 107: PC Hardware and Support Fundamentals	3
*CNSA 111: Intro to Networking	3
*CNSA 117: Analysis of TCP/IP & Local Area Networking	3
*CNSA 123: LAN Cabling and WAN Technologies	3
†^MATH 137: Intermediate Algebra (or higher)	3
ENG 106: English Composition	3
Semester 2	
*CNSA 156: Operating Systems I	3
*CNSA 161: Systems Administration I	3
*CNSA 166: Internetworking Devices and Concepts	3
*^CNSA 172: Web Technologies and Network Security Fund	3
*ENG 216: Technical Writing	3
*MATH 141: Trigonometry (or higher)	3
Semester 3	
*^CNSA 212: Programming I	3
*^CNSA 222: Database Management Systems	3
*CNSA 227: Management Information Systems	3
*CNSA 256: Operating Systems II	3
ENG 221: Public Speaking	3
Humanities Elective	3
Semester 4	
*CNSA 216: Web Programming	3
*CNSA 266: Systems Administration II	3
*CNSA 271: Network Design	3
*CNSA 276: Practical Applications	3
Science Elective	3
General Education Elective	3
Additional General Education Requirements	
HEAL 106 or HEAL 111	1
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

Model Schedule for Computer & Network Systems Administration. (Option #2)

Semester 1	
CNSA 107: PC Hardware and Support Fundamentals	3
*CNSA 111: Intro to Networking	3
*CNSA 117: Analysis of TCP/IP & Local Area Networking	3
*CNSA 123: LAN Cabling and WAN Technologies	3
†MATH 207: Pre-Calculus	4
ENG 106: English Composition	3
Semester 2	
*CNSA 156: Operating Systems I	3
*CNSA 161: Systems Administration I	3
*CNSA 166: Internetworking Devices and Concepts	3
*^CNSA 172: Web Technologies and Network Security Fund	3
*ENG 216: Technical Writing	3
Elective: General Studies Elective	3
Semester 3	
*^CNSA 212: Programming I	3
*^CNSA 222: Database Management Systems	3
*CNSA 227: Management Information Systems	3
*CNSA 256: Operating Systems II	3
ENG 221: Public Speaking	3
Humanities Elective	3
Semester 4	
*CNSA 216: Web Programming	3
*CNSA 266: Systems Administration II	3
*CNSA 271: Network Design	3
*CNSA 276: Practical Applications	3
Science Elective	3
General Education Elective	3
Additional General Education Requirements	
HEAL 106 or HEAL 111	1
TOTAL CREDITS	**74**

^Minimum Grade Required. See Course Description.

Computer and Network Systems Administration (CNSA)

CNSA 107 (3 Credits)
PC Hardware and Support Fundamentals
This course is focused on the internal components and operation of digital devices with emphasis on desktop PC systems used for business. Processors, memory, hard drives, SSDs, communication buses, and other components are covered. Electricity fundamentals and the binary numbering system are also a part of this course. Students build a computer from scratch in the lab.

CNSA 111 (3 Credits)
Introduction to Networking
Provides an overview of modern networking arrangements and goes into detail about the digitization of analog signals, the OSI model, the Ethernet protocol, and Ethernet switching. IP addresses and IP sub-netting are also covered in depth.
Prerequisite: CNSA 107

CNSA 117 (3 Credits)
Analysis of TCP/IP and Local Area Networking
The TCP/IP protocol suite is explored in detail. Topics include ARP, ICMP, DNS, DHCP, IPv4, IPv6, and TCP operation details such as sequencing, acknowledgments, and sliding window flow control. After lecture is complete, students spend lab time capturing frames with a software protocol analyzer and verifying the behaviors they learned about in lecture. Wireless networking (WiFi) is also a part of this course.
Prerequisite: CNSA 111

CNSA 123 (3 Credits)
LAN Cabling and WAN Technologies
Cabling standards and best cabling practices in the industry are covered. Students practice hands-on cable termination of copper and fiber cables in the lab. This course also provides an overview of telecommunications technologies and the use of telecommunications in wide area networks (WANs).
Prerequisite: CNSA 117

CNSA 156 (3 Credits) Operating Systems I
Microsoft's server operating systems are a dominant network operating system in the information technology industry. In this course, along with CNSA 161, students get detailed lecture about and hands-on experience with Microsoft's server operating system. Practical hands-on experience is included in the labs and begins with attended and unattended installation methods. Included in installation methods are imaging and cloning techniques for mass rollouts of server and client operating systems. The lecture and labs continue with configuration of file and print servers, securing files with share and NTFS permissions, disk management (including RAID), disaster recovery, and backup methods.
Prerequisite: CNSA 123

CNSA 161 (3 Credits) Systems Administration I
This course continues where CNSA 156 leaves off. In this course, students learn about Microsoft's Active Directory structure and management. User account maintenance, user profiles, logon scripts and group policy are covered. Students also learn in the classroom what goes on behind the scenes with dynamic host control protocol (DHCP or automatic addressing) and domain name server (DNS or computer name resolution). Ultimately, students take this classroom theory and apply it in the lab as they create their own active directory domains and configure DHCP and DNS services within their domain. *Prerequisite: CNSA 156*

CNSA 166 (3 Credits) Internetworking Devices and Concepts
This is a Cisco-centric course on IP routing and switching. Traditional routers and L3 switches are discussed in the classroom and used in the lab. Routing protocols such as RIPv2, EIGRP, and OSPF are covered. In addition to routing, voice-over IP (VoIP) is a significant technology that businesses implement in order to reduce cost and leverage investments in the data network. For that reason, this course provides an overview of VoIP and assigns a lab project to configure a software private branch exchange (PBX) telephone switch that is capable of routing phone calls within the lab environment.
Prerequisite: CNSA 161

CNSA 172 (3 Credits) Web Technologies and Network Security Fundamentals
Students learn how to configure a web server that can host multiple websites. The course then moves into the creation of web pages from scratch using HTML, CSS, and a text editor. Since security has become an increasingly important issue in our times, some of the security measures that are commonly used on the internet are included in this course. These security measures include an overview of threats and defense strategies, the public key infrastructure (PKI), digital certificates, hash codes, and digital signatures.
Prerequisite: CNSA 166
Minimum grade of "C" required

CNSA 212 (3 Credits) Programming I
An introduction to the fundamentals of computer programming. Students learn a structured, object-oriented approach to problem solving and automating routine processes using modern programming languages. The programming concepts used emphasize logical thinking and current programming standards and conventions. Students learn to plan, design, compile, debug, and document applications in a visual programming environment using a programming language that is compatible with the Microsoft .NET Framework. In addition, the course introduces the integration of programming applications with databases as well as next generation programming environments.
Prerequisites: CNSA 156 and CNSA 161

CNSA 216 (3 Credits)
Web Programming
A course that builds upon the information learned in CNSA 172, CNSA 212, and CNSA 222, it introduces advanced web programming and development techniques and tools. The primary focus of the course is on the design of dynamic, interactive websites, using current web programming languages and tools, including the technology of the Microsoft .NET Framework. Students integrate the use of relational databases to provide data storage and retrieval for their interactive websites. Students also configure and manage web servers to support interactive web pages.
Prerequisites: CNSA 172, CNSA 212, and CNSA 222

CNSA 222 (3 Credits)
Database Management Systems
An in-depth, hands-on survey course in which students develop the skills and the expertise required to design, to implement, and to manage databases using a relational database management system (RDBMS). Students learn concepts of the relational database model, the principles of database design and normalization, and database administration. In addition, the basic commands and functions of structured query language (SQL) are used for data manipulation and extraction, as well as for database administration. Finally, topics are introduced that relate enterprise databases to client/server systems, application programming, web database development, and e-commerce.
Prerequisite: CNSA sophomore standing
Minimum grade of "C" required

CNSA 227 (3 Credits)
Management Information Systems
A course that introduces students to the policies and procedures required to administer an enterprise computer network and to support an effective information technology department and users in the enterprise. Students learn how to prepare and to maintain documentation for information technology systems, software, processes, and projects. The skills learned in this course are integrated into the other CNSA courses throughout the sophomore year. An important component of the course is research, readings, and discussion related to ethical practices in the field of information technology.
Prerequisite: CNSA sophomore standing

CNSA 256 (3 Credits) Operating Systems II
The second operating systems course in the CNSA curriculum that introduces students to the design, functionality, and administration of the predominant non-Windows operating system in the current computer industry. At this particular time, the course presents an in-depth examination of Linux, focusing on the proper installation and administration of the operating system. Students explore the wealth of support sites available to administrators of Linux systems, as well as the availability of productivity software applications and system administration tools for Linux systems.
Prerequisite: CNSA 156

CNSA 266 (3 Credits)
Systems Administration II
This is a study of programming languages including variables and strings, software development, data types and expressions, selections and loop statements, arrays and lists, state maintenance and management, functions, semantics, implementation, and database connectivity. Students will explore language features such as formal syntax, scoping and binding of variables, higher-order programming, typing, inheritance, type polymorphism and design techniques. Introduces basics of security attacks and software security. Some of the models of languages may include scripting and dynamic languages such as Python, PHP, etc.
Prerequisite: CNSA 161 and CNSA 256

CNSA 271 (3 Credits)
Network Design
This is the first of two capstone courses in the CNSA curriculum that requires students to rely heavily upon the knowledge and skills acquired from their entire previous course experiences. Project teams manage all accounts (i.e., user, group, computer, security) in their respective domains. In designing their enterprise domains, the the teams conduct appropriate research; analyze and evaluate enterprise requirements and specifications; and document the network design. Knowledge of the fundamentals of networking technology, experience supporting a network, or successful completion of a networking essentials course is required.
Prerequisite: CNSA 266

CNSA 276 (3 Credits)
Practical Applications
The second of two capstone courses in the CNSA curriculum that requires students to rely heavily upon the knowledge and skills acquired from their entire previous CNSA course experiences. This course also includes in-depth research and examination of selected network applications and the implementation of those applications in the enterprise. Students learn how to plan, to configure, and to administer the specified application(s); how to implement the application(s); how to document the installation(s); and how to train the appropriate individuals to use and administer the application(s).
Prerequisites: CNSA 266 and CNSA 271

Computer Software Engineering Technology

What is Computer Software Engineering?

Computers have become a major factor in the development and operation of modern industry. From providing means of communications, to operating machines, to facilitating international commerce, to systems animation, computers and their related software programs makes things possible.

The Computer Software Engineering Technology program prepares students to design, to develop, and to build customized software programs for specific applications. Specifically, students will learn basic programming; how to interpret specifications; application of software architecture, verification and validation principles; and software performance standards. Students will create software programs which address known specifications. The program emphasizes a practical hands-on education as software projects are required each semester.

Upon completion of the program, graduates will find a wealth of employment opportunities in a variety of businesses and industries. Unlike some disciplines which are tied directly to a specific technical area, graduates of this program will work in small businesses, large industries, private organizations, software specialty businesses, IT department, government, and other agencies.

Job titles might include the following:

- Software designers
- Software test technicians
- Software maintenance technicians
- Technical writer for software publishing companies
- Customer service technicians for software companies

A Graduate of this Program Will be Able to:

- Edit and modify existing software programs with the aim of upgrading and correcting errors.
- Improve the performance of software programs or adapt it to new and old hardware and software.
- Analyze the needs of users for project design.
- Design and modify software systems for specific applications.
- Analyze and recommend all necessary system layouts and modifications.
- Train users how to make use of new software.

Arafat Hassan, Instructor
BS: Computer Science, University of Dhaka
MS: Computer Science, University of North Texas
MBA: Finance, University of Dhaka

Mainul Chowdhury, Instructor
BSS: Economics, University of Chittagong
MS: Economics, University of North Texas
MS: Information Science, University of North Texas

Fahim Shams, Instructor
BS : Computer Science, University of North Texas
MS : Computer Science, Harrisburg University of Science & Technology

Mohammad Ashraful Huq, Instructor
BS: Physics, University of Dhaka
MS: Physics, University of Dhaka
MS : Computer Science, Harrisburg University of Science & Technology

Model Schedule For
Computer Software Engineering Technology

Semester 1	
CSET 105: Intro to Web Applications	**3**
CSET 110: Web Development I	**3**
CSET 115: Technical Requirements & Data Structures	**3**
CSET 120: Software Project I	**3**
BUSN 106 Small Business Management	**3**
ENG 221: Public Speaking	**3**
Semester 2	
CSET 155 Database Design	**3**
CSET 160 Web Development II	**3**
CSET 170 Security & Professional Ethics	**3**
CSET 180 Software Project II	**3**
MATH 137: Intermediate Algebra (or higher)	**3**
ENG 106: English Composition	**3**
Semester 3	
***CSET 205: Advanced Data Integration**	**3**
***CSET 222: Database Management Systems**	**3**
CSET 210: Workplace Communications	**3**
CSET 220: Software Project III	**3**
***ENG 216: Technical Report Writing**	**3**
CIS 111 Introduction to Computer Applications	**3**
Semester 4	
CSET 265: Software Principles	**4**
CSET 270: Mobile Development	**4**
CSET 280: Capstone Project OR CSET 290: CSET Internship	**4**
HEAL 106 or HEAL 111	**1**
Humanities Elective	**3**
PHYS 106: Physics for Everyday Life OR any CHEM, BIO, SCI, or higher PHYS	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Computer Software Engineering Technology (CSET)

CSET 105 (3 Credits) Introduction to Web Applications

The course provides an introduction to the basic tools, processes, and workflow in the development of web applications with a focus on the JavaScript language. Students will embark on a comprehensive journey into the exciting world of web development, gaining foundational knowledge and practical skills essential for creating dynamic and interactive web applications. The course meets during the first twelve weeks of the semester.

CSET 110 (3 Credits) Web Development I

The course introduces front end web development concepts including HTML, CSS, and JavaScript, and their role in building web applications. The course meets during the first twelve weeks of the semester.

CSET 115 (3 Credits) Technical Requirements and Data Structures

The course provides information regarding the process of disseminating specifications and managing a project, as well as data structures concepts. Students will cover various concept of version control, with emphasis on git. The course meets during the first twelve weeks of the semester.

CSET 120 (3 Credits) Software Project I

This course requires the student to complete a computer software project that employs the skills acquired during that semester. Scheduled during the last three weeks of the semester, the specific projects are those suggested by local employers and advisory committee members. Optional challenge projects are available for those students who wish to tackle complex problems.

CSET 155 (3 Credits) Database Design

The course develops skills in the administration of databases. Students learn to organize data and to store the data for use and retrieval. Common systems of data storage are introduced. Students will build a database, script a process to load data, and outline how to retrieve data from that database. The course meets during the first twelve weeks of the semester.

CSET 160 (3 Credits) Web Development II

Students will look at server-side development and build more complex web applications using their knowledge gained in CSET 110 (Web Development I). Students will be using Python as their development language for labs and projects in this course. The course meets during the first twelve weeks of the semester.

CSET 170 (3 Credits) Security and Professional Ethics

The course explores issues of security in software development. Students analyze security problems and learn how they can be minimized or controlled. Students will also cover Secure Socket Layer (SSL) protocol and learn how to apply it to their web applications. The course meets during the first twelve weeks of the semester.

CSET 180 (3 Credits) Software Project II

This course requires the student to complete a computer software project that employs the skills acquired during that semester and previous semesters. Scheduled during the last three weeks of the semester, the specific projects are those suggested by local employers and advisory committee members. Optional challenge projects are available for those students who wish to tackle complex problems.

CSET 205 (3 Credits) Advanced Data Integration
The course is an extension to more complex data operations skills. Students will learn a new programming language called PHP which will be used in creating APIs, interacting with local databases and creating a web application. The course meets during the first twelve weeks of the semester.
Prerequisite: CSET 155

CSET 220 (3 Credits) Software Project III
This course requires the student to complete a computer software project that employs the skills acquired during that semester and previous semesters. Scheduled during the last three weeks of the semester, the specific project is designed by the instructor. Optional features in the project are available for those students who wish to tackle complex problems.

CSET 222 (3 Credits) Data Management System
An in-depth, hands-on course in which students will develop the skills and the expertise required to design, implement, and manage databases using a relational database management system (RDBMS). Students will learn concepts of the relational database model, the principles of database design and normalization, and database administration. In addition, the basic commands and functions of Structured Query Language (SQL) will be used for data manipulation and extraction, as well as for database administration.
Prerequisite: CSET 155

CSET 265 (4 Credits) Software Principles
Students will be introduced to the most fundamental concepts and principles of software that have been used in practical means throughout this program using Java Programming Language. Course may cover topics including fundamentals of programming, object oriented principles and software design patterns. The course meets 16 weeks (including final exams).

CSET 270 (4 Credits) Mobile Development
In this 16-week project-based course, students will be introduced to mobile application programming concepts and learn to build their own apps. Theory and concepts will be cross-platform, but examples and lab work will focus on one major platform. Topics will include working with Software Development Kits (SDKs), creating user interfaces, and utilizing mobile APIs such as notifications and location-based services.

CSET 280 (4 Credits) Capstone Project
The capstone project is designed to serve as a culminating experience for students, integrating the knowledge and skills acquired throughout their academic journey. Through this project, students will tackle real-world problems within their chosen field, demonstrating their ability to apply critical thinking, problem-solving, and creativity. The objective is to empower students to independently plan, execute, and present a substantial project, showcasing their proficiency and readiness for professional endeavors or further academic pursuits. Additionally, the capstone project aims to foster collaboration, innovation, and interdisciplinary learning, preparing students to navigate complex challenges in today's dynamic workforce or academic landscape

CSET 290 (4 Credits) Internship
The internship course aims to provide students with practical, hands-on experience in their chosen field of study. Through structured internships, students will develop professional skills, gain real-world insight, and build industry connections. The objective is to enhance students' employability by immersing them in authentic work environments, allowing them to apply theoretical knowledge to practical situations. Furthermore, the course aims to cultivate critical thinking, problem-solving abilities, and effective communication skills, essential for success in their future careers. Ultimately, the internship course endeavors to empower students with the confidence and competence needed to transition smoothly from academia to the professional world.

Computer-Integrated Machining

What is Computer-Integrated Machining?

Students in the Computer-Integrated Machining program will spend considerable time in the study and actual operation of industrial equipment and tools to develop skills used by tool and die making companies and production and manufacturing facilities. This includes emphasis on the set up and operation of computer numerical controlled (CNC) lathes and milling machines. Students will also be introduced to computer-controlled measuring machines and computer-aided design/computer-aided machining (CAD/CAM) software and its applications. A strong project, method-driven curriculum assures both theoretical and practical skill development.

This program prepares students to enter the workforce fields of CNC, CAM, tool making, mold making, machine tool operating, quality control, industrial sales, and production or manufacturing. High school prerequisites for this program are Algebra I & II, and a GPA of at least 2.5.

A Graduate of this Program Will be Able to:

- Demonstrate safe work habits and be conscious of safety when working with machinery.
- Read blueprints, interpret drawings, understand specifications, and establish tolerances.
- Apply mathematics in the machine tool technology (speeds, feeds, thread measurement, sine bar, etc.)
- Apply the principles of physics and metallurgy to the science of heat treatment operations, including hardening of steel, carburizing, case hardening, tempering, and annealing.
- Operate basic machine tools and demonstrate knowledge of their construction in relation to the metal industry.
- Demonstrate skills on computer numerical control machines and in digital readout.
- Operate abrasive cutting machinery; select and plan machining operations on this equipment.
- Demonstrate skills in quality control, inspection, gauging methods, and production control as they relate to manufacturing design and production.
- Demonstrate basic oral communication skills, speak logically, and use various types of oral and written communication techniques to promote good business relationships, to develop leadership, and to establish good employer-employee relationships.
- Demonstrate understanding of CAD/CAM programs for part design and generation of CNC code.

Jared Keim, Instructor
AAS: Thaddeus Stevens College of Technology
BS: Millersville University of Pennsylvania

Kyle Young, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Computer-Integrated Machining

Semester 1	
CIM 106: Blueprint Reading and Related Math	**3**
CIM 110: Manufacturing Processes	**2**
CIM 115: Measurement Systems	**2**
CIM 118: Lathe and Vertical Milling Machine I	**4**
CIM 161: Metallurgy	**2**
†^MATH 137: Intermediate Algebra (or higher)	**3**
CIS 105: Drawing with AutoCad	**3**
Semester 2	
***CIM 158: Lathe and Vertical Milling Machine II**	**3**
***CIM 166: Manufacturing Processes II**	**3**
***CIM 176: Computer Numerical Control I**	**3**
***CIM 222: CAD/CAM I**	**3**
***MATH 141: Trigonometry (or higher)**	**3**
ENG 106: English Composition	**3**
Semester 3	
***CIM 210: CNC Milling**	**4**
***CIM 211: CNC Turning**	**4**
***CIM 220: Geometric Dimensioning & Tolerancing**	**3**
***CIM 272: CAD/CAM II**	**3**
ENG 216: Technical Writing OR	
ENG 221: Public Speaking	**3**
Science Elective: ANY Physics or Chemistry Course	**3**
Semester 4	
***CIM 228: CAE/CAM**	**3**
***CIM 229: Automation and Production Lab OR**	
***CIM 231: Machine Tool Internship**	**4**
***CIM 259: Advanced CNC Milling and Automation**	**3**
***CIM 269: Advanced CNC Turning and Automation**	**3**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
General Studies Elective	**3**
TOTAL CREDITS	**75**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Computer-Integrated Machining (CIM)

CIM 106 (3 credits) Blueprint Reading and Related Math
Interpretation of industrial drawings, basic skills in sketching, and applied mathematics.

CIM 110 (2 credits) Manufacturing Processes
Students will learn laboratory safety and material handling. The physics of metal cutting, and the machinability of metals are introduced. Semi-precision and precision measuring instruments are introduced and practiced. Precision layout, bench grinding, surface grinding and power sawing operations will also be introduced and exercised.

CIM 115 (2 credits) Measurement Systems
Students will learn basic metrology. Precision layout, indirect, and direct measurement will be included. Geometric tolerancing and how GDT features are measured will be covered.

CIM 118 (4 credits) Lathe and Vertical Milling Machining I
This course introduces students to the lathe and vertical milling machine. Students are exposed to a wide variety of related operations.
Corequisite: CIM 106

CIM 158 (3 credits) Lathe and Vertical Milling Machining II
Techniques and procedures taught in CIM 118 are enhanced and reinforced. This course introduces students to more advanced techniques and procedures used on the lathe and the vertical milling machine.
Prerequisites: CIM 106, CIM 110, CIM 115 and CIM 118 and MATH 137
Corequisite: MATH 137

CIM 161 (2 credits) Metallurgy
Covering the basic principles of metallurgy, this course clarifies many industrial processes. Students gain an understanding of quenching, annealing, case hardening, tempering, and crystallization.

CIM 166 (3 credits) Manufacturing Processes II
This is a lab intensive course which provides students with extensive hands-on training. Assigned projects aid students in gaining critical experience contributing to a well-rounded machining education.
Prerequisites: CIM 106, CIM 110, CIM 115, CIM 118, & CIM 161
Corequisite: MATH 137

CIM 176 (3 credits) Computer Numerical Control (CNC) I
CIM 176 introduces the student to basic CNC concepts such as word-address programming, machine set-up, and program proofing. This course serves as an introduction to CNC machines and CNC programming methods and techniques. The programming and set up of a wire electro discharge machine will be covered as well.
Prerequisites: CIM 106, CIM 110, CIM 118
Corequisite: MATH 137

CIM 210 (4 credits) CNC Milling
This course expands upon introductory concepts learned in CNC I and provides for increased hands-on application of learned material. New programming techniques will focus completely on turning and the use of CNC machining centers. Students are required to complete specific laboratory work to gain confidence in working with CNC Machining Centers.
Prerequisites: CIM 158, CIM 165, CIM 175, CIM 222 and MATH 137

CIM 211 (4 credits) CNC Turning
This course expands upon introductory concepts learned in CNC I and provides for increased hands-on application of learned material. New programming techniques will focus completely on turning and the use of CNC turning centers. Students are required to complete specific laboratory work to gain confidence in working with the CNC Turning Centers.
Prerequisites: CIM 158, CIM 165, CIM 175, CIM 222 and MATH 137

CIM 220 (3 credits) Geometric Dimensioning & Tolerancing
This course provides the basic elements required to define and apply industry accepted design specifications. The curriculum covers ASME Y.14.5 and associated standards, datum selection, benefits of bonus tolerance, manufacturing and inspection implications when using GD&T. Students will learn the rules, symbolic language and concepts used to define part dimensions and tolerances. As a result, students will increase their productivity due to clear product definition and function based design rationale.
Prerequisites: CIM 106, CIM 110, CIM 115, and MATH 137

CIM 222 (3 credits) Computer-Aided Design and Computer-Aided Machining (CAD/CAM) I
This course introduces the use of MasterCAM® as a tool for defining part geometry and generating CNC machine code. Two-axis and three-axis applications are demonstrated, along with the use of the CAD/CAM applications. The AutoCAD® system is introduced as a drafting system to be linked with MasterCAM®.
Prerequisites: CIM 106, CIM 110 and CIM 118

CIM 228 (3 credits) CAE/CAM
This course teaches an intermediate level use of CAE/CAM software for generating code for use on multi-axis machine tools. Parametric modeling will be introduced using Computer Aided Engineering (CAE) software. Students will learn to design and engineer parts for manufacturing and assembly. This course will emphasize the connection between design and machine tool applications.
Prerequisite: CIM 272, CIM 210, CIM 211, CIM 220

CIM 229 (4 credits)
Automation and Production Lab

This class will focus on production setups and automation. On the lathe, advanced setups including dual-spindle, Y-axis milling, and the use of live tooling and bar pullers will be studied. On the mill, broaching, 3+2 milling and 5-axis simultaneous milling will be covered and applied. Preparing machined parts for heat-treating and required grinding will be covered in this course.

Prerequisites: CIM 210, CIM 211, CIM 220, CIM 272, and MATH 137

CIM 231 (4 credits) Machine Tool Internship

The course is a prearranged, structured learning experience scheduled within a specific time frame. The experience is relevant to an intern's academic goals and to the competencies of this program. Machine Tool Technology internships serve as a capstone experience to the academic instruction received at Thaddeus Stevens College and provide interns with an opportunity to gain practical work experience in the machining industry.

Prerequisites: CIM 208, CIM 209, CIM 272, and Instructor Permission.

CIM 259 (3 credits)
Advanced Milling & Automation

This course expands upon the intermediate concepts learned in CNC Milling I and introduces advanced milling techniques. This course also provides more hands-on experience with those techniques. New milling procedures and cycle time reduction will be the focus of this course. This course will focus on production techniques for CNC Machining Centers, including macro-B programming.

Prerequisites: CIM 210, CIM 220, and CIM 272
Corequisite: CIM 269

CIM 269 (3 credits)
Advanced Turning & Automation

Provides the student with additional time to perform specific advanced laboratory exercises in both programming and setup operations on the CNC Turning Centers. Programming techniques will focus completely on CNC Turning centers and will include multi-axis programming, live-tooling, and Swiss-style turning. A greater emphasis will be placed on the incorporation of CAM generated code in the production of finished parts. This class will also introduce Macro B programming techniques.

Prerequisites: CIM 211, CIM 220, and CIM 272
Corequisite: CIM 259

CIM 272 (3 credits)
Computer-Aided Design and Computer-Aided Machining (CAD/CAM) II

This course teaches intermediate-level use of CAM software as a tool for defining part geometry for both lathes and mills. Two axis and three axis application will be demonstrated along with the use of CAD/CAM applications. Three-dimensional surfacing and solids will be taught.

Prerequisite: CIM 222, CIM 175, CIM 158, CIM 165, MATH 137

Diesel Technology

What is Diesel Technology?

Diesel Technology Program is designed to prepare students to enter the diesel mechanic career field. This instruction gives an understanding of diesel equipment construction, theory of operation, and standard industry service, and repair procedures. This instruction not only provides knowledge to perform equipment repair and service but also develops skills necessary to diagnose malfunctions. Two of the most important skills that will be developed are problem solving and critical thinking.

A Graduate of this Program Will be Able to:

- Diagnose and repair common malfunctions of the following systems:
  - Diesel Engine principles and operation, shop operation and tool/equipment usage.
  - Diesel Engine – lubrication, cooling, fuel injection systems, mechanical systems, intake and exhaust including turbo chargers.
  - Diesel Engine Troubleshooting, Testing, Repair, and Rebuild.
  - Medium and Heavy-duty Truck and Equipment electrical/electronic systems.
  - Medium and Heavy-duty Vehicle braking systems; hydraulic and air brake systems.
  - Steering and suspension systems.
  - Drive Train Systems – Including automatic, auto-shift, and manual transmissions; driveline and differentials.
  - Preventive Maintenance Inspections
  - Basic Hydraulics and Hydraulic Systems
  - Heavy Duty HVAC Systems
  - Basic welding, oxy-acetylene, plasma, and metal fabrication.
  - PA State Cat 3 Inspection and Federal DOT Safety Inspection procedures.
- Develop sound and safe Diesel Shop practice skills, including environmental protection.
- Develop good shop habits, including demonstrating a good attendance record, punctuality, a willingness to work as a team, and a positive attitude toward lifelong learning.
- Apply laws of physics/scientific principles to Diesel Equipment systems and components when performing in-shop testing exercises and diagnostic procedures.
- Record diagnostic testing data and reports using necessary mathematics; solve basic problems using algebra.
- Locate and interpret technical data represented in shop manuals, diagnostic charts, and wiring diagrams. This could be hard copy or electronically driven.
- Demonstrate appropriate Diesel Shop management practices, including student management, customer relations, shop procedures, and writing repair orders.
- Prepare to take and pass the ASE Medium and Heavy-Duty Truck test series after successful completion of this program and one year of on-the-job experience.
- Prepare to become a lifelong learner. The Diesel Equipment Industry is very fast paced with technology changing daily. Technicians will be constantly upgrading their knowledge and skills. A solid fundamental base is crucial for building these skills.

Matthew Herr, Instructor
ASE Master School Bus Technician
ASE Automobile Technician
ASE Master Transit Bus Technician
ASE Advanced Level Specialist
ASE Master Medium/Heavy Truck Technician
AAS: Thaddeus Stevens College of Technology

Edward Hughes, Instructor
AST: Vale Technical Institute

Model Schedule for Diesel Technology

Semester 1	
DETC 105: Diesel Shop Safety	1
DETC 110: Diesel Service Fundamentals	3
*DETC 115: Diesel Engine, Electrical, and Drive Train Components and Systems Preventive Maintenance	3
*DETC 120: Diesel Vehicle Brake, Suspension & Steering, and Cab Components Systems Preventive Maintenance	2
*DETC 160: Basic Electricity	3
CIS 111: Intro to Computers	3
**^MATH 126: Technical Math I	3
Semester 2	
*DETC 125: Diesel Fuel and Supply Systems	3
*DETC 150: Diesel Engine Technology	4
*DETC 155: Diesel Engine Lab	3
*DETC 165: Introduction to Hydraulics	3
*MATH 132: Elementary Geometry or Math 136 Technical Math II	3
ENG 106: English Composition	3
Semester 3	
*DETC 205: Diesel Engine Electronic Fuel Systems, Operation and Diagnostics	3
*DETC 210: Vehicle Electronic Operation, Diagnostics, and Troubleshooting	3
*DETC 215: Medium and Heavy-Duty Brake Systems	4
*DETC 220: Diesel Equipment HVAC	3
*ENG 216: Technical Report Writing or ENG 221 Public Speaking	3
PHYS 106: Physics for Everyday Life	3
Semester 4	
*DETC 250: Manual, Automatic/Autoshift Transmission	4
*DETC 255: Steering, Suspension, Alignment	3
*DETC 260: Basic Welding and Fabrication	3
*DETC 265: Diesel Equipment Drive Train	3
General Studies Elective	3
Humanities Elective	3
Additional General Education Requirements	
HEAL: 106 or 111	1
TOTAL CREDITS	**76**

** Prerequisite or Co-requisite Required. See Course Description.*

***Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132/MATH 136, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.*

^ Minimum Grade Required. See Course Description.

Diesel Technology (DETC)

DETC 105 (1 credit) Diesel Shop Safety

Diesel Shop Safety presents an overview of safety in the Diesel Industry, including an introduction to OSHA requirements. Safety in the Diesel Shop is stressed. Instructor demonstrations and student hands on training in common shop safety practices, i.e., PPE, Fire Protection and Egress, Flammable and Combustible Liquids, Machine Guarding, Electrical Safety, Lock Out/Tag Out, and Fall Prevention is thoroughly covered. Students will also complete the SP-2 online safety training course.

DETC 110 (3 credits) Diesel Service Fundamentals

Diesel service fundamentals presents an overview of the Diesel Industry, including an introduction to the Diesel Vehicle and its systems. Jobs in the Diesel Service field are covered. Safety in the Diesel Shop, including the proper use of hand and power tools is demonstrated. Instructor demonstrations and student hands on training in common shop practices, i.e., proper vehicle lifting and jacking procedures, thread cutting and repair, fasteners, torque, and torque to yield is thoroughly covered. Measurement systems, including USC and metric are discussed. Students will receive hands on training using most of the common diesel precision measurement tools including micrometers, dial indicators, bore gauges, and torque wrenches. Students will also receive training on common tools and equipment found in a modern diesel shop. This includes: grinders, drill press, hydraulic press, and many more shop tools and equipment.

DETC 115 (3 credits) Diesel Engine, Electrical, and Drive Train Components and Systems Preventive Maintenance

Diesel Engine, Electrical, and Drive Train Components and System Preventive Maintenance presents an overview of the Diesel Systems and how they are inspected and maintained. Industry procedures on maintaining the Diesel Vehicle is discussed and demonstrated. Instructor demonstrations and student hands on training in common shop practices, i.e., Diesel Engine Maintenance and Inspection, Drive Train Maintenance and Inspection, and Electrical/Electronic System Maintenance and Inspection. The tasks included in this Course are entry level Technician skills and designed to introduce the student to correct procedures and practices of vehicle maintenance and inspection in a teaching/learning environment.

Prerequisite: DETC 105, DETC 110

DETC 120 (2 credits) Diesel Vehicle Brake, Suspension, Steering, & Cab Components Systems Preventive Maintenance

Diesel Vehicle Brake, Steering & Suspension, and Cab Components and System Preventive Maintenance presents an overview of the Diesel Vehicle Systems and how they are Maintained. Industry procedures on maintaining the Diesel Vehicle is discussed and demonstrated. Instructor demonstrations and student hands on training in common shop practices, i.e., Diesel Vehicle Air and Hydraulic Brakes Maintenance and Inspection, Steering &Suspension System Maintenance and Inspection, and Cab Maintenance and Inspection. The tasks included in in this Course are entry level Technician skills and designed to introduce the student to correct procedures and practices of vehicle inspection in a teaching/learning environment. *Prerequisite: DETC 105, 110*

DETC 125 (3 credits) Diesel Fuel and Supply Systems

Diesel Fuel and Supply Systems presents an overview of the Diesel Fuel Delivery Systems. Instruction starts at the supply tank and includes lines, filters, transfer pumps, and injector types and includes Instructor demonstrations and student hands on training in the most common fuel system preventative maintenance, diagnosis, and repairs. Students will also receive training in Shop practices, i.e., inspect fuel tanks and lines, low pressure fuel system components, and high-pressure system components. Students will receive hands on training using most of the common diesel fuel system diagnostic tools including electronic diagnostic equipment.

Prerequisite: DETC 105, 110

DETC 150 (4 credits) Diesel Engine Technology

Diesel Engine Technology presents an overview of the Diesel Engine, Diesel Engine components, Diesel Engine Systems and Operation. Industry procedures dealing with the Diesel Engine are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Diesel Engine Cylinder Head and Valve Train, Engine Block, Lubrication System, Cooling System, Air Induction and Exhaust Systems, and Engine Brakes. The tasks included in this Course are designed to give the student a thorough understanding of the Diesel Engine, Diesel Engine Systems, and Diesel Engine Components.

Prerequisite: DETC 115

DETC 155 (3 credits) Diesel Engine Lab

Diesel Engine Technology Lab provides hands on training and skill acquisition from the Diesel Engine Course. The Diesel Engine Lab presents an overview of the Diesel Engine, Diesel Engine components, Diesel Engine Systems and Operation. Industry procedures dealing with the Diesel Engines are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Diesel Engine Cylinder Head and Valve Train, Engine Block, Lubrication System, Cooling System, Air Induction and Exhaust Systems, and Engine Brakes. Each student will disassemble, measure components, diagnose wear and/or failure, and reassemble a Diesel Engine. The tasks included in this course are designed to give the student a thorough understanding of the Diesel Engine, Diesel Engine Systems, and Diesel Engine Components.

Prerequisite: DETC 115

DETC 160 (3 credits) Basic Electricity

Diesel Basic Electricity Course is an overview of the Diesel Electrical System, Battery System, Starting System, Charging System, Lighting System, and Cab & Chassis Electrical System. Industry procedures dealing with the Electrical Systems are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Basic Electrical Theory, 12- & 24-Volt Battery Systems, Engine Starting Systems, Unit Charging Systems, Vehicle Lighting Systems, and Vehicle Cab & Chassis Electrical Systems. The tasks included in this Course are designed to give the student a thorough understanding of Basic Electrical Principles and specific skills as related to a Diesel Vehicle.

Prerequisite: DETC 105 &110

DETC 165 (3 credits) Introduction to Hydraulics

Introduction to Hydraulics Course is an overview of Hydraulic Systems used in Diesel Powered Equipment. Hydraulic power is used to assist the operator to perform tasks otherwise impossible to complete. Fluid power is used to move and lift heavy objects. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Basic Hydraulic Theory, Hydraulic pumps, Filtration/Reservoirs, Hoses, Fittings & Connections, Control Valves, and Actuators. The tasks included in this Course are designed to give the student a thorough understanding of Basic Hydraulic Principles and specific skills as related to Diesel Powered Equipment.
Prerequisite: DETC 105 &110

DETC 205 (3 credits) Diesel Engine Electronic Fuel Systems, Operation and Diagnostics

Diesel Engine Electronic Fuel Systems, Operation, and Diagnostics presents an overview of the Diesel Engine Electronic Fuel Systems. It covers the use of electronic equipment for troubleshooting, diagnosing, and repairing modern computerized fuel systems. Industry procedures dealing with Electronic Fuel Systems are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Identify Electronic Fuel System components and configuration, perform system performance tests, and repair and service the Electronic Fuel System. The tasks included in this Course are designed to give the student a thorough understanding of the Diesel Engine Electronic Fuel System.
Prerequisite: DETC 160

DETC 210 (3 credits) Vehicle Electronic Operation, Diagnostics, and Troubleshooting

Vehicle Electronic Operation, Diagnostics, and Troubleshooting presents an overview of the Vehicle Electronic Systems. It covers the use of electronic equipment for troubleshooting, diagnosing, and repairing modern vehicle systems. Industry procedures dealing with Vehicle Electronic Systems are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Identify Vehicle Electronic System components and configuration, perform system performance tests, and repair and service the Vehicle Electronic Systems. These systems include: body controllers, Diagnostic software, multiplexing, and exhaust treatment systems. The tasks included in this Course are designed to give the student a thorough understanding of the Diesel Vehicle Electronic Systems.
Prerequisite: DETC 160

DETC 215 (4 credits) Medium and Heavy-Duty Brake Systems

Medium and Heavy-Duty Brake Systems presents an overview of the Vehicle Braking Systems. It covers both hydraulic and air brake systems. Modern vehicle brake systems, both hydraulic and air, are studied. The course includes standard repair and service procedures for; hydraulic systems, hydraulic system foundation components, air system, air system foundation components, drum and disc brake systems, power assist and parking brake systems. Troubleshooting ABS (antilock braking system), traction control, and vehicle stability are also covered. *Prerequisite: DETC 120*

DETC 220 (3 credits) Diesel Equipment HVAC

Diesel Equipment HVAC presents an overview of the Diesel Equipment Heating, Ventilation, and Air Conditioning System and Operation. Industry procedures dealing with the HVAC System are discussed and demonstrated. This course includes Instructor demonstrations and student hands on training in common shop practices, i.e., Identify HVAC system components and configuration, identify refrigerant types, Perform system performance tests, and repair and service HVAC system controls. The tasks included in this Course are designed to give the student a thorough understanding of the Diesel Equipment HVAC System, and controls.
Prerequisite: DETC 120

DETC 250 (4 credits) Manual, Automatic/Autoshift Transmission

The Manual, Automatic/Autoshift Transmission Course presents an overview of transmissions used in modern Medium and Heavy- Duty Trucks. It covers both maintenance and repair of these transmissions. The course includes standard repair and service procedures for; manual transmissions, automatic transmissions, and autoshift transmissions. Troubleshooting noise complaints and shifting problems, including electronic and air shift are also covered.
Prerequisite: DETC 115

DETC 255 (3 credits) Steering, Suspension, Alignment

The Steering, Suspension, and Alignment Course presents an overview of how these systems are used in modern Medium and Heavy-Duty Trucks. It covers both maintenance and repair of these systems. The course includes standard repair and service procedures for; manual and power steering systems, air and spring suspension systems, and checking and adjusting vehicle alignment. Troubleshooting steering, suspension, and handling complaints and repairing these system problems are also covered. *Prerequisite: DETC 120*

DETC 260 (3 credits) Basic Welding and Fabrication

The Basic Welding and Fabrication Course presents an overview of how these skills are used in the modern Medium and Heavy- Duty Truck Shop. The course includes basic blueprint reading, Oxy-fuel heating, cutting, and welding. It also provides training in Plasma Arc Cutting, Stick, and MIG Welding. These entry level skills are utilized in truck repair shops, trailer repair and fabrication facilities, and agriculture/heavy equipment repair shops.
Prerequisite: DETC 115

DETC 265 (3 credits) Diesel Equipment Drive Train

The Diesel Equipment Drivetrain Course presents an overview of how these systems are used in modern Medium and Heavy-Duty Trucks. It covers both maintenance and repair of these systems. The course includes standard repair and service procedures for; clutch, driveshaft and universal joints, drive axles, wheel bearings, and tires and wheels. Troubleshooting and repairing these systems is a key skill needed for today's technician.
Prerequisite: DETC 105 &110

Electrical Technology

What is Electrical Technology?

Electrical Technology provides the opportunity to acquire the theory and skills needed to gain entry-level employment and advancement at an accelerated pace in the electrical field. Students will be able to apply basic electrical theory to all aspects of electrical technology. Skills and safe working habits are developed through construction and maintenance work project assignments. Since electricity has become an integral part of everyday life, an adequate supply of electrical power is necessary, as well as a reliable system for efficient utilization; thus, there is a continuing need for qualified electrical technicians.

Graduates' knowledge and skills are useful in such career areas as electrical engineering technicians, power plant technicians, electrical construction, industrial maintenance, and as technical representatives. High school prerequisites for this program are Algebra I & II, and a GPA of at least 2.5.

A Graduate of this Program Will be Able to:

- Demonstrate technical skills in a variety of electrical fields, apply these skills to new developments in these fields, and apply accepted safety standards.
- Demonstrate the ability to design, develop, and analyze electrical circuits and systems.
- Complete parts lists and order forms that demonstrate knowledge of catalogs and of coding and numbering systems for devices, hardware, and materials.
- Interpret and develop blueprints, schematic diagrams, and wiring plans and transform them into functioning projects that conform to the National Electrical Code and/or other specifications.
- Evaluate electrical circuits and systems and communicate the results of such evaluations verbally or in writing.
- Demonstrate basic knowledge of construction procedures and electrical wiring techniques.
- Demonstrate knowledge of the use of test equipment and the electrical theory used in troubleshooting, repair, and operation of circuits, systems, and equipment.
- Demonstrate knowledge of the theory and mechanics of rotating machinery, programmable controllers, transformers, and instrumentation.
- Demonstrate leadership skills.

Frederick F. Bube, Instructor
BS: The Pennsylvania State University
Occupational Safety and Health Administration (OSHA)
General Industry Certification Trainer

Brian J. Kochan, Instructor
MA: University of Maine
BS: Millersville University
AAS: Thaddeus Stevens College of Technology

Andrew Jacobs, Instructor
MEd: Temple University
BS: The Pennsylvania State University
Electrical Apprenticeship Program: IBEW, Local 98 Philadelphia
Secondary School Counselor: Immaculata University
Occupational Safety and Health Administration (OSHA) 10 Trainer, WVU
NABCEP Entry Level Solar PV Installer Certification Program Instructor

Keith A. Brubaker, Instructor
AAS: Thaddeus Stevens College of Technology
Journeyman Electrician
Electrical Apprenticeship Program: Associated Builders and Contractors, Inc., Keystone Chapter

Model Schedule For
Electrical Technology

Semester 1	
ELEC 107: Electricity I: Theory and Analysis Lab	**1**
ELEC 113: Electricity I: Theory and Analysis	**4**
ELEC 117: Electricity I: Practicum	**4**
ELEC 120: Electricity I: Systems Design	**3**
†^MATH 137: Intermediate Algebra (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
***ELEC 126: Electricity II: Systems Design**	**3**
***ELEC 157: Electricity II: Theory and Analysis Lab**	**1**
***ELEC 162: Electricity II: Theory and Analysis**	**4**
***ELEC 168: Electricity II: Practicum**	**4**
***ENG 216: Technical Writing**	**3**
***MATH 141: Trigonometry (or higher) ^**	**3**
Semester 3	
***ELEC 211: Industrial Electronics**	**4**
***ELEC 216: D.C. & A.C. Motors and Generators**	**4**
***ELEC 257: Industrial Motor Control**	**4**
***PHYS 213: General Physics I**	**4**
CIS 111: Intro to Computer Applications	**3**
Semester 4	
***ELEC 206: Industrial Electricity**	**4**
***ELEC 263: Advanced Industrial Motor & Drive Control**	**4**
***ELEC 267: Programmable Logic Controllers**	**4**
Humanities Elective	**3**
General Studies Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**74**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Electrical Technology (ELEC)

ELEC 107 (1 credits)
Electricity I: Theory and Analysis Lab
Laboratory assignments enable students to demonstrate the theoretical topics covered in ELEC 113. Lab sessions train students to properly connect electrical circuitry and to utilize appropriate metering instruments to take specific measurements to determine voltage, resistance, current, and power, and to troubleshoot various circuit layouts.
Co-requisite: ELEC 113

ELEC 113 (4 credits)
Electricity I: Theory and Analysis
This course presents principles, laws, and formulas relating to basic direct current (DC) and alternating current (AC) applications in electricity. Topics include electron theory, magnetism, DC power supplies, Ohm's Law, Kirchhoff's Laws, AC waveform analysis and basic motor design. Resistive and inductive loads and various electrical circuit layouts are analyzed.
Co-requisite: ELEC 107

ELEC 117 (4 credits) Electricity I: Practicum
Workshop projects enable students to develop an understanding of fundamental residential and preliminary commercial circuit design and installation in accordance with the National Electric Code (NEC) and associated building regulations.
Co-requisite: ELEC 120

ELEC 120 (3 credits) Electricity I: Systems Design
This course is an introduction to fundamental residential and preliminary commercial wiring systems design. Topics include Occupational Safety and Health Administration (OSHA) certification; electrical and on-the-job safety; tool and material familiarization; plan design and specifications; wire diagramming; and the use of applicable National Electrical Code (NEC) standards.
Co-requisite: ELEC 117

ELEC 126 (3 credits) Electricity II: Systems Design
This course is an advanced study in commercial and industrial electrical systems design and installation. Sizing various raceway systems for commercial and industrial applications, custom electrical enclosure sizing, and poly-phase distribution systems are reviewed in detail. Industrial process and motor control material, circuit planning and design, and AC motors sizing and wiring methods introduce students to advanced electrical control systems.
Prerequisites: ELEC 117 and ELEC 120
Co-requisite: ELEC 157 and ELEC 168

ELEC 157 (1 credit)
Electricity II: Theory and Analysis Lab
Laboratory assignments enable students to analyze AC waveforms and AC circuit characteristics by connecting the appropriate electrical components and utilizing electrical measuring instruments to take specific measurements. Computer software is used to enable advanced circuit analysis and troubleshooting.
Prerequisites: ELEC 107 and ELEC 113
Co-requisite: ELEC 162

ELEC 162 (4 credit)
Electricity II: Theory and Analysis
This course presents advanced study in the principles, laws, and formulas relating to alternating current (AC) applications in electricity. Topics include AC waveform analysis, electromagnetism, power generation and distribution, vector diagrams, power factor and correction, single-phase and poly-phase systems, and motors.
Prerequisites: ELEC 107 and ELEC 113
Co-requisite: ELEC 157

ELEC 168 (4 credit)
Electricity II: Practicum
This course is a hands-on approach to commercial and industrial electrical systems design and installation. Assignments include schematic and ladder diagramming, commercial wiring and raceway systems installations, process control wiring, troubleshooting single-phase and poly-phase distribution systems, motors, and motor control circuits.
Prerequisites: ELEC 117 and ELEC 120
Co-requisite: ELEC 126

ELEC 206 (4 credits)
Industrial Electricity
This course presents principles and industry standards relating to industrial electrical power distribution systems. Students will learn about power distribution equipment including single- and three-phase transformers, power switchgear, switchboards, panelboards, and motor control centers. Student learning is centered on the design and installation of industrial power equipment based on the standards established by the National Electrical Code.
Prerequisites: ELEC 126, ELEC 157 and ELEC 162

ELEC 211 (4 credits)
Industrial Electronics
This course presents theory and practice in basic industrial electronic components found in the electrical industry. Students will learn about digital and analog electronic devices including diodes, transistors, SCRs, Triacs and common Integrated Circuits. A laboratory component will provide students with the opportunity to observe the operational characteristics of electronic components and their use in common electrical control devices/circuits.
Prerequisites: ELEC 126, ELEC 162, and ELEC 168

ELEC 216 (4 credits)
DC and AC Motors and Generators

This course presents principles and industry standards relating to electric generators and motors. Students will learn about both DC and AC machines and their usage in power generation and industrial environments. Student learning is centered on the operation and performance of DC and AC generators and motors under varying load conditions. Additionally, students will lean installation and troubleshooting practices associated with electric motors.
Prerequisites: ELEC 126, ELEC 162, and ELEC 168

ELEC 257 (4 credits)
Industrial Motor Control

This course presents principles and industry standards relating to the design and installation of basic industrial motor control circuits. Additionally, the theory and operational characteristics of electrical devices utilized in control circuits are covered. Topics include electrical drawings, contactors/ motor starters, basic motor control circuits (two-wire/three-wire/reversing), and control devices. A laboratory component provides students with the opportunity to design, to install, and to operate various motor control schemes/circuits.
Prerequisites: ELEC 162 and ELEC 168

ELEC 263 (4 credits)
Advanced Motor and Drive Controls

This course presents principles and industry standards relating to the design and installation of advanced industrial motor and drive control circuits. Additionally, the theory and operational characteristics of starting/stopping and motor speed control are covered. Topics include reduced voltage starting techniques, motor speed control, and AC/DC drive controls. A laboratory component provides students with the opportunity to design, to install, and to operate various motor control schemes/circuits, as well as opportunities to troubleshoot faulted circuits.
Prerequisites: ELEC 216 and ELEC 257

ELEC 267 (4 credits) Programmable Logic Controllers

This course presents principles and industry standards relating to the use of PLCs used for the automation of industrial process controls. Additionally, students learn to utilize the proprietary programming software to interact with and program PLCs. Topics include PLC hardware characteristics, Boolean logic, number systems, relay-type, timing, counter and advanced PLC instructions. A laboratory component provides students with the opportunity to design, to install, and to operate various PLC-controlled processes in a simulated and hands-on environment.
Prerequisites: ELEC 211 and ELEC 257

Electro-Mechanical Technology

What is Electro-Mechanical Technology?

Electro-Mechanical Technology (or mechatronics) is one of the most in-demand and highly sought-after careers in the manufacturing industry. The combination of electrical and mechanical skills, based in computer-aided drafting and machine technology, create a unique blend of knowledge desirable to industry. These technicians are trained in a variety of skill areas, allowing companies to utilize their knowledge for a vast array of technical and mechanical issues. When necessary, industry will call on more advanced specialists, however, for the everyday issues that arise which could cost the company revenue when they occur. Having a multi-skilled technician on staff who can address issues immediately allows companies to continue production at a minimal loss. Electro-mechanical technicians have become essential positions in the manufacturing industry.

A Graduate of this Program Will be Able to:

- Disassemble machinery or equipment to remove parts and make repairs.
- Repair or replace broken or malfunctioning components of machinery or equipment.
- Repair or maintain the operating condition of industrial production or processing machinery or equipment.
- Examine parts for defects, such as breakage or excessive wear.
- Reassemble equipment after completion of inspections, testing, or repairs.
- Observe and test the operation of machinery or equipment to verify the adequacy of repairs.
- Clean, lubricate, or adjust parts, equipment, or machinery.
- Analyze test results, machine error messages, or information obtained from operators to diagnose equipment problems.
- Record repairs and maintenance performed.

Benjamin Harmuth, Instructor
MEd: Temple University
BS: The Pennsylvania State University
AAS: Thaddeus Stevens College of Technology

Andrew Friedlund, Instructor
MS: Montana State University
BS: Albright College

Caleb Lower, Instructor
BS: Old Dominion University
AAS: Thaddeus Stevens College of Technology

David Thompson, Instructor
BS: The Pennsylvania State University
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Electro-Mechanical Technology

Semester 1	
ELME 104: Mechanical Systems I	**4**
ELME 105: Manufacturing Fundamentals	**4**
ELME 107: Electrical Systems I	**4**
†^MATH 137: Intermediate Algebra OR MATH 207: Pre-Calculus (4 credits)	**3**
ENG 106: English Composition	**3**
Semester 2	
ELME 109: Programmable Logic Controllers I	**4**
***ELME 116: Mechanical Systems II**	**4**
***ELME 117: Electrical Systems II**	**4**
***ENG 216: Technical Writing**	**3**
***^MATH 141: Trigonometry (or higher)**	**3**
Semester 3	
***ELME 204: Mechanical Systems III**	**4**
***ELME 208: Programmable Logic Controllers II**	**4**
ELME 215: Robotics and Motion Control	**4**
***PHYS 213: General Physics I**	**4**
Humanities Elective	**3**
Semester 4	
ELME 214: Mechatronics Seminar & Advanced Project	**4**
ELME 218: Process Control & Industrial Instrumentation	**4**
***ELME 225: Computer Integrated Manufacturing Systems & PLC's III**	**4**
General Studies Elective	**3**
General Studies Elective	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Electro-Mechanical Technology (Mechatronics) (ELME)

ELME 104 (4 credits) Mechanical Systems I

This course introduces the principles and applications of the most commonly found mechanical drive and fluid power components in an industrial manufacturing environment. Topics include mechanical power transmission devices, hydraulics, and pneumatics through a fundamental level along with related construction and troubleshooting techniques. All course material is supplemented with practical, hands-on exposure to the items described.

ELME 105 (4 credits) Manufacturing Fundamentals

This course provides students with an overview of the various types of manufacturing that take place in the discrete, hybrid, and continuous sectors and of the jobs that must be performed within manufacturing. The course provides an introduction to the techniques and resources that manufacturers employ to improve operations, preparing students for independent investigating and life-long learning. It provides basic knowledge and skills with regard to print/schematic reading, CAD drawing, measurement, and quality assurance. At least one plant tour is included as part of this course to provide firsthand validation of the topics covered.

ELME 107 (4 credits) Electrical Systems I

This course covers the principles and application of alternating current (AC) and direct current (DC) electricity, industrial sequential control, and electrical controls construction as found in a typical manufacturing environment. Topics include AC and DC circuit analysis and measurement in resistive, capacitive, and inductive circuits; AC fixed-speed motor control; control transformers, relays, timers, and counters; mechanical, pneumatic, and hydraulic input and output devices; sequencing and logic functions; introduction to component and systems troubleshooting; electrical wiring practices; conduit and raceways; and requirements for conductors, disconnects, and raceways as specified by the National Electric Code (NEC). All course material is supplemented with practical hands-on exposure to the items described.

ELME 109 (4 credits) Programmable Logic Controllers I

This course covers the principles and application of programmable logic controllers (PLCs) as found in a typical manufacturing environment. Topics include understanding the physical components that make up a PLC, basic PLC programming, and understanding the components that make up input/output, including AC/DC discrete input modules and analog input and output modules; how these modules connect to the PLC and to output devices such as motor controls, variable frequency drives, valves, and other types of machine controls.

ELME 116 (4 credits) Mechanical Systems II

This course covers the principles and applications of the most commonly found mechanical drive and fluid power components in an industrial manufacturing environment. Topics include mechanical power transmission devices and pneumatics and hydraulics through an intermediate level along with related construction and troubleshooting techniques. All course material is supplemented with practical, hands-on exposure to the items described.
Prerequisites: ELME 104

ELME 117 (4 credits) Electrical Systems II

This course covers the principles, application, troubleshooting, and maintenance of rotating electrical motors and electronic motor drives as used in industry. Topics include various types of single- and three-phase motors, various types of DC motors, reduced voltage starting, braking, DC electronic drives and AC variable frequency drives. The course builds upon the principles and applications covered in ELME 107.
Prerequisites: ELME 107

ELME 204 (4 credits) Mechanical Systems III

This course covers the principles and applications of the most commonly found mechanical drive and fluid power components in an industrial manufacturing environment. Topics include mechanical power transmission devices, pneumatics, and hydraulics through at an advanced level along with related construction and troubleshooting techniques. All course material is supplemented with practical hands-on exposure to the items described.
Prerequisites: ELME 104 and ELME 116

ELME 208 (4 credits) Programmable Logic Controllers II

This course covers the principles and application of programmable logic controllers (PLCs) featuring the IEC 61131-3 programming standard. Topics include how to install PLCs; how to configure modules; how to wire input and output modules, including temperature-sensing devices (thermocouples and resistive temperature detectors) and analog devices featuring 0–10 volts and 4–20 mA standards. The course also includes programming the built-in human-machine interface (HMI) which allows program control and status update through a built-in touch screen.
Prerequisites: ELME 109

ELME 214 (4 credits)
Mechatronics Seminar and Advanced Project

This course provides a capstone experience for the associate of applied science degree in Electro-Mechanical Technology by requiring that students—with a teammate(s)—apply skills and knowledge from each of the program areas to an independent mechatronics project. Students develop and implement a project plan and budget approved by the instructor that demonstrates the ability to integrate the skills and knowledge obtained over the previous three semesters of study. Students work with actual industrial equipment and machinery in a realistic application. This course broadens students' knowledge with respect to technology suppliers, equipment, and applications. Students should begin planning for this course during the semester prior to the semester in which the course is completed.

ELME 215 (4 credits) Robotics and Motion Control

This course provides students with a background in the programming and application of industrial robots and general purpose synchronized multi-axis motion control. Expanding upon previously-learned concepts, this course examines the combination of multiple axes of motion to perform useful functions such as creating a flexible manufacturing system utilizing robots and broadens the knowledge of different programming languages to initiate and control motion sequences. Students learn how to implement electronically many of the simple machines introduced in previous courses such as gear drives, belt drives, line shafts, and cams.

ELME 218 (4 credits)
Process Control and Industrial Instrumentation

This course covers the fundamentals of process control and instrumentation as applied in industry for the control of level, flow, temperature, and pressure. The concept of a control loop is introduced and each of the loop's components—sensor, controller, and final element—are examined. Design, documentation, operation, performance tuning, and troubleshooting of single-loop systems is discussed.

ELME 225 (4 credits)
Computer-Integrated Manufacturing Systems and PLCs III

This course guides students through the processes of interfacing and integrating manufacturing components and unit operations into useful systems. Students work with touch screen displays (HMI) networked to programmable logic controllers. System integration is accomplished using digital input/output, DeviceNet, and TCP/IP Ethernet networking. The course involves working with a flexible manufacturing lab that includes a bar code reader, vision system, servo, and AC drive to manipulate a conveyor and other equipment to sort and fill. Prerequisites: ELME 109 and ELME 208

Electronic Engineering Technology

What is Electronic Engineering Technology?

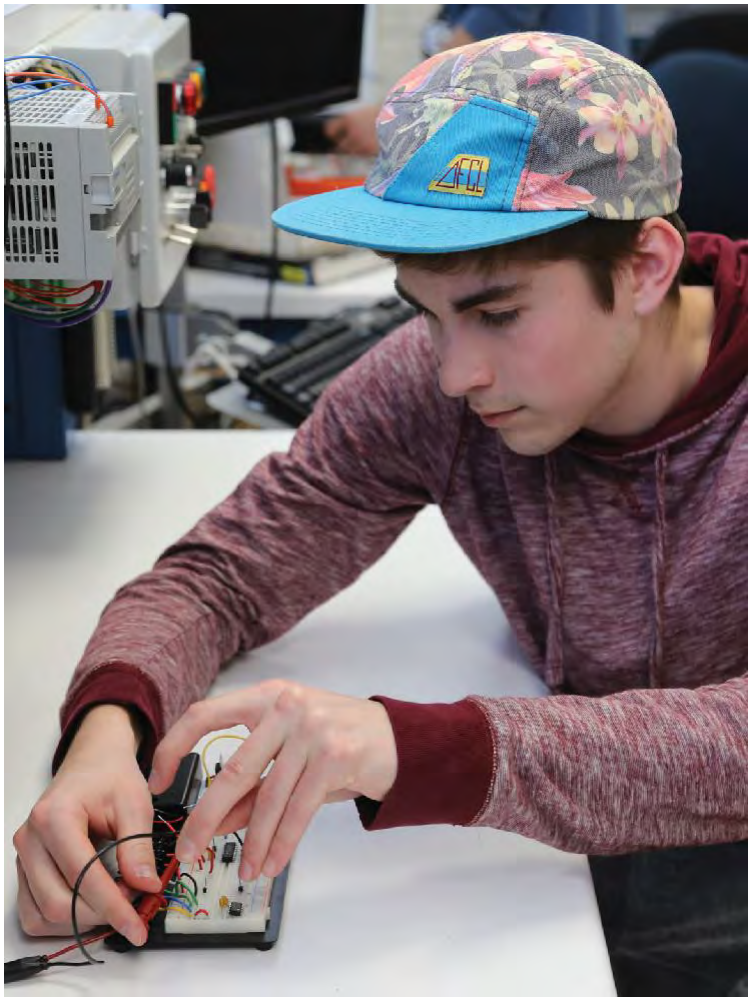
Electronic Engineering Technology provides the opportunity to acquire the skills needed to gain employment as an engineering technician in manufacturing and industry. Skills are developed by theoretical analysis and by the use of manipulative practice in the laboratory. The program gives students a broad theoretical and practical background in analog and digital electronic circuits. Graduates of the Electronic Engineering Technology program are prepared to find employment as technicians with the ability to prototype, to test, to program, to integrate, to install, to maintain, and to repair electronic systems. Because of the use of electronics in most industries, many employment opportunities in varied environments exist. High school prerequisites for this program are Algebra I and II, and a GPA of at least 2.5.

A Graduate of this Program Will be Able to:

- Demonstrate a working knowledge of DC and AC components and circuits.
- Demonstrate a basic knowledge of solid state devices and circuits.
- Analyze, design, construct, and integrate components and circuits of various types.
- Demonstrate a basic knowledge of digital electronics, logic circuits, microprocessors, and programmable logic controls (PLCs).
- Solve math problems related to circuit analysis, digital electronics, and other systems.
- Operate standard test equipment to analyze electronic systems.
- Design and troubleshoot simple microprocessor-based systems and interface peripheral devices.
- Work with robotics and motion control systems at a basic level.
- Understand pneumatics at a basic level.
- Network PLCs and other data acquisition and control systems.
- Interface sensors and control elements to PLCs.

Thomas L. Evans, Instructor
AAS: Thaddeus Stevens College of Technology

Bruce C. Schreiner, Professor
MEd: The Pennsylvania State University
BS: Millersville University
AAS: Thaddeus Stevens College of Technology



Model Schedule For
Electronic Engineering Technology

Semester 1	
***EET 108: DC Fundamentals (w/lab)**	**4**
***EET 118: AC Fundamentals (w/lab)**	**4**
EET 128: Combinational Digital Logic (w/lab)	**4**
†^MATH 137: Intermediate Algebra OR MATH 207: MATH 207 Pre-Calculus (4 credits)	**3**
ENG 106: English Composition	**3**
Semester 2	
***EET 158: Solid State Devices I (w/lab)**	**4**
***EET 168: Solid State Devices II (w/lab)**	**4**
***EET 178: Sequential Digital Logic (w/lab)**	**4**
***ENG 216: Technical Writing**	**3**
***^MATH 141: Trigonometry (or higher)**	**3**
Semester 3	
***EET 217: Microprocessors/Microcontrollers (w/lab)**	**4**
***EET 222: Interfacing & Programming Microprocessors (w/lab)**	**4**
***EET 238: Interfacing and Basic Control Circuits (w/lab)**	**4**
***PHYS 213: General Physics I**	**4**
Humanities Elective	**3**
Semester 4	
***EET 258: Automation&Control Systems with PLCs I (w/lab)**	**4**
***EET 268: Automation&Control Systems with PLCs II (w/lab)**	**4**
***EET 278: Data Acquisition and Control Project**	**4**
General Studies Elective	**3**
General Studies Elective	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Electronic Engineering Technology (EET)

EET 108 (4 credits)
DC Fundamentals (w/Lab)
Voltage, current, resistance, conductance, power, and energy are defined. Ohm's law, Kirchoff's laws, Thevenin, Norton, and Superposition theorems are used to analyze resistive circuits. Components studied include resistors, potentiometers, bridge circuits, comparators, simple timing circuits, switches, circuit breakers, relays, h-bridges, solenoids, photo-resistors, thermistors, voltage sources, and current sources. Students build simple DC circuits based on concepts and components being studied. Electrical measurements are performed to verify proper circuit operation. Circuit construction and measurement techniques are taught. Students are trained in the use of digital multi-meters and DC power supplies as test equipment.
Co-requisites: Math 137

EET 118 (4 credits)
AC Fundamentals (w/Lab)
Waveforms, capacitors, inductors, and transformers are studied. Reactance, impedance, phase angles, and power factor are calculated. Pulse width modulation, time constants, and filters are introduced. Students build simple AC circuits based on concepts and components being studied. Wave parameters, capacitance, inductance, impedance, and phase angles are measured to verify proper circuit operation. Students are trained in the use of signal generators and oscilloscopes as test equipment.
Prerequisite: EET 108

EET 128 (4 credits)
Combinational Digital Logic (w/Lab)
Basic digital electronic concepts are covered including introduction to digital machines, number systems (binary and hexadecimal), binary arithmetic, digital signals and switching, Boolean algebra, logic gates (AND, OR, NAND, NOR, XOR, XNOR), logic gate specifications, and basic combinational logic circuits. Includes an introduction to and programming of programmable logic devices (PLDs). Circuits are built from schematics and test equipment (DVM, logic analyzer, digital signal generator, and circuit simulation software) is used to learn the operation of the circuits.

EET 158 (4 credits)
Solid State Devices I (w/Lab)
Diodes, rectifiers, power supplies, regulators BJT transistors, and transistor amplifiers are studied. Students build and test diode circuits, power supplies, transistor circuits, and amplifiers.
Prerequisites: EET 108 and EET 118

EET 168 (4 credits)
Solid State Devices II (w/Lab)
FET transistors, op amps, thyristors, opto-isolators, and solid state relays are studied. Drivers, buffers, interfacing, pre-amps, amplifiers, active filters, mixers, oscillators, and phase controllers are built and tested.
Prerequisite: EET 158

EET 178 (4 credits)
Sequential Digital Logic (w/Lab)
Comprehensive coverage of combinational and sequential logic circuits including adders, subtractors, flip-flops, shift registers, counters, digital multiplexors/de-multiplexors, and A/D and D/A conversions. Electronic equipment schematics are reviewed to develop technician-level skills. Circuits are built from schematics and test equipment (DVM, logic analyzer, digital signal generator, and circuit simulation software) is used to learn the operation of the circuits.
Prerequisite: EET 128

EET 217 (4 credits) Microprocessors/Microcontrollers (w/Lab)
This course is an introduction to the basic architecture and instruction sets of microprocessors and microcontrollers. Learning activities include basic assembly language programming, working with programming IDE environment, software simulation tools, hardware emulation tools, and logic analysis of hardware signals. Both Harvard architecture and von Neumann architecture devices are covered.
Prerequisites: EET 128 and EET 178

EET 222 (4 credits)
Interfacing and Programming Microprocessors (w/ Lab)
This course involves the interfacing of basic input and output devices at the chip level to microprocessors and microcontrollers and also includes their support ICs and common peripheral devices. Learning activities include interfacing, programming (at assembly language level) and modifying existing assembly and C language code. Test equipment—including DSOs, DVMs, logic analyzers, and data analyzers—is used in support of these activities.
Prerequisite: EET 217

EET 238 (4 credits)
Interfacing and Basic Control Circuits (w/Lab)

This course will provide an introduction to common interfacing schemes and foundational control circuits. The student will gain insight into concepts involved in interfacing the outside world to and from a controller. The student will be introduced to basic circuits, ladder diagrams, and GUIs (graphic user interfaces) to create HMIs (human machine interfaces).
Prerequisite: Successful completion of 1st year EET courses

EET 258 (4 credits)
Automation and Control Systems with PLCs I (w/Lab)

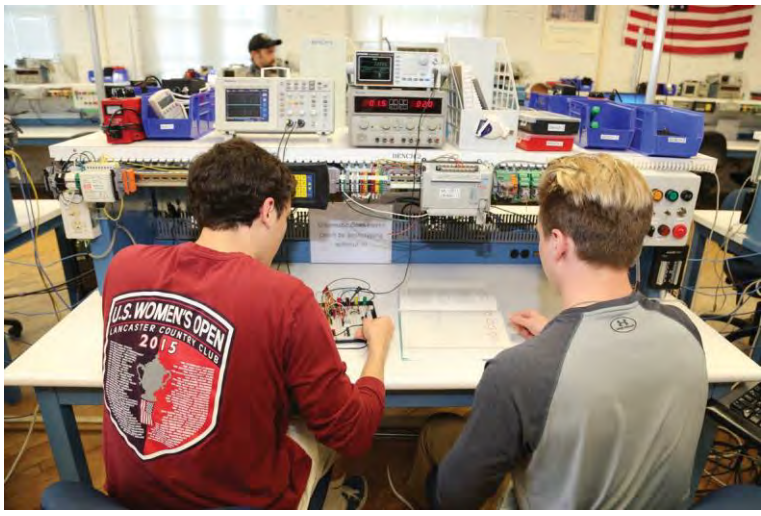
This course handles electronic topics from an industrial viewpoint and deals with actual control systems utilizing programmable logic controllers (PLCs), IEC-61131 programming concepts, and industrial circuits. It also serves as introduction to process control, industrial process techniques, and instrumentation. During this course, the PLC is used as the control device where possible and therefore PLC knowledge is advanced in both interfacing and programming areas.
Prerequisites: EET 108, EET 118, and EET 128

EET 268 (4 credits)
Automation and Control Systems with PLCs II (w/Lab)

This course introduces mechanical, pneumatic, and photoelectric transducer devices used to convert all types of stimuli to electronic pulses and their use in industrial control circuits. Most activities use the PLC as the control element. Advanced ladder programming skills and higher-level language IEC-61131 programming is also covered. Industrial networking topics for control systems include RS232, TCP/IP, DH+, Modbus, DeviceNet, ASi, and other industrial networks. Motor and motion control topics include AC, DC, servo, and stepper motor operation. Motor and motion control systems are put into practical use and discussed as part of robotic systems.
Co-requisites: EET 258

EET 278 (4 credits)
Data Acquisition and Control Project

Students create a control system of their own design. The project incorporates topics from all semesters. Programming and interfacing are implemented with an automation emphasis. Aspects include design, construction, testing, and documentation.
Prerequisite: Successful completion of first three semesters of EET courses
Co-requisites: EET 258 and EET 268



Engineering CAD Technology

What is Engineering CAD Technology?

The Engineering CAD Technology program prepares graduates for positions as entry-level CAD operators in a wide range of manufacturing and engineering industries. Skills acquired from this program of study will allow students to become an integral part of product design and the manufacturing of those products. Graduates will apply specialized knowledge and skills utilizing state-of-the-art CAD software to think critically, to solve problems, and to effectively communicate with colleagues and supervisors in today's ever-changing work environment.

From preliminary drawings and sketches, to parametric design, to animated assemblies, graduates will learn how to simplify, enhance and streamline the manufacturing and engineering processes utilizing CAD. Students acquire comprehensive skills in the following technical areas: fundamentals of drafting, technical drawing, process pipe drafting, processes of manufacturing, geometric dimensioning and tolerancing (GD&T), metals fabrication drafting, and power transmission. Students' CAD skills are developed with a comprehensive exposure to the latest software releases of AutoCAD®, Autodesk Inventor®, SolidWorks®, and Pro/Engineer®.

Upon completion of the program, graduates will find various employment opportunities in the following fields:

- CAD operator
- Cost estimator
- Drafting manager
- Drafting supervisor
- Mechanical detailer
- Mechanical design technician

A Graduate of this Program Will be Able to:

- Produce working drawings such as detail, subassembly, and full-assembly drawings utilizing manual, freehand, and computer-aided drafting techniques.
- Recognize and apply the ASME Y14.5 guidelines in the creation of mechanical working drawings.
- Apply industrial standards to the creation of working drawings of sheet-metal components, welded assemblies, electronics drafting, piping systems, and power transmission components.
- Identify and understand basic manufacturing processes as they relate to the dimensioning of working drawings.
- Demonstrate an ability to work independently and to apply interpersonal and technical skills to solve problems as a member of a multi-disciplinary team.
- Demonstrate skills and proficiency in multiple 2D and 3D solid modeling CAD software packages.

Donald Hart, Assistant Professor
AST: Thaddeus Stevens College of Technology
PCT Technical Committee, Sheet Metal
Society of Manufacturing Engineers (SME): Member
Technology Students Association (TSA):
State Conference Planning Team

James Knapp, Professor
MS: Millersville University
BS: Millersville University
American Design Drafting Association (ADDA): Member
Society of Manufacturing Engineers (SME): Member
International Technology and Engineering Education
Association (ITEEA): Member
Technology Students Association (TSA):
State Event Coordinator
State Conference Planning Team
Epsilon Pi Tau (EPT) Honor Fraternity: Laureate Member

Model Schedule For
Engineering CAD Technology

Semester 1	
ECAD 105: Metallic Manufacturing Processes	**3**
***ECAD 112: Technical Drawing**	**3**
***ECAD 120: Intro to AutoCAD Applications**	**3**
***ECAD 130: Advanced AutoCAD Applications**	**3**
†^MATH 137: Intermediate Algebra (or higher)	**3**
CIS 211: Microsoft Excel	**3**
Semester 2	
***ECAD 150: Intro to AutoDesk Inventor Applications**	**3**
***ECAD 160: Advanced AutoDesk Inventor Applications**	**3**
***ECAD 168: Process Pipe Drafting**	**3**
***ECAD 171: Non-Metallic Manufacturing Processes**	**3**
ENG 106: English Composition	**3**
***MATH 141: Trigonometry (or higher)**	**3**
Semester 3	
***ECAD 207: Geometric Tolerancing**	**3**
***ECAD 211: Metals Fabrication Drafting**	**3**
***ECAD 220: Intro to Solid Works Applications**	**3**
***ECAD 230: Advanced Solid Works Applications**	**3**
***ENG 216: Technical Report Writing**	**3**
PHYSICS : Any Physics Elective	**3**
Semester 4	
***ECAD 250: Introduction to Pro/Engineer Applications**	**3**
***ECAD 260: Advanced Pro/Engineer Applications**	**3**
***ECAD 266: Working Drawings**	**3**
***ECAD 271: Power Transmission**	**3**
ENG 221: Public Speaking	**3**
Humanities : Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Engineering CAD Technology (ECAD)

ECAD 105 (3 Credits)
Metallic Manufacturing Processes (3 credits)
This course will introduce students to common machine tools and processes. Students will be exposed to the various hand and power tools as well as the Vertical Mill and the Engine Lathe.

ECAD 112 (3 Credits) Technical Drawing
A study of orthographic projection and drawing creation with applications in multi-view drawings including sectioning and auxiliary views. Techniques in pictorial drawing are also used to convey orthographic views as pictorial representations.
Co-requisites: ECAD 105 and ECAD 120 or instructor approval

ECAD 120 (3 Credits)
Introduction to AutoCAD® Applications
A practical application of 2D orthographic skills utilizing AutoCAD® integrating knowledge of software commands with drafting standards. Students also experience dimensioning styles, templates, and symbols libraries. During the course, students create a series of mechanical drawings.
Co-requisites: ECAD 105 and ECAD 112 or instructor approval

ECAD 130 (3 Credits)
Advanced AutoCAD® Applications
An advanced application of 2D orthographic skills utilizing AutoCAD® integrating knowledge of software commands with drafting standards. Students also experience advanced 2D commands, system variables, symbols libraries, attributes, customization, and macros. During the course, students create a series of mechanical working drawings packets.
Prerequisite: ECAD 120 or instructor approval

ECAD 150 (3 Credits)
Introduction to AutoDesk Inventor® Applications
An AutoCAD Inventor® applications course with an emphasis on solid modeling parts and basic assemblies and the transition from 3D solid models to 2D working drawings.
Prerequisite: ECAD 130 or instructor approval

ECAD 160 (3 Credits)
Advanced AutoDesk Inventor® Applications
An advanced AutoDesk Inventor® applications course with an emphasis on advanced modeling of parts, advanced assemblies, and working drawings and the generation of 2D working drawings from the solid models. Add-on packages such as pipe and tube, sheet metal, weldments, and wire harness diagrams are explored.
Prerequisite: ECAD 150 or instructor approval

ECAD 168 (3 Credits)
Process Pipe Drafting
An intermediate drafting course covering the topics appropriate for reading and creating the working drawings necessary to instruct in the assembly of piping and equipment for industrial processes. Students are also exposed to cable and harness drafting and the process in which drawings are created.
Co-requisites: ECAD 150 and ECAD 160 or instructor approval

ECAD 171 (3 Credits) Non-Metallic Manufacturing Processes
An introduction to the processes commonly employed in the conversion of raw materials into finished products. This course provides students with a solid understanding of the operations necessary to cast, mold, form, separate, condition, assemble, and apply surface finishes to manufactured products.
Prerequisite: ECAD 105
Co-requisite: ECAD 150 or instructor approval

ECAD 207 (3 Credits)
Geometric Tolerancing
A study of the American Society of Mechanical Engineers (ASME) dimensioning guidelines including geometric dimensioning and tolerancing (GD&T). This course emphasizes the creation and usage of the drafting symbols necessary to define the form, fit, and function of mechanical components.
Co-requisite: ECAD 211

ECAD 211 (3 Credits)
Metals Fabrication Drafting
An intermediate drafting course covering the topics pertinent to reading and creating the working drawings necessary to instruct welders and metal fabricators in the creation of welded assemblies. This course includes a thorough review of industrial welding drafting practices and practical applications of the symbols required to specify them in an assembly.
Prerequisite: ECAD 171
Co-requisite: ECAD 207 or instructor approval

ECAD 220 (3 Credits)
Introduction to SolidWorks® Applications
Introduces students to the essential applications with an emphasis on how to use the SolidWorks® mechanical design software to build parametric models of parts and assemblies and how to make drawings of those parts and assemblies.
Prerequisites: ECAD 112 and ECAD 160 or instructor approval

ECAD 230 (3 Credits)
Advanced SolidWorks® Applications

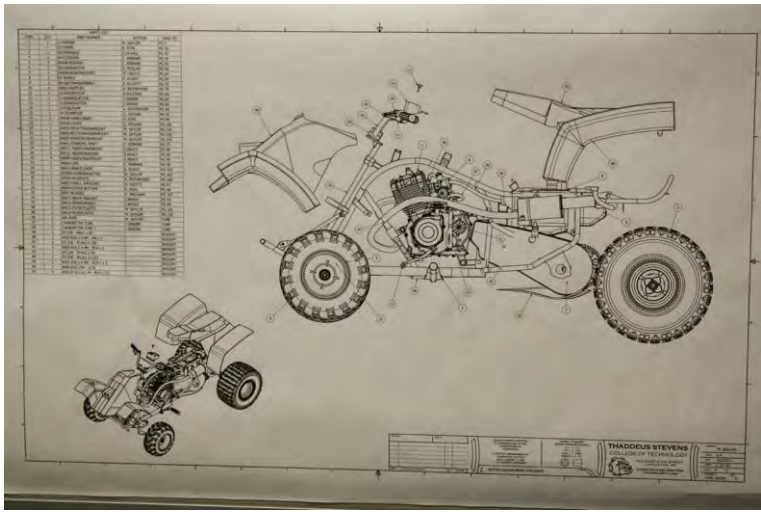
Advanced SolidWorks® applications course focuses on developing skills central to the successful use of SolidWorks® parametric software. It is designed for SolidWorks users who have mastered the basics of parametric solid model design but who need to continue building skills for working with imported models, surface modeling, and an introduction to finite element analysis (FEA) using simulation software and model analysis.

Prerequisite: ECAD 220 or instructor approval

ECAD 250 (3 Credits)
Introduction to Pro/Engineer® Applications

Introduces students to the essential applications that focuses on learning core-modeling skills in this comprehensive, hands-on course. Topics include sketching, part modeling, assemblies, drawings, and basic model management techniques. The course also includes a comprehensive design project that enables to practice new skills by creating realistic parts, assemblies, and drawings.

Prerequisite: ECAD 230 or instructor approval



ECAD 260 (3 Credits)
Advanced Pro/Engineer® Applications

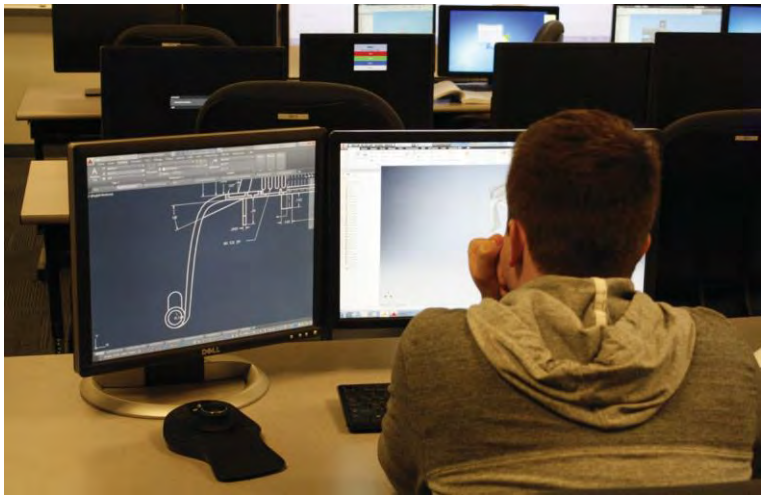
Focuses on developing skills central to the successful use of Pro/Engineer® parametric software. It is designed for Pro/Engineer® users who have mastered the basics of parametric solid model design but who need to continue building skills for working with imported models, surface modeling, sheet metal models and mechanism design which permits users to animate their assemblies in a mechanical fashion. Other skills covered are simplified reps, top-down design, flexible components, shrink-wrap feature, skeleton models, layouts, and advanced drafting commands.

Prerequisite: ECAD 250 or instructor approval

ECAD 266 (3 credits) Working Drawings

An advanced drafting course emphasizing the practices necessary to produce detail, sub-assembly, and full assembly mechanical drawings for industrial applications.

Co-requisite: ECAD 271 or instructor approval



ECAD 271 (3 credits)
Power Transmission

A study of power transmission fundamentals, the related computations, and drafting methodologies. Applications include drafting standards for utilizing bushings, keys, sheaves, belts, chains, clutches, and conveyor pulleys in working assembly drawings.

Prerequisites: MATH 137 and MATH 141

Co-requisite: ECAD 266 or instructor approval

Graphic Communications & Printing Technology

What is Graphic Communications and Printing Technology ?

The Graphic Communications and Printing Technology program provides a comprehensive understanding of the printing process and related fields. The student receives training in all major areas, with preparation to enter one of several printing fields, depending on interest and ability.

Graduates with technical and mechanical interests find employment in desktop publishing, pre-press, presswork, and bindery operations. Skills in computer operations, electronics, photography, chemistry, and physics will also be useful in these areas.

Graduates with good English and math skills will find employment in proofreading, estimating, production planning, and sales. Those students with artistic talent may enter layout and design, advertising, or commercial art.

A Graduate of this Program Will be Able to:

- Recognize the major printing processes and their products as well as the advantages of each process.
- Demonstrate the skills needed for entry-level positions (as advanced trainees) in the following areas: layout and design, copy preparation, desktop publishing, plate processing, direct-to-plate applications, press operations, and bindery operations.
- Assess personal strengths and limitations in various areas of the graphic arts.
- Demonstrate good work habits: Promptness to class, willingness to work, and the ability to accept supervision.
- Demonstrate knowledge of equipment and use appropriate safety precautions.
- Understand the various production departments and the contributions each makes to the finished product.
- Write clear, concise, legible, and accurate technical reports using standard grammatical English.
- Demonstrate skill in basic verbal communication.
- Solve basic math problems related to printing operations.

Michael Brady, Assistant Professor
BS: Walden University
AAS: Thaddeus Stevens College of Technology

Megan Zettlemoyer, Instructor
BFA: Fashion Institute of Technology

Model Schedule For
Graphic Communications &
Printing Technology

Semester 1	
GRPH 116: Introduction to Desktop Publishing	**4**
GRPH 122: Digital Photography	**4**
GRPH 126: Printing Processes I	**4**
CIS 111: Intro to Computer Applications	**3**
MATH 111: Business Math (or higher)	**3**
Semester 2	
***GRPH 150: Intro to Lithography**	**3**
***GRPH 155: Intro to Screen Printing**	**3**
GRPH 160: Graphic Communications I	**3**
***GRPH 165: Multimedia and Web Design**	**3**
CIS 211: Microsoft Excel	**3**
ENG 106: English Composition	**3**
Semester 3	
GRPH 207: Bindery and Finishing	**3**
GRPH 214: Print Marketing	**3**
***GRPH 222: Graphics Communications II**	**3**
***GRPH 228: Printing Processes II**	**3**
Humanities Elective	**3**
ENG 221: Public Speaking OR	**3**
***ENG 216: Technical Writing**	
Semester 4	**3**
***GRPH 258: Advanced Lithography**	**3**
GRPH 262: Color Theory	**3**
***GRPH 267: Graphics Communications Studio**	**3**
***GRPH 272: Web Design**	**3**
Science Elective	
General Studies Elective	**3**
(May Not Take ARTS 106 Digital Photography)	
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

^ Minimum Grade Required. See Course Description.

Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 141, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Graphic Communications & Printing Technology (GRPH)

GRPH 116 (4 credits) Introduction to Desktop Publishing

Introduction to the hardware and software used in desktop publishing. Topics include graphical user interface and current industry uses such as design, layout, typography, illustration, and imaging. Students receive hands-on training in the computer environment using current production software. Basic scanning techniques are demonstrated.

GRPH 122 (4 Credits) Digital Photography

An introduction to the processes commonly employed in the conversion of raw materials into finished products. This course provides the student with a solid understanding of the operations necessary to cast, mold, form, separate, condition, assemble, and apply surface finishes to manufactured products.

GRPH 126 (4 credits) Printing Processes I

Covers the various printing processes including offset, screen, flexo, and gravure. Career opportunities, salary potential, and the role each process plays in the industry today are also discussed. Safety procedures and operations are identified. Upon completion, students should be able to demonstrate an understanding of the major characteristics, advantages, and disadvantages of each process.

GRPH 150 (3 credits) Introduction to Lithography

This course introduces students to the basic fundamentals of lithography. Through practical application, students develop a working knowledge of this printing process with a strong concentration into multi-color image reproduction and image registration.
Prerequisite: GRPH 126

GRPH 155 (3 credits) Introduction to Screen Printing

This course introduces students to the basic fundamentals of screen printing. Through practical application, students develop a working knowledge of this printing process with a strong concentration into multi-color image reproduction and image registration.
Prerequisite: GRPH 126

GRPH 160 (3 credits) Graphic Communications I

Covers the history, development, and commercial applications of printing processes. Students learn about the curriculum and the industry including its processes, products, and careers. Emphasis is placed on the attributes which are most desirable for successful entry and advancement.

GRPH 165 (3 credits) Multimedia and Web Design

Introduces the fundamentals of design and production for presentations and the World Wide Web. Basics of hypertext markup language (HTML), the use of authoring software, and making portable data format (PDF) documents for internet downloads and multimedia basics are covered.
Prerequisite: GRPH 120; minimum grade of "D" required

GRPH 207 (3 Credits) Bindery and Finishing

Bindery and finishing is an increasingly important part of the printing process as it can provide unique physical characteristics to a finished product. Students develop an understanding of both the physical processes of bindery and finishing, along with understanding the creative application and added value these processes can provide to a final piece. Along with theory, students have the opportunity to operate folding equipment, produce die cuts, and create varnishes.

GRPH 214 (3 Credits) Print Marketing

Commercial printers no longer simply provide a printed piece. They provide various solutions to communicating messages through different techniques along with the management of data. This course looks at how print is used to connect companies to consumers through trends in marketing.

GRPH 222 (3 Credits) Graphic Communications II

This course provides an overview of the history of graphic communications, along with an in-depth analysis of what graphic communications is and how it reflects culture. Typography is a primary focus in this course. Students are challenged to develop creative solutions to problems using different techniques for developing ideas.
Prerequisite: GRPH 160

GRPH 228 (3 Credits) Printing Processes II

In a continuation of GRPH 126, the major printing processes are discussed in greater detail, primarily offset printing. Students are introduced to multiple unit-offset press, press settings, and press troubleshooting. The aspects of paper and ink are discussed. An emphasis is placed on creating print ready files following industry specifications.
Prerequisite: GRPH 126

GRPH 258 (3 Credits) Advanced Lithography

In this course, printing standards and quality control metrics for process color printing are examined. Students continue to expand their knowledge of the inner workings of an offset press using a press simulator program. The use of printing in marketing is also discussed.
Prerequisite: GRPH 228

GRPH 262 (3 Credits) Color Theory

Color theory is the study of the science of color and light as it relates to the printing industry. Several color spaces are discussed, along with the usage for each. A focus is placed on managing color within the printing industry by means of devices, software, and techniques.

GRPH 267 (3 Credits) Graphic Communications Studio

Communication skills are challenged to create unique solutions for a host of design problems. Emphasis is placed on the design process and working with others to craft a message. The course ends with a cumulative capstone project tasking students to design and produce several products. Students are also tasked with the creation of a portfolio.
Prerequisite: GRPH 222

GRPH 272 (3 Credits) Web Design

The primary languages needed for web development, HTML and CSS, are introduced along with how to design for the web.
Prerequisite: GRPH 165

Heating, Ventilation, & Air Conditioning/ Refrigeration

What is HVAC/R?

The HVAC/R program is unique because it treats designing, retrofitting, testing, and balancing on a problem-solving level. This specialized program prepares the technician for the fast-growing, highly technical HVAC/R field.

The challenge for the service technician is to optimize the service operation of HVAC/R systems to maximize customer and employer satisfaction. Using computers to replicate various conditions that could be encountered, students develop a plan of action to use with live work.

Students learn current methods of identifying and performing efficiency evaluations on various types of heating, ventilation, and air-conditioning systems as well as adjusting and balancing equipment for maximum performance.

In addition to HVAC/R classroom theory sessions, students also perform service and installation on numerous live projects on and off campus. The HVAC/R laboratory includes tools, equipment, computers, and instrumentation typically found in commercial, residential, and industrial settings. The lab also includes ground source heat pumps, gas efficient furnaces, regular heat pumps, oil-fired furnaces, gas and oil boilers, ice machines, walk-in boxes, roof-top equipment, chiller systems, and commercial refrigeration trainers.

Challenging careers abound on a national level with firms offering graduates a variety of positions as service technicians, installation technicians, estimators, and in-plant industrial technicians. High school prerequisites for this program are Algebra I & II, and a GPA of at least 2.5.

A Graduate of this Program Will be Able to:

- Demonstrate the ability to do technical work in a variety of heating, cooling, plumbing, and refrigeration fields; apply safety standards and understand and work with technical developments in the industry.
- Apply concepts of algebra and physics in the layout, design, development, and analysis of refrigeration and air conditioning equipment and systems.
- Identify and demonstrate correct use of tools, materials, and equipment used in the trade.
- Demonstrate the ability to read and interpret blueprints and use blueprints when installing equipment.
- Troubleshoot heating, cooling, and refrigeration equipment using standard troubleshooting procedures.
- Write clear, concise, legible, and accurate technical reports using technical English and apply verbal communication skills in job-related activities.
- Read and interpret electrical schematics and use schematics when installing and repairing equipment.
- Estimate the cost of an installation and design and lay out an effective system for a specific location and use.
- Demonstrate knowledge of the operation and use of hermetic, reciprocating, and centrifugal compressors.
- Apply basic knowledge of airflow, ventilation, and energy conservation concepts to the design of systems, using modern building design and solar energy technology.

Matthew Bixler, Instructor
BS: Eastern Mennonite University
AAS: York Technical Institute

Ty Christman, Instructor
BS: Eastern Mennonite University
AAS: Washtenaw Community College

Bart Heagy, Instructor
BS: Eastern Mennonite University
CTE Certification: Temple University

Bruce Hrycek, Instructor
MBA: Trinity University
MD HVACR Master 01

John Sweda, Instructor
BS: Temple University
MEd: Bloomsburg University
PA Instructional II Certification in HVAC/R and Plumbing

Model Schedule For HVAC-R

Semester 1	
HVAC 123: OSHA Electrical and Construction Safety	**1**
HVAC 135: Electricity for HVACR	**3**
HVAC 138: Lab Practice I: Electrical Applications	**2**
HVAC 143: HVAC Installation Procedures	**1**
HVAC 146: Lab Practice II: Installation Procedures	**2**
HVAC 150: Principles of Refrigeration	**3**
†MATH 126: Technical Math I (or higher)	**3**
Science Elective	**3**
Semester 2	
HVAC 157: Residential Heating Systems	**3**
HVAC 160: Lab Practice III: Heating Applications	**2**
HVAC 167: Refrigerant System Components	**2**
HVAC 170: Lab Practice IV: Cooling Applications	**2**
HVAC 175: Refrigerant Management	**2**
HVAC 180: Mechanical Codes for HVAC/R	**1**
***MATH 132: Elementary Geometry (or higher)**	**3**
ENG 106: English Composition	**3**
Semester 3	
***HVAC 206: Air Conditioning Systems**	**4**
HVAC 211: Heat Pump Systems	**3**
HVAC 216: Systems Installation and Start Up	**3**
HVAC 221: Commercial Refrigeration	**3**
ENG 221: Public Speaking OR	
***ENG 216: Technical Writing**	**3**
Humanities Elective	**3**
Semester 4	
HVAC 256: Load Calculations	**3**
HVAC 261: Controls of HVAC	**3**
HVAC 266: Ventilation	**3**
HVAC 271: System Servicing and Troubleshooting	**3**
General Studies Elective	**3**
CIS 105 OR CIS 111	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**74**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Heating, Ventilation & Air Conditioning/Refrigeration (HVAC)

HVAC 123 (1 credit)
OSHA Electrical and Construction Safety
This course is designed to meet the requirements that all service technicians must have for training in the rules and regulations of Occupational Safety and Health Administration (OSHA) Construction Safety and Building Maintenance Electrical Safety. Emphasis is on the requirements for compliance, identifying a proper lock-out/tag-out policy, and procedures a technician should follow for safe electrical work.

HVAC 135 (3 credits)
Electricity for HVACR
This course is designed to provide the basic knowledge of electrical theory and application as it pertains to the HVACR industry. The course will emphasize the basic electrical laws and definitions, generation and distribution of electrical power, and the functions of electrical controls and loads, including electrical measurements and testing. Further emphasis is placed on the application of electrical theory as it pertains to the VACR industry. Wiring diagrams and schematics will be developed and used to wire basic electrical components including testing and troubleshooting electrical circuits.

HVAC 138 (2 credits)
Lab Practice I: Electrical Applications
Practical experience is provided to apply the theory learned concerning electrical components and controls of the HVAC/R industry. Students demonstrate the proper electrical installations for basic A/C and heating equipment. Emphasis is placed on the installation, testing and start-up operation of motors, relays, thermostats, pressure switches, and other basic controls.

HVAC 143 (1 credit)
HVAC Installation Procedures
This course introduces the basic methods, tools, and materials needed for the installation of the HVAC/R equipment to students. A foundational study of the purpose of various tools and skills necessary for their safe use is emphasized. Materials and joining methods of various piping, tubing, wiring, and ductwork systems as used in this industry is studied.

HVAC 146 (2 credits)
Lab Practice II: Installation Procedures
This course provides the practical hands-on skill training. Piping practice utilizes various refrigeration trainers and a selection of commonly used A/C and heating equipment. Residential duct systems are installed on working systems. Practice is provided for the development of skills needed for various methods of joining copper tubing, stainless steel natural-gas tubing, plastic, and iron pipe.

HVAC 150 (3 credits)
Principles of Refrigeration
This course provides a study of the basic principles of thermodynamics as applied to the refrigeration cycle. The Mollier diagram is used to display the purpose and operation of the various components used in the system at expected standard operating conditions. The lab portion provides practice in measuring various system performances.

HVAC 157 (3 credits)
Residential Heating Systems
This course provides a basic understanding of different types of oil and natural gas residential heating systems. Emphasis is on proper installation, sequence of operation, and proper maintenance requirements.

HVAC 160 (2 credits)
Lab Practice III: Heating Applications
This lab time provides the hands-on training pertaining to residential heating systems. Typical residential heating systems is utilized in the lab experience to master the skills necessary for proper installation and service. Students practice typical annual servicing, combustion analysis, and efficiency testing of fossil fuel heating systems.

HVAC 167 (2 credits)
Refrigerant System Components
Introduction to residential and light commercial A/C system components. This course details the following components of air conditioner and refrigeration systems: Evaporators, condensers, metering devices, compressors, and other safety and servicing system components. Emphasis is placed on applying the knowledge gained in HVAC 150, along with manufacturer specifications, to determine proper installation and operating conditions of these cooling system components.

HVAC 170 (2 credits)
Lab Practice IV: Cooling Applications
This lab provides the hands-on training for skills necessary to properly install and start-up comfort cooling systems. Students are required to assemble a refrigeration system and test it for proper operation under various conditions.

HVAC 175 (2 credits) Refrigerant Management

This course is designed to give students the knowledge to understand the laws on venting and handling of the various refrigerants covered in the Clean Air Act–Section 608. A requirement for this course is to take the EPA Technician Certification Exam provided by ARI. Lab practice is provided in refrigerant recovery, recycling, evacuation, and charging various small appliances and high pressure appliances.

HVAC 180 (1 credit) Mechanical Codes for HVAC/R

This course introduces HVAC/R students to the current International Code Council (ICC) codes. The emphasis highlights the sections of these codes that are relevant to the technician for proper HVAC/R equipment installation. A brief overview of other national and local building codes is also provided.

HVAC 206 (4 credits) Air Conditioning Systems

Air conditioning benefits, unitary cooling, unitary combination cooling and heating equipment, central station systems, service and problem analysis, and absorption refrigeration system topics are studied.
Prerequisites: HVAC 150

HVAC 211 (3 credits) Heat pump Systems

Covers basic principles, components, and application of heat pump systems.

HVAC 216 (3 credits) System Installation and Start Up

Codes and standards, heating start-up, heating checkouts, heating operation, AC start-up, AC checkouts, AC operation, heat pump start-up, heat pump checkouts, and heat pump operation are covered.

HVAC 221 (3 credits) Commercial Refrigeration

Discusses system applications, refrigerated storage, and ice machines.

HVAC 256 (3 credits) Load Calculations

Covers refrigeration, psychometrics, heating load, and cooling load calculations.

HVAC 261 (3 credits) Controls of HVAC

Topics include controls, valves, regulators, sensing devices/ fuel controls, residential control systems—heating/cooling, commercial and engineered control systems, and heat pump controls.

HVAC 266 (3 credits) Ventilation

Students learn about air flow principles/duct design, mechanical and electronic filtration, and fans.

HVAC 271 (3 credits) System Servicing and Troubleshooting

Refrigeration system problems, electrical troubleshooting, heating service/problem analysis, heat pump service/ problem analysis, and AC service/problem analysis are covered.

Masonry Construction Technology

What is Masonry Construction Technology?

Masonry Construction Technology provides the opportunity to develop the skills of a proficient mason, from the simple spreading of mortar to the complex construction of an inside fireplace. These skills are developed by practice projects, which are preceded by theory lectures and demonstrations. Faculty members show films on various aspects of the trade, and students take field trips to learn about the manufacture of masonry products.

Since a large part of masonry work is decorative as well as functional, special emphasis is placed on appreciation of the beauty and permanence of brickwork and on the development of pride in good workmanship.

Students find employment in the field as masons and with experience, as forepersons or superintendents. Many masons are self-employed.

A Graduate of this Program Will be Able to:

- Operate masonry tools and equipment safely and effectively.
- Use masonry terminology.
- Read blueprints to estimate materials quantity and pricing.
- Lay out and construct footings and build a block foundation.
- Apply brick veneering to a structure.
- Construct a masonry arch.
- Lay out and set ceramic tile.
- Construct an inside fireplace and chimney.
- Repair older masonry structures.
- Organize personnel and materials at a construction site.
- Provide all masonry options in current residential construction.

Michael T. Gardner, Instructor
AAS: Thaddeus Stevens College of Technology

Chad Hummel, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Masonry Construction Technology

Semester 1	
MASN 101: Intro to Tools, Safety, and Equipment	**3**
MASN 105: Introduction to Masonry Construction	**3**
MASN 110: Development of Masonry Materials	**3**
MASN 116: Chimney Construction	**3**
†MATH 126: Technical Math I (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
MASN 155: Block Construction, Bearings & Anchoring Systems	**4**
MASN 158: Adhered Concrete Masonry Veneer	**2**
MASN 162: Masonry Hardscaping Patios & Retaining Walls	**2**
MASN 167: Masonry Restoration and Building Maintenance	**3**
MASN 171: Concrete Sidewalks	**1**
***MATH 132: Elementary Geometry (or higher)**	**3**
CIS 111: Intro to Computer Applications OR CIS 105: Drawing with AutoCad	**3**
HEAL 111: Basic First Aid	**1**
Semester 3	
MASN 207: Advanced Masonry Applications	**5**
MASN 213: Planning and Management	**3**
MASN 216: Blueprint Reading and Estimating	**4**
ENG 221: Public Speaking OR *ENG 216: Technical Writing	**3**
Science : Elective	**3**
Semester 4	
MASN 256: Fireplace Construction	**4**
MASN 261: Arch Construction	**3**
MASN 266: Tile Setting	**2**
MASN 271: Footings and Foundations	**3**
Humanities Elective	**3**
BUSN 106: Small Business Mangement	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Masonry Construction Technology (MASN)

MASN 101 (3 credits)
Introduction to Tools, Safety and Equipment
Students will be introduced to the tools required for the masonry trade, understand safety standards and practices, and receive training and certifications on various equipment used on a job site.

MASN 105 (3 credits)
Introduction to Masonry Construction
This course will teach the fundamentals of the masonry trade. This will include spreading mortar and striking full joints, laying brick and block to the line, bonding the length and height of a wall, building leads, and hanging a corner pole.

MASN 110 (3 credits)
Development of Masonry Materials
History and the manufacturing of masonry materials. In the manufacturing of materials, there are many different types of brick and block. Students will learn the various names and where the material should be used in a wall. Portland cement comes in different forms and how to properly mix the different types. Students will learn what the different strengths of cement and where they should be used.

MASN 116 (3 credits) Chimney Construction
Students will understand the difference between and be able to construct properly a single and double flue chimney.

MASN 155 (4 credits)
Block Construction, Bearings, and Anchoring Systems
Students will learn terminology; the placement of anchor bolts, bearing plates, setting lintels, cutting in electrical boxes and door ties. They will be working around conduit, duct work and rebar reinforcement. They will also build a composite wall using block and brick.

MASN 158 (2 credits)
Adhered Concrete Masonry Veneer
Students will learn to use the tools and equipment for installing veneer stone; to apply hanging wire, scratch coat, flashings, vapor barriers, and drain mats; to hang stone; and to point the mortar joints. Students will learn the different types of patterns stone can be laid in.

MASN 162 (2 credits)
Masonry Hardscaping Patios & Retaining Walls
The proper use of masonry products in an outdoor environment. Understand the process to build an outdoor patio and retaining walls using masonry materials.

MASN 167 (3 credits)
Restoration and Building Maintenance
Cover the various materials that go along with masonry products. These would be caulking, waterproofing, patching, repointing, cutting out and repairing damaged areas, and cleaning of masonry. This course will focus on preventive maintenance to stop any further damage of the masonry structure.

MASN 171 (1 credit) Concrete Sidewalks
Students will learn how to build forms and how to place concrete for a sidewalk.

MASN 207 (5 credits)
Advanced Masonry Applications
Application of skills relative to masonry systems. Includes working on the off-campus housing project. Techniques include firewall construction, brick veneering, porch/patio and step construction, and proper preparation for varying weather conditions.

MASN 213 (3 credits) Planning and Management
Organizing personnel and materials on a job site; planning and coordinating the placement of equipment and materials; and completing a job on time and within budget. Supervisory duties and responsibilities are also covered.

MASN 216 (4 credits)
Blueprint Reading and Estimating
Basic skills to interpret residential construction drawings. Emphasis on calculation of materials, labor, and equipment necessary to complete selected projects. Proposals and closed bids required.

MASN 256 (4 credits)
Fireplace Construction

Provides history, theory, and function of the fireplace. Students design and construct a fireplace of their choice with emphasis on proper terminology, workmanship, and various components of different fireplaces.

MASN 261 (3 credits) Arch Construction

Provide the skills necessary to build various types of arches. Terminology, different types, and various techniques used in the construction of arches are taught.

MASN 266 (2 credits) Tile Setting

The basics of ceramic tile setting are covered. Emphasis is placed on terminology, tools, safety, and proper layout.

MASN 271 (3 credits)
Footings and Foundations

Provides the opportunity to layout and construct a residential concrete block foundation. Topics include blueprint interpretation, materials estimating, installation of anchor bolts, partition construction, and the use of the transit for site layout.

Mechanical Engineering Technology

What is Mechanical Engineering Technology?

The Mechanical Engineering Technology program prepares graduates for entry-level employment in the mechanical engineering field. The skills acquired from this course of study allow the student to visualize objects in three dimensions, describe objects with manual and computer-aided drafting (CAD) techniques, and apply mechanical engineering principles to design products, tools, and equipment for a manufacturing-oriented industry. The program's affiliations with industry are maintained through an advisory committee and the Society of Manufacturing Engineers (SME).

The student's skills are developed with a comprehensive exposure to the concepts of orthographic projection, sectioning, and isometric drawing with an emphasis on instrument drawing techniques. A thorough understanding of geometric dimensioning and tolerancing (GDT) and a demonstrated proficiency with the latest CAD software complement these skills. Additional training in fabrication principles, mechanical design, product design, and manufacturing processes provides a well-rounded experience with mechanical design and manufacturing technology.

The principles of mechanical engineering are mastered by studying the motion of mechanical objects and the underlying concepts required to understand how a machine functions or a manufacturing process is performed. By studying the practical aspects of structured programming, parametric feature-based design, and solid modeling, the student gains the skills necessary to utilize the computer as a design tool. Further studies in fluid mechanics, production design, engineering materials, thermodynamics and heat transfer, machine design, and related engineering topics allow the student to build upon these concepts. Practical applications of these concepts are further realized as the student completes an internship project during the fourth semester.

Upon entering the work place, the graduate can expect to assist engineers and scientists in the design and development of new products. As work experience is acquired, the graduate can expect to gain more design responsibility and thereby become a key member of an engineering team.

A Graduate of this Program Will be Able to:

- Produce detail, subassembly, and full-assembly engineering drawings utilizing manual and computer-aided drafting techniques.
- Recognize and apply the ASME Y14.5 guidelines in the creation of engineering drawings.
- Utilize ASME Y14.5 geometric dimensioning and tolerancing guidelines for establishing and maintaining the functional fit of mating parts.
- Apply industrial practices in the design and fabrication of sheet-metal components, welded assemblies, and piping systems.
- Identify and understand manufacturing processes and their effect on the cost and/or function of manufactured products.
- Analyze and design mechanical parts and systems for static and dynamic loading conditions.
- Apply engineering principles for determining the effects of stationary and moving fluids and the control and transformation of energy.
- Design manufacturing tooling for locating, clamping, forming, piercing, blanking, and/or shaping a given part.
- Employ structured programming techniques and utilize computer software tools to design and analyze mechanical parts or systems.
- Select and apply engineering materials for use in the design and manufacture of mechanical components.
- Analyze and design machine elements such as gears, shafts, bearings, clutches, brakes, flywheels, and related assemblies.
- Apply engineering problem-solving skills to complete a project on time and within budget.

Amy Jo Mumma-Frank, Professor
BA: Elizabethtown College

Christopher Way, Instructor
BS: The University of Iowa

Model Schedule For Mechanical Engineering Technology (Option #1)

Semester 1	
MET 101: Drafting Fundamentals	3
^MET 106: Engineering Graphics	3
^MET 116: Computer-Aided Drafting	3
^MET 176: Manufacturing Processes	3
†^MATH 137: Intermediate Algebra (or higher)	3
^ENG 106: English Composition	3
Semester 2	
*MET 111: Engineering Standards	3
*MET 161: Fabrication Principles	3
MET 166: Mechanical Design	3
*MET 171: Product Design	3
*^PHYS 113: Statics	3
*^MATH 141: Trigonometry (or higher)	3
Semester 3	
*^MET 201: Engineering Mechanics	3
*^MET 206: Fluid Mechanics	3
*^MET 211: Production Design	3
*^MET 216: Parametric Solid Modeling	3
*^ENG 216: Technical Writing	3
*^PHYS 213: General Physics I	4
Semester 4	
*MET 261: Engineering Materials	3
*MET 266: Thermodynamics	3
*MET 271: Machine Design	3
*MET 276: Engineering Seminar	3
Humanities Elective	3
General Studies Elective	3
TOTAL CREDITS	**73**

Model Schedule For Mechanical Engineering Technology (Option #2)

Semester 1	
MET 101: Drafting Fundamentals	3
^MET 106: Engineering Graphics	3
^MET 116: Computer-Aided Drafting	3
^MET 176: Manufacturing Processes	3
†^MATH 207: Precalculus (or higher)	4
^ENG 106: English Composition	3
Semester 2	
*MET 111: Engineering Standards	3
*MET 161: Fabrication Principles	3
MET 166: Mechanical Design	3
*MET 171: Product Design	3
*^PHYS 113: Statics	3
General Studies Elective	3
Semester 3	
*^MET 201: Engineering Mechanics	3
*^MET 206: Fluid Mechanics	3
*^MET 211: Production Design	3
*^MET 216: Parametric Solid Modeling	3
*^ENG 216: Technical Writing	3
*^PHYS 213: General Physics I	4
Semester 4	
*MET 261: Engineering Materials	3
*MET 266: Thermodynamics	3
*MET 271: Machine Design	3
*MET 276: Engineering Seminar	3
Humanities Elective	3
General Studies Elective	3
TOTAL CREDITS	**74**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MA

Mechanical Engineering Technology (MET)

MET 101 (3 credits)
Drafting Fundamentals
An introductory course in the basics of instrument drawing, lettering, geometric construction, and associated manual drafting techniques.

MET 106 (3 credits)
Engineering Graphics
A study of orthographic projection and the creation of engineering drawings with applications in sectioning and auxiliary views. This course also includes isometric drawing and practice in freehand sketching.
Minimum grade of "C" required

MET 111 (3 credits)
Engineering Standards
A study of the American Society of Mechanical Engineers (ASME) dimensioning guidelines including geometric dimensioning and tolerancing (GD&T) for the design and manufacture of interchangeable mechanical parts.
Prerequisites: MET 106 and MET 116 (Both with final grade of C or higher or instructor permission)

MET 116 (3 credits)
Computer-Aided Drafting (CAD)
An introduction to computer-aided drafting and its applications. The student will learn the fundamentals of using the computer operating system and the CAD program. These skills are affirmed with the completion of a series of mechanical drawings.
Minimum grade of "C" required

MET 161 (3 credits)
Fabrication Principles
A study of the industrial practices in the design and fabrication of sheet-metal components, welded assemblies, and piping systems.
Prerequisite: MET 116 (With final grade of C or higher or instructor permission)

MET 166 (3 credits)
Mechanical Design
A study of power transmission fundamentals and design-related computations. Design applications include sizing and/or selection of belts, chains, gears, bearings, couplings, shafts, cams, linkages, and electric motors.

MET 171 (3 credits) Product
Design
The practical implementation of the mechanical design practices, engineering standards, and computer-aided drafting techniques as they relate to the design and fabrication of a manufactured product.
Prerequisites: MET 106 and MET 116 (Both with final grade of C or higher or instructor permission)

MET 176 (3 credits)
Manufacturing Processes
A comprehensive study of the processing of materials as it relates to manufacturing. In this course, class lectures and literature review will be combined with machine shop practice and plant visits to form a well-rounded understanding of the intricacies of manufacturing technology
Minimum grade of "C" required.

MET 201 (3 credits)
Engineering Mechanics
An introduction to the analysis of the static and dynamic forces which govern the behavior of structures and machines. The analytic skills in vector mechanics established in this course are employed for the design of structural components and assemblies as well as machine elements such as cams, gears, and linkages.
Prerequisites: MATH 137, MATH 141 and PHYS 113 (All with final grade of C or higher or instructor permission)
Co-requisite: PHYS 213

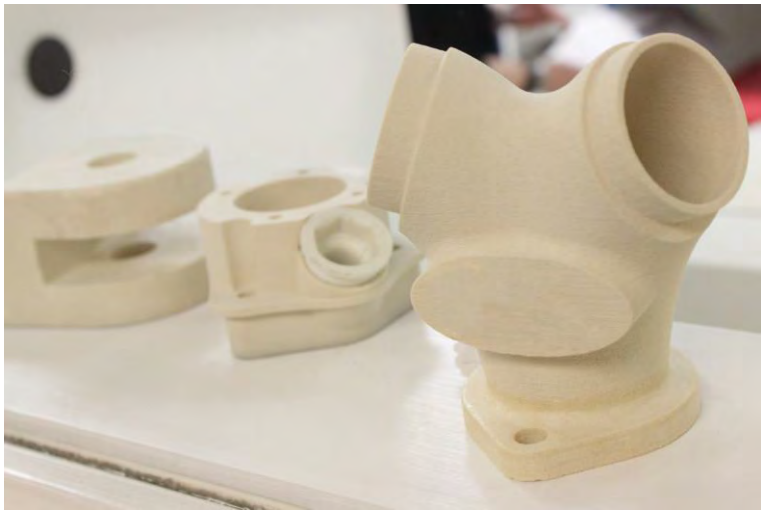
MET 206 (3 credits) Fluid
Mechanics
A study of the effects of stationary and moving fluids as it relates to the analysis and design of mechanical systems. Topics involving the volume and energy transfer of a working fluid are utilized to demonstrate the problems commonly encountered in industry.
Prerequisites: MATH 137, MATH 141 and PHYS 113 (All with a final grade of C or higher or instructor permission)
Co-requisite: MET 201 and PHYS 213

MET 211 (3 credits)
Production Design
An introductory course in manufacturing engineering and lean production methods. Major topics include manufacturing processes, economics of production design, and design of manufacturing systems.
Prerequisite: MET 176 (With a final grade of C or higher or instructor permission)
Corequisite: MET 216

MET 216 (3 credits) Parametric
Solid Modeling
An intermediate computer-aided drafting course in three-dimensional, feature-based, parametric solid modeling with applications in the designing and detailing of mechanical components and assemblies. Applications include structured programming with practical applications in the creation and modification of solid models for complex parts, assemblies, and related engineering drawings.
Prerequisite: MET 116 (With final grade of C or higher or instructor permission)

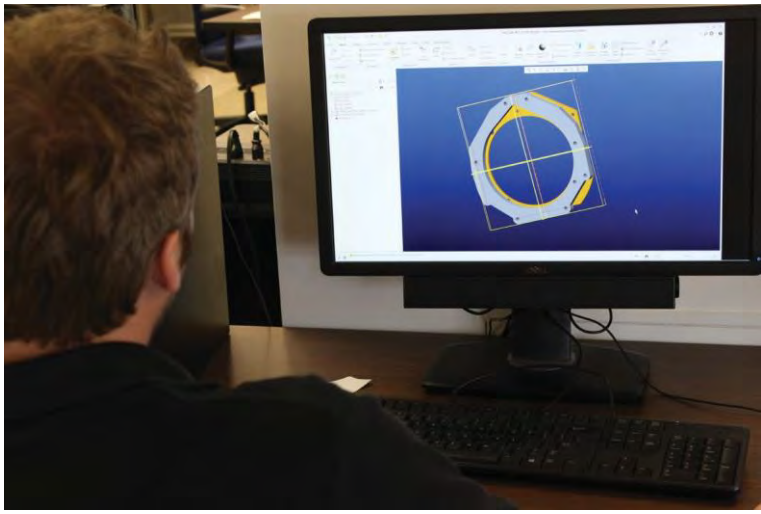
MET 261 (3 credits)
Engineering Materials

An introduction to the selection and utilization of engineering materials as they relate to their mechanical characteristics under various operating conditions. Material strength and failure criteria are utilized to identify design margins of safety for mechanical components.
Prerequisites: MET 176, ENG 106, ENG 216, PHYS 113, and PHYS 213 (All with final grade of C or higher or instructor permission)



MET 266 (3 credits)
Thermodynamics

An introduction to the principles which govern the control and transformation of energy. These principles provide a concise description of the processes that are common to boiler, refrigeration, and related systems.
Prerequisites: MET 206 and PHYS 213 (Both with final grade of C or higher or instructor permission)



MET 271 (3 credits) Machine Design

A study of the design of machine elements such as gears, shafts, bearings, clutches, brakes, flywheels, and related assemblies. These concepts will be employed by the student through structural analysis of numerous machine elements.
Prerequisites: MET 201, MET 216, and PHYS 213 (All with final grade of C or higher or instructor permission)

MET 276 (3 credits)
Engineering Seminar

A review course for the fundamentals of manufacturing including engineering economics and special topics of engineering technology. This course also covers engineering internship projects, technical presentations, and preparation for SME certification examination.
Prerequisites: MET 211 and MET 216 (Both with final grade of C or higher or instructor permission)
Co-requisites: MET 261, MET 266, and MET 271

Metals Fabrication & Welding

What is Metals Fabrication and Welding Technology?

Metals Fabrication and Welding Technology provides the student with a working knowledge of the various tools, equipment, and modern techniques used in the metals fabrication, mechanical installation, and welding industries. The proper application of various layout, fabrication, and assembly techniques for specific designs in sheet metal, plate, structural metals and pipe will be stressed. Students will design, estimate, fabricate, and install projects relative to air handling systems and structural and miscellaneous fabricated systems. Proper and safe work habits must be developed due to the nature of the equipment necessary to be successful in the industry.

The understanding and mastery of layout techniques is an essential component for success in the metals fabrication and welding fields. Therefore, disciplines in the basic, parallel line, radial line, and triangulation methods of layout are covered. Also, instruction in blueprint reading relative to the manufacturing and construction industries will be required. Included are components in drafting, orthographic projection, and symbol interpretation. Gas metal arc, shielded metal arc, gas tungsten arc, oxy-acetylene, and flux core arc welding will be studied and practiced to allow students to obtain skills for a total understanding of fabricated projects from design through the final assembly processes.

Graduates of the Metals Fabrication and Welding Technology program are prepared to work in businesses and industries that design, build, and install products that have been fabricated from sheet, plate, and structural metals. Areas of employment include the following:

- HVAC sheet metal duct systems fabrication & installation
- Precision sheet metal layout and fabrication
- Welding
- Industrial maintenance/millwright
- Plate layout/fitter for industrial fabrication
- Mechanical systems estimator/project manager
- Fabrication machinery operator
- Equipment manufacturing and installation
- Structural steel and miscellaneous iron fabrication
- Automated cutting systems operation programming
- Sales - industrial equipment or contractor
- Shop/installation foreperson
- Fabrication of sanitary stainless-steel products
- Food and pharmaceutical processing applications
- Industrial ventilation fabrication and installation

A Graduate of this Program Will be Able to:

- Demonstrate the ability to perform technical work related to welding, structural steel fabrication, sheet metal, and plate fabrication, applying OSHA and other applicable safety standards to work safely.
- Apply concepts of geometry, trigonometry, and physics to develop, to lay out, to fit, and to weld various fittings, structures, and systems associated with industrial and commercial metals fabrication.
- Identify and demonstrate correct use of various hand and power tools used in the fabrication industry.
- Demonstrate the ability to develop and interpret blueprints using accepted practices of orthographic projection.
- Determine set-up effectiveness of shop equipment and develop methods of manufacturing various products.
- Keep accurate records of project work, time expended, materials used, and costs incurred associated with a given job.
- Demonstrate a comprehension of business practices related to the metals fabrication industry.
- Estimate the costs associated with design, fabrication, and installation of various structural, sheet metal, or maintenance projects.
- Demonstrate basic oral communication skills, speak logically, and use various types of oral and written communication techniques to promote good business relationships, to develop leadership, and to establish good employer, customer, and employee relationships.
- Demonstrate competency in the simple, parallel line, radial line, and triangulation methods of layout to develop elbows, transitions, and tees in both round and rectangular forms.
- Understand industry standards of quality.
- Demonstrate the ability to choose the proper materials and fabrication and welding procedures for given projects.
- Be prepared to accept the challenges and responsibilities of the metals fabrication industry, knowing the full range of employment and advancement possibilities.

Joseph Battle, Instructor
AAS: Thaddeus Stevens College of Technology

Stacy Gillis, Instructor
AAS: Thaddeus Stevens College of Technology

Jim Stewart, Instructor
BS: Franklin University
AAS: Harrisburg Area Community College

Christopher Unruh, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Metals Fabrication & Welding Technology

Semester 1	
MFWT 106: Gas Metal Arc Welding/Plasma Arc Cutting	**3**
MFWT 111: Metals Fab I: Intro to Hand & Machine Processes	**3**
***MFWT 121: HVAC Duct Design and Fabrication**	**3**
MFWT 126: Drafting Fundamentals	**3**
†MATH 137: Intermediate Algebra (or higher)	**3**
***CIS 105: Drawing with Auto Cad (must take before MFWT 222)**	**3**
Semester 2	
***MFWT 154: Flux Corded Arc Welding/ Oxy-Acetylene Cutting and Welding**	**4**
***MFWT 162: Metals Fabrication II: Parallel Line Development Machine Processes**	**4**
***MFWT 167: Metals Fabrications II: Parallel Line Development and Machine Processes**	**2**
MFWT 171: Materials of the Trade and Applied Metallurgy	**2**
***MATH 132: Elementary Geometry (or higher) *See Physics Elective for Math Requirement**	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 3	
***MFWT 207: Shielded Metal Arc Welding**	**4**
***MFWT 212: Metals Fabrication III: Triangulation Pattern Machine Processes**	**4**
***MFWT 222: Industrial Applications II: CNC Applications and Estimating**	**4**
***Physics Elective: PHYS 101, PHYS 106, PHYS 113,or PHYS 213 (must take MATH 141 for PHYS 113 or PHYS 213)**	**3**
ENG 106: English Composition	**3**
Semester 4	
***MFWT 257: Gas Tungsten Arc Welding**	**4**
***MFWT 262: Metals Fabrication IV: Radial Design Development & Machine Processes**	**4**
***MFWT 267: Industrial Applications III: Print Reading for Welding**	**4**
***ENG 216: Technical Writing**	**3**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Metals Fabrication & Welding Technology (MFWT)

MFWT 106 (3 credits)
Gas Metal Arc Welding/Plasma Arc Cutting
Provides a thorough technical understanding of welding safety, gas metal arc welding fundamentals, gas metal arc equipment adjustments, metal transfer, and shielding gases. Provides training to develop the manual skill necessary to make high quality gas metal arc welds in all positions on mild steel from 1/16" to 3/8" thickness with single and multiple passes, using short circuit transfer.

MFWT 111 (3 credits)
Metals Fabrication I: Introduction to Hand and Machine Processes
Introduction to tools, materials, and equipment required to fabricate basic sheet metal projects. Students develop an understanding of seaming, hemming, and fastening techniques. Safety standards according to Occupational Safety and Health Administration (OSHA) are covered.

MFWT 121 (3 credits)
HVAC Duct Design and Fabrication
Teaches how to properly design and fabricate duct systems relative to low-pressure HVAC systems. Machinery, seaming, connecting, and basic layout techniques are covered. Course includes the interpretation of applicable Sheet Metal and Air Conditioning Contractors National Association (SMACNA) codes for duct construction.
Prerequisite: MFWT 111

MFWT 126 (3 credits)
Drafting Fundamentals
Introduction to drafting and sketching techniques. Major topics include geometric construction, drafting equipment, and orthographic projections. Mechanical drawing required.

MFWT 154 (4 credits)
Flux Corded Arc Welding/ Oxy-Acetylene Cutting and Welding
Offers a technical understanding of Flux cored arc welding and oxy-acetylene welding, flame cutting, brazing fundamentals, and welding safety. Training for manual skill necessary to produce high quality welds on mild steel in all positions. Manual and mechanized flame cutting and brazing mild steel also included.
Prerequisite: MFWT 111

MFWT 162 (4 credits)
Metals Fabrication II: Parallel Line Development and Machine Processes
Instruction in the use of precision measuring tools and saws. Use of parallel line method of pattern development for fabrication of elbows, tees, and offsets using sheet metal, pipe, and plate materials are covered.
Prerequisite: MFWT 111

MFWT 167 (2 credits)
Metals Fabrications II: Parallel Line Development and Machine Processes
Discusses the equipment used in the various fabrication and welding trades, such as sheet and plate products plus structures, tubing, pipe, and the various alloys of steel, aluminum and stainless steel. Included is the application of metals for industrial, commercial, and manufacturing design.
Prerequisite: MFWT 111

MFWT 171 (2 credits)
Materials of the Trade and Applied Metallurgy
Covers the common materials, designations, and methods of measurement used in the various fabrication and welding trades. Sheet and plate products plus structures, tubing, pipe, and the various alloys of steel, aluminum, and stainless steel are discussed.

MFWT 207 (4 credits) Shielded Metal Arc Welding
Provides students with a thorough technical understanding of shielded metal arc welding fundamentals, welding safety, welding machines, and electrode classifications and selections. It also provides training to develop the manual skill necessary to produce high quality shielded metal arc welds in all positions on mild steel from 16 gage to 1" plate with single and multiple passes. The welding process using mild steel electrodes with low hydrogen and iron powder flux coatings while using AC and DC power sources is covered.
Prerequisite: MFWT 106

MFWT 212 (4 credits)
Metals Fabrication III: Triangulation Pattern
Developmental and advanced machine processes designed to introduce students to the triangulation method of pattern development. Using this discipline of pattern development, students design, lay out, and fabricate transitions, Y-branches and other irregular fittings related to sheet metal, piping, and miscellaneous plate fabrication according to job specifications. Students also learn advanced machinery set-up techniques relative to the fabrication of components designed using this layout process. Instruction in the use of precision measuring tools, iron workers, press brakes, and saws are also major topics covered.
Prerequisites: MFWT 111 and MFWT 161

MFWT 222 (4 credits)
Industrial Applications II: CNC Applications and Estimating
The major objective of this course is to introduce students to aspects of programming and utilizing computer-controlled plasma and oxy-fuel cutting systems. Students use AutoCAD® and MTC ProNest software packages to produce duct, weldment, and miscellaneous profile parts from blueprints, sketches, and field measurements. Programmed parts are then nested and cut on given sheet or plate sizes using state-of-the-art computer numerical control (CNC) systems or plasma cutting system. Layout techniques previously learned for profile programming jobs are utilized. Other topics covered in this course are project management and estimating.
Prerequisites: MFWT 161 and CIS 105

MFWT 257 (4 credits)
Gas Tungsten Arc Welding
Provides students with a thorough understanding of gas tungsten arc welding fundamentals, arc characteristics, and welding safety. It provides training to develop the manual skill necessary to make high quality gas tungsten arc welds in all positions on 16- and 11-gage mild steel, 16- and 11-gage aluminum, also 16-gage stainless steel using both alternating and direct current. In addition, material is presented on the weld characteristics of carbon steel, stainless steel, and aluminum. The use of abrasives and other clean-up techniques to produce quality USDA and FDA finishes is covered. Instruction on the use of purging is also given.
Prerequisite: MFWT 106

MFWT 262 (4 credits)
Metals Fabrication IV: Radial Design Development and Machine Processes
This course is designed to instruct students in the use of the radial line method of pattern development. Students lay out and fabricate various sheet metal and plate fittings such as cones, reducers, and take-off branches using this technique. Fittings are then welded using processes previously learned.
Prerequisite: MFWT 111

MFWT 267 (4 credits)
Industrial Applications III: Print Reading for Welding/ Field Equipment and Rigging
Selected on- and off-campus projects are utilized to reinforce previous instruction. Opportunity to study and to evaluate projects to learn various aspects of industry. Applicable codes and standards are used to ensure proper design and applications of materials and processes are covered. Also included are the interpretation of welding blueprints and applications in field equipment and rigging.
Prerequisite: MFWT 167

Plumbing Technology

What is Plumbing Technology?

Students in the Plumbing Technology program learn how to design, install, and repair residential and commercial plumbing systems and hydronic heating systems. Some of the skills acquired are joining different types of piping materials, reading blueprints, and installing and repairing boilers, plumbing fixtures, faucets, and water heaters.

Employment opportunities in the plumbing and pipe-fitting industries include the installation of plumbing and heating systems in new buildings and the installation and maintenance of plumbing, heating, and piping systems for industries, public utilities, or government agencies. Self-employment is another option. Many graduates become self-employed plumbers after completing their apprenticeships.

A Graduate of this Program Will be Able to:

- Apply safety principles and demonstrate good work habits in the trade.
- Use the hand and power tools of the trade.
- Identify piping materials and install them using proper connections.
- Use and apply trade terms and technical data.
- Read and interpret blueprints, specifications, and codes as they apply to the trade.
- Lay out, estimate, calculate, and use mathematical skills as required in the trade.
- Install, maintain, and repair plumbing, heating, and mechanical systems and equipment.
- Keep abreast of new developments in the field.
- Demonstrate the ability to write letters of application, memos, work orders, reports, and apply communication skills in the world of work.

Kemon Papadimitriou, Instructor
AAS: Thaddeus Stevens College of Technology

Skyler Major, Instructor
AAS: Thaddeus Stevens College of Technology
Technical Certification, HVACR, Porter and Chester Institute

Model Schedule for Plumbing Technology

Semester 1	
PLBG 107: The Plumbing Trade	**3**
PLBG 112: Plumbing Design I: Introduction to Plumbing Systems	**3**
PLBG 117: Plumbing Installation I (a) Plumbing Materials	**3**
PLBG 122: Plumbing Installation I (b) Plumbing Tools	**1.5**
PLBG 130: Construction Blueprint Reading	**1.5**
†^MATH 126: Technical Math I (or higher)	**3**
ENG 106: English Composition	**3**
HEAL 111: Basic First Aid	**1**
Semester 2	
***PLBG 156: Plumbing Design II: Blueprint Reading**	**3**
***PLBG 170: Plumbing Installation II (a) Underground/Aboveground Rough In**	**3**
***PLBG 176: Plumbing Installation II (b) Fixture Installation**	**3**
***PLBG 167: Plumbing Service I: Introduction to Plumbing Service**	**3**
***MATH Elective: MATH 136 Technical Math II (or higher) OR *MATH 132: Elementary Geometry (or higher)**	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 3	
***PLBG 207: Plumbing Design III: Plumbing Codes**	**3**
***PLBG 213: Plumbing Installation III**	**3**
***PLBG 216: Plumbing Installation IV: Commercial Plumbing Installation**	**3**
***PLBG 223: Plumbing Service II: Advanced Plumbing Services**	**3**
Science Elective	**3**
Humanities Elective	**3**
Semester 4	
***PLBG 256: Plumbing Design IV: Designing Hydronic Heating Systems**	**3**
***PLBG 262: Plumbing Installation V: Installing Hydronic Heating Systems**	**3**
***PLBG 267: Plumbing Service III: Servicing Hydronic Heating Systems**	**3**
***PLBG 272: Plumbing Installation VI**	**3**
General Studies Elective	**3**
BUSN 106: Small Business Management	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 136 (or MATH 132), must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.
^ Minimum Grade Required. See Course Description

Plumbing Technology (PLBG)

PLBG 107 (3 credits)
The Plumbing Trade
Prepares students for their role in the Plumbing Technology program at Thaddeus Stevens College and for their future in the field. Examines organizational skills, safe work habits, and proper work attitude. Surveys the history of plumbing while also offering an examination of job opportunities and an analysis of steps in career progressions.

PLBG 112 (3 credits)
Plumbing Design I: Introduction to Plumbing Systems
Study of potable water, methods of sewage disposal, components of plumbing systems, and basic physics as related to plumbing.

PLBG 117 (3 credits)
Plumbing Installation I(a): Plumbing Materials
Familiarizes students with the proper selection and use of all the materials (cast iron, steel, copper, plastics, and others) of the plumbing and pipefitting trades.

PLBG 122 (1.5 credits)
Plumbing Installation I(b): Plumbing Tools
Familiarizes students with the proper selection and use of all the basic tools (hand tools, power tools, and torches) of the plumbing and pipefitting trades, including measurement and other applied math.

PLBG 130 (1.5 credits) Construction Blueprint Reading
Introduces students to construction prints and documents. Basic drawing symbols and line forms are explained, and the course covers the use of basic drawing tools, dimensioning, and single line pipe drawing methods and practices.

PLBG 156 (3 credits)
Plumbing Design II: Blueprint Reading
Focus on residential piping system design. Skills covered include the following: designing systems; reading blueprints; making orthographic and isometric pipe sketches and drawings; sizing potable water systems; sizing DWV systems; and sizing natural gas systems.
Prerequisite: PLBG 121

PLBG 167 (3 credits)
Plumbing Service I: Introduction To Plumbing Service
Focuses on the selection and use of tools and procedures for servicing and repairing plumbing systems. Skills include troubleshooting and repairing faucets and valve, leaking pipes, clogged drains, and toilets.
Prerequisite: PLBG 170 and PLBG 175

PLBG 170 (3 credits)
Plumbing Installation II(a): Underground And Aboveground Rough-In
Introduces the student to the installation of residential potable and DWV (drainage, waste, and vent) piping systems and the support of those systems.
Prerequisites: PLBG 111, PLBG 115, and PLBG 120

PLBG 176 (3 credits)
Plumbing Installation II(b): Fixture Installation
Introduces the student to bathroom and kitchen fixtures and water heaters. Discusses the installation of residential piping systems, bathroom/kitchen fixtures, and water heaters.
Prerequisites: PLBG 111, PLBG 115, and PLBG 120

PLBG 207 (3 credits)
Plumbing Design III: Plumbing Codes
By examining the 2019 International Plumbing Code, this course prepares students to design, install, and maintain plumbing systems in compliance with this statewide code. The course features the proper use of materials and fittings, correct venting, methods for testing plumbing systems, and the sizing of potable water, drainage waste and vent, storm water drainage, and natural gas piping systems.
Prerequisites: PLBG 156, PLBG 170, and PLBG 175

PLBG 213 (3 credits) Plumbing Installation III
An advanced residential plumbing course that is basically concerned with the plumbing of the housing project. Shop practice is made available as needed, but most instruction occurs at the housing project.
Prerequisite: PLBG 206

PLBG 216 (3 credits)
Plumbing Installation IV: Commercial Plumbing Installation
Covers the design and installation of compressed air piping systems, storm water drainage systems, specification fittings and fixtures, and commercial sanitary drainage and venting, and potable water systems. Students learn to read commercial blueprints and to acquire information from specification literature, applying this information in developing the capstone project, a complete and functioning commercial toilet room facility.
Prerequisite: PLBG 115 and 120

PLBG 223 (3 credits)
Plumbing Service II: Advanced Plumbing Services
An extension of PLBG 166. Covers the tools and procedures to repair flushometer valves, water heaters, frozen pipes, water hammer, and backflow.
Prerequisite: PLBG 166

PLBG 256 (3 credits)
Plumbing Design IV: Designing Hydronic Heating Systems
Designing and sizing hydronic heating systems is taught. Includes the calculation of heat loss.
Prerequisite: PLBG 156

PLBG 262 (3 credits)
Plumbing Installation V: Installing Hydronic Heating Systems
Students learn the proper installation of residential and commercial hot water heating systems.
Prerequisite: PLBG 115 and 120

PLBG 267 (3 credits)
Plumbing Service III: Servicing Hydronic Heating Systems
Heating service, including repair of hot water circulation problems, combustion testing, oil burner, and gas burner repair, boiler clean-up, and system troubleshooting are covered.
Prerequisite: PLBG 115 and 120

PLBG 272 (3 credits)
Plumbing Installation VI
Includes hands-on experience and training in the installation of plumbing fixtures, appliances, and the finished piping in a permanent structure. Work is done on the housing project and other appropriate projects around the campus.
Prerequisite: PLBG 211

Residential Remodeling Technology

What is Residential Remodeling Technology?

Residential Remodeling has become an essential part of the construction industry. Remodelers add living space to existing homes and retrofit homes to modern conveniences and updated building codes. Remodeling can be done not only for cosmetic purposes but also for structural reasons, as well as to increase the energy efficiency of older homes.

Jobs available in the residential remodeling field include but are not limited to carpenters; painters; drywall and ceiling tile installers; roofers; woodworkers; kitchen and bath remodelers; siding, roofing, and aluminum installers; and flooring specialists.

Upon graduation, students of the Residential Remodeling Technology program will have a number of different opportunities available. In addition to working in their field, graduates will also have the chance to continue their education in areas such as project management, technical education, residential designer, vv, and structural engineering degrees. Advanced opportunities as crew leaders, supervisors, assistant supervisors, superintendents and small business owners may also be possible for graduates of the program.

A Graduate of this Program Will be Able to:

- Understand the history of residential buildings in the 20th and 21st centuries.
- Demonstrate basic carpentry woodworking skills.
- Demonstrate successful use of basic and advanced tools of the profession.
- Read blueprints to lay out projects necessary to complete tasks.
- Calculate material quantities and estimate time allowances for projects using mathematical skills required in the profession.
- Apply remodeling skills necessary for interior, exterior, kitchen, and bathroom projects.
- Operate masonry tools and equipment safely and effectively.
- Complete basic masonry repairs.
- Identify and rectify basic plumbing problems in an existing dwelling.
- Troubleshoot basic electrical circuits found in a dwelling.
- Practice safety in the lab and on-site environments.
- Demonstrate a strong work ethic and the ability to work both independently and as a contributing member of a team.
- Stay current with any new technology or codes related to remodeling.

Loren Bishop, Instructor
BS: Eastern University
OSHA Certified Outreach Instructor

Charles T. Byers, Associate Professor
AAS: Thaddeus Stevens College of Technology
FHA/VA Certificate Builder
NCCER Certified Instructor Carpentry Level 4
OSHA Certified Outreach Instructor

Matthew Krupa, Instructor
Darden Executive Business Certificate: University of Virginia
BS: Pennsylvania College of Technology
AAS: Thaddeus Stevens College
OSHA: Construction Safety & Health Certificate
BCSP: Board of Certified Safety Professionals - Safety Trained Supervisor

Joseph Kiely, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Residential Remodeling Technology

Semester 1	
RMDL 106: Hand Tools and Power Tools	**3**
RMDL 111: Building Materials	**3**
CARP 157: Floor, Wall, and Ceiling Framing	**3**
CARP 182: Blueprint Reading	**3**
†MATH 126: Technical Math I (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
CARP 116: Building Site and Foundations	**3**
CARP 161: Stair Construction and Remodeling	**2**
CARP 166: Roofing and Exterior Finishes	**3**
CARP 177: Exterior and Interior Finishes	**3**
***CIS 111: Intro to Computer Application (must take before RMDL 216)**	**3**
***MATH 132: Elementary Geometry (or higher)**	**3**
Semester 3	
***RMDL 206: Remodeling Drafting & Design**	**3**
***RMDL 210: Demolition & Stabilization**	**2**
***RMDL 216: Estimating & Scheduling**	**3**
RMDL 221: Remodeling Electro-Mechanical Systems	**2**
***RMDL 250: Insulation and Weatherization**	**2**
Science Elective	**3**
***ENG 216: Technical Writing OR ENG 221: Public Speaking**	**3**
Semester 4	
CARP 272: Site Work and Foundations II	**2**
***RMDL 260: Kitchen & Bath Remodeling**	**3**
***RMDL 271: Advanced Interior Finishes**	**4**
***RMDL 280: Advanced Exterior Finishes**	**3**
BUSN 106: Small Business Management	**3**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 132, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Residential Remodeling Technology (RMDL)

RMDL 106 (3 credits)
Hand Tools and Power Tools
This course is a general introduction to the basic tools that are used by a carpenter with an emphasis on safety, proper usage and procedures, and various applications that are most commonly used in the carpentry trades.

RMDL 111 (3 credits)
Building Materials
This course covers the wide range of building materials used in carpentry, from the many different types of wood products used to the newest technology of steel framing. Proper procedures for estimating these building materials to the variety of fastening methods are also covered. Building anatomy from the 1940s and prior up to and including present is discussed.

CARP 116 (3 credits)
Building Site and Foundations
In this course, students learn how to set up and operate the transit level and laser level. Building layout and excavation of residential construction will be explained, with particular emphasis on building stake-off. Types of footers, foundations, and concrete forming are also explored. Students will be challenged to practice proper building site layout, constructing concrete stair and sidewalk forms, and installing the form-a-drain system.

CARP 182 (3 credits) Blueprint Reading
In this course students will learn the proper techniques necessary to dissect a set of residential blueprints and develop a broad understanding of the language of construction drawings. We will also become involved in duplicating, through the process of mechanical architectural drafting, a few select detailed residential section drawings, with each having different drafting scales.

CARP 157 (3 credits)
Floor, Wall, and Ceiling Framing
With a strong emphasis on platform framing, students will examine and demonstrate the proper methods of constructing subfloors, walls, and ceilings in the framework of residential and light commercial construction. This includes discussing the basic components and construction methods of light-gauge steel framing.

CARP 161 (2 credits)
Stair Construction and Remodeling
Students learn the different types of stairways and all parts pertaining to them. They also learn how to calculate, lay out, and construct stairway stringers with their proper landings, risers, treads, and railings.

CARP 166 (3 credits)
Roofing and Exterior Finishes
The different types of roof systems and all the material members that are involved in the different roof types are discussed. Students learn theoretically how to calculate rafters to fit their proper situations and practice laying out and cutting common and hip rafters. In addition, students are introduced to various exterior finishing with a focus on vinyl siding.

CARP 177 (3 credits)
Exterior and Interior Finishes
In this course, students will study and practice installing various types of exterior and interior finish material for residential construction. For exterior finish, we will give special attention to the proper installation procedures for roofing; siding; soffit; windows and doors; and aluminum trim. For interior finish, strong emphasis is placed on proper techniques for hanging drywall; installing prehung doors and door trim; applying trim around a window unit; and other common trim materials.
Minimum grade of "C" required

RMDL 206 (3 credits) Remodeling Drafting and Design
This course covers the principles of drafting and design for remodeling purposes. Particular emphasis will be placed on documenting the existing structure where it meets the new construction, including kitchens, baths, utilities, and all mechanicals. Students will create sketches and working drawings that follow design constraints and a systematic renovation sequence.
Prerequisite: CARP 182

RMDL 210 (2 credits) Demolition and Stabilization
This course covers the principles of proper techniques used for demolition and stabilizing structures during the remodeling process. It covers the safe use of tools and equipment and salvaging existing materials for reuse.
Prerequisite: CARP 157

RMDL 216 (3 credits) Estimating and Scheduling
This course covers the principles of fundamental estimating and scheduling skills. Microsoft Excel® is used to establish estimating and scheduling procedures associated with a remodeling project. Cross-disciplinary estimating and inspection processes that will be necessary during the project are both addressed.
Prerequisites: RMDL 111 and CIS 111

RMDL 221 (2 credits)
Remodeling Electro-Mechanical Systems This course provides a general introduction to electro-mechanical systems in a residential structure and how to modify these systems during the renovation process. Students learn how to safely and properly re-rout basic electrical, plumbing, and HVAC ducts that are regularly encountered when remodeling a building. Emphasis is placed on when the scope of the work requires a sub-contractor to perform the work.

RMDL 250 (2 credits) Installation and Weatherization
This course covers the various types of products for reducing building heat loss by infiltration and conduction and the use of insulation used for noise and fire protection. Types of ventilation baffles, vapor barriers, infiltration barriers, and types of insulation are covered. Students perform installation of insulation materials for walls, ceilings, floors, and fire stop applications.
Prerequisites: CARP 177 and RMDL 220

RMDL 260 (3 credits)
Kitchen and Bath Remodeling
This course covers the details and techniques used for residential remodeling and restoration of kitchens and baths. Students are exposed to a wide variety of products and the appropriate match for existing conditions. Emphasis is on the demolition of existing space and the acceptable design of the new space.
Prerequisite: RMDL 250

RMDL 271 (4 credits) Advanced Interior Finishes
This course covers the details and applications of various interior painting and finishing and materials integrated to match renovation work with the existing building. The proper wood types and species, finishing methods, and applications are utilized. Details of interior pre-hung doors, window stools, extension jambs, and casing are covered. Students perform the installation of a complete custom interior trim package.
Prerequisite: CARP 177

CARP 272 (2 credits)
Site Work and Foundations II
Covers the details associated with site preparation and foundation inspections for a new building. Specifics are for lot size, set back, right of way, and building location. Work includes using various instruments for batter board installations, excavation of foundation, locating footer elevation, and forming and pouring footers. Locating, forming, and pouring of sidewalks and exterior porches.

RMDL 280 (3 credits)
Advanced Exterior Finishes
This course covers the principles and practices of exterior finishes including roofing, siding, and aluminum trim applications.
Prerequisite: CARP 166

Water & Environmental Technology

What is Water and Environmental Technology?

The Pennsylvania Department of Environmental Protection requires that operators of drinking water and wastewater treatment facilities are certified. Certification is obtained through a combination of exams and operating systems. The completion of an approved associate degree program significantly reduces the number of years of operating experience required for certification. Students in the Water and Environmental Technology program gain the knowledge, skills, and abilities necessary for successful completion of Department of Environmental Protection examinations.

Courses in the Water and Environmental Technology program are designed to meet the knowledge, skills, and ability requirements tested on the Pennsylvania Department of Environmental Protection certification exams. This will include courses covering topics such as water and wastewater treatment; water distribution and wastewater conveyance systems; geographical information systems (GIS); equipment maintenance; solids handling; basic electricity; plant administration; and rules and regulations.

A Graduate of this Program Will be Able to:

- Describe the major processes, equipment, instrumentation, laws, and regulations associated with the collection and treatment of wastewater.
- Describe the major processes, equipment, instrumentation, laws, and regulations associated with the conveyance and treatment of potable water.
- Perform water and wastewater calculations involving flow, volume, surface area, disinfection, solids removal, retention time, and chemical feed rates.
- Analyze and improve operational procedures at water treatment and wastewater treatment facilities.
- Prepare, analyze, interpret, and report results of water and wastewater sample testing.
- Maintain a safe working environment as outlined by federal and state regulations.
- Describe the Safe Water Drinking Act and its implementation.
- Identify and describe the common diseases associated with water supply and sewage.
- Demonstrate the monitoring duties of water treatment operators.
- Describe the areas of safety to be considered in water treatment, storage, and laboratory testing.
- Describe the operation, components, and troubleshooting procedures for motors and electrical circuits.
- Determine and employ optimization strategies for water treatment and wastewater treatment processes and treatment facilities.

Shannon Butler, Instructor
B.A. Biology - Arcadia University
M.S. Pennsylvania State University
PA Certified Wastewater Operator

Heath A. Edelman PE, Associate Professor
B.S. Pennsylvania State University
M.S. University of New Haven
Licensed Professional Engineer
PA Certified Wastewater Operator
PA Certified Water Operator
Certified Hazardous Material Manager

Model Schedule For
Water & Environmental Technology

Semester 1	
WET 102: Laboratory Skills	**1**
WET 111: Drinking Water Distribution	**3**
WET 116: Water Resources	**4**
WET 156: Drinking Water I	**4**
†MATH 137: Intermediate Algebra (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
WET 106: Wastewater Collection	**3**
WET 121: Safety, Health, and Security	**2**
WET 161: Wastewater I	**4**
WET 168: Utility Management & Administration	**3**
***MATH 132: Elementary Geometry OR**	
MATH 150: Elements of Statistics (or higher)	**3**
CHEM 100 – Conceptual Chemistry	**3**
Semester 3	
WET 203: Stormwater Management	**1**
***WET 206: Wastewater II**	**5**
WET 211: Print Reading/Geographical	
Information Systems (GIS)	**3**
***WET 216: Industrial Waste**	**3**
BIO 210: General Biology I OR	
SCI 107 Environmental Sciences OR	
PHY 106 Physics for Everyday Life	**3**
CIS 111: Intro to Computer Applications	**3**
Semester 4	
***WET 256: Drinking Water II**	**4**
***WET 261: Advanced Wastewater and Solids Handling**	**4**
WET 268: Equipment & Systems O&M	**4**
***ENG 216: Technical Writing OR**	
ENG 221: Public Speaking	**3**
Humanities Elective	**3**
Additional General Education Requirements	
HEAL 106 or HEAL 111	**1**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 137 and MATH 132 (or MATH 150), must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

Water and Environmental Technology (WET)

WET 102 (1 credit) Laboratory Skills

In this course students will learn the basic math and laboratory skills needed to be successful as environmental professionals. Students will learn basic calculations, unit conversions, laboratory glassware, operation and maintenance of laboratory equipment, and basic laboratory testing used in the environmental field. Select lab methods will be utilized to provide students with a solid understanding of gravimetric, volumetric, and colorimetric methodologies. Basic chemical hygiene and chemical waste disposal will also be presented.

WET 106 (3 credits) Wastewater Collection

Wastewater Collection will provide students with an introduction to the practical aspects of operating and maintaining wastewater collection systems, with a focus on the knowledge and skills operators need to identify collection system problems and select appropriate methods to solve them. Students will learn the components and typical layouts of collection systems, and be introduced to safety procedures for construction, inspection and testing of sewers, inspection of manholes, and underground construction and repair. Students will learn the basics of closed-circuit television inspections, clearing stoppages, cleaning sewers, and controlling roots, grease, odors, and corrosion in collection systems, and will learn to solve arithmetic problems relating to the operation and maintenance of wastewater collection systems.

WET 111 (3 credits) Drinking Water Distribution

Students learn about the practical aspects of operating and maintaining water distribution systems, emphasizing safe practices and procedures, including the role and duties of water distribution system operators, procedures for operating and maintaining clear wells and storage tanks, and components and characteristics of distribution system facilities. The course covers the basics of operating and maintaining distribution systems, maintaining water quality in the system, disinfecting new and repaired facilities as well as water delivered to consumers. Techniques for recognizing hazards and developing safe procedures and programs is also taught.

WET 116 (4 Credits) Water Resources

Water Resources will introduce students to topics such as the properties of water, water resources management, sources of water, management of stormwater, and water quantity and quality requirements. Students will develop an understanding of the characteristics surface water and groundwater sources, and will examine the impacts of urbanization on runoff. Students will discuss the relationship between the hydrological cycle and the treatment of water and wastewater. Students will gain hands on experience through laboratory exercises, case studies, and field trips, as appropriate.

WET 121 (2 credits) Safety, Health, and Security

Water and Wastewater Safety, Health, and Security will provide students with an introduction to Safety, Health, and Security procedures to address the hazards and risks associated with operating and maintaining water and wastewater systems. Students will learn about industry accepted safety practices to provide the workforce a safe working environment. Identify and predict hazards in the work environment. Learn the proper use of personal protective equipment to mitigate the risks and hazards associated with operating and maintaining treatment plants, water distribution systems, and wastewater collection systems. Students will learn about the biological and chemical hazards associated with operating plants. Students will be introduced to security and emergency preparedness and the importance of coordinating activities with other agencies.

WET 156 (4 credits) Drinking Water I

Drinking Water I provides students with an introduction to the equipment and processes used in the treatment of drinking water. The student will be introduced to different sources of water, reservoir management, and intake structures and will learn how to safely operate and maintain coagulation, flocculation, sedimentation, filtration, and disinfection processes. Topics such as the control of tastes and odors in drinking water, the Lead and Copper Rule, and solving arithmetic problems related to water treatment plant operations will also be covered. Students will be introduced to daily operating procedures, regulation of flows, chemical use and handling, records and reports, plant maintenance, safety and security, emergency conditions and procedures, handling complaints, and energy conservation.

WET 161 (4 credits) Wastewater I

Wastewater I provides students with an introduction to the equipment and processes used in the treatment of wastewater. The student will be introduced to the different components of wastewater treatment facilities, including racks and screens, grit removal, sedimentation and floatation, trickling filters, rotating biological contactors, activated sludge, wastewater stabilization ponds, and disinfection. Topics such as why we treat wastewater, the duties of a wastewater treatment plant operator, and NPDES permits will also be introduced.

WET 168 (3 credits) Utility Management & Administration

The Utility Management & Administration course will cover the major areas of responsibility of a utility manager, including legal requirements of federal legislation such as the Americans with Disabilities Act (ADA), the importance of developing policies and procedures for dealing with harassment, grievances, and violence in the workplace. Students will also discuss the financial management of a utility, including assessing the financial strength and stability of the utility, budgeting, and funding capital improvements. The course will also introduce students to Pennsylvania Department of Environmental Protection regulations governing water and wastewater treatment facilities, as well as federal, state, and local environmental regulations that pertain to construction and operation of drinking water, stormwater, and wastewater facilities.

WET 203 (1 credit) Stormwater Management

The stormwater management course equips students with the knowledge and skills needed to address the complexities of stormwater management in Pennsylvania, integrating regulatory compliance, Best Management Practices (BMPs), soil and plant considerations, structural and non-structural approaches, and practical construction and inspection practices of BMPs. Through a combination of theoretical learning and practical applications, students will emerge with a holistic understanding of sustainable stormwater management practices tailored to the local context.

WET 206 (5 credits) Wastewater II

Building upon the topics covered in WET 161, the course covers conventional and modified activated sludge processes, processes used for the removal of phosphorus and nitrogen, coagulation and filtration, and membrane bioreactors. Students will perform laboratory procedures and chemistry, analysis and presentation of data, and records and report writing. Operators also learn to analyze and solve operational problems and to perform mathematical calculations relating to wastewater treatment process control. A laboratory component will allow students to gain hands on experience. *Prerequisite: WET 161 & MATH 137*

WET 211 (3 credits) Print Reading/Geographical Information Systems (GIS)

This course introduces students to blueprint reading, geographical information systems (GIS), and the types of blueprints students may expect to encounter working in the water and wastewater industries. This includes land development prints and water and wastewater treatment facility prints. The GIS portion of the course introduces students to GIS mapping as it relates to municipal services.

WET 216 (3 credits) Industrial Waste

Topics include the operation and maintenance of industrial wastewater treatment facilities, regulations governing industrial waste, types of industrial waste, operation and maintenance of flow measurement equipment, preliminary treatment processes, physical-chemical treatment processes, and physical treatment processes. Students are also introduced to the treatment of metal waste streams.
Prerequisite: MATH 137

WET 256 (4 credits) Drinking Water II

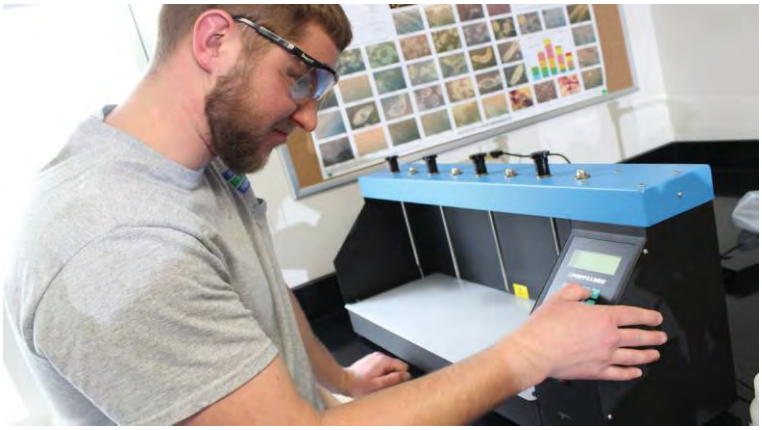
The Drinking Water II course will introduce operators to the practical aspects of operating and maintaining water treatment plants. Topics covered will include drinking water regulations (including the safe drinking water act), iron and manganese control, fluoridation, softening, disinfection by-products, emerging contaminants, nitrate and arsenic removal, corrosion control, handling and disposal of process wastes, maintenance, instrumentation, and advanced laboratory procedures. A laboratory component will allow students to gain hands on experience.
Prerequisite: WET 156

WET 261 (4 credits) Advanced Wastewater and Solids Handling

Advanced Wastewater and Solids Handling builds upon the material covered in Wastewater I and Wastewater II. Students will discuss the equipment and advanced treatment processes used for odor control and residuals solids management. Solids stabilization methods such as anaerobic and aerobic digestion and chemical stabilization will be covered. Additional topics such as sludge types, characteristics, and calculating sludge quantities are covered. Sludge thickening using gravity thickeners, dissolved air flotation units, centrifuges; as well as sludge conditioning such as thermal, wet oxidation, and elutriation are explored. Dewatering with pressure filtration (plate and frame, belt, vacuum), centrifuges and drying beds; and volume reduction using composting, mechanical drying, and incineration will be covered. Disposal methods for dewatered or liquid stabilized sludge, as applicable regulations for beneficial use and land application of biosolids are additional topics. Wastewater reuse, recycling, and reclamation is also explored.

WET 268 (4 credits) Equipment & Systems O&M

The Equipment & Systems O&M course will provide students with an introduction to the operation and maintenance of water and wastewater treatment facilities. Electrical and hydraulic concepts will be applied to water industry equipment. Typical maintenance procedures for pumps, blowers and compressors, valves, gauges and thermometers, and alarms will be covered. Motor control systems for pumps and blowers will be covered. Students will be introduced to maintenance programs and asset management. Topics such as preventive maintenance, emergency repairs, and scheduled repairs will be covered. Students will be given the opportunity learn maintenance procedures in a laboratory setting. This will include developing some basic mechanical, electrical, and plumbing skills.



Welding Technology

What is Welding Technology?

The Welding Technology program provides the opportunity to develop the skills necessary to be a skilled entry-level welder in the welding industry. There is an increasing demand for welders in a variety of industries including light and heavy construction, automobile, aircraft, gas and oil, railroad, machinery and manufacturing industries. These skills are developed through theory and hands-on application into various welding specialties including blueprint reading and advanced computer-aided design; oxy-fuel welding and related processes; basic shielded metal arc welding; basic gas metal arc welding; and basic gas tungsten arc welding.

Students find employment in a wealth of industries related to construction, machinery, manufacturing oil and gas, and transportation industries. Graduates with entry-level certifications will find challenging jobs with opportunity for rapid advancement.

A Graduate of this Program Will be Able to:

- Interpret welding blueprints
- Weld carbon steel with the oxy fuel welding process
- Weld carbon steel with the shielded metal arc welding process
- Weld carbon steel, aluminum, and stainless steel with the gas metal arc welding process
- Weld carbon steel, aluminum, and stainless steel with the gas tungsten arc welding process

Andrea Biesecker, Instructor
AAS: Thaddeus Stevens College of Technology
BS: Eastern Mennonite University

Michael Marino, Instructor
AAS: Thaddeus Stevens College of Technology
BS: Eastern Mennonite University

Joshua Seitzer, Instructor
BA: Eastern University
M.ED: Pennsylvania State University

Jeffery Swoyer, Instructor
S.Ed: Temple University

Model Schedule for Welding Technology

Semester 1	
WELD 106: Welding Blueprint Reading	**4**
WELD 110: Oxy-Fuel Welding and Related Processes	**3**
WELD 121: Shielded Metal Arc Welding I	**4**
WELD 150: Introduction to Safety	**1**
†^MATH 126: Technical Math I (or higher)	**3**
Science: Elective	**3**
Semester 2	
WELD 155: Gas Metal Arc Welding I	**3**
***WELD 160: Gas Metal Arc Welding II**	**3**
WELD 165: Gas Tungsten Arc Welding I	**3**
***WELD 170: Gas Tungsten Arc Welding II**	**3**
***MATH 136: Technical Math II (or higher)**	**3**
ENG 106: English Composition	**3**
Semester 3	
***WELD 205: Flux-Cored and Submerged Arc Welding**	**3**
***WELD 220: Shielded Metal Arc Welding II**	**3**
WELD 225: Metallurgy	**3**
***WELD 230: Special Welding Processes**	**3**
Humanities Elective	**3**
HEAL Elective : HEAL 106 OR HEAL 111	**1**
***ENG 216: Technical Report Writing**	**3**
Semester 4	
***WELD 260: Gas Metal Arc Welding III**	**3**
***WELD 270: Gas Tungsten Arc Welding III**	**3**
***WELD 275: Pipe Welding**	**3**
***WELD 280: Non-Destructive Testing**	**3**
CIS 105: Drawing with Auto Cad	**3**
General Studies Elective	**3**
TOTAL CREDITS	**73**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 136, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

^ Minimum Grade Required. See Course Description.

Welding Technology (WELD)

WELD 106 (4 credits)
Welding Blueprint Reading
A study of industrial blueprints. Emphasis on terminology, symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry.

WELD 110 (3 credits)
Oxy-Fuel Welding and Related Processes
Provides a course that covers the oxygen-acetylene welding/cutting process. Topic includes the assembly and disassembly of an oxy-fuel torch setup, the correct settings required to flame-cut carbon steel as well as a basic introduction to the oxyfuel welding process. Safety around using an oxy-fuel torch is covered extensively to ensure the safe operation of the process. Plasma Arc Cutting (PAC) is reviewed as modern alternative to using oxyfuel to cut carbon steel. The safe and correct operation of the process is covered.

WELD 121 (4 credits) Shielded
Metal Arc Welding 1
This course develops skills in shielded metal arc welding. Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 150 (1 credit) Introduction to Safety
This course provides the fundamentals of safety in conducting welding operations and provides safety training using Organization Safety Health Administration (OSHA) standards that apply to the programs of study at Thaddeus Stevens College of Technology. The training received covers all topic areas required by the OSHA Outreach Training Program for industry recognized tem hour certification in General Industry Safety.

WELD 155 (3 credits)
Gas Metal Arc Welding
This course develops skills in gas metal arc welding (GMAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 160 (3 credits) Gas
Metal Arc Welding 2
This course further develops skills in gas metal arc welding (GMAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.
Prerequisite WELD 155

WELD 165 (3 credits)
Gas Tungsten Arc Welding
The course develops skills in gas tungsten arc welding (GTAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 170 (3 credits)
Gas Tungstesn Arc Welding 2
The course develops skills in gas tungsten arc welding (GTAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided in advanced skills.
Prerequisite WELD 165

WELD 205 (3 credits)
Flux-Cored and Submerged Arc Welding
This course is an advanced welding application and examines safety, set-up, wire identification, current, shielding gases, operations and troubleshooting techniques of the process. Significant hands-on application designed to provide training in advancement of welding skills using the FCAW and SAW on carbon steels using small and large diameter flux-cored electrodes in all positions on fillet and groove welds.
Prerequisites: WELD 155 and WELD 160

WELD 220 (3 credits) Shielded
Metal Arc Welding 2
This course is an advanced welding application and examines safety, current selection, electrode identification, welding methods, operations, and troubleshooting techniques of the process. Significant hands-on application designed to provide training in advancement of welding skills on carbon and stainless steels using various electrodes in all positions on fillet and groove welds.
Prerequisite: WELD 120

WELD 225 (3 credits) Metallurgy
This course develops the understanding of physical characteristics and mechanical properties of metals for welding application. This course is designed to provide training in identifying base metals and selection of weld filler metals and understand how welding heat affects base metals during the welding process.

WELD 230 (3 credits) Special
Welding Processes
Significant hands-on application designed to provide training in advancement of welding skills using the submerged arc welding (SAW), stud welding, and tube welding processes on carbon and stainless steels using specialized equipment in various positions.
Prerequisites: WELD 155 and WELD 165

WELD 260 (3 credits) Gas Metal Arc Welding 3

This course is an advanced welding application and examines safety, set-up, wire identification, current, shielding gases, operations and troubleshooting techniques of the process. Significant hands-on application designed to provide training in development of welding skills on aluminum, carbon and stainless steels on all positions on fillet and groove welds.
Prerequisites: WELD 155 and WELD 160

WELD 270 (3 credits) Gas Tungsten Arc Welding 3

This course is an advanced welding application, set-up, welding rod identification, current, polarity and high frequency, shielding gases, operations and troubleshooting techniques of the process. Significant hands-on application designed to provide training in advancement of welding skills on aluminum, carbon and stainless steels using various filler metals in all positions on fillet and groove welds.
Prerequisites: WELD 165 and WELD 170

WELD 275 (3 credits) Pipe Welding

This course develops pipe welding application, preparation and set-up, current, shielding gases, welding techniques and quality inspection of the welds. Significant hands-on application designed to provide training in development of pipe welding skills on carbon steel pipe using various welding processes in all positions on groove welds.
Prerequisites: WELD 120 and WELD 220

WELD 280 (3 credits) Non-Destructive Testing

This course introduces the welder to non-destructive examination methods to determine the physical properties of a weld and to predict the service life of a weld. Students will learn to differentiate between destructive and non-destructive testing methods to identify discontinuities and defects in welds by using various non-destructive testing equipment to various specifications and codes.
Prerequisite: WELD 105

Certificate Programs

Electrical Construction & Maintenance

Certificate Program

What is the Construction Electrician Certificate?

The Construction Electrician certificate program provides students with the opportunity to acquire the theory and skills needed to gain employment as residential, commercial, and industrial construction electricians. Skills are developed through basic electrical theory and practical work project assignments. This program will give students a broad theoretical and practical background in all aspects of electrical construction.

Graduates of the Construction Electrician program are prepared to find employment as residential, commercial, and industrial construction electricians. Because of the continual growth in building construction, there are many employment possibilities.

A Graduate of this Program Will be Able to:

- Demonstrate appropriate technical skills in the electrical construction field.
- Demonstrate the ability to design, develop, and troubleshoot residential, commercial, and industrial circuitry.
- Complete parts list and order forms that demonstrate knowledge of coding and numbering systems for devices, hardware, and electrical equipment.
- Interpret, develop, and utilize blueprints, schematic diagrams, and wiring plans to perform electrical construction activities.
- Demonstrate the ability to apply OSHA-accepted safety standards as appropriate.
- Demonstrate knowledge of National Electrical Codes that apply to specific occupancies.
- Demonstrate knowledge of test equipment used in troubleshooting and repair of circuits, distribution systems, and electrical equipment.

Michael Oxenford, Instructor
BS: The Pennsylvania State University
OSHA: Construction Safety and Health Trainer
Electrical Apprenticeship: IBEW Local Union 743
Master Electrician
ICC: Electrical Inspector

Evan Ducko, Instructor
AA: Bucks County Community College
PDE C&T Instructional I Electrical Occupations
Electrical Apprenticeship: BCTHS
C-TECH: Fiber Optic/Copper-Based Systems
Network Cabling Specialist

Model Schedule For
Construction Electrician

Semester 1	
ECM 106: AC-DC Fundamentals	**5**
ECM 111: Residential Wiring	**5**
ECM 116: Electrical Construction Safety	**2**
ENG 106: Composition I	**3**
MATH 126: Technical Math I (or higher)	**3**
Semester 2	
***ECM 156: Commercial/Industrial Wiring**	**5**
ECM 162: National Electrical Code	**4**
ECM 166: Blueprint Reading:Electrical	**3**
ELECTIVE : General Studies Elective	**3**
ELECTIVE : General Studies Elective	**3**
TOTAL CREDITS	**36**

** Prerequisite or Co-requisite Required. See Course Description.*

ECM 106 (5 credits) AC/DC Fundamentals

This course presents basic principles, laws, and formulas which relate to alternating (AC) and direct current (DC) circuit applications in electricity. Topics include electron theory, Ohm's Law, series, parallel and combination circuit theory. In addition, capacitive and inductive reactive circuitry (RE, RC, RLC) are discussed.

ECM 111 (5 credits) Residential Wiring

This course is an introduction to residential wiring practices and techniques. Topics cover basic residential symbols, blueprint reading, wire diagramming, and the use of applicable National Electrical Codes (NEC). Lab work and projects enable students to develop an understanding of basic residential circuits.

ECM 116 (2 credits) Electrical Construction Safety

This course presents Occupational Safety and Health Administration (OSHA) general safety requirements for specific electrical and construction environments. Topics include ladders, scaffolds, lockout and tagging, personal protective equipment (PPE), temporary wiring, harness techniques, and confined spaces.

ECM 156 (5 credits) Commercial and Industrial Wiring

Basic theory and laboratory assignments in safety, wiring practices, blueprint reading, and the National Electrical Code (NEC) as it applies to commercial and industrial wiring techniques. Labs enable students to gain practical experience installing and troubleshooting single- and three-phase distribution, transformers, motors, and motor control circuits. *Prerequisite: ECM 111*

ECM 162 (4 credits) National Electrical Code

The student will locate, analyze and interpret National Electrical Code (NEC) tables and codes to determine appropriate distribution equipment, conduit and conductor sizes, overcurrent protection, load demands and branch circuit requirements for residential, commercial and industrial facilities.

ECM 166 (3 credits) Blueprint Reading: Electrical

This course is an introduction to basic blueprint reading skills and techniques. Topics cover lines and symbols, pictorial and orthographic diagrams, specifications, scales, prints, and plans. Classwork enables students to develop a basic understanding of construction drawings.

Computer Integrated Machining Certificate

What is the General Machine Certificate?

The General Machine certificate program offers a broad training experience that prepares individuals for entry-level employment in the machining industry. Through a combination of classroom study and assigned lab activities, students acquire essential background information, develop trade skills, and become familiar with production methods and standards common to the industry. Within the lab setting, emphasis is on the practical application of skills. Students will learn to operate a variety of conventional machine tools and computer numerical control (CNC) machines, interpret industrial drawings/blueprints, and use precision measuring and inspection instruments.

Students enrolled in the certificate program may enroll in the associate degree program upon completion of the certificate program. Graduates of the General Machine certificate program are employed as machine operators, machinists, CNC operators, and quality control inspectors.

A Graduate of this Program Will be Able to:

- Demonstrate safe work habits and be conscious of safety when working with machinery.
- Read blueprints, interpret drawings, understand specifications, and establish tolerances.
- Apply mathematics in machine tool technology (speeds, feeds, thread measurement, sine bar, etc.)
- Operate basic machine tools and demonstrate knowledge of their construction in relation to the metal industry.
- Operate abrasive cutting machinery; select and plan machining operations on this equipment.
- Demonstrate skills in quality control, inspection, gauging methods, and production control as they relate to manufacturing design and production.

Kyle Young, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Computer Integrated Machining Certificate

Semester 1	
CIM 106: Blueprint Reading and Related Math	**3**
CIM 110: Manufacturing Processes	**2**
CIM 115: Measurement Systems	**2**
CIM 118: Lathe and Vertical Milling Machine I	**4**
CIM 161: Metallurgy	**2**
MATH 137: Intermediate Algebra (or higher)	**3**
CIS 105 Drawing with AutoCAD	**3**
Semester 2	
***CIM 158: Lathe and Vertical Milling Machine II**	**3**
***CIM 165: Manufacturing Processes II**	**2**
***CIM 175: Computer Numerical Control I**	**4**
***CIM 222: CAD/CAM I**	**3**
***MATH 141: Trigonometry (or higher)**	**3**
ENG 106: English Composition	**3**
TOTAL CREDITS	**37**

** Prerequisite or Co-requisite Required. See Course Description.*

CIM 106 (3 credits)
Blueprint Reading and Related Math

Interpretation of industrial drawings, basic skills in sketching, and applied mathematics.

CIM 110 (2 credits) Manufacturing Processes

Students will learn laboratory safety and material handling. The physics of metal cutting and the machinability of metals are introduced. Semi-precision and precision measuring instruments are introduced and practiced. Precision layout, bench grinding, surface grinding and power sawing operations will also be introduced and exercised.

CIM 115 (2 credits) Measurement Systems

Students will learn basic metrology. Precision layout, indirect, and direct measurement will be included. Geometric tolerancing and how GDT features are measured will be covered.

CIM 118 (4 credits)
Lathe and Vertical Milling Machining I

This course introduces students to the lathe and vertical milling machine. Students are exposed to a wide variety of related operations.

CIM 158 (3 credits)
Lathe and Vertical Milling Machining II

Techniques and procedures taught in CIM 118 are enhanced and reinforced. This course introduces students to more advanced techniques and procedures used on the lathe and the vertical milling machine.
Prerequisites: CIM 106, CIM 110, CIM 115 and CIM 118 and MATH 137
Corequisite: MATH 137

CIM 161 (2 credits) Metallurgy

Covering the basic principles of metallurgy, this course clarifies many industrial processes. Students gain an understanding of quenching, annealing, case hardening, tempering, and crystallization.

CIM 166 (3 credits) Manufacturing Processes II

This is a lab intensive course which provides students with extensive hands-on training. Assigned projects aid students in gaining critical experience contributing to a well-rounded machining education.
Prerequisites: CIM 106, CIM 110, CIM 115, CIM 118, & CIM 161
Corequisite: MATH 137

CIM 176 (3 credits)
Computer Numerical Control (CNC) I

CIM 175 introduces the student to basic CNC concepts such as word-address programming, machine set-up, and program proofing. This course serves as an introduction to CNC machines and CNC programming methods and techniques. The programming and set up of a wire electro discharge
machine will be covered as well.
Prerequisites: CIM 106, CIM 110, CIM 118
Corequisite: MATH 137

CIM 222 (3 credits)
Computer-Aided Design and Computer-Aided Machining (CAD/CAM) I

This course introduces the use of MasterCAM® as a tool for defining part geometry and generating CNC machine code. Two-axis and three-axis applications are demonstrated, along with the use of the CAD/CAM applications. The AutoCAD® system is introduced as a drafting system to be linked with MasterCAM®.
Prerequisites: CIM 106, CIM 110 and CIM 118

Masonry Construction Certificate

What is the Masonry Construction Certificate?

The Masonry Construction certificate provides the opportunity to develop the basic skills of a mason and is designed as an introduction to the trade. Students will focus on basic tool skills, trade materials, safety procedures and terminology. Emphasis is placed on brick and block skill sets. These skills are developed through hands-on projects, which are preceded by theory lectures and demonstrations. Special emphasis is placed on the appreciation of the beauty and permanence of brickwork and on the development of pride in workmanship.

Students successfully completing the Masonry Construction certificate program find employment in the field as mason tenders and masons with experience and further education as forepersons or superintendents. Many masons are self-employed.

All students completing the certificate program may enroll in the associate degree program.

A Graduate of this Program Will be Able to:

- Operate masonry tools and equipment safely and effectively.
- Use masonry terminology.
- Read blueprints to estimate materials quantity and pricing.
- Lay out and construct footings.
- Lay out and build a block foundation.
- Apply brick veneering to a structure.
- Construct a masonry arch.

Michael T. Gardner, Instructor
AAS: Thaddeus Stevens College of Technology

Model Schedule For
Masonry Construction

Semester 1	
MASN 101: Intro to Tools, Safety, and Equipment	**3**
MASN 105: Introduction to Masonry Construction	**3**
MASN 110: Development of Masonry Materials	**3**
MASN 116: Chimney Construction	**3**
MATH 126: Technical Math I (or higher)	**3**
Semester 2	
MASN 155: Block Construction, Bearings & Anchoring Systems	**4**
MASN 158: Adhered Concrete Masonry Veneer	**2**
MASN 162: Masonry Hardscaping Patios & Retaining Walls	**2**
MASN 167: Masonry Restoration & Building Maintenance	**3**
MASN 171: Concrete Sidewalks	**1**
ENG 106: English Compostition	**3**
HEAL 111: Basic First Aid	**1**
TOTAL CREDITS	**31**

MASN 101 (3 credits)
Introduction to Tools, Safety and Equipment Students will be introduced to the tools required for the masonry trade, understand safety standards and practices, and receive training and certifications on various equipment used on a job site.

MASN 105 (3 credits)
Introduction to Masonry Construction
This course will teach the fundamentals of the masonry trade. This will include spreading mortar and striking full joints, laying brick and block to the line, bonding the length and height of a wall, building leads, and hanging a corner pole.

MASN 110 (3 credits)
Development of Masonry Materials
History and the manufacturing of masonry materials. In the manufacturing of materials, there are many different types of brick and block. Students will learn the various names and where the material should be used in a wall. Portland cement comes in different forms and how to properly mix the different types. Students will learn what the different strengths of cement and where they should be used.

MASN 116 (3 credits) Chimney
Construction
Students will understand the difference between and be able to construct properly a single and double flue chimney.

MASN 155 (4 credits)
Block Construction, Bearings, and Anchoring Systems
Students will learn terminology; the placement of anchor bolts, bearing plates, setting lintels, cutting in electrical boxes and door ties. They will be working around conduit, duct work and rebar reinforcement. They will also build a composite wall using block and brick.

MASN 158 (2 credits)
Adhered Concrete Masonry Veneer
Students will learn to use the tools and equipment for installing veneer stone; to apply hanging wire, scratch coat, flashings, vapor barriers, and drain mats; to hang stone; and to point the mortar joints. Students will learn the different types of patterns stone can be laid in.

MASN 162 (2 credits)
Masonry Hardscaping Patios & Retaining Walls The proper use of masonry products in an outdoor environment. Understand the process to build an outdoor patio and retaining walls using masonry materials.

MASN 167 (3 credits)
Restoration and Building Maintenance
Cover the various materials that go along with masonry products. These would be caulking, waterproofing, patching, repointing, cutting out and repairing damaged areas, and cleaning of masonry. This course will focus on preventive maintenance to stop any further damage of the masonry structure.

MASN 171 (1 credit) Concrete
Sidewalks
Students will learn how to build forms and how to place concrete for a sidewalk.

Welding Technology Certificate

What is the Welding Technology Certificate?

The Welding Technology certificate program provides the opportunity to develop skills necessary to be skilled entry-level welders in the welding industry. There is an increasing demand for welders in a variety of industries including light and heavy construction, automobile, aircraft, gas and oil, railroad, machinery and manufacturing industries. These skills are developed through theory and hands-on application Into various welding specialties including blueprint reading and advanced computer-aided design, oxy-fuel welding and related processes, basic shielded metal arc welding, basic gas metal arc welding, and basic gas tungsten arc welding.

Students find employment in a wealth of industries related to construction, machinery, manufacturing oil and gas, and transportation industries. Graduates with entry-level certifications will find challenging jobs with opportunity for rapid advancement.

A Graduate of this Program Will be Able to:

- Interpret welding blueprints
- Weld carbon steel, aluminum, and stainless steel with the oxy fuel welding process
- Weld carbon steel with the shielded metal arc welding process
- Weld carbon steel, aluminum, and stainless steel with the gas metal arc welding process
- Weld carbon steel, aluminum, and stainless steel with the gas tungsten arc welding process

Andrea Biesecker, Instructor
AAS: Thaddeus Stevens College of Technology
BS: Eastern Mennonite University

Michael Marino, Instructor
AAS: Thaddeus Stevens College of Technology
BS: Eastern Mennonite University

Model Schedule for Welding Technology Certificate Program

Semester 1	
WELD 106: Welding Blueprint Reading	**4**
WELD 110: Oxy-Fuel Welding and Related Processes	**3**
WELD 121: Shielded Metal Arc Welding I	**4**
WELD 150: Introduction to Safety	**1**
†^MATH 126: Technical Math I (or higher)	**3**
ENG 106: English Composition	**3**
Semester 2	
WELD 155: Gas Metal Arc Welding I	**3**
***WELD 160: Gas Metal Arc Welding II**	**3**
WELD 165: Gas Tungsten Arc Welding I	**3**
***WELD 170: Gas Tungsten Arc Welding II**	**3**
***MATH 136: Technical Math II (or higher)**	**3**
***ENG 216: Technical Report Writing**	**3**
TOTAL CREDITS	**33**

** Prerequisite or Co-requisite Required. See Course Description.*

†Any Student who has taken pre-calculus (MATH 207) or calculus (MATH 213) instead of MATH 126 and MATH 136, must take an additional Gen-Ed elective in order to meet their Gen-Ed requirements.

WELD 106 (4 credits) Welding Blueprint Reading
A study of industrial blueprints. Emphasis on terminology, symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry.

WELD 110 (3 credits) Oxy-Fuel Welding and Related Processes
Provides a course that covers the oxygen-acetylene welding/cutting process. Topic includes the assembly and disassembly of an oxy-fuel torch setup, the correct settings required to flame-cut carbon steel as well as a basic introduction to the oxyfuel welding process. Safety around using an oxy-fuel torch is covered extensively to ensure the safe operation of the process. Plasma Arc Cutting (PAC) is reviewed as modern alternative to using oxyfuel to cut carbon steel. The safe and correct operation of the process is covered.

WELD 121 (4 credits) Shielded Metal Arc Welding 1
This course develops skills in shielded metal arc welding. Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 150 (1 credit) Introduction to Safety
This course provides the fundamentals of safety in conducting welding operations and provides safety training using Organization Safety Health Administration (OSHA) standards that apply to the programs of study at Thaddeus Stevens College of Technology. The training received covers all topic areas required by the OSHA Outreach Training Program for industry recognized tem hour certification in General Industry Safety.

WELD 155 (3 credits) Gas Metal Arc Welding
This course develops skills in gas metal arc welding (GMAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 160 (3 credits) Gas Metal Arc Welding 2
This course further develops skills in gas metal arc welding (GMAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.
Prerequisite WELD 155

WELD 165 (3 credits) Gas Tungsten Arc Welding
The course develops skills in gas tungsten arc welding (GTAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided.

WELD 170 (3 credits) Gas Tungstesn Arc Welding 2
The course develops skills in gas tungsten arc welding (GTAW). Students will learn applications, set-ups, operations, and troubleshooting of these processes. Significant hands-on practice is provided in advanced skills.
Prerequisite WELD 165

Technical Studies-Journeyworker

In response to requests for academic recognition of registered apprenticeship training, Thaddeus Stevens College of Technology (TSCT) provides a technical studies–machining technology associate of applied science (AAS) degree. This degree recognizes the goals, general principles, and procedures of registered apprenticeship training. The technical studies–machining technology AAS degree is designed to support lifelong learning and accelerate the achievement of individual career goals. Transferability of the technical studies portion of the AAS degree to four-year institutions will be based on the policies of the accepting institution.

PROGRAM REQUIREMENTS:

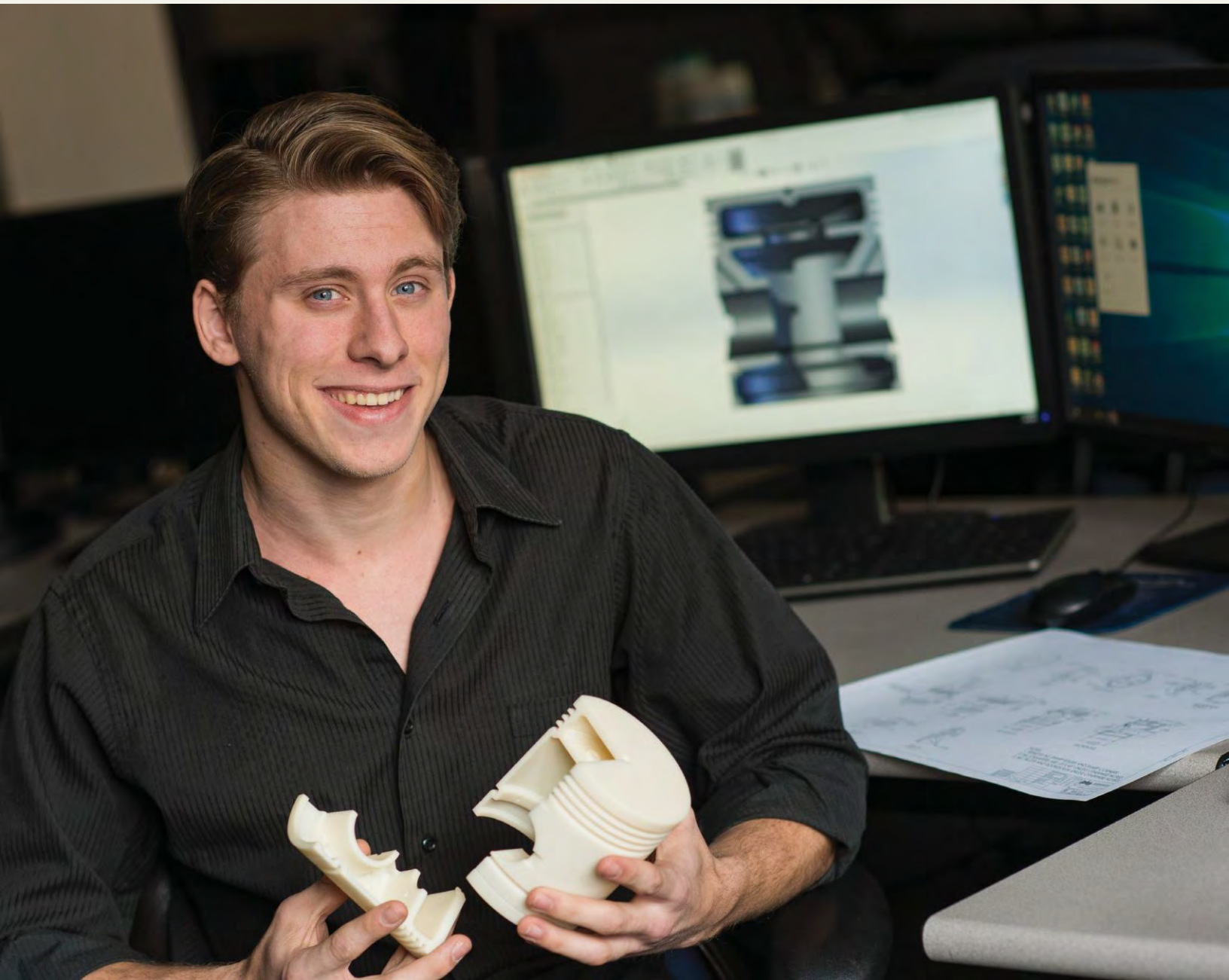
- For admission, students must possess a PA Apprenticeship Completion Certificate issued by the Pennsylvania Department of Labor and Industry.
- Students must complete all prescribed apprentice-related technical instruction.

GRADUATION REQUIREMENTS:

- 70 credit hours
- 46 credits technical studies (awarded as advanced standing)
- 24 credits general studies required from the following subject areas:
  - English (ENG)
  - Mathematics (MATH)
  - Science (includes PHYS, BIO, etc.)
  - Humanities (includes all SOC, ECON, HIST)

Twenty-five percent of the total program credits must be completed at Thaddeus Stevens College.

General Education



Computer Information Systems Courses

Tara Faro, Instructor
MS: The Pennsylvania State University
BS: West Chester University

Kelsey Haldeman, Instructor
AAS: Thaddeus Stevens College of Technology

CIS 105 (3 credits)* Drawing with AutoCAD®

Provides an introduction to the use of computer software used to draw. Students learn introductory AutoCAD® commands used to create basic geometric shapes and editing functions used to modify geometry. Measuring and distance specifications for objects is taught along with text creation for use in notes and specifications. Students also learn to use image transfer software that converts pictures and images into line geometry.

**ARCH and MET students may not take this course without consent of their respective program faculty members. ECAD students may also NOT take.*

CIS 111 (3 credits)* Introduction to Computer Applications

Introduction to applications for use in the professional and college environment. Students obtain skills in the latest business software. Activities consist of hands-on exercises using the operating system, word processing, spreadsheet, database management, and presentation programs.

**BUAD students may not take. Pre-Major students may not take until the completion of DSOC 010 & DSOC 011.*

CIS 211 (3 credits)* Microsoft Excel

This is a comprehensive course in Excel®. It contains everything from basic introductory material to complex business formulas and mapping procedures. Students upon completion will be prepared to take the Microsoft Office User Specialist (MOUS) exam for Excel® certification.

BUAD students may not take.

English and Humanities Courses

Marla Bucy, Associate Professor
MA: Temple University
BS: Millersville University

Dr. Sarah D'Stair, Instructor
PhD: University of Massachusetts
MA: San Jose State University
B.A: San Jose State University,

Laura Malone, Instructor
Adv. Cert Post Masters: SBL, SDL: Hunter College, C.U.N.Y.
MS: Pace University
BA: University of Richmond

Patricia Meley, Instructor
MA: The Pennsylvania State University
BA: Lynchburg College

Lisa-Marie Middendorf EdD, Assistant Professor
EdD: University of Pennsylvania
MA: SUNY Brockport
BS: St. John Fisher College

Melissa Weathers, Instructor
MS: Lincoln University
BS: West Chester University

ENG 106 (3 credits) English Composition I

This course teaches students to write well-crafted texts through engagement in the drafting and revision process. The course also covers skills for writing effective, precise, and grammatically correct prose. Students also learn to think critically about texts and other media they encounter.

ENG 116 (3 credits)* Short Story and Poetry (HSS)

Analysis of a variety of short stories and poems with an emphasis on developing interpretive skills. Special attention given to individual presentations and class discussion. technique, symbolism, irony, style, and social significance.

**Prerequisite: ENG 106 with a minimum grade of "C" or instructor permission*

ENG 206 (3 credits)* Reading and Writing Creative Nonfiction (HSS)

This course is an introduction to the genre of Creative Nonfiction and includes a variety of approaches to the genre, both in content and form. Specific content approaches include food writing, travel writing, sports writing, music writing, environmental/place writing, pop culture writing, and immersive journalism. Specific form approaches include vignette, freeform, podcast, blog form, among other non-traditional forms. Students are introduced to these approaches through various shared texts, and students practice these approaches through difference writing activities and assignments.

**Prerequisite: ENG 106 with a minimum grade of "C" or instructor permission*

(HSS) denotes course fulfills Humanities/Social Sciences requirement or may be used as a General Education elective

ENG 216 (3 credits)* Technical Report Writing
Presents technical subject matter with emphasis on intensive practice in the various methods of expository writing. Attention given to various technical forms, including instruction, proposal, progress, and feasibility reports.
**Prerequisite: ENG 106 or instructor permission*

ENG 221 (3 credits) Public Speaking
Course includes modes of speech communication, such as demonstration, information, persuasion, and interview.

ENG 222 (3 credits)* African American Literature (HSS)
Course includes a survey of African American literature from slave narratives to the pan-African experience of the 21st Century.
**Prerequisite: ENG 106 with a minimum grade of "C" or instructor permission*

ENG 238 (3 credits)* Film Appreciation (HSS)
This course introduces students to the art and craft of film. Students will learn about important film genres and become fluent in basic elements of cinema such as narrative style, character development, cinematography, setting, editing, and sound. In addition to studying the technical language of film, students will learn to appreciate film as an art form that expresses a society's values and conflicts. The course is designed to give students who enjoy film the tools to make substantive arguments about the movies they watch.

History Courses

Patricia Meley, Instructor
MA: The Pennsylvania State University
BA: Lynchburg College

HIST 106 (3 credits) American History I (HSS)
This course surveys American history from the colonial period to the Reconstruction period following the American Civil War. Students gain an understanding of the major events that have shaped American history; learn how American cultural values and character have developed as a result of these events; understand how myths and stereotypes about American history affect our perception of the past and present; and analyze and understand how economics, politics, society, religion, and geography are interrelated and impact on history.

HIST 111 (3 credits) American History II (HSS)
This course surveys American history from the Reconstruction period following the American Civil War to the Vietnam War. Students gain an understanding of the major events that have shaped American history; learn how American cultural values and character have developed as a result of these events; understand how myths and stereotypes about American history affect our perception of the past and present; and analyze and understand how economics, politics, society, religion, and geography are interrelated and impact on history.

Health and Physical Education Courses

HEAL 106 (1 credit) Fitness and Wellness
Offers information that enables students to take control of their personal health and lifestyle habits so as to make a continuous, deliberate effort to stay healthy and to achieve well-being. Students learn to develop personal lifetime programs that promote fitness, preventative health care, and personal wellness.

HEAL 111 (1 credit) Basic First Aid
Provides individuals in the workplace the knowledge and skills necessary to recognize and provide basic first aid care for injuries and sudden illnesses until advanced medical personnel arrive and take over.

(HSS) denotes course fulfills Humanities/Social Sciences requirement or may be used as a General Education elective

Mathematics Courses

Any student who takes Pre-Calculus (MATH 207) or Calculus (MATH 213) instead of the two required math course in their program must take an additional 3-credit general education elective to meet their general education requirements.

Renee M. Alshouse, Instructor
MEd: Millersville University
BS: Drexel University

Nasser Bogale, Ph.D., Assistant Professor
PhD - University of the Cumberlands
MEd - Millersville University
MA - University College Dublin
BSc - Addis Ababa University

Trina Hess, Professor
MA: Villanova University
BS: The Pennsylvania State University

Nora Othman, EdD, Assistant Professor
EdD; MS: West Virginia University
BS: University of Miami

Mary Phillips, Instructor
Med: Millersville University
BS: Shippensburg University

MATH 111 (3 credits)* Business Mathematics
Mathematics skills necessary to do calculations and procedures to operate a successful office or small business. Percentage and simple interest, credit, business ownership, compound interest, payroll and taxes, insurance, mortgages, and home ownership are covered.
**Prerequisite: DMAT 010 (C or above) or Satisfactory Score on Math Placement Exam*

MATH 126 (3 credits)* Technical Mathematics I
This course is an introduction to the mathematics required of students in technical programs. Designed for students whose academic background does not emphasize algebra or geometry. Includes a review of arithmetic, signed numbers, basic algebra, plane geometry, and other topics. Emphasis is on problem solving.
**Prerequisite: Satisfactory Score on Math Placement Exam*

MATH 132 (3 credits)* Elementary Geometry
This course is designed for students whose academic background did not emphasize geometry. It covers plane geometry topics, which include basic concepts, parallel lines, triangles, quadrilaterals, and circles. Theorems and postulates are included but emphasis is on measurement and constructions. This course is intended to substitute for Technical Mathematics II for those students who are not required to take General Physics I. It covers the practical geometry that is used in construction majors.
**Prerequisites: MATH 126 (C or above) or MATH 137*

MATH 136 (3 credits)* Technical Mathematics II
This course covers solving linear and quadratic equations, functions, graphing linear quadratic equations, polynomials, solving trigonometric ratios, solving right triangles and interpreting basic statistics.
Prerequisites: MATH 126 (C or above) or MATH 137

MATH 137 (3 credits)* Intermediate Algebra
This course reviews the structure and use of algebra through a combination of topics including polynomials, first-degree equations, quadratic equations, exponents, radicals, and systems of linear equations. Graphing first and second-degree equations is emphasized.
**Prerequisite: DMAT 030 (C or above) or satisfactory score on placement test, or permission of Math Department*

MATH 141 (3 credits)* Trigonometry
This course shows how mathematics can be applied in a physical setting. The theoretical foundations will be established and explored but emphasis will be placed on practical applications. Highlighted are the trigonometric functions used to solve right triangles, solving oblique triangles using the Law of Sines and the Law of Cosines, and the graphs of the trigonometric functions.
Prerequisite: MATH 137 (C or above)

MATH 150 (3 credits)* Elements of Statistics
Covers measures of central tendency and variability; probability and normal curve; and sampling and hypothesis testing. Students need to possess mathematical skills necessary to do calculations and derivation of basic formulas.
**Prerequisite: Math 126 with a C or above or higher*

MATH 207 (4 credits)* Pre-Calculus
Designed to prepare students for continuation into MATH 213: Calculus. Develops the concepts and proficiencies necessary to work successfully in the areas of elementary functions, theory of equations, inequalities, trigonometry and analytic geometry.
**Prerequisites: MATH 137 & MATH 141 (C or above in both)*

MATH 213 (4 credits)* Calculus
Introduces the concepts and techniques of calculus beginning with functions and limits. Major emphasis is on theory and applications of the derivative, antiderivative, indefinite integral and definite integral, including introductory calculus of trigonometric, exponential and logarithmic functions.
**Prerequisites: MATH 137 & MATH 141 (C or above in both) OR MATH 207 (C or above) or instructor permission.*

Science Courses

David W. Manning, Professor
MA: The Pennsylvania State University
BA: Slippery Rock University

Patricia A. McKinney, Ph.D., Professor
PhD: Harvard University Graduate School of Arts & Sciences
BS: Eastern Nazarene College

BIO 210 (4 credits)* General Biology I

This course explores the processes fundamental to life. Laboratory activities reinforce classroom theoretical content. Topics covered include biochemical principles, cell structure and function, intracellular and intercellular transport and communication, metabolic pathways including cellular respiration and photosynthesis, cell reproduction, Mendelian genetics, inheritance patterns and laws, DNA replication and repair, RNA transcription and processing, protein synthesis, regulation of gene expression, biotechnology and key structural and reproductive characteristics of viruses, bacteria, and protists.
**Prerequisites: High school biology and chemistry strongly recommended. Students must be matriculated in an approved TSCT program of study or obtain instructor permission.*

CHEM 100 (3 credits) Conceptual Chemistry

This course explores inorganic chemistry principles at the conceptual level. Intermittent in-class laboratory activities reinforce theoretical content. Special emphasis is placed on relating chemical principles to industry, the environment, and everyday events. Topics covered include the atomic structure and classification of matter, the periodicity of elements and their properties, intramolecular and intermolecular bonding, chemical reactions including oxidation-reduction reactions, thermochemistry, solutions, acids/bases, water chemistry, gases, and nuclear chemistry.

CHEM 110 (4 credits)* General Chemistry I

This course explores the fundamental principles of inorganic chemistry. Laboratory activities reinforce classroom theoretical content. Topics covered include the physical states and properties of matter, scientific measurement, problem solving, periodicity of elements, atomic structure, early and modern atomic theory, electron configuration, nomenclature, chemical composition, chemical equations and stoichiometry, chemical reactions, thermochemistry, chemical bonding and molecular geometry, gas laws, and solutions.
Prerequisites: MATH 137 (C or above) or instructor permission

PHYS 101 (3 credits) How Things Work

This is an introductory physics course that focuses on the ideas, concepts, and engineering behind everyday objects. The history of these objects and their relationships to physical laws are examined. Enrolled students create simple projects to demonstrate their understanding. Only basic mathematical skills are required.

PHYS 106 (3 credits) Physics for Everyday Life

Brief overview of physics. Includes motion, work, power, energy, and properties of matter, sound, and light. Electrodynamics, atomic physics, and nuclear physics are also discussed. Basic mathematical and algebra skills utilized.

PHYS 113 (3 credits)* Statics

Elementary, analytical, and practical approach to the principles and physical concepts of statics. Topics include force systems, principles of equilibrium, structural analysis of trusses and frames, friction, centroids, and moments of inertia.
Prerequisites: MATH 137 (C or above) and MATH 141 or instructor permission.

PHYS 213 (4 credits)* General Physics I

This course is a four-credit, algebra-based physics course in which one of the credits is devoted toward lab work. The course is an in-depth study of statics, kinematics, dynamics, work, power, energy, and the properties of matter.
Prerequisites: MATH 137 and MATH 141 (Both with a C or above) or instructor permission

SCI 107 (3 credits)* Environmental Science

This course is a comprehensive, multidisciplinary overview of environmental issues and the integral role humans play in shaping our natural surroundings. Topics covered include energy flow, biotic and abiotic factors in ecosystems, environmental law, terrestrial biomes and aquatic ecosystems, population dynamics, renewable and nonrenewable resources, fossil fuels and alternative energy sources, water resources and pollution, air pollution, ozone depletion, climate change, waste disposal, land and food resources, conservation, and sustainable living.
Prerequisite: ENG 106 or instructor permission

SCI 110 (3 credits) Introduction to Astronomy

Beginning with an understanding of what astronomy studies, the bulk of the course is organized into three main categories: 1) investigating planets in and out of our solar system 2) the life and death of stars and 3) galaxies and black holes/quasars. Students will also learn a few constellations and study the life of the universe and the Big Bang Theory.

Social Sciences Courses

Heriberto Arjona, Assistant Professor
MBA: Universidad Inter-Americana de Costa Rica
BA: Indiana University of Pennsylvania

Vincent E. Miles, Ph.D., Professor
PhD, MA: Indiana University of Pennsylvania
BA: Mansfield University of Pennsylvania
AAS: Thaddeus Stevens College of Technology

ECON 230 (3 credits) Principles of Microeconomics (HSS)
This course introduces students to foundational principles of microeconomic theory, with an emphasis on economic decisions made at the individual or firm level. It describes and analyzes the interaction of supply and demand and the behavior of the prices of goods and services. It explains the determinations of costs, output, strategic pricing, and purchasing decisions under various market structures in a global economy. In addition, it describes the supply and demand for factors of production with an emphasis on graphical formatting.

ECON 240 (3 credits) Principles of Macroeconomics (HSS)
This course covers ideas, models and concepts to give students a better understanding of our nation's and global economies. We will use references from real-world corporations, government policies, and current events, and explore how events and policies change the market
equilibrium. Students will analyze macroeconomic data using equations and conceptual graphs.

PSY 116 (3 credits) Introduction to Psychology (HSS)
Students learn the major specialties of the field and assumptions upon which they are based. Techniques used by psychologists are discussed.

SOC 106 (3 credits) Principles of Sociology (HSS)
Provides a systematic interpretation of major elements of sociology, including social dynamics, deviant behavior, social and cultural change, and developing major social trends.

SOC 121 (3 credits) Critical Thinking (HSS)
Provides an introduction to critical reading, writing, and thinking. Encourages students to pose questions at appropriate times and to have a generally critical attitude toward advertising and other aspects of popular culture.

(HSS) denotes course fulfills Humanities/Social Sciences requirement or may be used as a General Education elective

SOC 206 (3 credits) Sociology of Deviant Behavior (HSS)
Deviant social behavior are discussed. Topics include development of deviant individual's personality; deviant careers; conflicts between the deviant's and the normative social world. Social techniques and patterns used to resolve such conflicts are also covered.

SOC 216 (3 credits) Multiculturalism (HSS)
Introduction to general issues regarding cultural diversity. A focus on complex and diverse group activities in the contemporary workplace with an emphasis on coping skills with persons from different ethic, gender, religious, and professional backgrounds and perspectives.

SOC 221 (3 credits) Marriage and the Family (HSS)
Contemporary American marriage and family patterns are discussed. Topics include historical and cross-cultural perspectives, current trends toward
urbanization and changing value systems; and cultural, psychological, and social factors involved in the changing American family.

Business and Applied Arts Courses

Heriberto Arjona, Assistant Professor
MBA: Universidad Inter-Americana de Costa Rica BA: Indiana University of Pennsylvania

ART 106 (3 credits) Intro to Digital Photography
An introduction to digital photography using digital single lens reflex cameras and basic image editing software. This course includes print production for making black-and-white and color photographs and studio techniques that include
portrait lighting and still life photography. No prior photography experience is required. Students use digital photography for the production of a photographic portfolio.
**Graphics students may not take*

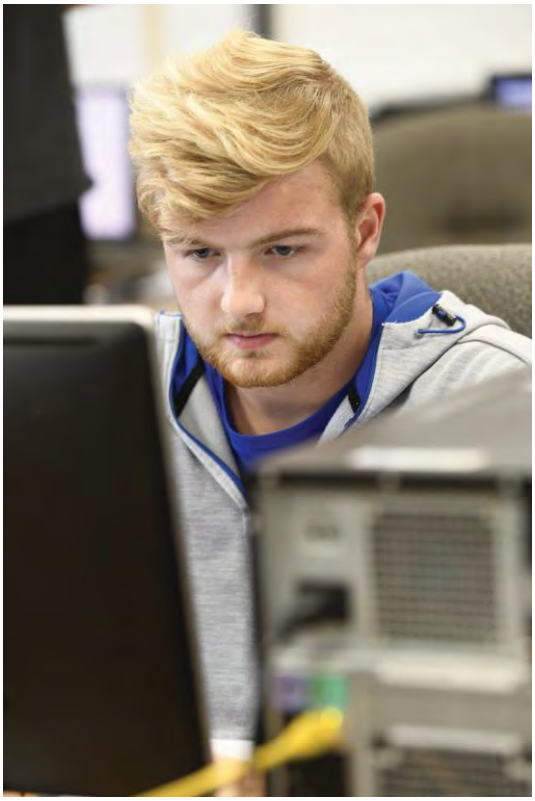
BUSN 106 (3 credits)
Small Business Management
Focuses on the world of small business, including getting involved as an entrepreneur; selecting business opportunities; and keeping the business afloat.

FIN 102 (3 credits) Personal Finance
The course is primarily concerned with the management of money from the viewpoint of the individual. Topics to be covered include consumer's credit, borrowing, saving and investments, purchase of insurance, real-estate and other
major items, the problem of taxation and wills, and controlling expenditures through the use of a budget.

Special Courses

ST 100–105 (1–5 credits)
Special Topics
Special topics are selected. The topic to be studied is determined by the instructor and approved by the vice president for academic affairs. Credits earned are applicable either as free electives in the program or as credits used for graduation (with the approval of the vice president for academic affairs.)

TECH 100, 199, 200, or 299 (1–3 credits)
Internships
Representing a possibility of four semesters, internships are designed to provide credit for supervised on-the-job work experience directly related to a student's major. Credit varies based upon the total hours worked. The credit-to-work hour ratio is 1 credit = 50 work hours. These courses include employer supervision and evaluation.



Pre-Major Program

Students may need to complete a course or courses at a foundational level before entering a specific program of study. Students in foundational reading, writing, and mathematics courses are required to earn at least a “C” grade. Students must also pass College Success testing requirements or demonstrate academic excellence in required courses with grades of “B” or higher.

These courses may not be used to meet graduation requirements.

CP 011^ Career Preparation I

Students are introduced to eight different areas of technology, drafting, electronics, graphics, woodworking, engineering, plastics, ceramics, and metals. By exposing students to these eight different areas, students gain a better understanding of each area and how it may apply to them specifically.

^Must obtain a grade of “C” or higher for successful completion.

CP 012*^ Career Preparation II

This is a continuation of CP 011, where students apply advanced concepts to eight different areas of technology, drafting, electronics, graphics, woodworking, engineering, plastics, ceramics, and metals.

**Prerequisite: CP 011.*

^Must obtain a grade of “C” or higher for successful completion.

ENG 006 English Composition Workshop

This 1hr, once weekly workshop aims to compliment and provide a workspace for English 106 Composition I. Students who have passed DENG 099 with a C grade (73%) or higher are required to enroll in ENG 006: English Composition Workshop the same semester they are enrolled in English 106. Students will engage in one-on-writing writing tutorials, writing workshops, peer reviews and whole-class writing, grammar, and citation instruction. The work flow will mirror the assignments required in English 106 Composition I.

DENG 099 Integrated Reading and Writing

Integrated Reading and Writing, a one semester course, focuses on applying critical reading skills for organizing, analyzing, and retaining material and developing written work appropriate to the audience, purpose, and length of the assignment.

Pre-Major Program

DMAT 010^
Fundamentals of Mathematics
Development and improvement of math skills. Fundamentals of Mathematics covers whole numbers, fractions, decimals, percent, measurement, and various other essential topics. For students whose test scores indicate the need for development and/or improvement in fundamental math skills, course must be taken before MATH 126: Technical Mathematics I or MATH 111: Business Mathematics; students may be required to complete DMAT 010 prior to enrollment in DMAT 030. DMAT 010 may not be used to meet certificate or degree requirements. Fundamentals of Mathematics is a one semester course offered during both semesters and summer terms.
^Must obtain a grade of "C" or higher for successful completion.

DMAT 030*^
Introduction to Algebra
Develops fundamental algebra skills necessary in vocational/ technical occupations. Topics include real numbers, solving first degree equations, exponents, polynomials, and factoring. This course may not be used to meet degree requirements.
**Prerequisite: DMAT 010 or by entrance exam*
^Must obtain a grade of "C" or higher for successful completion.

DSOC 010^
Success Strategies
Encourages students to live healthy lifestyles, develop academic skills, foster habits of punctuality, and maintain good attendance records in all classes. Time management, positive attitude, and goal orientation are also covered. Included in this course is a 2.5 hour lab for developing academic technology skills.
^Must obtain a grade of "C" or higher for successful completion.

DSOC 011^
Success Strategies Lab
Provides students with an opportunity to acquire fundamental computer skills and practical knowledge in applications needed for success in college coursework. Hands-on topics include use of the College portal for access to College and course materials, email guidelines, Internet research methods, file management and organization, and software for assisting in compiling research ideas and notes. In addition, exercises will be completed related to word processing (outlining tools, tables and columns to organize lists, report formatting), spreadsheet fundamentals (calculating GPA, budgets, measurement conversions and formulas, timesheets) and presentation software (developing projects).
^Must obtain a grade of "C" or higher for successful completion.