

# LEWISBURG AREA HIGH SCHOOL

## Curriculum Guide

2017-2018

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Mrs. Emily O'Connor (A-K)  
Mrs. Vicki Fennell (L-Z)  
Dr. Brenda Zack (K-12 Career Counselor)

### ANNUAL ANNOUNCEMENT REGARDING NON-DISCRIMINATION PRACTICES AND POLICIES

- The Lewisburg Area School District's programs are open and available to all students. The district does not discriminate or prohibit students from participation because of race, color, national origin, religion, sex, handicap, or political affiliations.
- The school district's hiring practices are also non-discriminatory. The school district is an equal opportunity employer. In the activities related to employee recruitment and screening, hiring, promotion, demotion, transfer and furlough, the non-discrimination policy stated above extends to include age and veteran status.
- Inquiries or complaints concerning possible discrimination are to be directed to Mrs. Cathy Moser, who serves as the Title IX and Section 504 officer for the school district. She will also provide information regarding services, activities and facilities which are accessible and usable by handicapped persons. Please call 523-3220, Ext. 3255 for additional information.
- Publication of this announcement is in accordance with state and federal laws including Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973 and Title VI of the Civil Rights Act.

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**DISCLAIMER:** Neither this Curriculum Guide nor any part of it should be construed as a contract itself. This Guide is not intended to be comprehensive and is advisory to only help students, parents, and faculty of Lewisburg Area High School. The school district reserves the right to make changes or exceptions to statements in the Curriculum Guide.

## **PROGRAM OF STUDIES**

This booklet has been prepared for the use of students and their parents in deciding which subjects are best suited to the student's' goals, interests, aptitudes, and abilities.

### **VISION STATEMENT**

*The Lewisburg Area School District is a learning community that prepares every child individually to meet the challenges of today and tomorrow.*

### **MISSION STATEMENT**

The Lewisburg Area School District will provide all students with a safe, respectful, and challenging learning environment that is student-centered, personalized, data-guided, and supported through appropriate technologies and shared leadership.

### **ACADEMIC PROGRAM**

Each course within the Academic Curriculum is tailored to provide for the needs and abilities of each student. The curriculum is designed to prepare students for an appropriate post-secondary experience, with an emphasis on career and college readiness. Different school situations demand different aptitudes and interests. To assure the greatest possible school success, students should assess their own aptitudes and future plans before selecting the specific courses they wish to pursue. The course descriptions contained in this booklet will be of immediate value and should prove beneficial in the long-range planning that students must do to achieve their desired goals.

Students' choices in high school may often affect their chances for success in future years of education and/or employment. For this reason, students are encouraged to select their courses with the greatest of care. This important educational matter should be discussed with parents. In the event that more information is needed concerning course selection, college admissions and requirements, or employment demands, students and parents should arrange to consult with a counselor. The high school principal reserves the right to place students in courses to enhance their overall program of studies.

### **SUN AREA TECHNICAL INSTITUTE PROGRAM**

SUN Area Technical Institute Courses are designed to prepare students for work in a specific technical field immediately after graduation or for further training in post-graduate education. Students electing this program may attend the Technical School full time in the twelfth grade or earlier with the principal's permission. A cooperative education program in which students gain "on-the-job" experience is an integral component of the SUN Area Technical Institute program.

### **COOPERATIVE AGRICULTURAL EDUCATION PROGRAM**

Students who have been approved for enrollment in The Cooperative Agricultural Education Program will attend Mifflinburg Area High School. Students in the program will follow the Vocational-Agriculture curriculum, must complete the Graduation Requirements for Mifflinburg High School and will receive a diploma from Mifflinburg upon graduation. Students generally begin this program in grade nine or ten and must be approved for enrollment by the Board of Directors of each school district. Students interested in this program must contact a high school counselor to begin the application process.

## COURSE SELECTION & REGISTRATION PROCEDURE

The steps outlined below should be of assistance to students in proceeding through the course selection and registration process:

Students will receive the Curriculum Guide link and Course Registration Form.

Students will complete the following:

1. Work with Advisors, Teachers, and Counselors to select courses for 2017-2018
2. Make an appointment with his/her current School Counselor to discuss course selections, if there are questions.
3. **Select “Alternate” courses for your electives.** Please choose carefully as you may be scheduled into these courses if the other courses are full.
4. Complete the Course Registration Form, have a parent/guardian sign the form, and return the completed form to your advisor.
5. Select courses in PowerSchool on the days designated for your grade.

## STUDENT SCHEDULE CHANGE PROCEDURE

The selection of an appropriate schedule is an important consideration that deserves the careful attention of students and parents/guardians. Students should read the Curriculum Guide, consider carefully the courses that are available, and review the high school graduation requirements when planning a schedule. The Master Schedule for the school is based upon student requests and therefore it may not be able to honor all schedule change requests. Please review the following schedule change guidelines:

Since students will have a complete cycle to follow their new schedule during the preview days, **all schedule change requests must be submitted by June 30, 2017.** This gives sufficient time to readjust the master schedule to accommodate changes in class sizes. Schedule changes requested after this date will be handled on a case-by-case basis and will be dependent upon the reason for the request and existing class size. The building principal approves all schedule changes.

Schedule changes will not be made for convenience purposes, or for a teacher change.

Students should expect to receive some summer assignments for AP classes and other advanced classes. Requests to drop these classes because the student has not completed the summer assignment will not be honored.

After the first two cycles of the new school year in August, schedule changes will require a parent conference with an administrator who will determine final approval. Any changes in the student schedule will result in a W/P (Withdraw Passing) or a W/F (Withdraw Failing) grade being recorded on their permanent record. W/F will affect Honor Roll for the marking period in which the change was made, a W/P or W/F will not affect grade point average.

Any course change after the midpoint of the first marking period and the 45th day (end of first marking period) will require the student's marking period current grade to transfer to the new course.

**After completing 45 days of a course (the first marking period), NO schedule changes will be made for the course. No student will be permitted to add or drop a yearlong course after the first 45 days of a semester.**

## COUNSELING SERVICES

For purposes of scheduling, college/career counseling, and record keeping, students are assigned a counselor as follows:

Students whose last name begins with A-K – Mrs. O’Connor

Students whose last name begins with L-Z – Mrs. Fennell

For all other counseling services, students may make an appointment with either counselor. Below is a general outline of the counselors' work with the students.

**Orientation** - 9th grade and upper class transfer students

### **Individual Counseling**

- ✓ Personal concerns
- ✓ Course selection and registration
- ✓ Schedule adjustments
- ✓ Academic problems as identified by unsatisfactory progress notices, report cards and teacher referrals
- ✓ Progress toward meeting graduation requirements
- ✓ Post-high school plans
- ✓ Test results and implications
- ✓ Counselors will meet individually with all Juniors during the second semester and all Seniors during the first semester to help finalize their future plans.

### **College and Post-Secondary School Counseling**

- ✓ Group and individual meetings concerning college selection, application process, required testing, financial aid, etc.
- ✓ Sessions with visiting college admission counselors
- ✓ Writing recommendations and submitting transcripts
- ✓ Scholarship announcements and selection

### **Technical and Career Counseling (Dr. Zack)**

- ✓ Group and individual meetings with students interested in attending the SUN Area Technical Institute
- ✓ Presentations by counselors from SUN Area Technical Institute
- ✓ Meetings with seniors attending the SUN Area Technical Institute
- ✓ Visitations at SUN Area Technical Institute
- ✓ Aptitude and interest tests
- ✓ Career and occupational information
- ✓ Assistance with work-study program at the SUN Area Technical Institute

### **Testing**

- ✓ Ninth Grade: Possible Keystone Exam in Algebra
- ✓ Tenth Grade: Preliminary Scholastic Aptitude Test; Keystone Exams English Literature, Biology and Algebra, as needed.
- ✓ Eleventh Grade: Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test; Registration for SAT’s; ACT’s; Keystone Exams
- ✓ Twelfth Grade: Registration for SAT’s and ACT’s; Keystone Exams, as needed
- ✓ Interest inventories are available upon request.

## GRADUATION REQUIREMENTS

**Graduation Requirements:** The Commonwealth of Pennsylvania outlines the Graduation Requirements in Chapter 4 of the PA Code (4.24). At the present time, students in the Class of 2018 will have to show proficiency in English Language Arts, Algebra I, and Biology through the Keystone end-of-course exams. Although passing the Keystone Exams is not a state requirement in 2018, it is a local graduation requirement. Since student performance on the Keystone Exams is used to calculate the score for the School Performance Profile, the Lewisburg Area School District requires all students to demonstrate proficiency on the Keystone Exams or to complete an alternative assessment prior to graduation.

**Graduation Project:** The purpose of the culminating project is to assure that students are able to apply, analyze, synthesize and evaluate information and communicate significant knowledge and understanding. All students in the Lewisburg Area School District are required to complete a Graduation Project that will be composed of a written document summarizing their experience / research and an oral presentation that includes a visual component. Graduation Projects may include Career Exploration, Community Service or an Extension of Academic Learning. A minimum of twenty hours must be invested into the project. The project is worth .25 credit and graded P/F with an F recorded as 50%. Students choosing to complete a Career Exploration or Community Service Project must complete the requirement by the Thursday in November set aside for Parent/Teacher Conferences or a 50% will appear on their official records. Records for Seniors are updated at the end of each semester.

**Lewisburg Area High School** requires a total of 27.25 credits for graduation as outlined below:

AREA	CREDITS
English	4.0
Social Studies	4.0 (American History and Civics/American Govt.)
Science	4.0
Math	4.0
Physical Education	2.0 (.5 credit each in Grade 9-12)
Arts and/or Humanities	1.5 (See definition below)
Health	0.5 (10th grade)
Personal Finance and Career Exploration	0.5 (9 <sup>th</sup> grade) Electives                      6.5
Completion of Graduation Project	0.25 (See Description Above)
<b>Total Credits</b>	<b>27.25</b>

**Arts and Humanities** – Courses in art, music, English, foreign languages, family and consumer science, business, and social studies. **Students must complete at least one course in the Visual Arts.** Students not in band, choir, or orchestra must take Performing Arts Appreciation.

SUN Area Technical Institute students shall be permitted to graduate with the following adjustments to the requirements: 3.0 credits of Science, 3.0 credits of Social Studies, 3.0 credits of English, 3.0 credits of Math. Students attending SUNATI must still demonstrate proficiency on the Keystone Exams.

## GRADE LEVEL SCHEDULING REQUIREMENTS

Students must complete a minimum of 7.0 credits and can take a maximum of 8.0 credits each year. AP courses are limited to 11<sup>th</sup> and 12<sup>th</sup> grade students except for AP Environmental Science(9), and AP European History(10). It is recommended, but not required, for students to complete at least three years of a foreign language. **The Driver Education elective is strongly recommended for all students.**

Students may want to take more than one credit of a core subject within an academic year to enable them to schedule more advanced classes throughout their career. (See Course Acceleration on the next page.) Common choices are mathematics in Grade 9 and Science in Grade 10.

### **Course Weighting:**

AP course grades are multiplied by a factor of 1.12 providing the student earns the equivalent grade of C or higher. Honors classes are weighted by a factor of 1.06 providing the student earns the equivalent grade of C or higher.

## SPECIAL COURSE OPPORTUNITIES

### **BUCKNELL UNIVERSITY COURSE #295**

Students who have demonstrated superior academic aptitude and achievement may have the opportunity to enroll in courses at Bucknell University. This program is open to eligible juniors and seniors who are in the top 20% of their graduating class. Lewisburg Area High School's cooperative agreement with Bucknell University allows students to enroll in courses tuition-free each semester; students may matriculate in day or evening classes during regular semesters. Students are limited to one course per semester or summer term. Typically, students may not take a course at Bucknell that is offered at Lewisburg Area High School if they have not taken it first at LAHS. Students must have completed one semester at Lewisburg Area High School before enrolling in a course at Bucknell. All effort will be made to accommodate students who may have a conflict between a Bucknell Class and a core Lewisburg Area High School Class.

Any student interested in this special program should seek further details from his/her school counselor. Final course approval will be granted by the principal. All registration must be initiated through the High School Guidance Office.

**Grade Guidelines:** Students who enroll in Bucknell or other college courses should understand these guidelines relative to the grade earned in each course: (1) The grade earned in the course will not appear on the high school report card, nor will it be counted in the GPA. (2) The course and grade earned will be listed on the student's official transcript.

### **SUSQUEHANNA UNIVERSITY COURSE #HS296**

Students who have demonstrated strong academic aptitude and achievement may have the opportunity to enroll in courses at Susquehanna University. The program is open to eligible juniors and seniors. Lewisburg High School students can enroll in SU Courses each semester, and there is no tuition cost for the courses. All enrollment information is handled by high school counselors, and student enrollment is limited to 8 credits in one academic year.

**Grade Guidelines:** Students who enroll in Susquehanna courses should be aware of these guidelines for grades earned in each course: (1) The grade earned in the course will not appear on the high school report card, and will not be counted in the GPA. (2) The course and the grade earned will be listed on the student's official LASD transcript.

### **SENIOR SERVICE /INTERNSHIP #298**

This program is for seniors who wish to practice or refine skills or to learn new skills through work or study. Each participant will choose a sponsor (a teacher or a community leader) who will act as a consultant, and to whom the student will be responsible. All participants will meet once per marking period with the staff. Eligible students must have an 89% overall GPA in order to participate in this program. In addition, the student's academic and attendance records will be reviewed prior to approval in the program. Senior Service is usually limited to one semester.

### **INDEPENDENT STUDY COURSE**

The purpose of an Independent Study course is to provide students the ability to enhance their education when limited other options are available. Students cannot participate in more than one Independent Study course in the same semester.

All Independent Study courses must be initiated through a faculty member, who in turn will seek administrative approval before the study can begin.

Students' indication of interest in an Independent Study course does not automatically guarantee that one will be available to them. Staff willingness and availability as well as other factors of consideration will affect the final decision to permit Independent Study. It will not be possible to alter faculty schedules to accommodate Independent Study courses.

The instructor will grade an Independent Study as Pass/Fail for credit. No Independent Study course can be substituted for a graduation requirement. Current Independent Study courses are listed in the Curriculum Guide.

Students who take Independent Study courses need to remember that they will be responsible for completing the required work under the direction of the faculty member but may not receive direct instruction. Independent Study courses will be approved only in the instruction areas that are currently listed in our approved curriculum guide. For further information, please refer to School Board Policy #118.

### **COURSE ACCELERATION**

A student may request to accelerate in select courses within the curriculum appropriate to their level of competency. All requests for course acceleration must be made via submission of the Course Acceleration Request Form obtained from the Guidance Office. Requests must be submitted prior to May 1<sup>st</sup> with final approval granted by the principal. Depending upon the type of acceleration, credit might be given for the course on a Pass/Fail basis. Interested students should see School Board Policy #215 or their Mrs. Fennell or Mrs. O'Connor for more information.

**ADVANCEMENT BY EXAMINATION**

A student may request to advance in sequential courses by demonstrating competency or mastery of a course. All requests for advancement by examination must be made in writing, and approved by the principal prior to taking the course final. Students may accelerate in certain subjects by demonstrating proficiency on the corresponding Keystone Exam. No credit will be awarded for this option.

**DUAL ENROLLMENT – ACE / ACE STEM / PC NOW**

The Lewisburg Area High School participates in a program with Bloomsburg University that allows students to take college courses at reduced tuition rates. The Advanced College Experience (ACE) Program at Bloomsburg University allows qualified high school seniors to take one or more college courses. Courses taken through the program would satisfy high school graduation credits and allow students to begin to earn college credits at a reduced cost. Students may be able to save up to 75% on tuition in the ACE Programs.

Students also have the opportunity to attend the STEM Magnet program through Bloomsburg University, which would allow juniors or seniors to take courses in Health Sciences or Early Childhood Education. Students would take LAHS courses in the morning and Bloomsburg University courses in the afternoon for select subject areas. More information about ACE and ACE STEM Magnet programs can be found at [www.Bloomu.edu/ace](http://www.Bloomu.edu/ace) or <https://www.bloomu.edu/stem>.

Students interested in pursuing this dual enrollment option should meet with his/her counselor for more information. There are program enrollment requirements and deadlines. All requests for dual enrollment are subject to the final approval of the principal.

Students attending SUN ATI may be eligible to earn college credits while attending SUN through the Penn College NOW program. Students should work with guidance counselors to learn more about this opportunity.

## LEARNING SUPPORT PROGRAM

### STUDY HALL SUPPORT #987

This course is designed for students enrolled in the Learning Support Program. The course is designed to identify and remediate academic and emotional needs while providing instruction in organizational, study, and test-taking skills. Students are instructed in various study and organizational skills while identifying their academic and behavioral strengths and needs. Special attention is given to individualized goals and coping skills necessary to succeed in the regular classroom environment. Students will also explore various career and college options.

### RESOURCE COURSES

These courses are designed for students enrolled in the Learning Support, Supplemental Support, or Emotional Support Programs who, despite adaptations and support, have experienced difficulties in regular education classrooms. Students who have been identified for these courses are provided specialized instruction in Mathematics, Science, English, Social Studies and/or other subjects, depending on individual needs and abilities. Instruction in these classes is provided by a regular and/or highly qualified resource teacher in small group or individualized settings.

## GIFTED PROGRAM

The Gifted Program offers several opportunities for students who are identified as gifted with a Gifted Individualized Educational Plan (GIEP). These opportunities provide a means for students to reach their academic potential, and to broaden their experience in subject areas beyond what is offered through differentiated instruction within the high school curriculum.

**ENROLLMENT** – Students in the Gifted Program are encouraged to take academically challenging courses through the Honors and AP courses offered within the curriculum. These students may also wish to investigate other opportunities that are available through the acceleration policy described on page 8 of this guide.

**ENRICHMENT** - A student may choose to complete an independent research project with a member of the high school faculty as his/her mentor. A planned course of study must be completed by the student and teacher and submitted to the high school gifted coordinator, which will become part of the GIEP. Credit will be awarded on a pass/fail basis. Students may not earn more than one credit per year for independent enrichment studies.

## THE ADVANCED PLACEMENT PROGRAM FOR COLLEGE CREDIT

The Advanced Placement Program is a cooperative educational venture between the College Board and Lewisburg Area High School. It is based on the fact that many young people can complete college-level studies while in high school. Like other programs of the College Board, this program is national in scope. Advanced Placement courses are designed to be the equivalent of freshman level college courses, and as such require more individual work than many other courses. Students who take Advanced Placement courses generally do so with the idea that they will take an Advanced Placement examination offered by the Educational Testing Service.

Advanced placement examinations are offered throughout the world each May. No examination in any subject area is longer than three hours. They cost about \$95.00 each and are administered in participating schools. All the examinations contain either an essay or problem-solving section; most of them also contain a section consisting of objective questions. The tests are scored by readers and are assigned grades: 5 - Extremely Well Qualified; 4 - Well Qualified; 3 - Qualified; 2 - Possibly Qualified; 1 - No Recommendation.

Many colleges grant credit and advanced standing automatically for qualifying work on the examinations; some grant advanced standing or credit only; others are still establishing their policies. It is the candidate's responsibility to apply for proper placement and credit at college registration. Courses that are available at Lewisburg Area High School that could help prepare the student to take these exams are:

AP Eng. Literature and Composition	AP Chemistry	AP Studio Art Concentration
AP Eng. Language and Composition	AP Physics 1	AP Art History * <b>New</b>
AP United States History	AP Physics 2	AP European History (10)
AP Government and Politics	AP Calculus AB	AP Music Theory
AP Economics	AP Calculus BC	AP Statistics
AP Biology	AP Studio Art Breadth	AP Environmental Science (9-12)

Interested students should refer to the appropriate departmental section in this booklet for course numbers and descriptions. For students to be admitted to Advanced Placement courses they must be juniors or seniors (except for AP Environmental Science (9) and AP European History (10)). AP Courses are weighted by a 1.12 multiplier.

### Distance Learning Opportunities

Students who reside in the Lewisburg Area School District interested in a hybrid or cyber education are able to participate in distance learning opportunities through a program offered by the District. Students and parents wishing to pursue such a program should develop their proposed schedule in consultation with their school guidance counselor. Final approval for participation in these opportunities will be granted by the Building Principal or the Assistant Superintendent. Students who participate in the Lewisburg Area School District LASD eShool program may receive credit toward a Lewisburg Area High School Diploma, providing they meet all LAHS graduation requirements.

## ARTS (Visual) and HUMANITIES

**ELEMENTS OF ART** #712  
Grades 9, 10, 11, and 12 (1 Semester, .5 Credit)

Emphasis is on the art elements and principles of design using various materials. Course activities include studies in drawing emphasizing line, shape, texture, composition, proportion, perspective, color mixing and terminology; painting emphasizing color, space, and form; typography; art from other cultures; art history; aesthetics; and art criticism.

**PRINCIPLES OF DESIGN** #704  
Grades 9, 10, 11, and 12 (1 Semester, .5 Credit)

Emphasis is on the principles of design, further exploration and development of drawing emphasizing composition and proportion, art criticism, creative thinking, problem solving, art history, and aesthetics. Assignments will include exploration in drawing, painting, sculpture, graphic design, and ceramics. All students will develop an art vocabulary, and improve technical skills and craftsmanship.

**THE WORLD IN 2D** #700  
Grades 9, 10, 11, and 12 (1 Semester, .5 Credit)

Emphasis is on design and expression in two dimensional Art, including drawing, painting, printmaking and other flat media. Art history, the human figure, originality, craftsmanship, aesthetics, art criticism, and self-evaluation will be a part of the creative process. All students will explore various materials, tools, and techniques, develop an art vocabulary and demonstrate individualized creative expression. The study of historical and cultural styles will be used and incorporated into individualized projects.

**DRAWING** #701  
Grades 9, 10, 11, and 12 (1 Semester, .5 credit)

Emphasis in this class is on the ability to develop observational skills as students create drawings in a variety of themes and mediums. Topics to be covered include perspective, mark making, line quality, value, and texture through still life, landscape, and portraiture.

**OBJECT MAKERS** #728  
Grades 9, 10, 11, and 12 (1 Semester, .5 Credit)

All students will explore crafts as a profession and/or hobby, explore art elements and design principles and discuss and build upon ancient, ethnic, and contemporary crafts to create meaningful objects combining form and function. Media includes ceramics, textile design (painting, silk-screen, batik, tie-dye, weaving, basketry, and beadwork) paper and other diverse individual crafts of student choice.

**DESIGN IN 3D** #729  
Grades 9, 10, 11, and 12 (1 Semester, .5 Credit)

Emphasis is on exploration of three-dimensional construction, both additive and subtractive. Materials may include wood, plaster, clay, paper maché, cardboard, found objects and paper. All students will explore the principles of design, art history, and aesthetics.

**AP STUDIO ART BREADTH** #735  
Grades 11-12 (1 Year, 1 Credit)

Prerequisites: Successful completion of two previous semesters of Art.

AP Studio Art - Breadth is an advanced elective art course to build a firm foundation in the Visual Arts, through intensive study, following the AP guidelines. Emphasis is on mastery of those skills to complete an art portfolio. The student and teacher will design all projects within the portfolio in accordance with the AP Breadth guidelines. Students must demonstrate the ability to work independently and be self-directed; students will also explore the design principles in-depth, creative expression, originality, craftsmanship, aesthetic perception, art heritage, criticism, assessment and aesthetics.

**AP STUDIO ART CONCENTRATION** #731  
Grade 12 (1 Year, 1 Credit)

Prerequisites: #735 AP Studio Art Breadth

AP Studio Art - Concentration is the most advanced elective art course with focused intensive study, following the AP guidelines. Emphasis is on mastery of those skills to complete an art portfolio. The student and teacher will design all projects within the portfolio in accordance with the AP Concentration guidelines. Students must demonstrate the ability to work independently and be self-directed; students will also explore the design principles in-depth, creative expression, originality, craftsmanship, aesthetic perception, art heritage, criticism, assessment and aesthetic values focusing on their own artistic production. Work includes projects, a journal, homework assignments, worksheets, critiques, a photo file, thumbnail sketches, sketchbooks, exercises, establishment of a slide portfolio, final, and requirements established by AP guidelines.

**AP Art History** #725  
Grades 11 and 12 (1 Year, 1 Credit)

The AP Art History course is equivalent to a two-semester introductory college course that explores the nature of art, art making, and responses to art. By investigating specific course content of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters in-depth, holistic understanding of the history of art from a global perspective. Students become active participants in the global art world, engaging with its forms and content. They experience, research, discuss, read, and write about art, artists, art making, responses to, and interpretations of art.

**PHOTOJOURNALISM #850/#851**  
**Grades 9, 10, 11, and 12** (1 Year, 1 Credit)

(Year 1) Students are introduced to the historical importance of journalism in America. They study the basic principles of print and online journalism as they examine the role of printed news media in our society. They learn investigative skills, responsible reporting, and journalistic writing techniques as they read, respond to, and write their own news and feature articles. During the course, students will learn digital storytelling through photos and will have opportunities to create photo essays as well as learn how to take their best "selfies" as a means of self-exploration. Students conduct interviews, research, write, and design their own publications, including the student yearbook.

**Students taking Photojournalism for a second year should use the course #851**

**PHOTOJOURNALISM (2ND YEAR) #851**  
**Grades 10, 11, AND 12** (1 Year, 1 Credit)

The second year Photojournalism is scheduled concurrently with Photojournalism One. This course offers second year Photojournalism students a more in-depth look at telling a story using photography. Time will be spent studying famous photographers and their works. Students will learn to critique their photos and will keep a digital portfolio for the class. They will also promote communications for the school and district by taking photos for the LASD website and participating in digital media opportunities, such as an online newsletter and social media sites. In addition, students will also continue to create the yearbook using online software. Students will have an opportunity in Photojournalism Two to take a leadership role and mentor students taking Photojournalism One. If you like hands-on classes where authentic learning is included, and want to make a positive impact in our school and district, then this class is for you.

## BUSINESS & TECHNOLOGY

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### **PERSONAL FINANCE/ CAREER EXPLORATION**

# 801

(1 Semester, .5 credit)

This course focuses on mastery of the National Standards for Business Education and related to Personal Finance, and the Pennsylvania Standards for Finance and Economics and Career Education and Work.

During this course students complete interest inventory assessments and explore career options related to individual interests. Students research the education, salary, and skills needed to prepare them for the careers identified in the assessments and create a career map. In addition to matching students' interest with possible career areas, students learn how to acquire a job and what skills employers find desirable. Finally, topics related to Personal Finance include but are not limited to budgeting, balancing a checkbook, banking, identifying types of credit, the risks and rewards of credit, calculating interest, preparing personal taxes and investment strategies.

### **ENTREPRENEURSHIP/SMALL BUSINESS**

#802

Grades 10-12 (1 Semester, .5 Credit)

This course focuses on mastery of the National Standards for Business Education and Pennsylvania's Standards for Entrepreneurship and Management. Students will analyze and develop a business plan and learn the key the skills, attitudes and guidelines that it takes to get an entrepreneurial venture off to a good start, including identifying entrepreneurial characteristics, evaluating opportunities, engaging in customer discovery, design thinking, feasibility, financing and planning for success. The course is based on The University of Iowa's BizInnovator Curriculum, and upon completion, students are eligible to receive 3 University of Iowa College Credits, after sitting for final and achieving a score of 70% or higher. This course is recommended for students who have a passion for creating new things, problem solving, and who are interested in business or plan to own and operate their own business.

### **TODAY'S LAW**

#828

Grades 9 - 12 (1 Semester, .5 Credit)

This course is designed to acquaint the student with the basic principles of law that apply to everyday life. Students are introduced to different types of laws and how they are created and discuss the differences between criminal, civil, procedural, and substantive law. Students learn how to recognize and create legally enforceable contracts by the introduction of the six elements of a contract: offer and acceptance, genuine agreement, consideration, capacity, legality of contracts, and written contracts under the Statute of Frauds. Students discuss the preparation and usefulness of wills and the distribution of estates, types of leases, and employment law. Students will also analyze and discuss current legal issues and events dealing with the law in the news. This course is to all students planning on a business or legal career, or who plan to own and operate their own business.

### **ACCOUNTING I**

Grades 10, 11, and 12

#841

(1 Year, 1 Credit)

This course focuses on mastery of the National Standards for Business Education and Pennsylvania State Standards for Accounting.

The Accounting I course provides an introduction to the accounting processes and procedures of using worksheets to document all transactions involved in various types of businesses. Students will become familiar with the generally-accepted accounting principles and procedures, double-entry accounting, the use of journals and ledgers, adjusting and closing entries, preparation of financial statements and completion of the accounting cycle for both service and merchandising businesses.

Benchmark assessments and portfolio pieces are employed to track individual progress. First year accounting provides the theory and skills necessary to keep financial records both manually and with the use of computers. This course provides a basic accounting knowledge for students planning to enter college and pursue a career in a business-related field, students desiring entry-level employment, and students who plan to own and operate their own business.

### **ACCOUNTING II**

Grades 11, and 12

#844

(1 Year, 1 Credit)

Prerequisites: Passing grade in Accounting I.

This course focuses on mastery of the National Standards for Business Education and Pennsylvania Standards for Accounting. This course is offered to students who have satisfactorily completed Accounting I. It provides the student with additional skills in applying the principles learned in the first year and will focus on accounting procedures related to a corporate structure, expanding on concepts of depreciation, inventory costs, stocks, and analysis of financial statements. The course includes the introduction to Departmentalized Accounting procedures. Students will solve accounting problems both manually and with the use of computers.

### **GRAPHIC DESIGN**

Grades 9-12

#910

(1 Semester, .5 Credit)

This course will emphasize visual communication principles and visual presentation aspects of Web pages and visual media, including page layout, typography, color theory, navigation, and image creation and editing. Prior to creating webpages students will understand how the Internet works, and how information is transferred from one server back to their web browser. Students will then apply principles of design in the creation of various visual media projects. Including but not limited to web pages using various markup languages, as well as the creation of various vector and bitmap related projects using CNC technology.

**COMPUTER PROGRAMMING #485**  
 Grades 10-12 (1 Semester, .5 Credit)

This course introduces students to computer programming at the beginning level, but students will be encouraged to explore beyond the elementary level. A structured approach to programming will be employed using C/C++. Topics include computer hardware and operating systems; problem-solving techniques; object-oriented program design; program coding, testing, and implementation; and documentation issues and techniques. Students will create computer programs to perform a specific function. Students will also use a 3D program called Alice. Alice is an innovative 3D programming environment that makes it possible to create an animation for telling a story, playing an interactive game, or a video to share on the web.

**INDEPENDENT STUDY IN COMPUTER SCIENCE #482**  
 Grades 10-12 (1 Semester, .5 Credit)

Prior instructor approval is required to take this course. Students who exhibit a strong desire to pursue a particular study on an independent basis are encouraged to enroll. However, students must discuss their plans with the instructor and receive approval of the project prior to registering for the course. Note: only a small number of independent projects will be scheduled each semester.

**TECHNOLOGY EXPLORATION #900**  
 Grades 9-12 (1 Semester, .5 Credit)

This course will allow students to explore all the technology modules that are part of the Technology Education program, including CADD, robotics, web page design, video editing, manufacturing and communications. Students will learn the safe and proper use of a variety of tools and materials. Students will learn to use data analysis software and will extend their word processing, research, and document preparation skills. Students will use both PC and Macintosh computers.

**INTRO TO ENGINEERING DESIGN #920**  
 Grades 9-12 (1 Semester, .5 Credit)  
 \*New Course

Introduction to Engineering Design (IED) is a high school level foundation course in the Project Lead the Way Engineering Program. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems, and engineering design process. Utilizing the activity-project-problem-based teaching and learning pedagogy, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills.

**INDEPENDENT STUDY IN TECHNOLOGY EDUCATION #907**  
 Grades 10-12 (1 Semester, .5 Credit)

Prior instructor approval is required to take this course. Tenth through twelfth grade students having completed a minimum of two semester courses of Technology Education may choose an independent study. A specific technology area of concentration may be elected which emphasizes the application of technology to solve problems encountered in real life situations. The technology education instructor and the student will determine the scope of the project, instructional time spent, and evaluation procedures.

**COMPUTER AIDED DRAFTING AND DESIGN I #911**  
 Grades 9-12 (1 Semester, .5 Credit)

Students learn to use AutoDesk Inventor, a 3-D solid modeling software package. After a computer hardware/software orientation, students learn to read and create several types of engineering technical drawings. Students will design 3-D objects using CADD software and then may create that object using a Computer Numerical Control (CNC) machine. Students will design both individual components and larger assembly drawings consisting of numerous individual parts. Students will explore Architectural Drawing concepts. Students will design building structures using AutoDesk Architectural software.

**COMMUNICATION SYSTEMS / VIDEO PRODUCTION #919**  
 Grades 9-12 (1 Semester, .5 Credit)

In this course, students will explore basic systems of communications such as: radio, television, telephone, cellular communication, satellite communications, and video programs. Students work in small groups to write, produce, record, and edit video programs using computers and digital cameras. Video composition, production planning, camera operation and lighting will be emphasized through hands-on activities. Students will design web pages and explore new and emerging communications and satellite technologies.

## ENGLISH LANGUAGE ARTS

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**ENGLISH LANGUAGE ARTS 9** #101  
Grade 9 (1 Year, 1 Credit)

Students will develop reading, writing, listening, and speaking skills. Students will learn to read independently as well as analyze and interpret texts. Literature, both fiction and non-fiction, will be used to develop skills. Various types of writing may include poems, short stories, plays, complex informational pieces, and persuasive pieces. Students will focus on clear research and conduct inquiry on self-selected and/or assigned topics. Students will improve the quality of their writing, understanding style and using grade appropriate conventions of language. Students will listen critically and respond to others while demonstrating an awareness of audience. Classes will understand the characteristics and functions of the English language. Students will use media and technology resources and understand how techniques used in media influence society.

**HONORS ENGLISH LANGUAGE ARTS 9** #102  
Grade 9 (1 Year, 1 Credit)

Utilizing a variety of writing genres, this course will focus on close reading of text for understanding and analysis purposes. Students will build their skill in analyzing, interpreting and evaluating the authors' use of techniques in fiction and nonfiction classical and contemporary works. They will study the impact of cultures and writers on literature and will build their skill in identifying and using literary devices through textual analysis. The course will focus on skills that aid students in interpreting the literal and figurative meanings of words as well as their origins. Students will continue vocabulary acquisition through the use of the English department's vocabulary program, which focuses on words that appear on the SAT test. Students will write beyond the five-paragraph. Students will build communication skills during class discussions of material by learning how to respond in a scholarly manner and will be able to support their position with textual responses in both large and small group situations. Students will also make associations between history, the arts, and literature. Through the use of various mediums of art, students will connect to the texts on both an intellectual and mimetic level.

**ENGLISH LANGUAGE ARTS 10** #107  
Grade 10 (1 year, 1 credit)

In this course, students will analyze various forms and genres of literature on a variety of levels, including thematic development, authorial assumptions and worldview, and point of view. Students will use textual evidence to answer specific questions and prompts, as well as to engage in collaborative discussions on grade-level topics. Students will write to different types of prompts of varying lengths, using academic vocabulary, sufficient facts, concrete details, and quotations. Students will read most of the texts in class and will also have an opportunity to better understand the texts through visual media and other supplemental materials pertaining to each module. Students will access some texts digitally and will be able to use the district

Moodle to obtain documents and handouts pertaining to each unit, notes, study guides, and assessments. English 10 will follow the five modules created by the PA Core Standards. Students taking this class should plan to take Keystone English Language Arts at the end of the course.

**HONORS ENGLISH LANGUAGE ARTS 10** #108  
Grade 10 (1 Year, 1 Credit)

This is an Honors Ten English Course for students in the sophomore class. The course will focus on using textual examples to defend opinions and analytical responses. The course will focus intensely on writing to various prompts; the length of the writing will vary from short writing assignments to several pages.

Students will increase their understanding of the texts through supplemental activities such as music, art, technology, and non-fictional texts. Students will have nightly reading assignments. Many texts can be accessed digitally; students will use the district Moodle to obtain documents, handouts, and notes pertaining to each unit. Honors Ten English follows the five modules created by the PA Core Standards. Students will sit for the Keystone Literature Exam in the spring.

**ENGLISH 11 LANGUAGE ARTS** #111  
Grade 11 (1 Year, 1 Credit)

In this course students will develop reading, writing, listening, and speaking skills. Students will develop these skills through a systematic study of American Literature including poetry, fiction, nonfiction, and drama. They will apply critical thinking skills to texts, analyzing and interpreting literature, evaluating relationships, drawing inferences, and analyzing the effective use of literary elements. Students will expand and enrich their vocabulary through direct vocabulary study and through the examination of the relationship of new words to other words in context. Students will develop writing skills through grammar study and by writing essays, poems, and short stories. Students will develop speaking and listening skills through presentations, class discussions, and small group discussions. Students will engage in collaborative learning experiences and group and individual projects. Assessments will include daily reading assignments and homework, reading quizzes, grammar quizzes, vocabulary tests, unit exams, essays, presentations, projects, and participation in classroom discussions.

**LATER TWENTIETH-CENTURY  
AMERICAN LITERATURE** #126  
Grade 12 (1 Semester, .5 Credit)

This discussion-based course will utilize later 20<sup>th</sup> century American literature as a focus for examining how literature reflects the societal issues of its time while addressing universal concerns. Students will develop the skills to evaluate textual

evidence in order to make inferences and draw conclusions about the author's implicit and explicit beliefs about a subject. Students will read a variety of texts and evaluate the authors' effective use of literary devices. Students will respond to literature through discussion, papers, and projects. Tests and quizzes will evaluate the students' understanding of texts. Students will listen critically and respond to others in small and large group situations.

**FILM STUDY AND PRACTICE** #195  
Grades 9-12 (1 Semester, .5 Credit)  
\*New Course

In this course students will start out by analyzing films for the various ways to develop plot, manipulate the viewer through sound, and create a visual work of art through angles. After looking at the bigger picture, each student will be able to write a screenplay. Throughout the writing process there will be tutorials on how to use a screenwriting app on your personal device along with a look at other scripts and how they are developed. At the completion of the semester students will choose a scene to record with classmates and present as a final for the course.

**CREATIVE WRITING** #145  
(Grades 9-12) (.5 Semester, .5 Credit)  
\*New Course

In Creative Writing, students will have an opportunity to write and workshop as they prepare to share their own creative work with an audience. They will participate in rigorous, teacher-led workshops with the goal of identifying existing strengths and areas of improvement in their own and other's writing, developing their skills as both writers and editors. The number one goal in a workshop is to provide the writer with the tools and encouragement to attempt an improved second draft of their piece. If the workshop does not accomplish this, it has not been successful! Units will also include readings on craft as well as texts to be used as examples in discussions. Writing exercises will also be periodically assigned. All genres are welcome: fiction, creative non-fiction, poetry, drama, screenwriting, and more.

**THEATRE ARTS** #138  
Grades 9-12 (1 Semester, .5 Credit)

Theatre Arts is an elective for students interested in the visual art of acting. Students will read several plays during the semester through the strategy of reader's theatre. Within each unit specific theatrical devices will be addressed such as: characterization, blocking and physical use of the actor's body, set design, costume design, accents, language and line delivery, and performance of specific scenes in classroom performances. Students will have reading guides for each unit in order to help them better understand the play and the playwright's message to the audience. Students will have unit exams and will work on a variety of projects specific to each unit.

**MYTHOLOGY AND LEGENDS** #144  
Grades 9-12 (1 Semester, .5 Credit)

Instruction in the course of Myths and Legends is based on the PA Core English Language Arts standards. Students focus on reading, writing, speaking, and listening activities framed around the big idea of exploring and analyzing mythology from around the world. Students read fictional mythology and non-fictional informative texts to provide context. Students write to analyze, connect, and evaluate these texts. Students engage in class discussions involving informational text and literature to interpret diverse perspectives from across the world and history. Students address how literature is a reflection of the society that produced it. Students address how heroes of a culture reflect the values of a society. Key outcomes include citing strong and thorough textual evidence to support analysis of what the text says explicitly and implicitly; analyzing different perceptions of the purpose of life, the duties of humanity, and the function of death based on texts; identifying how audience and purpose influence a writer's choice of organizational pattern; and constructing original creation and hero myths.

**SPEECH** #157  
Grades 9-12 (1 Semester, .5 Credit)

Instruction in the course of Speech is based on the PA Core English Language Arts standards. Reading, writing, speaking, and listening are framed around the big idea that communication is a process that requires preparation. Students read informative and persuasive texts and watch examples of speeches to provide models. Students write and present to inform and persuade their audience. Students engage in class discussions involving informational and persuasive presentations to interpret diverse perspectives within the audience and society. Key outcomes include identifying how audience and purpose influence a speaker's choice of organizational pattern; analyzing different perceptions of selected topics; evaluating presentations; and constructing a complete script and delivering speeches using information from their research.

**WRITING I** #173  
Grade 12 (1 Semester, .5 Credit)

**This course is required for students who have not taken AP English Language and Composition in 11th grade or AP Literature and Composition in 12th grade.** In this course students will develop writing skills to prepare them for any type of writing they will encounter in college courses. Students will write a variety of essays in response to reading a variety of non-fiction and fictional pieces, culminating in a research paper at the end of the course. They will apply critical thinking skills as they respond to complex informational and persuasive pieces. They will also hone their skills in using correct mechanics in their writing. Assessments will include responses to questions related to the reading selections as well as essays and a research paper.

**AP ENGLISH LANGUAGE & COMPOSITION #185**  
Grade 11 (1 Year, 1 Credit)

The AP English Language and Composition course is designed to parallel an introductory college course in composition. This course is a rigorous class in which students will develop skills in reading and writing over the course of four thematic units. The course is aligned with the PA Core Standards for English Language Arts as well as the curricular requirements set forth by the College Board. Students will be challenged to engage in higher-order thinking based upon in-depth reading and thoughtful writing. Students will become better readers as they practice close reading and examine the rhetorical strategies of a wide variety of nonfiction prose and visual texts. Students will improve their writing through informal and formal writing exercises. Student writing will display skillful focus, development, organization, and style. Students will complete a researched argumentative paper that shows understanding, analysis, and synthesis of ideas from a number of different texts and follows MLA conventions of citation. Students will improve their vocabulary by using direct vocabulary study as well as by practicing precise word choice during the writing and revising processes. Students enrolled in this course will be prepared to take the AP English Language and Composition exam, which may count as college credit at some colleges and universities.

**AP ENGLISH LITERATURE AND COMPOSITION #187**  
Grade 12 (1 Year, 1 Credit)

AP English Literature and Composition focuses on reading literature from a variety of time periods and genres. Students will read widely in this course and reflect on their reading through extensive discussion, writing, and rewriting. Students will write a variety of papers including analytical papers focusing on a particular literary prompt, expository essays using textual examples and personal experience to respond to or defend a particular opinion, and argumentative essays. There will also be essays incorporating the visual arts as a means of better understanding the texts, and timed in-class essays taken from previously used national exam prompts. Students will use MLA (Modern Language Association) Format for their outside writings. Prompts used in class will be those created and used by the College Board for the timed in-class essays. In all cases the writing and reading in this course will allow students to interact and better understand the writer's purpose, genre conventions, and how language itself contributes to the effectiveness in writing. Poetry will be integrated into each unit and will allow students another chance to connect with the big ideas in the course as well as the connection of ideas through a variety of texts.

## FAMILY AND CONSUMER SCIENCES

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**BAKING AND PASTRY (Level 1)** #870  
 Grades 9-12 (1 Semester, .5 Credit)

Baking and Pastry is a basic baking class. Culinary skills will be taught in Quick breads, Yeast breads, Cookies, and Pie/ Pastry Units. In each unit students will learn how to modify recipes to meet individual dietary needs while lowering fats, sugar, sodium, and calories. Measurement, equipment, and sanitation will also be taught. Labs are designed to apply information learned in class.

**CULINARY ARTS (Level 2)** #892  
 Grades 9-12 (1 Semester, .5 Credit)

**Prerequisite: Baking and Pastries**

In Culinary Arts, students will study and prepare food from cultural cuisines such as Italian, Mexican, French, and Chinese. Cultural food prep techniques using woks, pasta machines, food processors, pizzelle irons, and other equipment will also be studied. Students will learn sanitation, food purchasing information, and recipe adaptations (changing recipes to serve various dietary needs such as vegetarianism, lower cholesterol, and sodium reduction. Food budgeting strategies for young adult living will also be covered.

**FIBER ARTS (Clothing and Crafts)** #871  
 Grades: 9-12 (1 Semester, .5 Credit)

Learn to sew and create your own clothes, purses, and accessories. Students will also have the opportunity to learn how to knit a scarf and create needlecrafts such as cross stitch, and embroidery. Since creating an article of clothing is personal and is created to suit a student's individual style, students are required to supply their own materials for main projects.

**CHILD DEVELOPMENT/PARENTING** #884  
 Grades: 9-12 (1 Semester, .5 Credit)

This semester course is designed to help students understand the normal growth and development patterns of children from the prenatal stage to kindergarten. Students will learn to develop effective parenting skills through a positive approach. The attitudes and knowledge developed help students become better parents and will lead others to rewarding careers in child care. Students will develop and carry out a variety of activities for children using information learned. Child safety, books, toys, and developmental activities will also be studied.

**SURVIVING THE REAL WORLD** #875  
 Grades: 9-12 (1 Semester, .5 Credit)

This course is based on Pennsylvania Standards for Family and Consumer Sciences. *Surviving the Real World* is a course intended to prepare students for post-graduation life with a focus on financial management, independent living, and personal improvement. The course contains five units. The first, *Food and Nutrition*, will focus on healthy and sanitary food preparation. In addition, food choice and its effects on one's health will be explored. The second unit is *Financial Management* and will explore budgeting, saving, and prioritizing money. *Consumerism* is the topic of the third unit. This unit will focus on comparative shopping, which includes understanding marketing and advertising techniques. Students will work towards the ability to evaluate items and determine the best option. Also, analyzing nutrition labels, conservation, and basic mending will be explored and practiced. The fourth unit looks at *Housing* with a comparative focus. Students will use their budgeting skills in an application project involving interior design. The last unit is *Career and Professional Development*. Students will learn skills such as résumé and cover letter creation, interview skills, and professional, educational or scholarship application completion.

## MATHEMATICS

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### ALGEBRA I

Grades 9 – 11

**#410**

(1 Year, 2 Credits)

Algebra I is designed to build strong problem solving skills through linear and quadratic functions. Multiple methods of representing these functions such as verbal descriptions, equations, tables, and graphs will be taught. Modeling real-world situations using functions in order to solve problems arising from those situations is also covered. Skills are learned individually as well as collaboratively. Topics covered include expressions; equations; functions; properties of real numbers; solving, graphing and writing linear equations and functions; graphing linear inequalities; exponent; operations with polynomials; and probability with data analysis. This course meets every day for one full block.

### INTERMEDIATE ALGEBRA

Grades 9 – 11

**#430**

(1 Year, 1 credit)

Prerequisite: Algebra I

Intermediate Algebra class is a yearlong course. In addition to a review of topics covered in Algebra I, students will also learn all other topics included as eligible content on the Keystone Algebra Exam. New mathematical topics include Quadratic Functions and Factoring, Polynomials and Polynomial Functions, Rational Exponents, Rational Functions, and Radical Functions. The Pennsylvania Keystone Algebra Exam will serve as an end of course exam to determine student mastery of content.

### INTERMEDIATE ALGEBRA (9)

Grade 9

**#432**

(1 semester, .5 Credit)

Prerequisite: Algebra I

Intermediate Algebra (9) class is a semester long course. In addition to a review of topics covered in Algebra I, students will also learn all other topics included as eligible content on the Keystone Algebra Exam. New mathematical topics include Quadratic Functions and Factoring, Polynomials and Polynomial Functions, Rational Exponents, Rational Functions, and Radical Functions. The Pennsylvania Keystone Algebra Exam will serve as an end of course exam to determine student mastery of content. This course should be scheduled with Algebra II (9).

### ALGEBRA II

Grades 9-12

**#435**

(1 Year, 1 Credit)

Prerequisites: Algebra I, Intermediate Algebra

Algebra II is a year-long course. It includes a continual application of all topics covered in Algebra I and Intermediate Algebra, plus additional topics. Additional topics include Systems of Equations in Three Variables, Matrices, Function Operations, Graphing Square Root and Cube Root Functions, Exponential and Logarithmic Functions.

### ALGEBRA II (9)

Grades 9

**#437**

(1 Semester, .5 Credit)

Prerequisites: Algebra I, Intermediate Algebra

Algebra II is a half-year course. It includes a continual application of all topics covered in Algebra I and Intermediate Algebra plus additional topics. Additional topics include Systems of Equations in Three Variables, Matrices, Function Operations, Graphing Square Root and Cube Root Functions, Exponential and Logarithmic Functions. **This course should be scheduled with Intermediate Algebra (9)**

**Students who take this course should enjoy mathematics and desire to reach the level of AP Calculus prior to graduation.**

### GEOMETRY

Grades 10-12

**#427**

(1 Year, 1 Credit)

Prerequisites: Algebra I

Geometry topics include, but are not limited to, points, lines, and planes; segments and angles; parallel and perpendicular lines; triangle relationships; congruent triangles; special quadrilaterals; similarity of plane figures; areas of plane figures; surface area and volume of solids; right triangle trigonometry; and circles.

### GEOMETRY (9)

Grade 9-10

**#428**

(1 Year, 1 Credit)

Prerequisites: Algebra II

Geometry topics include, but are not limited to, points, lines, and planes; segments and angles; parallel and perpendicular lines; triangle relationships; congruent triangles; special quadrilaterals; similarity of plane figures; areas of plane figures; surface area and volume of solids; right triangle trigonometry; and circles.

**Students who take this course should enjoy mathematics and wish to progress through AP Calculus in the Math sequence prior to graduation.**

### TRIGONOMETRY/ADVANCED MATH

Grades 11, 12

**#450**

(1 Year, 1 Credit)

Prerequisites: Successful completion of Algebra II and Geometry.

Description: Topics covered in this course include exponential and logarithmic functions; rational functions; counting methods and probability involving permutations and combinations; data analysis and statistics; arithmetic and geometric sequence and series; trigonometric ratios; functions; graphs; identities; and equations.

**PRE-CALCULUS**

Grades 11, 12

#464

(1 Year, 1 Credit)

Prerequisites: Trigonometry/Advanced Math

Pre-calculus is an advanced form of secondary algebra and trigonometry. Topics covered include equations and inequalities, polynomial, rational, exponential, and logarithmic functions and their graphs. The conics and trigonometry as well as sequences, series, and probability will be discussed.

**BASIC STATISTICS**

Grade 12

#444

(1 Year, 1 Credit)

Prerequisites: Algebra II

The course content of Basic Statistics includes, but is not limited to probability, data collection, data display methods, data interpretation, descriptive and inferential statistics, statistical measures of centrality and spread, binomial and normal distributions, hypothesis testing, sample size, and confidence intervals.

**AP STATISTICS**

Grade 12

#445

(1 Year, 1 Credit)

Prerequisite: Algebra II

Recommended: Trigonometry/Advanced Math

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students are exposed to four broad conceptual themes:

- 1 . Exploring Data: Describing patterns and departures from patterns
- 2 . Sampling and Experimentation: Planning and conducting a study
- 3 . Anticipating Patterns: Exploring random phenomena using probability and simulation
- 4 . Statistical Inference: Estimating population parameters and testing hypotheses

**Students who successfully complete the course and exam may receive credit, advanced placement or both for a one-semester introductory college statistics course**

**AP CALCULUS AB**

Grades 11, 12

#470

(1 Year, 1 Credit)

Prerequisites: Trigonometry/Advanced Math with teacher recommendation or Pre-Calculus.

Description: The course content of Advanced Placement Calculus incorporates guidelines recommended by the College Board for Calculus AB including: functions, limits and continuity, derivatives and applications, the definite integral and applications, methods and application of integration, and transcendental functions. Students are encouraged to take advantage of the opportunity to receive college credit or advanced standing by sitting for the Advanced Placement Calculus AB Exam. Students are also encouraged to use graphing calculators.

**AP CALCULUS BC**

Grade 12

#471

(1 Year, 1 Credit)

Prerequisite: AP Calculus AB

Calculus BC is a full-year course in the calculus of functions of a single variable. It includes all topics covered in Calculus AB plus additional topics. Additional topics include convergence tests for series, Taylor and Maclaurin series, the use of parametric equations, polar functions, arc length in polar coordinates, calculating curve length in both parametric and function equations, L'Hopital's rule, integration by parts, improper integrals, Euler's method, differential equations for logistic growth, and the use of partial fractions to integrate rational functions.

## MUSIC AND PERFORMING ARTS

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**PERFORMING ARTS APPRECIATION #703**  
Grade 9 (1 Semester, .5Credit)

This course is designed as a way to fulfill the State requirements for music, dance and theatre for students who are not in Band, Orchestra or either Choir. Students will explore elementary music theory, different genres of music, dance and theatre.

**HIGH SCHOOL SYMPHONIC BAND/MARCHING BAND #740**  
Grades 9-12 (1 Year, .5 Credit)

Prerequisites: Prior instruction on at least one band instrument, ability to demonstrate certain aptitudes on that instrument, knowledge of musical rudiments, and audition by the director. String bass players from the chamber orchestra may be asked to join the band for credit, but must be in good standing as a bassist in the orchestra and be invited by the director.

The Band is a performing group open to all students in grades 9-12 who play a wind or percussion instrument. Band encompasses both marching band and concert band; the two are a single course. During the late summer and fall, the band functions as the marching band. Advance preparation for this is accomplished through practicing for a week in August at required band camp. This band camp is part of the program and is graded. In addition, the band performs the pre-game or half-time show at all football games. The band also participates in pep rallies, school assemblies, community events, and local community parades as well as neighboring community parades as the season and the director determines. During the remainder of the year, the group functions as the Symphonic Band presenting several concerts during the school year, in particular, one during the winter holiday season, and one during the spring term. Community performances may also be scheduled. Performance literature is drawn from all periods and encompasses every type and style within the competency levels of high school musicians. Susquehanna Valley Band, PMEA District, Regional, State Band Festivals, and local Honor Band Festivals provide an opportunity to showcase our highly talented students in their pursuit of excellence. An important part of the instrumental music program is a number of small ensembles when talent and schedule permit. Membership in small ensembles is by invitation of the band director. Ensembles included in a given year are determined by availability of students and instrumentation. Examples of groups that may exist are jazz/rock ensemble, clarinet quartets, brass ensemble, woodwind and brass quintets, flute choir and percussion ensemble.

**HIGH SCHOOL ORCHESTRA #750**  
Grades 9-12 (1 Year, .5 Credit)

Prerequisites: Prior instruction on at least one stringed instrument, ability to demonstrate certain aptitudes on that instrument, a knowledge of musical rudiments, and audition by the director.

Orchestra is a performing group open to all students in grades 9-12 who play an orchestral stringed instrument. *Wind and percussion students belonging to the band may be requested to join the class for credit by invitation of the director only.* String bass players may be asked to join the symphonic band for credit as well, but must be in good standing as a bassist in the chamber orchestra and be invited by the director. The group will present several concerts during the school year, one during the winter holiday season, and two during the spring term. Community performances may also be scheduled. Students will be responsible for learning their music. PMEA District, Regional, and State Music Festivals provide an opportunity to showcase our highly talented students in their pursuit of excellence.

**You must receive permission to join the orchestra as a wind or percussion student prior to scheduling this course. This will ensure proper instrumentation and balance, which is critical to an orchestra.**

**CONCERT CHOIR #760**  
Grades 10-12 (1 Year, .5 Credit)

The Concert Choir is a performing organization which may be made up of two choirs. Many of the students who sing in the choir each year have had no previous musical experience. An ability to read music is not a required skill. Through membership in the group, that skill will be taught to each student. All styles of choral literature will be explored in reading situations and in preparation for performances. The Choir performs major concerts each year. Prominent conductors also work with the concert choir in clinic situations. Occasionally, a Men's Choir or Women's Choir will be an adjunct of this choir. All students who are enrolled in Concert Choir are responsible for the preparation and the adjudication of musical materials. Subject areas will include posture, breath control, attack tone, resonance, diction, range, intonation and vocal interpretation as involved in correct singing processes. PMEA District, Regional, and State Choir Festivals provide an opportunity to showcase our highly talented students (beginning in 10<sup>th</sup> grade) in their pursuit of excellence.

**CHAMBER CHOIR**

Grades 10-12

#762

(1 Year, .5 Credit)

Prerequisites: A high degree of vocal proficiency, knowledge of the rudiments of music. *Admission to the group is by audition or invitation of the director.* Also, students must be a member in good standing of the Concert Choir in order to be considered for admission to the Chamber Choir.

The Chamber Choir is a small, select group of students with an arrangement of vocal balance designed to obtain a high degree of independence and performance. This course is designed to teach students the technical music skills of their respective instrument/voice and musicianship/sight-reading skills involved in the large and small group performance of the art. An investigation of all styles of music will be realized. PMEA District, Regional and State Choir Festivals provide an opportunity to showcase our highly talented students in their pursuit of excellence. Chamber Choir is open to students in grades 10-12.

**GRADE NINE CONCERT CHOIR**

Grade 9

#765

(1 Year, .5 credit)

Grade Nine Concert Choir focuses on mastery of the PA Academic Standards for Arts and Humanities and the National Standards for Music Education. As students progress through the course they focus on all aspects of good vocal production including breathing, diction, rhythm, pitch, articulation, phrasing and tonal production. All styles of choral literature will be explored in reading situations and in preparation for performances. The Choir performs major concerts each year. Prominent conductors also work with the concert choir in clinical situations. Occasionally a Men's Choir or Women's choir will be an adjunct of this choir. All students who are enrolled in Grade Nine Concert Choir are responsible for the preparation and adjudication of musical materials. Subject areas will include posture, breath control, attack tone, resonance, diction, range, intonation, and vocal interpretations as involved in correct singing processes.

**MUSIC THEORY I**

Grades 10-12

#770

(1 Semester, .5 Credit)

Prerequisites: Active enrollment in a performing ensemble

Music Theory I is a beginning course in the fundamentals of music. Students interested in enrolling in the course should have some musical background playing an instrument or singing. The course will deal with key signatures, musical notation, triads and two or four part writing. An important aspect of the course is the improvement of musicianship through the recognition by sound of tonal and rhythmic patterns. Theory I is the first level of a three level sequence of courses.

**MUSIC THEORY II**

Grades 10-12

#775

(1 Semester, .5 Credit)

Prerequisite: Music Theory I

Music Theory II is a sequential, elective course for students who have completed Music Theory I. Sight reading will be continued from the previous semester in addition to more advanced harmonic and rhythmic dictation. Written theory will also explore chord inversions and chromatic harmony. Students completing this course and Music Theory I are eligible to take the College Board Advanced Placement Exam for college credit.

**AP MUSIC THEORY**

Grades 11-12

#776

(1 Year, 1 Credit)

Prerequisite: Music Theory II

AP Music Theory is a sequential elective for students who have completed Music Theory II. The course will explore all harmonic tools of the twentieth century through compositions done by students and presented in a classroom lab situation. Students will also be introduced to listening techniques and basic style analysis. Because of the emphasis placed on compositions and their live performance for the class, a significant amount of time will have to be spent outside the class on composition. Students completing this course and Music Theory I and Music Theory II, are eligible to take the College Board Advanced Placement Exam.

## SCIENCE

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### **ECOLOGY and ENVIRONMENTAL SCIENCE #505** Grade 9 (1 Year, 1 Credit)

Earth, Ecology and Environmental Science is a laboratory course which investigates the Earth and the environment around us. Physical science and mathematical applications are used to help students explore the answers to questions about their surroundings. Students also explore the economic impact of environmental decisions while also gaining a deeper understanding of the Ecological standards tested on the Biology Keystone Exam.

### **AP ENVIRONMENTAL SCIENCE #507** Grade 9-12 (1 Year, 1 Credit)

Prerequisite: Successful completion of Algebra I

AP environmental science is designed to be the equivalent of an introductory college course in environmental science. This course is a rigorous, in depth, study of advanced topics in environmental science. Students will be challenged to engage in higher order thinking with a foundation based upon significant amounts of reading, writing, and laboratory research. Students enrolled in this course will be expected to plan to take the AP Environmental Science exam. High scores on this exam can count as college credit at some Colleges and Universities. There is a cost to register for the exam.

### **BIOLOGY #510** Grade 10 (1 Year, 1 Credit)

This tenth grade course offers an investigation of living things at the molecular, cellular and organism levels. An emphasis will be placed on the structures and processes necessary for all organisms to maintain life. Class activities and discussions will demonstrate the relevancy of biology to our personal well-being and that of the planet. This course is designed for students who intend to continue their education at a four-year college but do not intend to major in science. The course is appropriate for those planning careers in nursing and medical technology. Students taking this course will be taking the Keystone Biology Test at the completion of the course.

### **HONORS BIOLOGY #525** Grade 10 (1 Year, 1 Credit)

This course offers an investigation of living things at the cellular and molecular (chemical) levels. The topics will be covered in more detail and at a faster pace than in the tenth-grade Biology course. Highly motivated students with a strong interest in science and science related careers, such as medicine and engineering, should enroll. Students taking this course will be taking the Keystone Biology Test at the completion of the course. In order to select the course, students must complete and submit a letter of intent with the course selection form.

### **AP BIOLOGY #545** Grade 12 (1 Year, 1 Credit)

Prerequisites: Recommendation of biology and chemistry teacher.

This course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year. Some AP students, as college freshmen, are permitted to undertake upper-level courses in biology or to register for courses for which biology is a prerequisite. Other students may have fulfilled a basic requirement for a laboratory science course and will be able to undertake other courses to pursue their majors.

The AP Biology course is designed to be taken by students after the successful completion of a first course in high school biology and one in high school chemistry. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology.

This is a very intensive course. It will expand on certain topics introduced in previous biology courses and introduce new topics as well. Students must expect summer and holiday assignments and they must recognize that there is a need to devote significant time to the course above and beyond scheduled class time. A high level of interest in science, self-discipline and self-motivation are required for success.

### **AP CHEMISTRY #555** Grade 11/12 (1 Year, 1 Credit)

Prerequisites: Completion of Algebra II and Honors Chemistry. Students taking this course must sign a contract provided by the Chemistry teacher, and complete an extensive summer assignment in order to complete all course material within the allotted time.

**The advanced work in chemistry should not displace any other part of the student's science curriculum. It is highly desirable for a student to have a course in secondary school physics and a four-year college preparatory program in mathematics.**

This course is designed to be the equivalent of the general chemistry course usually taken during the first college year and should be taken after the successful completion of an initial course in high school chemistry. The college course in general chemistry differs qualitatively from the usual first secondary school course in chemistry with respect to the kind of textbook used, the topics covered, the emphasis on chemical calculations and the mathematical formulation of principles, and the kind of laboratory work done by students. Students will probably need to spend at least five to ten hours a week studying outside of class.

**HUMAN ANATOMY/PHYSIOLOGY** #565  
Grade 11-12 (1 Year, 1 Credit)

Prerequisites: Honors Biology or Biology must be completed. Completion of or taken concurrently with Chemistry or Honors Chemistry.

This course is specifically designed for students intending to pursue a medical, science, or health-related career in college. This course will provide the student with an in depth look at the human body and the way it works. The anatomy and physiology units describe levels of biological organization, support and movement, control and regulation, body fluids and transport, environmental exchange and continuity of life. Extensive medical terminology and laboratory work is included. A culminating fetal pig dissection studying the organ systems will also be required.

**HONORS CHEMISTRY** #575  
Grade 11 (1 Year, 1 Credit)

Prerequisites: Enrollment in or completion of Algebra II; Biology teacher's recommendation

Students will investigate the composition, structure, and properties of matter and how substances interact, transform, and change. To prepare for college-level chemistry courses, a high concentration of content will be covered. Students will be required to complete some sections of the course independently with teacher guidance. To be successful in this course a student must have a superior ability for independent learning, a desire to achieve to high levels, and intellectual curiosity not motivated by grades alone. In order to select the course, students must complete and submit a letter of intent with the course selection form.

**CHEMISTRY** #580  
Grades 11, 12 (1 Year, 1 Credit)

Prerequisites: Enrollment in or completion of Algebra II or teacher recommendation

Students will study key concepts regarding the composition, structure, and properties of matter and how substances interact, transform, and change. Through classroom demonstrations, laboratory activities, and discussions, students will learn about the chemical make-up of the world and applications of chemistry. This course will serve as preparation for college chemistry for non-science majors.

**AP PHYSICS 1** #584  
Grade 11/12 (1 Year, 1 Credit)

Prerequisites: Chemistry, Pre-Calculus, or concurrent Pre-Calculus

AP Physics I is the equivalent to a first semester college course in algebra/trigonometry-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It also introduces electric circuits. The content of this course focuses on eligible content found on the AP Physics I exam.

**AP PHYSICS 2** #586  
Grade 12 (1 Year, 1 Credit)

Prerequisites: AP Physics 1, Pre-Calculus

AP Physics 2 is equivalent to most college-level introductory physics courses with a focus on the following topics: fluid statics and dynamics, thermodynamics, PV diagrams and probability, electrostatics, electrical circuits with capacitors, magnetic fields, electromagnetism, physical and geometric optics, and other topics in modern physics. *AP Physics 1 should be taken before this course, which covers traditional mechanics and other important introductory topics.*

Emphasis will be placed on understanding physical science literacy and applying physics. The content of this course focuses on material for the AP Physics 2 exam.

**PHYSICS** #590  
Grade 11/12 (1 Year, 1 Credit)

Prerequisites: Chemistry, Adv. Math/Trig. or Teacher Approval if currently enrolled in Adv. Math/Trig.

Physics is the final part of the high school science sequence and students will find it an interesting and useful part of their education. Topics include measurement of time and space, motion, forces, momentum, energy, and an introduction to sound, light, and nuclear physics.

**SENIOR STEM -** #570  
Grade 12 (1 Year, 1 Credit)

This course is intended for seniors and covers concepts and investigations from a variety of science fields: biology, chemistry, earth science, environmental science, physics, and engineering. The course will be project-based, with students identifying problems and designing procedures for experiments through the use of technology that currently is in use, or has been used, in different science fields. They'll follow up with data analysis and a recommendation for further study or alternate application of techniques used in their investigations.

**ENVIRONMENTAL STUDIES** #594  
Grade 11, 12 (1 Year, 1 Credit)

Students taking this course should have an interest in wildlife, the environment, and the outdoors. We will be studying wildlife management and its history, conservation, economic impacts, populations, and ecology. This course will place an emphasis on wildlife species found in PA, such as small and large mammals, upland game birds, waterfowl, avian predators, and freshwater fishes. The sustainable management, habitat, and identification of these species will be investigated by conducting in-class and hands-on studies. We will also explore current environmental issues affecting both humans and wildlife, such as invasive species, endangered species, nonrenewable/renewable resources, and pollution.

## SOCIAL STUDIES

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**AMERICAN CITIZENSHIP AS ACTION #204**  
Grade 9 (1 Semester, .5 Credit)

American Citizenship is designed to provide students with an understanding of the American political system, and the skills necessary to exercise their citizenship in a socially responsible manner, while attempting to foster positive attitudes about the role of the citizen in American democracy. The role and functions of national, state and local governments as they relate to the student/citizen's need for participation in government will be studied. Included will be the Constitution, Bill of Rights, political parties, elections, and the overall functioning of government. An emphasis will be on the practical applications and skills of the citizen in society and his/her relationship with government.

**ECONOMICS #205**  
Grade 9 (1 Semester, .5 Credit)

Economics will describe the role that basic economics plays in understanding and improving the quality of everyday choice making. Economics plays a vital role in society, and that role will be examined through the choices made in the marketplace and the voting booth, especially regarding trade and exchange. The relationships between nations, as well as the everyday political affairs within the U.S. will be examined in an economic context.

**WORLD HISTORY #219**  
Grade 10 (1 Year, 1 Credit)

This course is designed to provide a meaningful realization of the vast contributions made by different cultures in the advancement of civilization. This course will deal with the history of the world from the end of the Middle Ages through Modernity. Major historical eras and events in European, Asian, Latin American, African, and Middle Eastern countries will be covered. The course will have a thematic approach designed to parallel chronological sequences by country, cause and effect relationships, and the influence of the past in present society with emphasis on relationships to American history. Themes include: Religion, Geography, War & Conflict, Arts/Architecture, Science & Technology, Economics, Politics/Government, World Order, Demographics and Social Trends.

**AP EUROPEAN HISTORY #292**  
Grades 10 (1 Year, 1.0 Credit)

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. Without this knowledge, students would lack the context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. In addition to providing a basic narrative of events and movements, the goals of the AP program in European History are to develop (a) an understanding of some of the principal themes in modern European History, (b) an

ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing.

**AMERICAN HISTORY #200**  
Grade 11 (1 Year, 1 Credit)

This course is designed to present American history and culture from 1865 to the present. American History is a general survey course which includes such topics as reconstruction, westward and imperialist expansion, military conflicts and their resolutions, civil rights, the presidencies, business, labor, immigration and minority's conflicts and accomplishments.

**AP U.S. HISTORY #293**  
Grade 11 (1 Year, 1 Credit)

To give students an in-depth course in American History in preparation for the Advanced Placement United States History Test. In addition, college bound students with a strong interest in United States History should benefit from the design and requirements of the course. The course will focus on the intellectual, cultural, social, economic, and political history of the United States. Students should obtain a detailed knowledge of United States History through the use of text and supplemental readings, and individual research and writings.

**INTRODUCTION TO PSYCHOLOGY #245**  
Grades 11, 12 (1 Semester, .5 Credit)

This course is designed to encourage students to question who they are, how they relate to others and to study the everyday behavior of people. This is an introductory course that will study basic theories and principles underlying behavior and experience. Students will be given the opportunity to explore a variety of topics ranging from altered states of consciousness to the aging process.

**INTRODUCTION TO SOCIOLOGY #254**  
Grades 11, 12 (1 Semester, .5 Credit)

This course is designed to have students realize the dynamics of their relationships to other people and to different groups in our society; to understand the nature of culture and the structure of society. The student will examine major areas of sociology in a dynamic blend of concept, theory and application. Major content areas include society and culture, social organization, social institutions, collective behavior, adolescence, and social problems. Content areas will contain source material and case studies to involve students in the practice as well as the content of this discipline.

**AMERICA IN THE MODERN WORLD #285**  
 Grades 11, 12 (1 Semester, .5 Credit)

This elective covers contemporary issues as they relate to America and historical events of the past fifty years. Issues to be covered will include, but not limited to, social movements, political ideologies, military conflicts, globalization, the role of media in the modern world and terrorism. Taught in a seminar format, students will research and discuss the historical significance of topics to answer the question “Why does this matter?”

**AP ECONOMICS #281**  
 Grades 11, 12 (1 Year, 1 Credit)

An understanding of economics is important to your everyday life. Economics helps you make more informed decisions as a consumer, worker, and citizen. Economics is divided into two major types of theory. Microeconomics is concerned with individual producing or consuming units and generally involves individual decisions. Macroeconomics is concerned with the economy as a whole and generally examines social economic decisions. This course prepares students for the Advanced Placement examination. Although not required, completion of the AP Exam is highly recommended.

**AP GOVERNMENT & POLITICS #290**  
 Grade 12 (1 Year, 1 Credit)

This class is designed as an elective for those students who are college bound and want the challenge of a course that is designed to be a freshman level college course. During the month of May the students have the opportunity to take a test offered by the Educational Testing Service. If students score well on the test, they may receive some college credit. The AP Government & Politics: United States course provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute United States’ political reality. The basic content areas will include: 1) Constitutional Underpinnings of United States Government, 2) Political Beliefs and Behaviors, 3) Political Parties, Interest Groups, and Mass Media , 4) Institutions of National Government: The Congress, the Presidency, the Bureaucracy, and the Federal, 5) Public, and 6) Civil Rights and Civil Liberties.

## WELLNESS

### PHYSICAL EDUCATION

Grades 9/10

#308

(1 Year, .5 Credit)

Ninth and tenth grade students are offered opportunities to participate in flag football, team handball, gymnastics, aerobic conditioning, physical fitness testing, hockey, basketball, volleyball, softball, core training, and organized activities that include the use of cardio watches. Students will have the opportunity to assess personal strengths and weaknesses to allow them to select activities most appropriate to their personal goals. Through active participation, opportunity is given to the students to develop desirable attitudes of sportsmanship, cooperation, responsibility, appreciation of the skill of others, and an understanding of the strategies employed while playing a particular sport.

### PHYSICAL EDUCATION

Grades 11/12

#304

(1 Year, .5 Credit)

Twelfth grade students are given opportunities to participate in badminton, pickle ball, lacrosse, soccer, weight training, volleyball, ping pong, aerobic conditioning, ultimate Frisbee, and organized activities that included the use of cardio watches. Students will be encouraged to design, monitor and participate in personal fitness programs in accordance with principles of training and conditioning that will aid them in achieving their goals. Through active participation, opportunity is given to the students to develop desirable attitudes of sportsmanship, cooperation, responsibility, appreciation of the skill of others, and an understanding of the strategies employed while playing a particular sport.

### LIFETIME FITNESS

Grades 11/12

#313

(1 Semester .5 Credit)

This course will be offered as an alternate Physical Education Elective in place of the Physical Education 11/12 Course. The students will be participating in various activities that will help them stay active and fit throughout life. Activities will include: Walking, Use of Cardio Machines, Weight Training Exercises, Stability Ball Exercises, Stretching and Yoga Exercises, Jogging etc. Students will be expected to develop and follow their own exercise program with the approval of the instructor. The program will need to include exercises in all of the above-mentioned areas.

### HEALTH EDUCATION

Grade 10

#339

(1 Semester, .5 Credit)

Health Education is an introductory course that covers a variety of health-related topics that includes personal health, nutrition, and fitness, preventing disease and injury, growth, development, and sexuality, substance abuse, and mental health and community health issues.

### DRIVERS EDUCATION

Grade 9/10

#307

(1 semester, .5 Credit)

This course prepares students for the Knowledge Exam to acquire a learner's permit. Driver Education then continues to describe, discuss, and practice various driving techniques in preparation for the Road Test to acquire a junior license as well as independent driving throughout a lifetime. Along with the testing process, other topics covered in this course include, but are not limited to, driver responsibility; signs, signals, and pavement markings; basic car controls; decision making process of driving (IPDE: Identify, Predict, Decide, Execute); natural laws of physics in regard to driving; basic car maneuvers; Pennsylvania Point System; negotiating intersections safely; sharing the road with other vehicles; differences between rural, city, and highway driving; driving in adverse weather conditions; the dangers of distracted driving; and handling emergencies. **Although this course is an elective, it is highly recommended.**

### LIFETIME HEALTH

Grades 11/12

#335

(1 semester, .5 Credit)

This is an elective course specifically for juniors and seniors to prepare them for healthy independent living. Studies have shown that unhealthy behaviors and habits originate during a time of great transition. One of the most challenging transitions a young adult faces is the shift from a high school student to an independent adult. This course studies the topics of stress management, mental and emotional health, sleep patterns, personal fitness, prevalent risk behaviors, and training in first aid/CPR/AED. Most of these topics are not covered in the general health education course that tenth grade students receive. The life skills that will be implemented are extremely valuable to living an independent healthy lifestyle.

## WORLD LANGUAGES

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**FRENCH I** **#600**  
 Grades 9-12 (1 Year, 1 Credit)

This introductory course in French is designed to help students communicate in the French language and to acquaint them with various aspects of French culture. Students will begin to develop their listening, speaking, reading, and writing skills in French. Among the cultural topics covered is the geography of France. Students will be evaluated based on their class participation, tests/ quizzes, homework, and projects.

**FRENCH II** **#605**  
 Grades 9-12 (1 Year, 1 Credit)

In this course, students will continue to develop their listening, speaking, reading, and writing skills in French. They will again be exposed to various aspects of French culture. Assessment will be based on the student's class participation, tests/quiz scores, homework, and projects.

**FRENCH III** **#610**  
 Grades 10-12 (1 Year, 1 Credit)

In this course, listening, and speaking skills continue to be refined, while reading and writing skills are more strongly emphasized. The study of complex grammar and various verb tenses gains emphasis. Class participation, tests, quizzes, homework, and projects remain the major forms of assessment.

**FRENCH IV** **#615**  
 Grades 11-12 (1 Year, 1 Credit)

This course is an elaboration and refinement of the skills previously acquired. The study of grammar continues to be important. As in previous French courses, the student will gain knowledge of and an appreciation for the unique contributions of France to world history and culture. The major assessments are the same as in previous French courses.

**FRENCH V** **#620**  
 Grades 11-12 (1 Year, 1 Credit)

In this course writing, speaking, reading and listening skills are constantly refined and practiced. A majority of the course will be devoted to the study of various French literary works and aspects of French culture. It is recommended that students have a final grade of 83% or higher in French IV to enroll in this course. Although the course is not designed to prepare students to take the Advanced Placement Examination, they may choose to do so. Materials will be provided for students to study independently for this exam.

**GERMAN I** **#625**  
 Grades 9-12 (1 Year, 1 Credit)

Communication is the function of all language. To that end, the basic skills of listening, reading, speaking and writing German will be taught. Students will be introduced to culture and geography of German speaking countries. A good grasp of English grammar is desirable and a willingness to participate orally in class.

**GERMAN II** **#630**  
 Grades 10-12 (1 Year, 1 Credit)

The skills of listening, reading, speaking and writing German will continue to be developed in various formats. The study of German culture is expanded.

**GERMAN III** **#635**  
 Grades 11-12 (1 Year, 1 Credit)

The skills of listening, reading, speaking and writing German will continue to be the focus of this course. The course will build on what was taught in German 1 and 2 with the goal of higher proficiency in all four skills.

**GERMAN IV** **#640**  
 Grades 12 (1 Year, 1 Credit)

The skills of listening, reading, speaking and writing German are taught with the goal of a higher degree of proficiency. More advanced grammar concepts will be studied. Students' knowledge of culture and history is developed through the readings of Grimm's Fairy Tales and other short selections. Modern German culture is also examined.

**SPANISH I** **#665**  
 Grades 9-12 (1 Year, 1 Credit)

Communication is the function of all languages. For this reason, students are strongly encouraged to participate actively and orally in class in a variety of activities. Students will also practice reading and writing skills using a variety of formats including essays, skits, and presentations.

**SPANISH II** **#670**  
 Grades 9-12 (1 Year, 1 Credit)

Students will continue to study vocabulary and grammar. Students will also practice writing, reading, and speaking skills using a variety of formats including essays, conversations, skits, and presentations.

**SPANISH III**

Grades 10-12

**#675**

(1 Year, 1 Credit)

Students will refine and add fine detail to the grammatical aspects studied in Spanish I and II as well as expand their grammatical studies and vocabulary. Students will practice these skills using a variety of formats including essays, conversations, skits, and presentations.

**SPANISH IV**

Grades 11-12

**#680**

(1 Year, 1 Credit)

Students will continue to refine the skills previously acquired. The class will be conducted largely in Spanish. The students will practice newly acquired vocabulary and grammatical concepts using a variety of formats including essays, conversations, skits and presentations.

**SPANISH V**

Grades 11-12

**#685**

(1 Year, 1 Credit)

The course is designed to refine the four skills; listening, speaking, reading and writing. Students are expected to speak only in Spanish. The study of vocabulary and grammar continues to be important. Daily speaking and spontaneous descriptions of situations will enhance the student's oral skills. Students will explore the history and culture of the Spanish-speaking world through the reading of Mexican legends and adapted versions of Hispanic literature.

## SUN AREA TECHNICAL INSTITUTE PROGRAM

SUN Area Technology Institute (SUNATI) courses are designed to prepare students for future employment and/or education beyond high school. All SUNATI programs are tech prep certified leading to higher education choices at over 45 Pennsylvania post-secondary schools. Students electing this program may attend the technical school full-time in the twelfth grade or earlier with the permission of the high school principal. Students will follow the SUNATI school calendar. Students attending SUNATI remain students at Lewisburg Area High School, and they may participate in all athletic programs, assemblies and graduation activities. SUNATI is an extension and a vital part of Lewisburg Area High School.

Students who plan to attend the SUN Area Technical Institute during their senior year should complete the following credits by the end of their junior year:

- English: 3.0 credits
- Social Studies: 3.0 credits
- Mathematics: 3.0 credits
- Science: 3.0 credits
- Health: 0.5 credit
- Physical Education: 1.5 credits (.5 to be completed during senior year)

In addition, beginning with the Class of 2016, students must demonstrate proficiency in Algebra, Biology, and English Literature through a proficient score on each respective Keystone Exam or through successful completion of the Performance Based Assessment in each subject.

Note: Students attending SUNATI during their senior year need 3.0 credits each of Math, Science and Social Studies, 3.5 credits of English, a Graduation Project and successful completion of a course of study from SUNATI for graduation.

### Sun Tech to Lewisburg Grading conversion

Lewisburg	A 100-92	B 91-83	C 82-74	D 73-65	F 64-
Sun Tech	5 100-94	4 93-86	3 85-78	2 77-70	1 69-

example: 94 at SUN ATI = 92 at Lewisburg

Students registering for SUNATI should complete an Application Form available in the Guidance Office. On the LAHS Course registration form, students should register for

1. **SUNATI PROGR #999** This program is worth 6.0 credits
2. **SUNATI PHYSICAL EDUCATION #306**  
All contract physical education students are required to fulfill the time requirements set forth by their individual elected activities. The activities may include jogging, walking, tennis, volleyball, roller skating, varsity sports, dance, exercises, weight training and bowling. This is a requirement for graduation.
3. **SUNATI MATH #997**

### SUN TECH MATHEMATICS PROGRAM

The programs at SUN Area Technical Institute require that every student have proficiency in basic math including addition, subtraction, multiplication, division, usage of decimals, usage of fractions and percentages. Every student takes a diagnostic test at the beginning of the school year. If students do not pass this test they must take a remedial math course in order to graduate from SUNATI.

We also offer Math courses to those students who need Math credits in order to graduate or to those students who are furthering their education and want to keep their math skills sharp. The courses offered are Integrated Math, Pre-Algebra, Algebra 1, Algebra 2, Geometry, Trigonometry, and Calculus. Our goal is to have students prepared for post high school employment, trade school, two-year and/or four-year college programs.

Integrated math covers basic math skills as well as probability and statistical measure. It also covers selected topics in Algebra, Geometry and Trigonometry.

Pre-Algebra covers topics such as solving equations, inequalities, factors, fractions, exponents, ratios, proportions, percents, graphing, area, volume and right triangles.

Algebra 1 includes working with real numbers, solving equations and inequalities, polynomials, factoring, fractions, exponents, and graphing and working with functions.

Algebra 2 expands on all concepts in Algebra 1 and also includes linear functions and equations, rational expressions, irrational and complex numbers and solving quadratics.

Geometry topics include, angle relationships, congruent and similar triangles and polygons, circles and constructions, coordinate geometry and areas and volumes of polygons, quadrilaterals and circles.

Trigonometry covers all of the trigonometric functions (including graphing), application of trigonometric identities, solving triangles, inverse functions and equations, and polar coordinates.

Calculus topics include functions, graphs, limits, differentiation, exponential and logarithmic functions and integration.

## SUN AREA TECHNICAL INSTITUTE PROGRAM OFFERINGS

*Program descriptions are provided by the SUN Area Technical Institute*

### ADVANCED PRECISION MACHINING

**Become a CNC machinist in this program, just like the ones seen on TV's "American Chopper" and "How It's Made". Imagine inventing something and being able to actually build it yourself.**

**Outcomes:** By developing the skills necessary to operate computerized (CNC) and conventional machinery you can secure a high paying job and earn college credits. Working with Mastercam X6 software, you can design and build amazing projects. Students can start earning up to \$15.00 per hour working in our Co-Op program in less than one year. Students earn nationally recognized credentials through NIMS (National Institute for Metalworking Skills)

**Description:** A machinist doesn't think of metal as something hard and unchangeable, because they can change it into anything they want. Students setup and operate machinery to fabricate and repair parts and components. A machinist performs cuts on materials to bring it to the desired shape and dimensions. Metal blocks can be transformed into intricate parts such as sprockets, gears, pistons, tools, wheels, and molds. These parts are then assembled into cars, bikes or the machinery which mass produce every conceivable manufactured good. Machinists are the foundation of all industries, and without them no manufacturing or construction job would exist. Machinists are the only skilled workers capable of reproducing the actual tool they are using! Advanced Precision Machining students are highly sought out by local employers, and have one of the highest job placement rates in the school. Many students pursue careers in engineering. You can qualify for advanced placement (up to 15 credits) at the Pennsylvania College of Technology, Thaddeus Stevens School of Technology and the Harrisburg Area Community College.

**Requirements:** You should have good hand-eye coordination; attention to detail and an ability to do accurate work are desirable. Also a knowledge of Basic and/or industrial math, and measurement would be helpful.

### ADVANCED WOOD PRODUCTS MANUFACTURING

**Are You Interested In Learning A Skill That Will Make You MONEY And Also SAVE You MONEY For The Rest of Your Life?** If the answer is yes, then consider a career in Wood Products Manufacturing and get your FREE training at SUN Tech!!! Visit the Advanced Wood Products Manufacturing Program and Check It Out!!!!

**Outcomes:** You can:

- Learn skills that will stay with you forever and MAKE YOU MONEY
- Do different and challenging projects each day
- Express your creativity
- Participate in community service projects off campus
- Work by yourself and a team member
- Go to college.....possibly for FREE
- Enter the workforce upon graduation

**Description:** As an Advanced Wood Products Manufacturing (AWPM) student, you can be trained to be a quality machine operator, production worker, finisher, or technician. You will learn to have a strong emphasis on quality and professionalism. Wood products manufacturing remains one of the top career fields locally and throughout the State. AWPM is a State approved Program of Study. When you complete all of the required state tasks, you can earn college credits to numerous colleges throughout the State.

**Requirements:** You should possess creativity and a willingness to learn and experience new things. Good hand-eye coordination, attention to detail, basic math and measurement skills are desirable skills to have when entering this program.

### ADVERTISING ART & DESIGN

### ARE YOU AN ASPIRING ARTIST? WOULD YOU LIKE

**TO GET PAID FOR YOUR CREATIVITY?** If you have a passion for art, a need to be creative, and a dream of becoming a successful graphic designer, then the Advertising Art & Design program at SUN Tech is for YOU!

**Outcomes:** You can experience a broad range of creative careers while still in high school so that you can:

- Discover where your talent lies
- Develop a professional portfolio
- Be successful at art college
- Obtain a job you actually love

You will use the most modern technology and techniques to increase your skills in graphic design, illustration and photography.

**Description:** The program emphasizes your creative growth through instruction in art principles as well as technology skills through computer-based projects. You will gain a working knowledge of color, typography, and printing while you master Adobe software on the Mac and PC. You may find employment in graphic design, advertising, publishing, web page design, illustration, or photography. The number of opportunities for employment and advancement are expected to be bright for the next five to ten years. Salaries in this field range from \$8 to \$32 per hour within our local area.

**Requirements:** Artistic talent, originality, communication skills, and dependability are needed. You must be able to give and take constructive criticism, meet deadlines, and work effectively by yourself or with a team. Computer experience, writing, and math skills are also important.

## AUTO TECHNOLOGY

**Do you like taking things apart to see how they work? Do you like mechanical things like motors and engines? Make money while enjoying what you do! The Automotive Technology Program at SUN Technical Institute will teach you what you need to know to diagnose and repair vehicles so you can make a great living doing something you love to do!**

**Outcomes:** You will have the opportunity to obtain a PA State Inspection License, Air Conditioning Certification, SP/2 Safety Certification, Valvoline Oil Certification, and NATEF Certification. The certifications and skills learned allow you to enter the automotive repair industry with skills and certification to back up those skills. You also have the opportunity to qualify for advanced placement at post-secondary institutions such as Penn College, Harrisburg Area Community College, and Northwestern Ohio.

Entry-level auto technicians generally earn around \$8.00 per hour, progressing up to \$20.00 per hour with experience and training. An "A" level technician in a mid-sized city such as Scranton can earn up to \$100,000 per year. The education received through the Automotive Technology Program allows you to climb this salary ladder very quickly.

**Description:** In the Automotive Technology course at SUN Tech, you are given the opportunity to learn the necessary skills and competencies to maintain, diagnose and repair the advanced systems on modern automobiles. You can use common hand tools as well as power tools such as impact wrenches, grinders, drills, tire machines and automotive lifts. You will also be using

state-of-the-art equipment such as electronic engine analyzers, oscilloscopes, scan tools and internet-based information systems.

The Automotive Technology program consists of daily theory lessons which teach the skills needed to complete nearly 350 hands-on exercises involving real cars and light trucks. Both follow NATEF guidelines and expose you to most of the operating systems on modern automobiles. Areas covered include electrical systems, steering and suspension, braking systems, engine repair, computerized powertrain control, and air conditioning.

**Requirements:** You should possess a desire to learn with a strong work ethic. You will learn by actively participating in select live work and structured shop projects. If you are not afraid of hard work this may be the program for you.

**Information:** Go to [www.sun-tech.org](http://www.sun-tech.org) and click on Automotive Technology to learn more about this exciting opportunity!

## CARPENTRY

### WOULD YOU LIKE TO POSSESS THE SKILLS NEEDED TO BUILD A HOUSE?

If you like working with your hands, if you love to build projects, problem-solve, and tackle new challenges every day, visit the Carpentry Program at SUN TECH.

**Outcomes:** Learn skills in carpentry that you will use the rest of your life whether on the job in construction or on your own home. You will also have the opportunity to earn dual enrollment college credits while completing the carpentry curriculum.

**Description:** As a SUN TECH carpentry student you will learn all aspects of residential and light commercial construction through classroom theory and practical shop instruction and projects. All areas of residential construction will be covered, including but not limited to, floor, wall and roof framing, exterior and interior finish.

Look what you can learn in the Carpentry Program:

- Learn the skills necessary to properly build a house
- Work in a team setting.
- See the day go by so quickly you will wonder what happened to the time.
- Work on community service projects off campus.
- Use the most advanced tool, equipment and materials
- Be challenged every day by your instructor
- Earn college credits
- Do something different everyday

Emphasis is placed on developing the skills you will need for your future as a contractor.

**Requirements:** Students must possess the desire to learn with a strong work ethic. If you are not afraid of hard work, this may be the program for you. See your guidance counselor to arrange a visit.

**Dual Enrollment PC NOW Courses you can complete while in high school and earn college credits:**

**BCT103 Construction Hand & Power Tools**  
**BCT109 Framing Principles**

## COLLISION REPAIR TECHNOLOGY

**DON'T GET BENT OUT OF SHAPE OVER YOUR FUTURE.** Become a Collision Repair Technician and learn to straighten damaged cars and your future. You will learn many techniques seen on the TLC channel with host "Chip" Foose and others.

**Outcomes:** By developing the skills necessary to become an entry level Collision Repair technician you can secure a high paying job and earn college credits. You will have instruction in State-of-the-Art I-CAR certified repair techniques in the following areas: Non-structural analysis and damaging repair, painting and refinishing, plastics and adhesives, structural, analytic and damage repair. With great attendance and grades, you can participate in the Co-op program and earn a salary during second semester of the school year.

**Description:** The Collision Repair Technology course at SUN Tech is the first in the Commonwealth of Pennsylvania to be evaluated by the "National Automotive Technicians Education Foundation, Inc." (NATEF) and become certified by the "National Institute for Automotive Service Excellence" (ASE). The course includes theoretical study and practical application in all areas related to the collision repair industry including major and minor collision repair, MIG welding, base-clear and tri-coat refinishing, color matching and blending, SMC and urethane plastic repair, glass service, and supplement restraint systems. You will be evaluated on practical hands-on application skills and through ASE type-written examinations. You may be eligible for one year service credit toward applying for ASE certification in any or all of the four specialized technical areas within the trade. Related areas of employment are: insurance adjustor, automotive refinish, parts and sales, and assembly line refinishing.

**Requirements:** Written Tests, Practical Tests, Homework, Cross Cluster Projects (team learning), and Individual Projects. Also knowledge in the following areas would be to the student's advantage, but all areas are NOT required. Basic Math, Trade Math, Bookkeeping, General Science, Physics, Industrial Arts, Metal Working, Mechanical Drawing, Computer Skills.

**Advanced Placement:** Through the "PC Now" program, you have the opportunity to dual enroll, meaning you would apply and be a registered Pennsylvania College of Technology student while you attend SUN Tech and actually earn college credits. This is not mandatory, but an option which can save you \$\$\$\$ in college tuition and expenses.

PC NOW Courses:

ABC100	Introduction to Non-Structural Collision Repair
ABC104	Introduction to Non-Structural Collision Repair Applications
	3 credits

## COMPUTERS AND NETWORKING

### ARE YOU A COMPUTER GEEK OR HAVE GEEK

**ENVY?** Do you love working with computers? Do you love taking computers apart or building computers? Do you ever wonder how you can send an email half-way around the world in less than a second? Would you love to know how the geeks

on TV like Abby and McGee from NCIS track down criminals through the use of computers? If you answered "yes" to any of these questions, you need to check out the Computer Networking Technology program at SUN Tech.

**Outcomes:** You can learn entry level skills in Computers, Network installation, Web Design, Web Animation, Network Administration, and Computer Forensics that will help you prepare for an exciting and well paying career in the computer field.

**Description:** As a SUN Tech Computer and Networking Technology student, you will learn a wide range of skills that will enable you to get an entry level job, skills to give you a head start on college, and even a way to make good money while going to college!

Look at all the exciting things that "you" can learn at SUN:

- Build, upgrade and repair computers
- Setup and configure routers, switches, firewalls, and servers
- Design web pages and flash animations
- Administer a computer network, setting up user accounts, servers, etc.
- Become Certified in copper and fiber optic network cabling
- Earn college credits from Penn College saving thousands of dollars
- Earn up to 15 Credits of Advance Placement through the Bloomsburg University Computer Forensics 2+2+2 program
- Build laptop computers that you will use throughout the year!

**Requirements:** Knowledge in the following areas are highly recommended, but not mandatory: Keyboarding, Algebra 1, Technical Writing, and the Microsoft Office Suite.

**Dual Enrollment PC NOW Courses you can complete while in high school and earn college credits:**

**CIT171 Introduction to Networking**

## COSMETOLOGY

**Whether you have always had a love for hair and makeup, nail care and beauty or whether you are looking for a career with exciting diverse opportunities, driven by a sense of fashion and business; Cosmetology at SUN Tech can set you on a fast track to a successful future.**

By starting your cosmetology training while you are in high school you will be able to make a smooth transition to a college related partner career, pursue advanced training in the cosmetology profession or you can opt to begin a lucrative wage earning career working in a salon or spa or even owning your own salon or spa. And best of all, you have the choice of working in a local salon and staying close to home or traveling to Hollywood, the fashion districts of New York or the platform arenas of competitive styling around the world!

**Outcomes:** The Cosmetology Program at SUN Tech is designed to provide you with the necessary education needed to pass the Pennsylvania State Board Exam for licensing; but more importantly prepares you to successfully pursue career opportunities in all aspects of the beauty industry. Whether you wish to pursue a job as a hair stylist, beauty therapist, makeup artist, or nail technician working in a salon or spa; or whether you wish to pursue a job working in sales, marketing, education or business management for a beauty manufacturer or company; it can all begin with a decision to start your beauty education

while in high school.

**Description:** The Cosmetology course at SUN Tech includes theoretical studies and the application of all aspects of hair, skin and nail care. You will be trained in the theoretical areas of anatomy/physiology, decontamination, safety and management. Eighty percent of all course activities are hands-on applications including the operation of a clinic/salon area where you will work on clients just as you would in a licensed salon. The topics and skills covered include hairstyling, hair cutting, hair coloring and lightening, permanent waving, hair straightening, braiding, skin care, massage, makeup, hair removal, nail care, artificial nails, nail art, ethnic hair care, male hair cutting and styling and product knowledge.

In order to acquire the 1250 hours of supervised instruction required for the PA State Board of Cosmetology licensing examination, you will attend a 300 hour summer program at SUN Tech prior to your senior year at SUN Tech.

**Requirements:** If you like working with people, if you are interested in fashion trends and helping people look their best, if you enjoy working in a fast paced environment where no two days are ever the same, if you like to take what you know and transfer it to what you can do and create; the Cosmetology Program at SUN Tech is for you!

## CRIMINAL JUSTICE

**Are you a people person who enjoys interacting with all types of people, using your mind to look at things from different perspectives, or solving puzzles? Become a part of an exciting criminal justice career!** Television, movies, and video games only show a portion of the many rewarding career opportunities awaiting you. Criminal justice is the second largest employer in the Susquehanna Valley and offers entry level salaries ranging from \$ 20,000 to over \$75,000 annually.

**Outcomes:** As a SUN TECH criminal justice student, you will have the opportunity to earn 6 college credits while building an impressive resume. Criminal justice offers the following certificates:

- Federal Emergency Management Agency National Incident Management System (FEMA NIMS) certificates, 100, 200, 700, and 800
- American Heart Healthcare Provider CPR
- Department of Health Emergency Medical Provider
- HACC Recognition and Identification of Hazardous Materials
- The Association of Public Safety Communication Officials (APCO) Telecommunicator 1

**Description:** This program offers the entry-level skills and knowledge required for employment in criminal justice professions such as police officer, security officer, correctional officer, 911 dispatcher, store security and military police. These skills are acquired through a combination of classroom training and hands-on experience. The program offers job shadowing experiences, featured guest speakers, and field trips. To remain state of the art, the program uses three simulators to create real life experiences.

**Requirements:** You must possess the desire to learn and be of

strong moral character. Many careers in criminal justice are closed to individuals with any arrest history. Due to the required additional training and education beyond high school, this program will require excellent written and oral communication skills, emphasizing high academic standards. Hand/eye coordination, following and applying instructions, problem solving skills, and physical fitness are also strongly encouraged.

## DENTAL HEALTH TECHNOLOGY

**Get the root of your education in Dental Assisting.** By coming to SUN Tech you will be prepared with a variety of hands-on experiences and practical clinical training that will lead to careers as a Dental Assistant and other dental auxiliaries.

**What's in it for you:** By completing this program you will obtain leading edge training in the following areas:

- Earn advanced college level education by participating in dual enrollment through Harrisburg Area Community College to gain an impressive 12 credits.
- Students will participate in a clinical rotation to gain valuable skills, procedures, and patient care for all aspects of the dental profession.
- It also prepares students to take the Pennsylvania Radiology Registration examination through the Dental Assisting National Board (DANB).
- Prepare for emergency situations and health-related experiences.
- Obtain CPR/AED and First Aid Certification.
- Follow OSHA and CDC guidelines for dental professions so that your skills will be current and up to date.
- Target employability skills that will lead to family sustaining wages.

**Description:** As a dental assistant you will learn to prepare patients for treatment, sterilize instruments, practice infection control, prepare materials, and make study models from impressions. You will also be exposed to digital x-ray technology and provide chairside assisting with a local dentist to gain clinical experience.

Program Uniforms required for clinical; certification cost of the Pennsylvania

**Requirements:** Radiology Registration examination through the Dental Assisting National Board (DANB); practical's, tests, quizzes, homework, and completion of clinical rotations

## DIESEL & TRUCK TECHNOLOGY

**Would you like to learn how to service, repair and maintain the trucks that bring you everything that you come in contact with every day?**

If you enjoy solving problems, working with your hands, and learning new things every day, then the Diesel and Truck Technology program may be for you.

See you guidance counselor to schedule a visit to see our program first hand.

**Outcomes:** By developing the skills that are necessary to

maintain and repair today's sophisticated trucks and other Diesel powered equipment you can earn a good starting wage as an entry level technician. You will also have the opportunity to earn college credits through the Penn College Now Program while completing the Diesel curriculum that will help you get a start on furthering your education.

**Description:** The Diesel and Truck Technology course at SUN Tech prepares you for higher education or employment in the field of truck and bus repair or maintaining diesel engines and other related equipment used to power ships, trains, electric generators and construction machinery. A working knowledge of the trade is taught through theory and practice, disassembly of diesel engines, clutches, brakes (hydraulic and air brakes), electrical systems and electronic trouble shooting. If you are trained in Diesel Technology you can secure employment as a technician working on trucks, buses, agricultural and construction equipment. You will be given the opportunity to attain a Pennsylvania Vehicle Safety Inspection license and prepare to take the Automotive Service Excellence (ASE) tests.

**Prerequisites** Along with a strong desire to learn and good work ethic, knowledge in the following academic areas would be to your advantage, but are NOT required: General sciences, Mechanical Drawing, Basic Math, Business Math, Trade Math, and a basic understanding of electronic/ electrical and computers.

**Penn College Now courses that can be completed while studying at SUN Tech include:**

**DSM109 Basic Fuel Systems**  
**DSM141 Heavy Duty Brake Systems**

### **ELECTRICAL SYSTEMS TECHNOLOGY A HIGH PAYING JOB IS WAITING FOR YOU!**

Be a success in life by starting an exciting career in the electrical industry by gaining skills that demand high wages!

By attending the SUN Area Technical Institute's Electrical Systems Technology program you can:

- Learn a skill that will lead to a high paying job.
- Enter a field where skilled technicians are in high demand.
- Earn college credits while in high school.
- Start your own business.

Skills you will acquire in the SUN Tech Electrical Systems Technology program include:

- Electrical Safety
- Learn how to wire a home to meet National Electrical Code requirements.
- Design and troubleshoot motor control circuits used in industry.
- Develop Programmable Logic Control (PLC) programs that control modern day manufacturing processes.
- Gain an understanding of the fundamentals of electricity.

**Outcomes:** After graduation you will be ready to continue your education with advanced placement earned at many institutions of higher learning or you can enter directly into the electrical field with a wealth of knowledge and skills attained in the Electrical Systems Technology class. You will be prepared for positions such as Residential Electrician, Electrician's Assistant, Electrical Maintenance Assistant, Telecom Cabling Assistant, or

a variety of positions related to providing electrical products and services.

**Description:** The Electrical Systems Technology class provides training through a combination of classroom instruction and practical, hands-on assignments. Projects, both within and outside of the school, give you hands-on experience in a safe, supervised environment. You will learn to design and build electrical systems to meet the requirements of the National Electrical Code and OSHA. Emphasis is placed on developing skills used in residential, commercial, and industrial installation, design and repair. Local methods, materials and requirements are taught, therefore making you highly employable.

**Prerequisites:** Good hand-eye coordination, ability to work with tools, manual dexterity, problem solving skills, ability to follow instructions, and good communication skills are needed to succeed in the Electrical Systems Technology class. Knowledge in the following areas will also be to the your advantage, but all areas are not required: Industrial Math, Algebra, General Science, Mechanical Drawing, and Computer Basics.

### **ELECTRONICS TECHNOLOGY**

**Ever picture yourself as an electronic game engineer or technician?** Yes, engineers and technicians are the people who create the hardware and software for gaming systems. Ever thought about controlling robots with iPADS or your phone? You can do it at SUN Area Technical Institute. Imagine yourself designing your own robot and being part of a "team build". You will learn solar and fuel cell basics. Did you ever think that you could repair your own electronic equipment? You can, after your year at SUN! Ever set up a home theater system correctly? You can do all these things and more in the SUN Area Technical Institute's Electronics Technology program.

**Outcomes:** You will develop the skills needed to design and build electronic circuits dealing with computers, robots, audio, video and much more. You can also earn a semester of college credits in the dual enrollment program at SUN. You will enter the workforce or college with a definite advantage over people that do not have any electronic skills.

**Description:** The Electronics Technology course at SUN Tech teaches you the basic laws of electricity and applications of electronic circuitry through study and laboratory experimentation. You will learn the fundamentals of analog and digital electronics as well as proper use of test equipment for both technologies. Throughout the analog section of study you will learn basic nano-fabrication processes that are used to manufacture integrated circuits (computer chips), as well as testing techniques for the technology.

- Learn to use electronic test equipment – meters, oscilloscopes, logic probes, power supplies, simulators
- Create your own circuit designs – amplifiers, digital clocks, car alarms, your own individual designs!
- Work on campus with Penn College instructors – robotics labs – fiber optic labs
- Be challenged at school! Go to the next level! Take a chance on a futuristic industry..... electronics!
- Do different things every day. Build desktop computers, network computers, setup home theater systems, build robots, build laptops, build your own test equipment.

- Repair your own equipment. You will have the skills to fix your broken electronics!
- Complete your first semester of college during your senior year. Start college in your second semester.
- Learn wind, solar and fuel cell basics.

**Requirements:** You must have a desire to understand how electronic devices work and a strong work ethic. Attention to detail and patience are definite assets in this course of study. Talk to your counselor about visiting SUN today.

**PC NOW Courses:** All the Pennsylvania College of Technology (PCT) courses listed below can be completed during your junior/senior year at SUN Technical Institute. Save tuition and housing costs that you would normally pay if you took these courses on campus at Penn College.

EET114	Digital Circuit Applications	1 Credit
EET115	Introduction to Digital Electronics	3 Credits
EET116	Electronic Circuits and Devices I	5 Credits
EET124	Engineering, Technology and Society	3 Credits

### FOOD SERVICE

**Do you want to be the next Food Network Star?** Attending the SUN Tech Food Service Program will put you on the right track to achieving this goal! In America, Service Workers make up 60% of the workforce. SUN Tech's Food Service program will teach you the skills needed to enter the exciting world of culinary arts.

**Outcomes:** As a SUN Area Technical Institute student enrolled in the Food Service Program, you will have the opportunity to learn the skills necessary to work in a variety of food service positions. Your educational experience in this program will prepare you for a career in the food service industry and provide you with the prerequisites to continue your education at a post-secondary school or college in a food-related field. You will have an opportunity to work towards earning your ServSafe Certification; a recognized industry certification increasing your employability. You may also have the opportunity to earn advanced placement credits at the college level. Does working and earning money while enrolled at SUN Tech sound interesting? Food service students may also choose to participate in the Co-op program and work in the food service industry.

**Description:** The SUN Tech Food Service Program will provide you with the skills and experience needed to prepare for an entry-level position in the Food Service industry.

The skills you will learn include:

- Basic operation of a restaurant
- Food preparation
- Safety and Sanitation
- Operation and maintenance of restaurant tools and equipment
- Creating and planning of menus for restaurant and catering functions
- Cooking & Baking
- Customer service including; hosting, serving, and bussing of tables.
- Cost Control

**Requirements:** You must possess a desire to learn and an interest in a career in the food service industry. The program requires strong verbal communication skills and the ability to work with others in a positive manner. Hand-eye coordination

and fine motor dexterity skills are necessary. It is important that you are able to count money, follow instructions, remain flexible to changing routines, and take direction from others.

### HEALTH PROFESSIONALS & RELATED SCIENCES

**HAVE YOU EVER HAD A DREAM TO BE A DOCTOR, NURSE, OR TAKE CARE OF THE ELDERLY?** The Health Professions Program here at SUN Tech allows you to live out your childhood dream. If you like working with the public, show empathy to others, have good communication skills and have a desire to become a health care worker, visit the Health Professions Program at SUN Tech.

**Outcomes:** The skills that you will be taught in the Health Professions Program you will use on a daily basis. You will have the opportunity to earn a Certified Nurse Aide Certification which is valuable whether you choose to enter the work force immediately after graduation or further your education. You can also earn college credits while completing the health curriculum at SUN Tech.

**Description:** The Health Professions program at SUN Tech helps you learn the theory and practical skills required to help prepare you for a career in the health field. You will learn the duties of a Certified Nurse Aide and have the opportunity to perform skills learned as you deliver quality resident care while at our clinical affiliations at a local long term care facility and local community hospital. You will learn the importance of commitment to other members of the health care team. Preparation is primarily in a simulated work environment combined with clinical application. Core subjects to be covered: 150 hour State approved Nurse Aide course, anatomy and physiology, Medical Abbreviations, Medical Terminology, Infection Control and Safety, Basic Nursing, Medical Assistant and Receptionist Skills, CPR/First Aid, Career Exploration, Employability Skills and Leadership.

**Prerequisites:** Knowledge in the following areas would be to your advantage, but are not required: Algebra, Basic Math, Biology, Chemistry, General Sciences, Keyboarding and Communications.

**Program Requirements:** PA-CHRI (Act 34-Criminal Records Check) and FBI report (Act 114-Federal Fingerprinting) is required prior to the first day of class. Uniforms, Physical Exam, TB tests, and Immunization records are also required.

**HACC Course: College in the Technical School:** Classes will be incorporated within the classroom during the day and you will have the opportunity to earn a total of 6 college credits.

**Intro to Allied Health:** Placement Test required  
Biology (Medical Terminology):

### HVAC & PLUMBING TECHNOLOGY

**How would you like to learn more about green energy? Become an HVAC service technician or an HVAC installer of residential or commercial systems!** If this sounds interesting than the HVAC program at SUN AREA TECHNICAL

INSTITUTE is the program for you.

**Outcome:** You can learn the skills necessary to gain employment in the HVAC and plumbing field. Your training will prepare you for residential or commercial installation and or service of all types of heating and air conditioning equipment. The primary goal of the HVAC program is to provide you with theoretical and a practical hands on learning environment. You will have the opportunity to obtain either entry-level employment in the trade or earn advanced placement credits toward furthering your education at many institutions of higher learning while still in high school.

**Description:** HVAC & Plumbing Technology students at SUN Tech learn through classroom instruction and practical shop assignments. You will learn basic system design as well as the installation and servicing of modern HVAC systems through practice in the laboratory or at an actual job site. Emphasis is placed on developing student skills used in residential and commercial installation and repair jobs. Additional training within this trade area is available in green technology learning about solar and geothermal energy. Please contact me at [gsnook@sun-tech.org](mailto:gsnook@sun-tech.org) for more details or visit the [www.sun-tech.org](http://www.sun-tech.org) for more information.

**Requirements:** A successful student must have a desire to learn. You will learn through actively participating in all of the following: individual and team projects, professional development activities, written and practical evaluations, and related in and out of class assignment.

## MASONRY

### WOULD YOU LIKE TO LEARN A HIGH-PAYING AND IN-DEMAND TRADE THAT WILL PROVIDE FOR A GREAT FUTURE?

By attending the Masonry Program at SUN Area Technical Institute, you can learn the skills necessary to enter the Masonry workforce immediately upon graduation, or to advance onto higher education opportunities. Perhaps you want to become a supervisor or even own your own business someday, YOU CAN MAKE IT HAPPEN! Take the first step by contacting your guidance counselor and arranging a visit to the Masonry Program.

### BUILD YOUR FUTURE.... BRICK by BRICK !!

**Outcomes:**

- You will progress through a program where the mastery of new skills will go hand-in-hand with the potential for bigger paychecks.
- Your advancement will not only be measured in terms of dollars, it will also be measured in terms of accomplishment.
- By the time you enter the workforce you will possess literally hundreds of complex construction skills.
- You may even advance as a site foreman, an estimator, or a contractor. It is individual motivation more than anything else that will determine how far you will advance in Masonry.

**Description:** Work in Masonry is a combination of physical and mental activity. Skills to master the tools of the trade along with efficient work habits are what you will learn at SUN. These skills will enable you to construct quality work that will stand the test of time. You will also develop an understanding of mathematics as it relates to building materials as well as blueprint reading, jobsite organization, and jobsite safety.

**Requirements:** You should have physical strength and stamina. If you have a strong desire to learn, and you are not afraid of hard work, this could be the program for you. Contact your guidance department to set-up a visit.

**Advanced**

**Placement :** Up to 12 college credits with Penn College of Technology

**WELDING**

**Start your career with a spark!**

A Professional Welder's career options are nearly endless. Careers range from structural welding and pipe fitting to manufacturing and fabrication. Best of all, the demand for welders worldwide continues to grow. Nine months in the Welding Program will benefit you for the rest of your life.

**Outcomes:** By enrolling in the Welding Program you can learn the skills needed to succeed in this challenging field. If you are interested in furthering your education, you can earn up to 12 Penn College Now credits and advanced placement credits while attending SUN Tech. You may also choose to participate in Co-op and earn pay while being trained.

**Description:** The SUN Tech Welding Program provides you with the hands-on training in all positions and theoretical backgrounds required for an entry-level position in the field of welding. You also have the opportunity to take a certification test (D1.1 or D1.5) at the end of the school year.

**Welding processes you will learn:**

- **Shielded Metal Arc Welding**
- **Gas Metal Arc Welding**
- **Gas Tungsten Arc Welding**
- **Flux Core Arc Welding**
- **Submerged Arc Welding**
- **Oxyfuel Cutting/Welding/Brazing**
- **CNC/Manual Plasma cutting**
- **Blueprint Reading**
- **Nondestructive Testing Methods/Inspection**
- **Fabrication skills**

**Requirements:** You must have a desire to learn. You will learn through actively participating in all of the following: individual and team projects, professional development activities, written and practical evaluations, total quality curriculum, and related in and out of class assignments.

**PC Now Courses:**

WEL114	Shielded Metal Arc I
WEL116	Shielded Metal Arc II
WEL120	Gas Metal Arc I

WEL124 Gas Metal Arc II  
WEL123 Gas Tungsten Arc I

WEL129 Gas Tungsten Arc II  
2 credits