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## **INTRODUCTION**

This COURSE SELECTION GUIDE has been developed to enable students together with the help of their parents, school counselor, and teachers to set educational and vocational goals for themselves. Course selection should not be viewed as a one year at a time exercise, but as a four year long master plan. The high school administration reserves the right to make adjustments as needed to best meet students' academic needs.

## **ODD/EVEN DAY CYCLE**

Sayre Area High School operates on an eight (8) period day with an additional thirty (30) minute lunch period. A normal class load is seven (7) credits. The school schedule revolves around an odd/even schedule. Therefore, one half (1/2) credit courses can meet every other day (odd or even days) for the entire year or every day for a semester or eighteen (18) weeks. One quarter (1/4) credit courses will meet every other day (odd or even days) for a semester or eighteen (18) weeks).

## **SCHEDULING**

Students should begin to develop a plan for after high school: post-secondary education, military, or employment. Students should put time and effort into the course selection process. Scheduling should complement those choices. The selection of courses and area of concentration should be a joint effort involving the student, the parents, and the teachers.

Students or parents who would like a conference with Mrs. Richmond, the School Counselor, are encouraged to contact the Guidance Office at 888-2190.

AFTER THE START OF SCHOOL, STUDENTS WILL BE GIVEN A ONE-WEEK TIME SPAN TO MEET WITH THE SCHOOL COUNSELOR TO DISCUSS PROBLEMS WITH THEIR SCHEDULE. AFTER THAT ONE WEEK PERIOD, ALL SCHEDULES ARE FINAL. **Exceptions will be made and only granted in extreme situations and only with the approval of the high school administration.**

SAYRE AREA JR. SR. HIGH SCHOOL

GUIDANCE OFFICE

331 WEST LOCKHART STREET

SAYRE, PA 18840

(570) 888-2190

School Counselor – Stacy Richmond

Guidance Secretary - Debra Brandt

School CEEB Code – 394375

Web Site – <http://www.sayresd.org>

## **COURSE LEVELS**

Accelerated College Education (ACE): Courses with this description offer college credit through Corning Community College. Students who wish to receive college credit are given the opportunity to pay for the course at a reduced fee or they may take the course for high school credit only with no fee attached, with the exception of materials cost. Students who sign up for an ACE course will be automatically registered through Corning Community College. If a student elects not to take the course for college credit, they need to contact Corning Community College by the deadline (which they will be made aware of). If Corning Community College is not contacted by the drop date, the student will be billed and expected to pay. Advanced Placement (AP): Students who elect this option will receive high school credit but have the option to take an Advanced Placement Exam at the end of the course for possible college credit. **The AP Exam(s) must be paid for by the student in advance of the testing date if the student chooses to take the exam(s).**

Honors (H) – Courses that include more challenging material than the college prep curriculum and require additional in and out of school commitment on the part of the student.

College Prep (CP) – Challenging courses to prepare students for the demands of post-secondary education.

General (G) – Basic level courses for students who plan to go to two year programs (community college, trade, technical, or business school) or enter the work force after graduation.

**STUDENTS ARE PLACED IN THE ABOVE LEVELS BY TEACHER RECOMMENDATION. ANY QUESTIONS REGARDING PLACEMENT LEVEL SHOULD BE DIRECTED TO THE TEACHER.**

## **GRADING SCALE**

<u>Numerical Grade</u>	<u>Letter Grade</u>
93 to 100	A
85 to 92	B
77 to 84	C
70 to 76	D
69 & Below	F

## **SENIOR PROJECT COURSE DESCRIPTION**

The Senior Project is a graduation requirement required of all students by the Pennsylvania State Board of Education. It is designed to represent an exhibition of the skills a senior has learned throughout their high school experience. The project consists of a research/reflective paper, oral presentation, tangible “final product”, and a documentation of at least 30 hours of independent work. An additional 5 hours of community service will need to be completed and documented during the sophomore and junior years. There is no class time assigned to completing the project, but a student is given an advisor and a scheduled presentation date and time. A committee of faculty members reviews the project to determine if it meets the guidelines for graduation. Advisor Mr. Johnston – [djohnston@sayresd.org](mailto:djohnston@sayresd.org)

## COLLEGE PREPARATORY

The College Preparatory program places emphasis on languages, mathematics, social studies and the sciences. This program is tailored to prepare students who wish to continue their formal education at a college or university. While this offering is obviously required for the college bound, it is also valuable for any student who is interested in continuing with an educational program after high school and for students who need to meet eligibility requirements to play a sport in college. It allows for greater career options in later years.

### Grade 9

English 9 CP or H  
American History 1 CP  
Physical Science CP  
Geometry  
French 1 or Spanish 1  
Phys. Ed./MS Office  
One elective \*

### Grade 10

English 10 CP or H  
Global History & Culture I CP  
Biology 10CP  
Algebra 2  
French 2 or Spanish 2  
Phys. Ed./Driver's Ed./21<sup>st</sup> Century Skills Course  
One elective \*

### Grade 11

English 11 CP or H  
Global History & Culture II CP  
Chemistry CP  
Pre-Calculus CP  
Phys. Ed./Health  
Two electives\*

### Grade 12

English 12AP/ACE or English 12CP  
Senior Social Studies  
Physics and/or Biology 2 and/or Chemistry 2  
Calculus H or Statistics CP  
Phys. Ed.  
One elective \*

An elective is any course, which is not specifically required for graduation. Students may choose any elective, provided that they are in the appropriate grade and have completed any pre-requisite.

### ACADEMIC REQUIREMENTS FOR COLLEGE BOUND ATHLETES

In order to be eligible to compete athletically as a freshman in college, you will need to make certain that you meet the academic eligibility requirements of the Athletic Association where you are planning to participate, whether you hope to compete in the NCAA, NAIA, or the NJCAA, you must realize that it's not just athletic talent that determines whether you will be able to participate. Just as important, if not more, are the academic requirements that relate to the course schedule you carry each year in high school. Each Athletic Association has their own initial eligibility standard, which is determined using a combination of required core courses, a core GPA, and a standardized test score. Information and a list of requirements and approved courses can be found at the following web sites:

NCAA -- [www.ncaaclearinghouse.net](http://www.ncaaclearinghouse.net)  
NAIA -- [www.naia.org](http://www.naia.org)  
NJCAA -- [www.njcaa.org](http://www.njcaa.org)

It is strongly recommended that you consider these requirements when planning your schedule.  
(Wire, Rick: The Student Athlete & College Recruiting)

**PLEASE NOTE: General Level Courses do NOT meet core course requirements for the NCAA.**

GRADUATION CREDITS	
Requirements	
4 Credits	English
4 Credits	Social Studies American History Global History & Culture I Global History & Culture II Senior Social Studies
3 Credits	Mathematics
4 Credits	Science
2-1/2 Credits	Health and Physical Education
1/4 Credit	Driver Education
1/4 Credit	21 <sup>st</sup> Century Skills Course
5-1/2 Credits	Electives
1/2 Credit	MS Office
	Graduation Project
24 Credits	Total

Students must be scheduled for a **minimum** of six and one-half (6-1/2) credits per year.

To Be Promoted To Grade	Credits Earned
10	6 Credits
11	12 Credits
12	18 Credits
Graduation	24 Credits

If you choose to repeat a class that you passed, you will earn 0 credits for the second class. You cannot earn another credit in a course you already passed. The only classes that can be repeated for credit are Journalism, Yearbook, Woodshop, Metal Shop, Fitness for Life, Web Page, Instrumental Music and Concert Choir.

## COURSE OFFERINGS

### ENGLISH

English 9 H  
English 9 CP  
English 9 G  
English 10 H  
English 10 CP  
English 10 G  
English 11 H  
English 11 CP  
English 11 G  
English 12 AP/ACE  
English 12 CP  
English 12 G  
Journalism  
Yearbook

### SOCIAL STUDIES

American History 1 CP  
American History 1 G  
Global History & Culture I CP  
Global History & Culture 1 G  
Global History & Culture II CP  
Global History & Culture II G  
Modern American History  
Principals of Economics

### SCIENCE

Science 9 CP  
Science 9 G  
Biology CP  
Biology G  
Chemistry CP  
Chemistry G  
Biology 2 H  
Chemistry 2 H/ACE  
Science Today  
Physics H

### MATHEMATICS

Course 3  
Algebra 1  
Geometry  
Algebra 2  
Pre-Calculus CP  
Statistics CP /ACE  
Calculus H/ACE

### STUDENT ENHANCEMENT

21<sup>st</sup> Century Skills Course

### BUSINESS

Management & Marketing  
MS Office (Grade 9)  
Computer Apps CP/ACE  
FYEX 1000 CP/ACE  
Web Page Design  
Law for Business & Personal Use  
Foundations in Personal Finance

### FOREIGN LANGUAGE

French 1  
French 2  
French 3 CP  
French 4 CP  
Spanish 1  
Spanish 2  
Spanish 3 CP  
Spanish 4 CP

### FAMILY AND CONSUMER SCIENCE

Family & Consumer Science 1  
Family & Consumer Science 2  
Single Living  
Food Service

### INDUSTRIAL ARTS TECHNOLOGY

Wood Shop 1  
Wood Shop 2  
Wood Shop 3  
Metal Shop 1  
Metal Shop 2  
Basic Mech. Drawing/Basic AutoCAD  
Basic Electricity & Electronics

### PRE-ENGINEERING AND ENGINEERING TECHNOLOGY

Design Drawing & Production  
Principles of Engineering  
Digital Electronics  
Computer Integrated Manufacturing  
Civil Engineering & Architecture  
Engineering Design and Development

### MUSIC

Instrumental Music  
Concert Choir  
Music Theory

### PHYSICAL EDUCATION

Driver Education  
Health 11  
Fitness for Life  
Physical Education 9-12

### ART

Design  
Ceramics/Sculpture  
Oil/Water Painting  
Studio Art  
Computer Graphics

### VOCATIONAL-TECHNICAL COURSES

Auto Body Fender & Repair/Collision  
Repair Technology (Dual Enrollment)  
Auto Mechanics  
Building Construction  
Cosmetology  
Computer Networking Technology  
Diesel Mechanics  
Diversified Occupations  
Electrical Occupations  
Food Production, Mgmt & Service  
Health Assistant  
Machine Tool Technology  
Medical Office Technology  
Welding Technology

**ENGINEERING PROGRAM REQUIREMENTS**  
**(COURSES TAUGHT AT WAVERLY HIGH SCHOOL)**

1. Completion of Algebra 1 to begin program and concurrent enrollment in a college level mathematics course for subsequent course
2. You must have a 93% overall average and/or principal or guidance counselor's recommendation.
3. Behavior will be strongly considered.
4. Interview required with principal and guidance counselor prior to enrollment in the program.

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**PRE-ENGINEERING AND ENGINEERING TECHNOLOGY**

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DESIGN DRAWING & PRODUCTION (DDP) (Introduction to Engineering Design)	1 Year	1 Credit	Grades 9-12
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DESIGN DRAWING & PRODUCTION – DDP is an introductory course, which develops student problem solving skills, with emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Students focus on the application of visualization processes and tools provided by modern, state-of-the-art computer hardware and software. The course will emphasize the design development process of a product and how a model of that product is produced, analyzed and evaluated, using a Computer Aided Design System. By qualifying for and passing the college credit exam at the end of this course, the student is eligible to earn 4 transcribed undergraduate credits from Rochester Institute of Technology.

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PRINCIPLES OF ENGINEERING (POE)	1 Year	1 Credit	Grades 10-12
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PRINCIPLES OF ENGINEERING – Prerequisite: Introduction to Engineering Design. POE is a broad-based survey course designed to help students understand the field of engineering and engineering technology and its career possibilities. Fundamental principles of engineering including dynamics and kinematics, machines, hydraulics, pneumatics, thermodynamics and strength of materials are discussed in preparation of the mechanical and civil engineering disciplines. By qualifying for and passing the college credit exam at the end of this course, the student is eligible to earn 4 transcribed undergraduate credits from Rochester Institute of Technology.

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DIGITAL ELECTRONICS (DE)	1 Year	1 Credit	Grades 10-12
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DIGITAL ELECTRONICS – DE is a course of study in applied digital logic. The course is patterned after the first semester course in Digital Electronics taught in two and four year colleges. Students will study the application of electronic logic circuits and devices and apply Boolean logic to the solution of problems. Such circuits are found in watches, calculators, video games, computers and thousands of other devices. The use of smart circuits is present in virtually all aspects of our lives and its use is increasing rapidly, making digital electronics an important course of study for a student exploring a career in engineering or engineering technology. By qualifying for and passing the college credit exam at the end of this course, the student is eligible to earn 4 transcribed undergraduate credits from Rochester Institute of Technology.

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COMPUTER INTEGRATED MANUFACTURING (CIM)	1 Year	1 Credit	Grades 10-12
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COMPUTER INTEGRATED MANUFACTURING (CIM) – This course builds upon the computer solid modeling design skills developed in Introduction to Engineering Design. Students will use Computer Numerical Control (CNC) equipment to produce actual models of their three dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are also included. By qualifying for and passing the college credit exam at the end of this course, the student is eligible to earn 4 transcribed undergraduate credits from Rochester Institute of Technology. (Will be taught alternating years with CEA. **Will be offered 2012/2013 school year.**)

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CIVIL ENGINEERING AND ARCHITECTURE (CEA)	1 Year	1 Credit	Grades 10-12
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CIVIL ENGINEERING AND ARCHITECTURE (CEA) -- Prerequisite: Introduction to Engineering Design. The major focus of the Civil Engineering and Architecture (CEA) course is a long-term project that involves the development of a local property site. As the students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. The course is structured to enable all students to have a variety of experiences that will provide an overview of both fields. Students will work in teams, exploring hands-on projects and activities to learn the characteristics of civil engineering and architecture. By qualifying for and passing the college credit exam at the end of this course, the student is eligible to earn 4 transcribed undergraduate credits from Rochester Institute of Technology. (Will be taught alternating years with CIM. **Will be offered 2013-2014 school year.**)

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ENGINEERING DESIGN AND DEVELOPMENT (EDD)	1 Year	1 Credit	Grade 12
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ENGINEERING DESIGN AND DEVELOPMENT – Prerequisites: Introduction to Engineering Design and Principles of Engineering. In this course, students will work in teams of one to three to design and construct the solution to an engineering problem, (original idea, project need from a community or local business, or a national challenge) applying the principles developed in the four preceding courses. Students will maintain a journal as part of a portfolio of their work. Each team will be responsible for delivering progress reports and making final presentations of their project to an outside review panel, administrators and family. The completed portfolio will be invaluable as students apply to college.

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## LANGUAGE ARTS/ENGLISH

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The following are the grade prerequisites for the selection of ENGLISH courses grades 9 - 12.

1. Honors courses 9 – 12:  
Grade of 93% or English teacher's recommendation.
  2. Advanced/College Prep courses 9 – 12:  
Grade of 85% or English teacher's recommendation.
  3. Students enrolled in a general English class may select an advanced/college prep or an honors course provided they have a 90% average and their English teacher's recommendation.
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ENGLISH 9 H	1 Year	1 Credit	Grade 9
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ENGLISH 9 HONORS. This course is designed for students who have demonstrated advanced reading and composition skills. It includes in-depth analysis of various genres of literature and composition activities to promote scholarly analysis of materials. This course includes activities for building a more mature vocabulary, and implements editing skills that focus on usage and mechanics to improve writing. Written communication as well as professional presentation is the focus of this class. Texts are used as a means to support analytical thought and critical-thinking is modeled and expected. A report card grade of a minimum of 93 in Advanced 8th Grade English or a 95 in Regular 8th Grade English is recommended, in addition to an English teacher's recommendation.

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ENGLISH 9 CP	1 Year	1 Credit	Grade 9
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ENGLISH 9 COLLEGE PREP. This course is designed for students who have demonstrated proficient reading and composition skills. Students are exposed to various genres of literature and composition activities and are taught to analyze material in a scholarly way. Students will engage in activities to promote critical thinking, build a more mature vocabulary, improve editing skills, and encourage professional, scholarly work. Written communication as well as professional presentation is the focus of this class. Texts are used as a means to support analytical thought and critical-thinking is modeled and expected.

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ENGLISH 9 G	1 Year	1 Credit	Grade 9
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ENGLISH 9 GENERAL. This course is designed for students who have demonstrated basic reading and composition skills. This course exposes students to a variety of readings from many literature genres. Effective, professional communication is emphasized in oral and written assignments. This course strives to instill a sense of responsibility and a

respectful appreciation for reading and writing, while helping students to become better readers and writers. Critical thinking strategies are modeled and encouraged.

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ENGLISH 10 H

1 Year

1 Credit

Grade 10

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ENGLISH 10 HONORS. This course is designed for students who have demonstrated advanced levels of proficiency in language-arts skills and who aim for academic challenge through intense language-arts study. Through a thematic exploration of literature, students will refine their critical thinking and critical reading skills as they are asked to make connections between and among various texts. This literature-heavy course will focus on the analysis and evaluation of literary elements and devices in addition to textual features and structure. Emphasis will be placed on inquiry-based learning methods used to help students construct meaning from texts. Written and oral communication will be emphasized through project-based learning opportunities and 21<sup>st</sup> Century research skills will be employed. Finally, students will assess the characteristics and functions of the English language through vocabulary-in-context learning.

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ENGLISH 10 CP

1 Year

1 Credit

Grade 10

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ENGLISH 10 COLLEGE PREP. This course is designed for students who have demonstrated proficient levels of language-arts skills and are seeking a challenging academic learning environment aimed at preparation for post-secondary education. Through a thematic exploration of literature, students will further develop their critical thinking and critical reading skills as they are asked to make connections between and among various texts. As part of an intense study of literature, students will be required to use extended thinking strategies to better develop analytical skills as they focus on the role and function of literary elements and devices in addition to textual features and structures. Inquiry-based learning methods will be used to help students construct meaning from texts. Written and oral communication will be emphasized through project-based learning opportunities and 21<sup>st</sup> Century research skills will be employed. Finally, students will assess the characteristics and functions of the English language through vocabulary-in-context learning.

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ENGLISH 10 G

1 Year

1 Credit

Grade 10

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ENGLISH 10 GENERAL. This course is designed for students who may or may not be seeking post-secondary education but who aim to receive supportive, grade-level instruction in the language-arts in order to enhance reading and writing skills. Through a thematic exploration of literature, students will further develop their critical thinking and critical reading skills as they are asked to make connections between and among various texts. As part of an intense study of literature, students will be required to use extended thinking strategies to work on analytical skills as they focus on the role and function of literary elements and devices in addition to textual features and structures. Inquiry-based learning methods will be used to help students construct meaning from texts. Written and oral communication will be emphasized through project-based learning opportunities and 21<sup>st</sup> Century research skills will be employed. Finally, students will come to understand the characteristics and functions of the English language through vocabulary-in-context learning.

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ENGLISH 11 H

1 Year

1 Credit

Grade 11

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ENGLISH 11 HONORS. This course is designed to challenge the student who has an interest in language and literature. By studying American Literature, students will explore different forms of reading materials including novels, short stories, plays and poetry. By analysis, students will search for the writer's message and express this literary interpretation through oral and written criticism. Students will be assigned formal writing assignments including a referenced research paper.

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ENGLISH 11 CP

1 Year

1 Credit

Grade 11

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ENGLISH 11 COLLEGE PREP. This course combines language, literature, and composition skills. Students practice and apply specific skills in reading, writing, speaking and listening. The course explores American Literature through the reading of novels, short stories, plays and poetry. Vocabulary studies are geared to the SAT. Students complete a referenced research paper.

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ENGLISH 11 G

1 Year

1 Credit

Grade 11

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ENGLISH 11 GENERAL. This course emphasizes practical studies for those students who enter the working world upon graduation or who have had difficulty in advanced English. Extensive work is done to improve grammar, usage and mechanics. The student works to improve reading abilities through short stories and novels. Writing skills focus on compositions, and completing practical business forms, resumes and applications.

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**ENGLISH 12AP/ACE**

1 Year

1 Credit

Grade 12

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**ENGLISH 12 ACE.** The work of the advanced placement course will be on the college level. Reading the works of world authors, probing for ideas and meanings, writing analyses and taking part in lively discussions will offer new experiences in English. Short stories, poetry, essays, novels and drama will be examined. Completion of two research papers is required. Students will be able to take the Advanced Placement Examinations for possible college credit upon completion of this course. Up to 6 credits can be earned from Corning Community College (CCC Course # ACE 1010 College Composition I and ACE 1020 College Composition II).

**All seniors must have a 70% or higher in both of their ½ credit courses. The two grades do NOT get averaged together.**

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**ENGLISH 12 CP LITERATURE**

½ Year

½ Credit

Grade 12

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**ENGLISH 12 COLLEGE PREP LITERATURE.** An intense study of literature from a variety of historical contexts and genres is the foundation of this course, designed to prepare the student for college level work after graduation. Students will engage in a sophisticated study of advanced literary techniques and devices as well as consideration of various perspectives through literary criticism. In addition, students will extend their thinking by developing thesis-driven, evidence-supported writing for an array of audiences. An emphasis will be placed on scholarly, authentic, and research-based writing. This course alternates with 12 COLLEGE PREP COMPOSITION.

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**ENGLISH 12 CP COMPOSITION**

½ Year

½ Credit

Grade 12

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**ENGLISH 12 COLLEGE PREP COMPOSITION.** An intense study of composition from a variety of historical contexts and genres is the foundation of this course, designed to prepare the student for college level work after graduation. Students will engage in a sophisticated study of advanced writing techniques and devices. In addition, students will extend their thinking by developing thesis-driven, evidence-supported writing for an array of audiences. An emphasis will be placed on scholarly, authentic, and research-based writing. This course alternates with 12 COLLEGE PREP LITERATURE.

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**ENGLISH 12 G LITERATURE**

½ Year

½ Credit

Grade 12

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**ENGLISH 12 GENERAL LITERATURE.** A study of literature from a variety of historical contexts and genres is the foundation of this course, designed to prepare the student for life after graduation. Students will engage in a study of advanced writing techniques and devices between and among texts. In addition, students will extend their thinking by developing thesis-driven, evidence-supported writing for an array of audiences. An emphasis will be placed on scholarly, authentic, and research-based writing. This course alternates with 12 GENERAL COMPOSITION.

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**ENGLISH 12 G COMPOSITION**

½ Year

½ Credit

Grade 12

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**ENGLISH 12 GENERAL COMPOSITION.** A study of composition from a variety of historical contexts and genres is the foundation of this course, designed to prepare the student for life after graduation. Students will engage in a study of advanced writing techniques and devices between and among texts. In addition, students will extend their thinking by developing thesis-driven, evidence-supported writing for an array of audiences. An emphasis will be placed on scholarly, authentic, and research-based writing. This course alternates with 12 GENERAL LITERATURE.

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**JOURNALISM**

1 Year

1 Credit

Grades  
9-12

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**JOURNALISM.**

- Prerequisite: English Teacher recommendation and a C average or higher in English.

This course is for the student with an interest in writing for publication. The class takes an in-depth look at journalism and mass communications. Students produce a school newspaper, *The Express*, using basic reporting and photojournalism skills. Students also contribute to the school's district-wide newsletter, *The Redskin Review*. After the successful

completion of Journalism 1 and the instructor's recommendation, students may continue their study by taking Journalism 2 and Journalism 3. These students will be expected to take leadership positions in the class and on school publications.

YEARBOOK	1 Year	1 Credit	Grades 9-12
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YEARBOOK.

- Prerequisite: Instructor's approval and C average or higher in English

This independent study course will produce the school's yearbook, *The Sayrenade*. Students must have a C average or higher in English and the recommendation of the class instructor. The class will work independently on producing the yearbook by writing stories, taking photographs and designing yearbook pages.

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**SOCIAL STUDIES**

AMERICAN HISTORY CP	1 Year	1 Credit	Grade 9
AMERICAN HISTORY G	1 Year	1 Credit	Grade 9

AMERICAN HISTORY. American History traces American social, political, economic and geographic development from 1900 to 2000's. It emphasizes evolution of themes in response to continuously changing historical demands and conditions. Individual differences are served through the depth of coverage and type of tests.

GLOBAL HISTORY & CULTURE I CP	1 Year	1 Credit	Grade 10
GLOBAL HISTORY & CULTURE 1 G	1 Year	1 Credit	Grade 10

GLOBAL HISTORY & CULTURE 1. This class will look at the development of western culture starting with the first recognized civilizations in the area of Mesopotamia. It will then follow the spread of civilization from the Persian Empire to Greece, Hellenistic Society, and then the Roman Empire. From the collapse of Rome the focus will be on the development of European history including the Byzantine Empire, Russia, the Middle Ages, Renaissance and decline of feudalism, the influence of the Ottoman Empire, Spain and Portugal's rise and exploration, and finally the ideas of absolutism, enlightenment, and the first global wars. The class will conclude with the state of European culture and politics at the eve of the French Revolution.

GLOBAL HISTORY & CULTURE II CP	1 Year	1 Credit	Grade 11
GLOBAL HISTORY & CULTURE II G	1 Year	1 Credit	Grade 11

GLOBAL HISTORY & CULTURE II. Global History & Culture II is intended to give the student a global and interdisciplinary study of the geography, history and culture of regions throughout the world. Also, this course will stress on awareness of the world's traditions and current problems of mankind.

SENIOR SOCIAL STUDIES

**All seniors must have a 70% or higher in both of their ½ credit courses. The two grades do NOT get averaged together.**

MODERN AMERICAN HISTORY	1/2 Year	½ Credit	Grade 12
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MODERN AMERICAN HISTORY. This course is intended to give the student a comprehensive study of the people, places and events of the Modern American history era covering the time period from 1945 - present. The course will focus on foreign relations, culture and diversity as it relates to America becoming a world power.

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**ECONOMICS**

1/2 Year

½ Credit

Grade 12

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**ECONOMICS.** This course will examine how individual decision makers, both consumers and producers, and their behaviors affect the larger economic system. Scarcity of resources, the supply and demand for goods and services, and the role of the government in the market will be the primary emphasis. This course will give you, the individual consumer, the opportunity to learn about how economic factors affect consumer transactions, business transactions, and the everyday lives of American citizens.

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**MATHEMATICS**

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**COURSE 3**

1 Year

1 Credit  
(Grades 9-12)

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**COURSE 3.**

The early units of Course 3 focus on rational numbers and their operations, equations and inequalities. You will build understanding of these concepts using models, such as algebra tiles, number lines, and verbal models. You will also apply your skills to problem-solving situations and use estimation to check reasonableness. Topics from math strands, such as real number properties, geometric formulas, and averages are introduced early in the course and then integrated and expanded upon throughout.

Later units include topics such as linear equations and their graphs, properties of right triangles, geometric transformations, and probability. The number and variety of problems, ranging from basic to challenging, give you the practice you need to develop your math skills.

Every lesson has both skill practice and problem solving, including multi-step problems. These types of problems often appear on standardized tests (like the Keystone Exams) and cover a wide variety of math topics. To help you prepare for standardized tests, Course 3 provided instruction and practice on standardized test questions in many formats – multiple choice, short response, extended response, and so on. Technology support for course content and standardized test preparation is available throughout the course at [classzone.com](http://classzone.com).

- Passing score on Course 2 final exam.
- Scientific calculators are useful, but not required, for successful completion.
- Completion of daily assignments is required for successful completion.
- Curriculum reflects PA Assessment Anchors and Eligible Content.

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**ALGEBRA 1**

1 Year

1 Credit

Grades 9-12

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**ALGEBRA 1.**

Algebra 1 is organized around families of functions, with special emphasis on linear and quadratic functions. As you study each family of functions, you will learn to represent them in multiple ways – as verbal descriptions, equations, tables, and graphs. You will also learn to model real-world situations using functions in order to solve problems arising from those situations.

In addition to algebra content, Algebra 1 includes lessons on probability and data analysis as well as numerous examples and exercises involving geometry. These math topics often appear on standardized tests (like the Keystone Exam), so maintaining your familiarity with them is important. To help you prepare for standardized tests, Algebra 1 provides instruction and practice on standardized test questions in a variety of formats – multiple choice, short response, extended response, and so on. Technology support for both learning algebra and preparing for standardized tests is also available throughout the course at [classzone.com](http://classzone.com).

- Passing score on Course 3 final exam.
- Graphing calculators are useful, but not required, for successful completion.
- Completion of daily assignments is required for successful completion.
- Curriculum reflects PA Assessment Anchors and Eligible Content.

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**GEOMETRY**

1 Year

1 Credit

Grades 9-12

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**GEOMETRY.**

In Geometry, you will be develop reasoning and problem-solving skills as you study topics such as congruence and similarity, and apply properties of lines, triangles, quadrilaterals, and circles. You will also develop problem-solving skills by using length, perimeter, area, circumference, surface area, and volume to solve real-world problems.

In addition to geometry content, Geometry includes numerous examples involving algebra, data analysis, and probability. These math topics often appear on standardized tests (like the Keystone Exam), so maintaining your familiarity with them is important. To help you prepare for standardized tests, Geometry provides instruction and practice on standardized test questions in a variety of formats – multiple choice, short response, extended response, and so on. Technology support for both learning algebra and preparing for standardized tests is also available throughout the course at [classzone.com](http://classzone.com).

- Passing score on Algebra 1 final exam/Algebra 1 Keystone Exam.
- Graphing calculators are useful, but not required, for successful completion.
- Completion of daily assignments is required for successful completion.
- Curriculum reflects PA Assessment Anchors and Eligible Content.

## ALGEBRA 2

1 Year

1 Credit

Grades 10-12

### ALGEBRA 2.

Algebra 2 is organized around families of functions, with special emphasis on linear and quadratic functions. As you study each family of functions, you will learn to represent them in multiple ways – as verbal descriptions, equations, tables, graphs, and matrices. You will also learn to model real-world situations using functions in order to solve problems arising from those situations.

In addition to algebra content, Algebra 2 includes lessons on probability and data analysis as well as numerous examples and exercises involving trigonometry. These math topics often appear on standardized tests (like the Keystone Exam), so maintaining your familiarity with them is important. To help you prepare for standardized tests, Algebra 2 provides instruction and practice on standardized test questions in a variety of formats – multiple choice, short response, extended response, and so on. Technology support for both learning algebra and preparing for standardized tests is also available throughout the course at [classzone.com](http://classzone.com).

- Passing score on Geometry final exam/Geometry Keystone Exam.
- Graphing calculators are useful, but not required, for successful completion.
- Completion of daily assignments is required for successful completion.
- Curriculum reflects PA Assessment Anchors and Eligible Content.

## PRE-CALCULUS CP

1 Year

1 Credit

Grades 11-12

### PRE-CALCULUS CP.

This course is a thorough and comprehensive treatment of pre-calculus mathematics. Topics from algebra, geometry, trigonometry, discrete math, probability, and statistics are interwoven to form a fully integrated fourth course of high school mathematics.

Topics explored include trigonometric equations, common and natural logarithms, angular velocity, conic sections, combinations, permutations, systems of inequalities, sinusoidal equations, normal distributions, boxplots, stemplots, linear variation, antilogarithms, logarithmic equations, simple probability, arithmetic and geometric means, exponential growth and decay, and the rational root theorem. Word problems will be developed through the problem sets. All students will be required to learn math vocabulary.

- Passing score on Algebra 2 final exam/Algebra 2 Keystone Exam.
- TI-83/TI-84 graphing calculator is mandatory for successful completion.
- Fast paced and very challenging.
- For students intending on post-secondary education.
- Completion of daily assignments is required for successful completion.
- Curriculum reflects PA Assessment Anchors and Eligible Content.

## STATISTICS CP/ACE

1 Year

1 Credit

Grades  
11, 12

### STATISTICS CP/ACE.

Statistics is for 11/12<sup>th</sup> grade students. Seniors may take Statistics concurrently with H/ACE Calculus. The course will stress the development of statistical thinking skills. Students will be introduced to the world of statistics and will later be required to compile data for analysis. This is an introductory course designed to provide basic statistical techniques to all students leaving high school. All students will be required to learn math vocabulary and mathematical terminology specific to the course. This course will also involve specific topics such as one-variable and two-variable analysis, regression, association, correlation, boxplots, stemplots, variance, standard deviation, normal distributions, binomial distributions, chi-square distributions

- Passing score on any Algebra 2 final exam/Algebra 2 Keystone Exam.
- TI-83/TI-84 graphing calculator is mandatory for successful completion.
- Completion of daily assignments is required for successful completion.

- For students intending on post-secondary education.
- Expect college-level content, thinking and work load.
- Curriculum reflects Corning Community College's requirements for MA 1310.
- Successful completion could earn four (4) college credits.

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CALCULUS H/ACE

1 Year

1 Credit

Grade 12

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CALCULUS H/ACE.

This course is taught through Corning Community College as an ACE course (CCC Course MA1610); students can earn 4 credits through the college. Topics covered include, but are not limited to, various pre-calculus review topics, limits, derivatives, integrals, techniques of differentiation, techniques of integration, applications of differentiation, applications of integration, and separable differential equations.

- Passing score on Pre-Calculus CP final exam.
- TI-89 graphing calculator is mandatory for successful completion.
- Completion of daily assignments is required for successful completion.
- For students intending on post-secondary education.
- Expect college-level content, thinking and work load.
- Curriculum reflects Corning Community College's requirements for MA 1610.
- Successful completion could earn four (4) college credits.

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**SCIENCE**

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SCIENCE 9 CP

1 Year

1 Credit

Grade 9

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SCIENCE 9 COLLEGE PREP.

- Prerequisite - grade of 85% or above in Science 8
- Suggested: Algebra I or Algebra I concurrent
- **All science courses meet the Pennsylvania Science Standards. Students will need to complete class work, homework, laboratory activities, quizzes, tests/exams, and special projects as assigned by their teacher. Notebooks are required in most classes.**

This course offers an introduction to scientific laws and principles and their applications. Areas of study will include topics in the fields of ecology and physics. Special concentration is given to the integration of these fields of study. Units will include forces and motion, forms of energy (light, sound, etc.), pollution (air, water, land) and agricultural topics.

SCIENCE 9 G

1 Year

1 Credit

Grade 9

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SCIENCE 9 GENERAL.

- **All science courses meet the Pennsylvania Science Standards. Students will need to complete class work, homework, laboratory activities, quizzes, tests/exams, and special projects as assigned by their teacher. Notebooks are required in most classes.**

This course is designed to make students aware of basic scientific laws and principles and how these play a role in our daily life. Areas of study will include topics in the fields of ecology and physics. Special concentration is given to the integration of these fields of study. Units will include forces and motion, forms of energy (light, sound, etc.), pollution (air, water, land) and agricultural topics.

BIOLOGY G

1 Year

1 Credit

Grade 10

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BIOLOGY GENERAL.

This course is designed to provide a foundation for understanding the fundamental characteristics and functions of living things. Areas of study include: ecology, chemistry, cell, genetics, evolution, and classification. Labs are included. Participation in lab is required.

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BIOLOGY CP

1 Year

1 ½  
Credits

Grade 10

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BIOLOGY COLLEGE PREP.

- Recommended - 85% or higher in Science 9 CP **OR** 93% or higher in Science 8CP.
- Participation in lab is required.

This course is designed to meet college entrance requirements, providing an introduction to the concepts of biology, which include ecology, chemistry, cellular biology, cellular respiration, cellular reproduction, genetics, evolution, and classification. Students taken this course have class every day with a separate lab period built in every other day.

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BIOLOGY 2H

1 Year

1 ½  
Credits

Grade 12

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BIOLOGY 2 HONORS.

- Prerequisite –Biology CP or recommendation by instructor. Recommend concurrent with Physics.
- Prerequisite – Grade of 85% or higher in Biology CP.
- Participation in lab is required.
- Good lab techniques and study skills are required.

This course provides in depth coverage of topics covered in Biology 10. Topics include: biochemistry, cell, cellular respiration, photosynthesis, cellular reproduction, genetics, gene expression and biotechnology, evolution, classification review, and an introductory study of anatomy and physiology.

Students taking this course can take the AP Biology exam offered in the spring (cost approx. \$80.00) to possibly earn 3 college credits (check with your colleges of interest to see if they accept AP Biology credits).

Students planning on furthering their education in medical or biologically related fields are encouraged to enroll in this course.

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CHEMISTRY G

1 Year

1 Credit

Grades 11, 12

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CHEMISTRY - GENERAL.

This course gives students hands-on experience in concepts of Chemistry. Areas of study include natural resources, food and pollution.

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CHEMISTRY CP

1 Year

1 ½ Credits

Grade 11

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CHEMISTRY COLLEGE PREP.

- Student will have an overall average of at least an 85% in Biology CP or 90% in Biology G.
- Prerequisite - successful completion of Algebra 1 or Algebra 2 concurrent.
- Lab periods are required.

This course introduces the student to the basic concepts of atomic theory and bonding. Stoichiometric relationships are utilized throughout the course. Emphasis is placed on understanding basics such as chemical symbols, formulas, chemical reactions, periodic table, gas laws, acids and bases.

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CHEMISTRY 2 H/ACE

1 Year

1 ½ Credits

Grade 12

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CHEMISTRY 2 HONORS/ACE.

- Prerequisites– Grade of 85% or above in Chemistry College Prep.
- Algebra 2 or higher.
- Students must purchase Lab Manual and approved Textbook (\$150.00 estimated cost).

This course is an extension of Chemistry 1 CP, with topics in the following units: thermochemistry, quantum theory, electron configurations, periodic trends, and bonding. The following units will be newly introduced: molecular geometry, colligative properties, kinetics, acid/base, oxidation reduction, electrochemistry, and equilibrium. The course follows the curriculum approved by Corning Community College as an ACE course (CCC Course # CHEM 1510 General Chemistry I

and Course # CHEM 1520 General Chemistry II) and a lab manual and course approved textbook are required and must be purchased by the students at an estimated cost of \$150.00. In addition, students taking the course can receive 8 credits through the college.

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SCIENCE TODAY

1 Year

1 Credit

Grade 12

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SCIENCE TODAY. This course is designed to explore key themes of current science interest. The integrated science course will apply the scientific principles to everyday life. It will explore science-related questions and technologies that will affect the social, political, and economic aspects of your life now and in the future.

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PHYSICS H

1 Year

1 ½ Credits

Grade 12

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PHYSICS HONORS.

- Prerequisites - successful completion of Algebra 2 with an average of 90% or higher - completion of Pre-Calculus would be advantageous but is not necessary.
- Recommendation of last Math teacher.
- Completion of daily homework assignments is required.
- Completion of assigned laboratory experiments.

The Saxon physics book was written with both the average and honors student in mind. The subject is taught at an introductory level, which will allow the average high school student to grasp the concepts of Newton's laws, static, dynamics, thermodynamics, optics, DC circuits, waves, electromagnetic, and spatial relativity. The subjects are covered to a depth appropriate for college students majoring in non-engineering disciplines. This program focuses on the solving of physics problems and the student must be diligent in completing the homework assignments. The abilities of each class will determine the extent to which this book will be covered.

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**FOREIGN LANGUAGE**

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FRENCH 1

1 Year

1 Credit

Grades  
9-12

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FRENCH 1.

French 1 attempts from the outset to bring the student to an acceptable understanding of the spoken word, to speak with grammatical accuracy, and to begin to understand and appreciate cultural differences in our societies.

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FRENCH 2

1 Year

1 Credit

Grades  
9-12

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FRENCH 2.

French 2, introduced in Grade 10, although placing stress on the audio lingual skills of foreign language learning, lends more emphasis to reading and writing, and continues to blend essential cultural knowledge into the program.

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FRENCH 3 CP

1 Year

1 Credit

Grades  
10,11,12

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FRENCH 3 – COLLEGE PREP. Students, without exception, must have achieved a final average of 85% or higher in French 2 to go on to French 3. French 3 continues with the audio-lingual approach, making heavier demands on the skills of reading and writing. At this level, all four language skills (listening comprehension, speaking, reading and writing) are challenged by the more advanced concepts of the French language. Cultural materials continue to be an integral part of the program.

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FRENCH 4 CP

1 Year

1 Credit

Grades  
11,12

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FRENCH 4 – COLLEGE PREP. Students, without exception, must have achieved a final grade of 85% or higher in French 3 to go on to French 4 **AND** teacher recommendation. At this level the reading and writing are, by necessity, much more sophisticated and demanding. The student will be able to understand and speak with more grammatical accuracy and with very good pronunciation. He/She will be able to write ideas they would like to express, utilizing concepts which have been taught during the course of his/her foreign language training.

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SPANISH 1

1 Year

1 Credit

Grades  
9-12

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SPANISH 1. Spanish 1 attempts from the outset to bring the student to an acceptable understanding of the spoken word, to speak with grammatical accuracy and with good pronunciation, to write with grammatical accuracy, and to begin to understand and appreciate cultural differences in our societies.

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SPANISH 2

1 Year

1 Credit

Grades  
9-12

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SPANISH 2. Spanish 2 introduced in Grade 10, although essentially placing stress on the audio lingual skills of foreign language learning, lends more emphasis to reading and writing, and continues to blend essential cultural knowledge into the program.

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SPANISH 3 CP

1 Year

1 Credit

Grades  
10,11,12

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SPANISH 3 – COLLEGE PREP. Students, without exception, must have achieved a final average of 85% or higher in Spanish 2 to go on to Spanish 3. Spanish 3 continues with the audio-lingual approach, making heavier demands on the skills of reading and writing. At this level, all of the four language skills (listening comprehension, speaking, reading, and writing) are challenged by the more advanced concepts of the Spanish language. Cultural materials continue to be an integral part of the program.

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SPANISH 4 CP

1 Year

1 Credit

Grades  
11,12

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SPANISH 4 – COLLEGE PREP. Students, without exception, must have achieved a final average of 85% or higher in Spanish 3 to go on to Spanish 4. At this level the reading and writing are, by necessity, much more sophisticated and demanding. The student will be able to understand and speak with more grammatical accuracy and with good pronunciation. He/she will be able to write ideas they would like to express, utilizing concepts which have been taught during the course of his/her foreign language training.

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## STUDENT ENHANCEMENT

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21<sup>ST</sup> CENTURY SKILLS COURSE

½ Year

¼ Credit

Grade 10

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21<sup>ST</sup> CENTURY SKILLS COURSE. This specialized course is designed to present students with practical, real-world learning opportunities that will help them be competitive in the 21<sup>st</sup> Century world. For immediate preparation, test-taking skills will be covered to familiarize all students with test formats and strategies for impending assessments. Oral communication skills will be an area of emphasis as students learn to use effective speech and formal presentation strategies purposefully and succinctly to reach an intended audience. Written communication will center on developing, editing and publishing informational genres through authentic, career-focused tasks such as resume creation. To engage in responsible digital citizenship students will use, access and manage appropriate technology and media for these learning purposes.

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## BUSINESS

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### MS OFFICE

1 Year      ½ Credit      Grade 9

MS OFFICE. This course is designed to teach students advanced word processing, database management, graphics presentation and spreadsheet development. This is a one-half credit course required for graduation.

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### LAW FOR BUSINESS AND PERSONAL USE

1 Year      1 Credit      Grades 10, 11, 12

LAW FOR BUSINESS AND PERSONAL USE. Explore the foundations of business law, while introducing personal law topics that interest students. LAW FOR BUSINESS AND PERSONAL USE combines strong content with interactive technology and video to maintain student interest and support active learning. Coverage includes contracts, criminal law, consumer protection, wills and estates, marriage and divorce, property law, agency, employment contracts, unions, commercial paper, and credit obligations. Each chapter is divided into short, easy-to-handle lessons, setting a comfortable learning pace. With more than 1,000 cases, there's never a shortage of opportunities for case analysis and research.

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### MANAGEMENT AND MARKETING

1 Year      1 Credit      Grades 10, 11, 12

MANAGEMENT AND MARKETING. Management serves as a one-semester course for marketing and business management students. Using topics in the sports and entertainment industries, the text and multimedia supplements cover the basic functions of management as outlined in national and state standards. Management topics discussed in the 12 chapters include leadership, finance, product management, people management, information management, legal and ethical issues, customer relations, sales management, managing change, and career development. This course reinforces essential application skills, such as word processing, desktop publishing, spreadsheets, databases, and electronic presentations. This intermediate/advanced simulation is different from other typical document production simulations in that it provides students unique opportunities to go beyond the basics as they apply creativity in problem solving, decision making, flexibility and more. The second half of the year, Marketing, takes you on a step-by-step journey through the world of marketing. Students encounter and learn about the key functions of marketing and how those functions are applied to sports and entertainment. Each marketing function is incorporated throughout the text.

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### WEB PAGE DESIGN

1 Year      1 Credit      Grades 10, 11, 12

WEB PAGE DESIGN. This course uses HTML and Dream Weaver programs to learn how to do web pages. Emphasis will focus on updating and maintaining the district web page. The use of scanners and the digital camera will also be included.

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### COMPUTER APPS CP/ACE

1 Year      1 Credit      Grades 11, 12

COMPUTER APPLICATIONS COLLEGE PREP/ACE. Approval from Mrs. Cole is required.

This course may be taken for 4 ACE credits through Corning Community College (CCC Course # CSIT 1390 – Computer Literacy and Microcomputer Applications) and is designed for the college bound student. This advanced course covers the entire Microsoft Office 2007 suite. This includes the advanced features of Word, Excel, Access, and Power Point. Students will also learn about networking basics, file management, digital media, and Information Systems Analysis & Design.

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### FYEX 1000 CP/ACE – First Year Ex.

1 Year      1 Credit      Grades 11, 12

FYEX 1000 COLLEGE PREP/ACE – FIRST YEAR EXPERIENCE. Approval from Mrs. Cole is required.

This course facilitates intellectual and social integration of first-year students into the academic community. The course provides specific methods and strategies which students may adopt to promote personal growth and success both in the college environment and throughout life. This course may be taken for 3 ACE credits through Corning Community College (CCC Course # FYEX 1000 – First Year Experience).

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FOUNDATIONS IN PERSONAL  
FINANCE

1 Year

½ Credit

Grades  
11, 12

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FOUNDATIONS IN PERSONAL FINANCE.

Foundations in Personal Finance is a premier course for teaching students financial literacy. Topics are presented in an easy-to-understand manner. There are three assessments per chapter, a quarterly unit exam, and a comprehensive final exam. The course uses 72 case studies and over 70 activities that employ the very latest in research based learning strategies

Unit 1: Savings, Understanding Investments, Wealth Building, and College Planning  
Unit 2: Dangers of Debt, Consumer Awareness, Credit Bureaus, and Collection Practices  
Unit 3: Budgeting 101, Bargain Shopping, and Relating with Money  
Unit 4: Careers, Employment Taxes, Ins and Outs of Insurance, Real Estate, and Mortgages

- Desire to understand how to win with money and help others.
  - Class meets every other day for the whole school year.
  - Curriculum reflects all State and National Standards for Financial Literacy.
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**ART**

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DESIGN

1 Year

1 Credit

Grades  
9-12

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DESIGN.

- For academic success in the field of art the student must achieve a passing grade based on the average of their project grades, art reports, homework, and classroom effort.

This course includes advanced problems dealing with art and design concepts and media in several different areas to be used at the student's discretion in a studio setting. These areas include creative design, drawing, lettering, advertising, figure study, cartooning, graphics, composition elements, calligraphy, computer graphics, and an opportunity for exploration. This class is recommended to be the first studio art class of the art course of study, but it is not required. Upon successful completion of this course, students will be prepared and allowed to select any avenue of art studio available within the art curriculum. A student sketchbook based on creativity is required as well as completed art history worksheets and tests per semester with emphasis on periods of art and its effect on today's culture.

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CERAMICS/SCULPTURE

1 Year

1 Credit

Grades  
10,11,12  
9\*

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CERAMICS/SCULPTURE. This course is designed for all students with a desire to gain knowledge or to improve their skills in three-dimensional art. The course includes a guided experience in ceramics and sculpture which includes directed lessons in all major techniques and concepts involved with the media such as coil, slab, hand building, pewter casting, plaster construction, assemblage, cardboard construction, clay, armature construction, wheel throwing, and an opportunity to design and create a project based on their skills developed. Weekly sketches and art history reports are required per semester with emphasis on periods of art and its effect on culture today.

- Available to 9th grade students if not able to schedule Design.

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OIL PAINTING/  
WATER BASE MEDIA

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1 Year

1 Credit

Grades  
10,11,12

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OIL PAINTING/WATER BASE MEDIA.

- Recommended - Design or Ceramics/Sculpture

This course is designed for all students with a desire to gain knowledge or to improve their skills in painting. The course includes a guided experience with directed lessons in the three main areas of painting, watercolors, acrylics and oil painting, with variations and opportunity for individual experimentation. Emphasis is placed on the understanding of the various approaches and techniques rather than the resulting product. The intent is not to create artists out of all of our students; it is to have our students understand the process of painting. Creative sketches and art history worksheets are also required in this course for creative development and artistic enrichment.

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COMPUTER GRAPHICS

1 Year

1 Credit

Grade 11,12

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COMPUTER GRAPHICS.

The course of study involved with this studio option is centered around the techniques and options needed to create computer graphic images: using software available, using layers, importing images/sounds, manipulating images, creating GIF animations, and flash movies. Digital movies are the focus for the second half of the year which covers filming and editing.

\*Emphasis will be placed on design and understanding of processes used to make images that can be used in pragmatic applications (i.e. Web-Pages, Reports, School-Related applications).

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STUDIO ART

1 Year

1 Credit

Grade 12

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STUDIO ART.

- Recommended - Design and Painting or Ceramics/Sculpture **and** teacher recommendation required.

This is a course for the highly motivated student interested in the serious study of art. Every student will be expected to develop a quality portfolio and exhibit a senior show of their work before the end of their senior year. Projects are developed through research development production and presentation stages. All work must be of an advanced art student quality to be accepted. Students work in an independent study studio environment with two graded finished projects due per semester. Projects are required to be matted, framed or mounted to be considered complete at this level. Creative development, art history worksheets and tests are required per semester for artistic enrichment. Students are required to post their work on the Art Department Wikispace on a regular basis during each semester for administrative review of progress.

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**MUSIC**

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INSTRUMENTAL MUSIC

1 Year

.5 or  
1 Credit

Grade 9-12

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INSTRUMENTAL MUSIC. This course is designed for students in grades 9-12 able to play a musical instrument. Emphasis is on ensemble performance and individual improvement and facility on a musical instrument. This course also develops aesthetic sensitivity, basic musicianship, and an appreciation of various musical styles. Students will perform in the concert band and have the option to join the marching band, jazz ensemble, and/or chamber ensembles. Students will complete written and played assessments related to the concert band literature. Literature will be chosen from a range of styles, historical periods, and cultures. Three public performances are mandatory (winter and spring concerts and the HS graduation ceremony). Students are required to attend one group/private lesson each week and held accountable for the condition of all music, instruments, and equipment. Previous instrumental experience required or permission of director.

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**CONCERT CHOIR**

1 Year

.5 or  
1 CreditGrades 9-12

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**CONCERT CHOIR.** This course is designed for students who enjoy singing and are interested in improving vocal technique and musicianship. Emphasis is on both ensemble and individual vocal growth. Students will be introduced to various styles of music, from various musical periods and will sing both English and foreign language literature. Proper breathing, vocal technique, diction, and overall musicality will be emphasized through the learning of the selected pieces. Grading is based upon rehearsal attendance, rehearsal behavior and contribution, required public performances, group lesson attendance as well as some written work. Students are required to own professional black and white garments as attire for all performances, unless noted.

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**FAMILY & CONSUMER SCIENCE**

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**FAMILY & CONSUMER  
SCIENCE 1**

1 Year

1 Credit

Grades  
9-12

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**FAMILY & CONSUMER SCIENCE 1.** The curriculum in Family and Consumer Science I will include the following topics: Food Science and Nutrition, Child Development - focusing on readiness through 1 year old, Balancing Family, work and community responsibilities and Financial and Resource Management. One marking period will be spent on each area.

**FAMILY & CONSUMER  
SCIENCE 2**

1 Year

1 Credit

Grades  
10,11,12

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**FAMILY & CONSUMER SCIENCE 2.** Prerequisite: Family & Consumer Science 1.

This is a full year course that will build on information learned in Family and Consumer Science I. The topics covered will be Advanced Food Science and Nutrition – taking a closer look at meal planning principles, food processing and diets to improve health conditions. The Child Development unit will focus on new research in understanding children and parenting, how to successfully meet the needs of children and community resources that impact child development, Financial and Resource management and strengthening family relationships.

**FOOD SERVICE**

1 Year

1 Credit

Grades  
11,12

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**FOOD SERVICE.** Prerequisite: Family & Consumer Science 2.

This is a full year course designed for students interested in a career in the Food Service industry. Teamwork, creativity and exploration with food are essential to be successful in this class.

**SINGLE LIVING**

1 Year

1 Credit

Grades  
11, 12

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**SINGLE LIVING.** This course is designed to assist students with completing their Senior project AND in making the transition to independent living. The topics covered will be budgeting, savings and checking accounts, renting an apartment, buying a car, types of insurance, career search, resumes, job/college applications

The second semester will consist of Food Science and Nutrition, focusing on preparing healthy meals, practical meal planning, comparison shopping and fitness.

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## INDUSTRIAL ARTS TECHNOLOGY

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METAL SHOP 1

1 Year

1 Credit

Grades  
9-12

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METAL SHOP 1. This is a full year (2 semesters) course for students interested in working with metal and metal fabrication. There are weekly quizzes on materials and machines used in this course. Topics covered will be: sheet metal work and tools, heat treating, foundry casting aluminum, wrought iron work, and different welding techniques. There are mandatory projects that must be completed throughout the course of the school year. Before starting any new project a Bill of Materials MUST be completed by student. Students are responsible for the cost of all materials used for their projects.

**Daily Requirements:** a writing utensil and a three ring binder dedicated to this class.  
Cooperation and participation.

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METAL SHOP 2

1 Year

1 Credit

Grades  
10-12

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**!!!!!! Prerequisite: Passing Metal Shop 1 and teacher recommendation !!!!!**

METAL SHOP 2. This is a full year (2 semesters) course for students interested in working with metal and metal fabrication. There are weekly quizzes on materials and machines used in this course. Topics covered will be: sheet metal work and tools, heat treating, foundry casting aluminum, wrought iron work, and different welding techniques. There are mandatory projects that must be completed throughout the course of the school year. Before starting any new project a Bill of Materials MUST be completed by student. Students are responsible for the cost of all materials used for their projects. Emphasis will be placed on school and community related projects and equipment maintenance. These students will also help other students with projects and designs.

**Daily Requirements:** a writing utensil and a three ring binder dedicated to this class. And as always, cooperation and participation are essential.

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**METAL MAY BE TAKEN MULTIPLE YEARS FOR CREDIT.**

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WOOD SHOP 1

1 Year

1 Credit

Grades  
9-12

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WOOD SHOP 1. This is a full year (2 semesters) course for students interested in working with and learning about wood. There are weekly quizzes on materials and machines used in this course. There are mandatory projects that must be completed throughout the course of the school year. As knowledge and experience progress, students will be able to (with instructor permission) design or make individual projects. Before starting any new project a Bill of Materials MUST be completed by student. Students are responsible for the cost of all materials used for their projects.

**Daily Requirements:** a pencil (not a pen) and a three ring binder dedicated to this class.  
Cooperation and participation.

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WOOD SHOP 2

1 Year

1 Credit

Grades  
10,11,12

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**!!!!!! Prerequisite: Passing Wood Shop 1 and teacher recommendation !!!!!**

WOOD SHOP 2. This is a full year (2 semesters) course for students interested in working with wood. There are weekly quizzes on materials and machines used in this course. There are mandatory projects that must be completed throughout the course of the school year. Student will learn new techniques and more advanced equipment use in the wood shop environment. As knowledge and experience progress, students will be able to (with instructor permission) design or make individual projects. Before starting any new project a Bill of Materials MUST be completed by student. Students are responsible for the cost of all materials used for their projects.

**Daily Requirements:** a pencil (not a pen) and a three ring binder dedicated to this class.  
Cooperation and participation.

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WOOD SHOP 3

1 Year

1 Credit

Grades  
11,12

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**!!!!!! Prerequisite: Passing Wood Shop 1 & 2 and teacher recommendation !!!!!**

WOOD SHOP 3. This is a full year (2 semester) course for students interested in working with wood. There are weekly quizzes on materials and machines used in this course. Student will learn new techniques and more advanced equipment use in the wood shop environment. As knowledge and experience progress, students will be able to (with instructor permission) design or make individual projects. Before starting any new project a Bill of Materials MUST be completed by student. Students are responsible for the cost of all materials used for their projects. Emphasis will be placed on school and community related projects and equipment maintenance. These students will also help other students with projects and designs.

**Daily Requirements:** a pencil (not a pen) and a three ring binder dedicated to this class. And as always, cooperation and participation are essential.

**WOOD MAY BE TAKEN MULTIPLE YEARS FOR CREDIT.**

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BASIC MECHANICAL DRAWING/  
AutoCAD

1 Year

1 Credit

Grades  
9-12

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BASIC MECHANICAL DRAWING/BASIC Auto/CAD. This is a full year (2 semesters) course designed to introduce drawing techniques used in today's industry. The course uses drawing materials such as T-squares, triangles, and architect scales in the construction of isometric, orthographic, and perspective drawings. Later as this course progresses, students will learn about Computer Aided Drafting (AutoCAD). This is a basic introduction to AutoCAD. AutoCAD is a computer program that is used to create drawings for local businesses and many high-tech global markets.

**Daily Requirements:** a pencil (not a pen) and a three ring binder dedicated to this class.  
Cooperation and participation.

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BASIC ELECTRICITY AND  
ELECTRONICS

1 Year

1 Credit

Grades  
9-12

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BASIC ELECTRICITY AND ELECTRONICS. This is a full year (2 semesters) course for students interested in working with electricity (A.C./D.C.). There are weekly quizzes on materials used in this course. There are mandatory projects that must be completed throughout the course of the school year. The first 2 semesters will cover household residential wiring (Alternating Current). Topics covered will be: lights, switches, circuits, and different wiring techniques. The third quarter of the school year will be an exploration into electronics (Direct Current). Students will use solderless circuit boards and electronic components to create many different reusable projects to experiment with electronics. The 4th quarter of the school year, students will learn how to solder and troubleshoot electronic problems. Students will be required to buy small electronic kits to build and keep,

**Daily Requirements:** a writing utensil and a three ring binder dedicated to this class.  
Cooperation and participation.

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## PHYSICAL EDUCATION

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PHYSICAL EDUCATION 9-12

1 Year

½ Credit

Grades 9-12

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PHYSICAL EDUCATION 9-12. This course offers encouragement for further development of advanced skills, greater participation in competitive team situations, and emphasis on the enjoyment and skill development of the lifetime individual sports. Swimming, water polo and boating are incorporated into physical education. Students learn to develop basic skills that will lead to a greater interest in aquatic activities in and outside of school. Student grades are based on participation, effort, written assignments and/or written test.

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## HEALTH

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HEALTH 11

1 Year

½ Credit

Grade 11

HEALTH 11. The purpose of this class is to further educate students in areas of health. The class deals with topics that are critical in the life decisions of our future adults. Topics include function of body systems, dealing with mental illness, suicide, fitness/nutrition, tobacco, alcohol, drugs, human development, STD's, among others. Students demonstrate learning and knowledge in multiple intelligence projects, peer tutoring, health assessments, and current event essays.

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## FITNESS FOR LIFE

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FITNESS FOR LIFE

1 Year

½ Credit

Grades 9-12

FITNESS FOR LIFE. **Pre-requisite: Phys Ed Teacher recommendation required to take this course.**

This course introduces students to the many different aspects of fitness including nutrition, goal setting, weightlifting, research and fitness testing. A portfolio is required for this course as well as a daily fitness component.

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## DRIVER EDUCATION

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DRIVER EDUCATION

½ Year

¼ Credit

Grade 10

DRIVER EDUCATION (CLASSROOM PHASE).

- Required for behind the wheel phase

The classroom phase of Driver Education is a 30-hour course, introducing students to the legal, safety and natural limitations of today's cars and driving situations. The car phase is a systematically applied program of practice driving 6 hours and reinforces classroom work. The car phase must be scheduled through the Driver Education Instructor. Completion of both courses results in reduced insurance rates and a senior license at the age of 17-1/2.

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# NORTHERN TIER CAREER CENTER

## VOCATIONAL-TECHNICAL COURSES

**STUDENTS MUST BE PASSING AND ON TRACK FOR GRADUATION IN ORDER TO BE ELIGIBLE TO ATTEND THE NORTHERN TIER CAREER CENTER.**

# Auto Body Fender and Repair



**Program Length:** Two years (900 Hours)

**Program Objectives:** Automotive reconstruction and restoration including: panel replacement and repair, frame repair, plastic repair, refinishing, auto body related mechanics, automotive electricity, estimating. Students study and practice all methods of auto body repair, including the use of hand tools, welding practices, body and frame repair, refinishing processes, spray painting techniques, interior trim removal, upholstery and weather stripping.

**Program Competencies:**

- Hand Tools-Safety
- Power Tools-Safety
- Body Fillers
- Masking
- Spray Painting Materials
- Oxyacetylene Welding
- M.I.G. Welding
- Metal Working
- Frame Repair
- Automotive Electricity
- Plastic Repair
- Refinishing
- Outside Body Trim

**Equipment Used:**

Air Hammers	Dollies
Grinders	Sanders
Buffers	Compressors
Paint Equipment	Cutters
Welders	Torches
Drills	Specialty Tools

**Suggested Academics:**

- Algebra I
- Applied Mathematics
- Applied Communications
- Principles of Technology

**Occupational Requirements:** Dependability, ability to work independently and with others, sense of pride in quality and craftsmanship, oral and written communication skills, good math skills.

**Work Environment:** Variable, often indoors

**Career Opportunities:**

- Auto Body Technician
- Automotive Rustproofers
- Automotive Detailer

**Related Occupations:**

- Sheet Metal Worker
- Salvage Yard Operator
- Industrial Painter
- Automotive Parts Person

**With Further Education:**

- Insurance Adjuster
- Body Shop Owner/Manager
- Frame Straightener
- Glass Installer
- Front End Alignment Technician
- Factory Representative
- Vocational Instructor

**Employers:** New Car Dealerships, Used Car Dealerships, Body Shops, Pennsylvania Department of Transportation, Inspection Stations, Salvage Yards, Detail Shops, Restoration Shops, and Automotive Parts Stores.

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Johnson College, WyoTech, Nashville Auto/Diesel College, and Ohio Technical Institute.

**PENN COLLEGE COURSE DESCRIPTION FOR COURSE OFFERED THROUGH PENN COLLEGE**  
**NOW AT NORTHERN TIER CAREER CENTER**

**(DUAL ENROLLMENT WITH AUTO BODY)**

**COLLISION REPAIR TECHNOLOGY**

ABC100

**Introduction to Non-Structural Collision Repair**

Analysis of basic principles and industry best practices, including issues of human and environmental safety. Theory/overview of removing, repairing, replacing, and adjusting outer body panels; straightening and roughing out of damaged steel panels and preparing them for body filler; and repairing aluminum panels. Study of proper replacement of corrosion protection to the repaired panels and adjustment of panels for proper fit. Introductory theory of cutting and welding of steel. Group interaction/activities; application of assessment tools. 2 Credits (2 Lecture – 0 Lab)

*Corequisite(s): ABC104*

ABC104

**Introduction to Non-Structural Collision Repair Applications**

Application of theory, techniques, principles, and industry best practices, including issues of human and environmental safety. Applied skills include removing, repairing, replacing, and adjusting outer body panels; straightening and roughing out damaged steel panels and preparing them for body filler; repairing aluminum panels for proper replacement of corrosion protection; and adjusting panels for proper fit. Group interaction/activities; application of assessment tools. 3 Credits (0 Lecture – 9 Lab)

*Corequisite(s): ABC100*

# Auto Mechanics



**Program Length:** Two years (900 Hours)

**Program Objectives:** Automotive technology including engine diagnosis, engine repairs, heating & cooling systems, power train, brake, suspension, and steering systems, computerized engine controls. Students study and practice all phases of engine repair and overhaul from diagnosis-problem solving to preventative maintenance.

**Program Competencies:**

- Hand Tools-Safety
- Power Tools-Safety
- Tires and Wheels
- ABS Brake Systems
- Electrical Systems
- Engine Repair
- Electronic Engine Control Diagnosis
- Suspension and Steering Systems
- Manual Drive Train and Axles
- Fuel Injection Systems
- Heating and Air Conditioning
- Pennsylvania State Inspection

**Equipment Used:**

- Multimeters
- Oscilloscopes
- Engine Analyzers
- Scanners
- Precision Measuring Tools
- Micrometers
- Dial Indicators

**Training Experiences:**

Work Stations on actual vehicle systems and components, diagnosis of electronic systems on all major manufactures vehicles from the 90's to present.

**Suggested Academics:**

Algebra; Applied Mathematics  
Applied Communications; Principles of Technology

**Occupational Requirements:** Good math skills with knowledge of metric system essential, good oral and written communication skills, and ability to read and comprehend technical manuals. Prospective students should have mechanical aptitude, manual dexterity, skills with tools, physical stamina, good hand-eye coordination, physical strength, willingness to work in an uncomfortable environment and the ability to think logically.

Continuing education is essential to keep up-to-date with technology changes.

**Work Environment:** Variable, often indoors.

**Career Opportunities:**

- Auto Mechanic
- Auto Parts Counter Person
- Service Station Technician
- Tune-up Specialist

**Related Occupations:**

- Service Writer
- Heavy Equipment Repair Technician
- Diesel Mechanic

**With Further Education:**

- Service Manager
- Shop Foreman
- Automotive Engineer
- ASE Certified Master Technician
- Garage Manager
- Aircraft Technician
- PA State Inspector
- Vocational Instructor

**Employers:** Garages, Service Stations, New Car Dealerships, Used Car Dealerships, Automotive Manufacturing Plants, Pennsylvania Department of Transportation, Trucking Companies, Rental Agencies.

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Johnson College, Luzerne County Community College, WyoTech, and Nashville Auto/Diesel College.

# Building Construction



**Program Length:** Two years (900 Hours)

**Program Objectives:** Construction and remodeling of buildings including carpentry, masonry, painting, drywall, cabinetry, stairs, and finishes. Students study and practice all phases of building construction, from layout of site, foundation and wall construction, to roof framing and interior trim. Techniques include building partitions, subfloors, millwork (construction and installation of doors, molding and cabinetry), and application of finishing hardware.

## Program Competencies:

Forms	Basic Electrical Wiring
Estimating	Basic Plumbing
Foundations	
Power Tools - Safety	
Hand Tools - Safety	
Floor Frames	
Wall Frames	
Roof Frames	
Exterior Finish	
Interior Finish	
Stair Building	
Basic Masonry	
Blueprint Reading	
Trade Mathematics	

## Equipment Used:

Table Saw	Saber Saw
Circular Saw	Band Saw
Jointer	Planer
Drill Press	Power Miter Box
Drills	Power Miter Saw
Finish Sander	Router
Bench Grinder	Belt Sander

## Suggested Academics:

Applied Mathematics  
Applied Communications  
Principles of Technology  
Algebra I, Geometry

**Occupational Requirements:** Must be able to work at heights up to 50 feet, good manual dexterity, good eye-hand coordination, mechanical aptitude, mathematics problem solving skills.

**Work environment:** Strenuous work, often outdoors, in all weather conditions.

## Career Opportunities:

Carpenters Apprentice  
Mill Worker  
Lumberyard Technician  
Salesperson  
Estimator

## Related Occupations:

Drywall Installer  
Block Mason  
Roofer  
Siding Installer  
Painter  
Cabinet Installer

## With Further Education:

Foreman  
Construction Superintendent  
Building Contractor  
Building Codes Inspector  
Vocational Instructor

**Employers:** Carpenters, Building Contractors, Lumberyards, Lumber and Wood Processing Mills, Patio and Deck Contractors, Custom Home Builders, General Contractors, Cabinet Makers.

**Post-Secondary Training:** Pennsylvania College of Technology, Johnson College, and Luzerne County Community College.

# Cosmetology



**Program Length:** Two years and two summers (1250 hours)

**Program Objectives:** This is a state licensed course designed to provide the student with the fundamentals needed to prepare for the state board examination. Instruction is provided in cutting, conditioning, tinting, bleaching, and individualized styling of the hair. Make-up analysis, superfluous hair removal, styling eyebrows, and various kinds of manicures are also part of the course. Practical experience is gained by providing services through the operation of a clinic whereby students work on each other's hair or volunteer "customers" from the community.

## Program Competencies:

Hair Analysis	Shampooing/Rinses
Haircutting	Manicures
Pedicures	Skin Care/Facials
Styling/Fingerwaving	Permanent Waving
Hair Coloring	Scalp Treatments
First Aid/Safety	Sanitation/Sterilization
Bacteriology	Anatomy
Salon Management	Customer Relations
Hygiene	
State Board Review	

## Equipment Used:

Infrared Current  
Dryers  
Crimpers  
Curling Irons/Brushes  
Hydraulic Chairs  
Accelerating Machine  
Scissors  
Razor  
Facial Chairs  
Computer  
Perm Rods/Rollers  
Color Wheels/Charts

## Suggested Academics:

Applied Mathematics  
Applied Communications  
Applied Biology and Chemistry

**Occupational Requirements:** A pleasant personality is important. Must be able to stand for long periods of time and have good manual dexterity and eye-hand coordination. Good attendance is imperative.

**Work Environment:** Indoor work - standing for long periods of time.

## Career Opportunities:

Cosmetologist  
Hair Stylist  
Salon Owner  
Nail Technician  
Color Technician

## Related Occupations:

Receptionist  
Cosmetic Sales  
Cosmetic Buyer  
Beauty Product Demonstrator

## With Further Education:

State Board Inspector  
Shop Manager  
Esthetician  
Research Assistant  
Make-up Artist  
Vocational Instructor

**Employers:** Beauty Salons, Cosmetic Firms, Department Stores, Television, Movie Studios, Cruise Ships, and Hotels.

**Post-Secondary Training Opportunities:** Empire Beauty School, Academy of Hair Design, Pittsburgh Beauty Academy, Penn State University, and Indiana University of Pennsylvania.

# Computer Networking Technology



**Program Length:** Two years (900 Hours)

**Program Objectives:** Problem solving, technical training, and industry certifications are the cornerstones of this program. Students are prepared to take computer technology certifications tests and have the opportunity to study other interest areas in the I.T. profession.

**Program Competencies:**

Safety  
Microprocessors  
Operating Systems/Software  
Personal Computer Systems  
Computer Hardware  
Computer Application Software

**Equipment Used:**

Digital and Analog Multimeter  
Personal Computer  
Laptops  
Hand Tools

**Suggested Academics:**

SOAR Scope & Sequence

**Occupational Requirements:** Good mathematical skills, capacity for sustained concentration, color differentiation, manual dexterity, deductive reasoning skills, eye-hand coordination, and critical/logical thinking skills.

**Work environment:** Indoors, bench work or assembly work.

**Career Opportunities:**

Computer Repair Technician  
Desktop Support Technician  
PC Assembler

**Related Occupations:**

Field Service Technician  
Audio/Visual Repair Technician  
Bench Technician  
Data Process Equipment Installer

**With Further Education:**

Network Administrator  
Technology Coordinator  
Vocational Instructor

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**Employers:** Service Departments, Radio Stations, Telephone Companies, Electronics Manufacturers, Computer and Electronics Repair Shops, Assembly Plants, Armed Services, Hospitals, Office Complexes, Industrial Plant Maintenance.

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Johnson College, Luzerne County Community College, Wilkes University

# Diesel Mechanics



**Program Length:** Two years (900 hours)

**Program Objectives:** Fundamentals of diesel engines with emphasis on light duty diesel equipment (tractors, light duty pick-up trucks, diesel automobiles). Students will be able to transfer and apply this learning to heavy duty diesels engines and equipment. Students study and practice all phases of diesel technology including diagnosis of malfunctions, disassembly of engines and examination of parts, reconditioning and replacement of parts, fuel injection systems, auxiliary power units, governors and transmissions.

**Program Competencies:**

- Hand Tools-Safety
- Power Tools-Safety
- Power Trains
- Brakes
- Engine Performance
- Suspension & Steering Systems
- Hydraulics
- Oil Pumps
- Cooling Systems
- Fuel Injection
- Electrical Systems and Schematics

**Equipment Used:**

- Multimeters
- Engine Analyzers
- Precision Measuring Tools
- Micrometers
- Dial Indicators
- Calipers
- Welders

**Suggested Academics:**

- Algebra I
- Applied Mathematics
- Applied Communications
- Principles of Technology

**Occupational Requirements:**

Good math skills with knowledge of metric system essential, good oral and written communication skills, ability to read and comprehend technical manuals, physical and manual dexterity, good hand-eye coordination.

**Work environment:**

Variable, often indoors.

**Career Opportunities:**

Bus Technician	Diesel Technician
Diesel Parts Counter Person	Truck Repair
Farm Machinery Technician	
Lawn and Garden Tractor Repair	
Heavy Equipment Repair Technician	

**Related Occupations:**

- Fuel Injection Shops
- Service Writer
- Automotive Mechanic

**With Further Education:**

- Service Manager
- Shop Foreman
- Field Service Representative

**Employers:** Truck Dealers, Farm Equipment Dealers, Garages, Service Stations, Pennsylvania Department of Transportation, Trucking Companies, Busing Companies, Rental Agencies.

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Johnson College, Luzerne County Community College, WyoTech, Nashville Auto/Diesel College, and Central Pennsylvania Diesel Institute.

# Diversified Occupations



**Program Length:** One year (720 Hours)

**Program Objectives:** Diversified Occupations is a ONE YEAR - SENIOR YEAR ONLY instructional program that operates as an integral part of career and technical education to provide a cooperative arrangement between the Northern Tier Career Center and local employers whereby the student receives career related theory instruction in the school and on-the-job training through part-time employment in business/industry. The area of training may be in any career area where there are needs for trained persons and must relate to the student's career objective. This program is designed to provide training for those career areas not presently being offered at the Northern Tier Career Center (i.e. HVAC) or to serve students who are unable to gain admission to a NTCC program due to enrollment limitations.

**Program Competencies:**

Career Related Theory – 50 hours in class

- Orientation to Diversified Occupations
- Career development and Planning
- Employment Acquisition
- Human Relations
- Health and Safety
- Employment Retention
- Communications Development
- Legal Awareness
- Professional Organizations
- Consumer Skills
- Economics
- Future Planning
- Technical Related Instruction

On-the-job training – minimum 670 hours paid employment

- Career specific technical training, including safety, communications, and opportunities for career advancement.

**Equipment Used:**

Varies by career objective and job placement

**Suggested Academics:**

Algebra  
Geometry  
Biology  
Chemistry  
English

**Occupational Requirements:** Varies by career objective and job placement

**Work Environment:** Varies by career objective and job placement

**Career Opportunities:**  
Varies by career objective

**Employers:** Retail stores, restaurants, grocery stores, government offices, heavy equipment dealers, and dairy farms

**Post-Secondary Training Opportunities:** Lackawanna College, Luzerne County Community College, Pennsylvania College of Technology, Mansfield University, and Broome County Community College

**Job Outlook:** Varies by career objective

# Electrical Occupations



**Program Length:** Two years (900 Hours)

**Program Objectives:** Electrical systems including power, heat, light, motor controls, air conditioning, refrigeration, generators, and transformers. Students study and practice all phases of residential, commercial and industrial electricity including layout, assembly, installation, testing and maintenance of electrical systems.

## **Program Competencies:**

- Hand Tools-Safety
- Power Tools-Safety
- Reading Blueprints
- Signaling Circuits
- Wiring Methods
- Power Circuits
- Lighting Circuits
- Motor Control Circuits
- Low Voltage Circuits
- Conduit Bending and Installation
- Service Installation
- Wiring Diagrams
- Transformers
- Generators and Motors
- Wiremold
- Troubleshooting

## **Equipment Used:**

- Drill Press
- Electric Drill
- Bench Grinder
- Conduit Bender
- Pipe Threader
- Industrial Control Trainers
- PLC Trainer

## **Suggested Academics:**

- Algebra I; Applied Mathematics
- Applied Communications
- Principles of Technology:

**Occupational Requirements:** Good mathematics skills ability to read and interpret blueprints, schematics, color differentiation, manual dexterity, good eye-hand coordination, ability to work at heights up to 50 feet.

**Work Environment:** Ability to work in all weather conditions. Variable from clean to dirty.

## **Career Opportunities:**

- Electrical Apprentice
- Electrician's Helper
- Maintenance
- Electric Motor Installer

## **Related Occupations:**

- Appliance Repair
- Motor Rewinder
- Industrial Plant Maintenance
- Electrical Equipment Sales
- Estimator

## **With Further Education:**

- Electrician
- Electrical Draftperson
- Electrical Engineer
- Electrical Inspector
- Vocational Instructor

**Employers:** Electrical Contractors, Electrical Supply Houses, Maintenance Departments in Industry.

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Johnson College, Penn State University, Wilkes University, and Baran Institute.

# Food Production, Management and Service



**Program Length:** Two years (900 Hours)

**Program Objectives:** This course is designed to provide the student with the skills, knowledge, and attitudes necessary in quantity foods related careers. Specialized learning units include theory and work experience in the major areas of cooking, baking, dessert preparation and salad preparation. The restaurant kitchen serves as the preparation laboratory, while the 45-seat restaurant provides experience in proper and efficient serving.

## Program Competencies:

Kitchen Techniques	Safety
Safety and Sanitation	Sanitation
Vegetable Preparation	Small tools and Equipment
Slicing	Use & care of Equipment
Dishware Cleaning	Receiving and Storage
Table Service	Standard Recipe Use
Management	Desserts
Menu Planning	Salads
Recipe Analysis	Bakery
Baking	Vegetable Cooking
Meat Cutting	Meat Cookery
Equipment Use and Maintenance	
Sandwiches and Garnishes	

## Equipment Used:

Broiler	Grill
Cash register	Knives
Coffee Maker	Mixers
Convection Ovens	Proof Box
Dishwasher	Slicer
Disposals	Steamer
Electric Range	Steam Jacketed
Kettle Fryer	Oven
Gas Ranges	

## Suggested Academics:

Applied Mathematics  
Applied Communications  
Applied Science

**Occupational Requirements:** Neatness and cleanliness are a must. Must be able to work quickly while under pressure and be able to follow strict food service guidelines.

**Work Environment:** Indoor work - often in hot kitchen areas.

## Career Opportunities:

Cook  
Short order Cook  
Baker  
Server  
Cake decorator

## Related Occupations:

Host/Hostess  
Bus Person  
Dishwasher

## With Further Education:

Chef  
Dietitian  
Food Service director  
Restaurant Manager  
Vocational Instructor

**Employers:** Restaurants, Fast Food Chains, Cafeterias, Hospitals, Bakeries, Grocery Stores, Hotels, Nursing Homes, Schools, Caterers, Resorts.

**Post-Secondary Training Opportunities:** Pennsylvania Culinary, Pennsylvania College of Technology, Penn State University, Johnson and Wales College, Keystone College, Luzerne County Community College.

# Health Assistant



**Program Length:** Two years (900 Hours)

**Program Objectives:** This course allows the student to advance at their own rate, and allows for their individuality in the choice of a specific career objective. This course provides skills for Nursing Assistant, Dental Assistant, Medical Assistant and Physical Therapy Aide careers. After successful completion of the nursing assistant curriculum, students are eligible to take the state exams (written and skill) for placement on the registry for long term nursing assistants. Clinical experiences may accompany all portions of this course.

## Program Competencies

### Theory Competencies

Dental Terminology  
Medical Terminology  
Anatomy/Physiology  
Patient Rights  
Confidentiality  
Mental/Social Needs  
Nutrition/Special Diets  
Job Seeking Skills  
Health Career  
Exploration  
Abuse Prevention

### Skill Competencies

Vital Signs  
Transporting Patients  
First Aid/CPR/Safety  
Direct Patient Care  
Eye Exams  
Care of Geriatric Patient  
Care of Obstetrical Patient  
Care of Pediatric Patient  
Care of Acute Care Patient  
Care of Dying Patient  
Universal Precautions  
Office Procedures  
Range of Motion

### **Equipment Used:**

Autoclave  
Amalgameter  
Wheelchair  
Upright Scale  
Hospital Bed  
Ultrasonic Cleaner  
Dental Operatory  
Computer/Printer  
Sphygmomanometer  
Microscope  
Stretcher  
Hydraulic Lift  
Dry Heat Sterilizer  
Chemical Sterilizer  
Model Grinder

### **Suggested Academics:**

Applied Communications; Applied Mathematics  
Applied Biology and Chemistry

**Occupational Requirements:** Must have good physical health and manual dexterity, cleanliness and good grooming.

**Work Environment:** Indoor work in a medical setting. Few hazards exist if proper handling of materials is followed.

### **Career Opportunities:**

Nurse Assistant	Orderly
Home Health Care Aide	Dental Assistant
Physical Therapy Aide	Medical Assistant

### **Related Occupations:**

Child Care Aide  
Dietary Aide  
Ward Clerk

### **With Further Education:**

LPN	Vocational Instructor
RN	Phlebotomist
Veterinary Assistant	Surgical Technician
X-Ray Technician	Dental Hygienist
Dental Lab Technician	Respiratory Therapist
EKG Technician	Physical Therapist
Physical Therapy Assistant	

**Employers:** Hospitals, Clinics, Nursing Homes, Rehabilitation Centers, Day Care Centers, Dentist's Office, Physician's Office, Home Health Care, Personal Care.

**Post-Secondary Training Opportunities:** Northern Tier Career Center LPN Program, Geisinger Medical Center, Danville School of Practical Nursing, Arnot School of Nursing, Pennsylvania College of Technology, Penn State University, Keystone College, Luzerne County Community College, Bloomsburg University, Robert Packer Hospital/Mansfield University Nursing Program.

# Machine Tool Technology



**Program Length:** Two years (900 hours)

**Program Objectives:** Machining fundamentals including layout, sawing, drilling, milling, grinding operations, and inspecting. Students study and practice basic machine tool operations including; milling machines to cut parallel and perpendicular surfaces, slots pockets, and arcs.

**Program Competencies:**

- Print Reading
- Layout
- Sawing
- Operations
- Inspection Techniques
- Lathe operations
- Safety

**Equipment Used:**

- Hand tools
- Multi-spindle drill press
- Personal computers
- Sawing operations
- Safety
- Surface plate

**Suggested Academics:**

- SOAR Scope & Sequence

**Occupational Requirements:**

- Good math skills
- Hand-eye coordination
- Ability to stand for an entire shift

**Work environment:**

Indoors, conditions vary on the type of manufacturing done.

**Career Opportunities:**

- Machine operator
- Machinist apprentice
- Machinist

**Related Occupations:**

- Automotive machinist
- Millwright
- Tool Sales
- Machine Designer

**With Further Education:**

- CNC Machinist
- Tool and Die Maker
- Mechanical Or Manufacturing Engineer
- CNC Programmer

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**Employers:** Manufacturing Plants, Contract Machine Shops, Automotive Machine Shops, Armed Services and Cutting Tool Suppliers.

**Post-Secondary Training Opportunities:** Luzerne County Community College, Corning Community College, and Pennsylvania College of Technology

**Job Outlook:** Changes in the technology combined with a large number of retirements has resulted in a strong local demand for people with these skills.

# Medical Office Technology



Program Length: Two years (900 Hours)

**Program Objectives:** Preparation to assist physicians and other medical personnel by performing functions related to administrative and clerical duties in a medical office. Students study and practice medical terminology, computer operations, applicable laws and regulations (including HIPAA), insurance forms, statistical reporting, medical records, medical transcription and word processing.

**Program Competencies:**

- Receptionist Procedures
- Office Procedures
- Insurance Forms
- Machine Transcription
- Medical Terminology
- Word Processing
- Computer Operations
- Ethics
- Communication Skills
- Medical Records Management
- Filing

**Equipment Used:**

- Computer/Network
- Electronic Dictating/Transcribing System
- Office Machines
- Copier

**Suggested Academics:**

- Mathematics
- Communications
- Biology
- Anatomy and Physiology
- Microsoft Office

**Occupational Requirements:** Must have good hygiene and grooming. Superior communication skills and an understanding of basic medical terminology, anatomy, and physiology.

**Work Environment:** Indoor work in a medical setting.

**Career Opportunities:**

- Medical Transcriptionist
- Medical Secretary
- Medical Records Clerk
- Hospital Ward Clerk

**Related Occupations:**

- Receptionist
- File Clerk
- Billing Clerk
- Secretary

**With Further Education:**

- Medical Office Manager
- Registered Health Information Technician (RHIT)
- Registered Health Information Administrator (RHIA)
- Vocational Instructor

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**Employers:** Hospitals, Health related Clinics, Nursing Homes, Physician's Office, Rehabilitation Centers, Veterinary office

**Post-Secondary Training Opportunities:** Pennsylvania College of Technology, Broome Community College, Luzerne County Community College, Keystone College, Elmira Business Institute, Allied Medical Careers.

# Welding Technology



**Program Length:** Two years (900 hours)

**Program Objectives:** Instruction is provided in the basic principles and skills required in the welding field. Students will be introduced to both welding and cutting.

## **Program Competencies:**

Safety  
Basic Metallurgy  
Oxyacetylene Welding and Cutting  
Arc Welding  
MIG Welding  
TIG Welding  
Blueprint Reading

## **Equipment Used:**

Arc Welders  
MIG Welders  
TIG Welders  
Oxy Fuel System  
Grinders

## **Suggested Academics:**

SOAR Scope & Sequence

## **Occupational Requirements:**

Students entering the welding program should be in good physical condition and have good physical strength. Importance should be placed on good eyesight, manual dexterity, and good hand and eye coordination. They should be able to concentrate on detailed work for long periods of time. They should be free of any physical disabilities that would prevent them from bending, stooping and working in awkward positions.

## **Work environment:**

Variable, conditions based on the type of industry.

## **Career Opportunities:**

Tack Welder  
Welder  
Welding machine operator  
Welder assembler  
Welder fitter  
Construction welder  
Maintenance welder

## **Related Occupations:**

Business owner  
Sales and service representative

## **With Further Education:**

Welding supervisor  
Welding technician  
Educator  
Inspector  
Engineer

**Employers:** Manufacturing Plants, Repair Shops, Construction Companies, Natural Gas Industry, Armed Services

**Post-Secondary Training Opportunities:** Alfred State College, Harrisburg Area Community College and Pennsylvania College of Technology

**Job Outlook:** The welding industry today presents a continually growing and changing series of opportunities for welders. Despite economic fluctuations, there is a positive job outlook in welding. Most everything we use or depend upon today requires welding and joining technology. The U.S. Department of Labor lists more than 140 occupations related to welding and joining.

**CAREER DEVELOPMENT COUNCIL SERVICES**  
**AVAILABLE THROUGH THE GUIDANCE OFFICE OF THE SAYRE HIGH SCHOOL**

**Job Shadowing** – Juniors and seniors are encouraged to get first-hand career information with an area professional in their work environment. Students gain knowledge of the job responsibilities, what a typical day is like, and education and training requirements. Job shadows range from an hour to a full day depending on the occupation being shadowed and the variety of job duties.

**Career Panels** – A panel of professionals speak on various career topics in a group setting. Panel's topics often include: medical careers, psychology and social work, law enforcement, forensic science, sports careers, and fashion design.

**Work Site Visits** – Tours of local employers can be arranged to help students learn about the range of employment opportunities, and the skills needed to be employed along with hiring practices.

**Resume Preparation and Review** – Assistance with resume preparation and cover letters.

**Employment Assistance** – Information is provided on local employers and registration for employment at the Pennsylvania Career Link.

**Mock Interviews** – A practice employment interview is conducted with local employers to help students receive input on their interviewing strengths and areas of improvement needed.

**Internet Career Research Assistance**

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