

# Pocono Mountain School District Cyber Program

## Program of Studies

*Grades Kdg-12*

## Graduation Requirements

2018-2019



The Mission of The Pocono Mountain School District is To Prepare All Students for Tomorrow's Challenges and Opportunities.

# TABLE OF CONTENTS

GRADUATION REQUIREMENTS .....	2
ADDITIONAL PROGRAMS.....	4
SPECIAL EDUCATION .....	5
GIFTED EDUCATION .....	5
ART.....	6
BUSINESS & COMPUTER TECHNOLOGY/PROGRAMMING.....	7
ENGLISH LANGUAGE ARTS (ELA).....	9
HEALTH & PHYSICAL EDUCATION.....	13
MATHEMATICS .....	17
SCIENCE.....	21
SOCIAL STUDIES.....	23
WORLD LANGUAGE.....	23
INTERMEDIATE/JUNIOR HIGH PROGRAM.....	25
ELEMENTARY K-5 PROGRAM .....	29
MCTI PROGRAM DESCRIPTIONS.....	31

# **HIGH SCHOOL PROGRAM GRADES 9-12**

## **KEYSTONE EXAM PROFICIENCY AND GRADUATION REQUIREMENTS**

Improving academic performance for all children is an essential part of Pennsylvania's educational system. The Commonwealth of Pennsylvania established academic standards that define what students should know and be able to do at specific grade levels. Standards provided a framework and learning targets for students, teachers, and parents. Progress toward the Standards is measured through a state assessment called the Keystone Exams. Keystone Exams will be administered after the completion of the Keystone related course. These exams are part of the criteria for the School Performance Profile (SPP).

Students must demonstrate their ability to meet or exceed the academic standards at a proficient or advanced level. The Pocono Mountain School District uses its own assessment system as well as the Keystone Exams to measure students' proficiency. In addition, to be eligible for high school graduation all students must complete 22 credits.

Students who meet the prerequisites may earn graduation credit for Algebra I, French, and Spanish when taken in the seventh or eighth grade. These credits will be utilized in calculation of class rank and grade point average.

For each successful year of participation at the Monroe Career and Technical Institute, students will receive three (3) credits.

### **KEYSTONE TUTORIAL**

A Keystone Tutorial course will be required for students who do not demonstrate proficiency on the Keystone Literature, Algebra I, and/or Biology Exams.

By the end of grade 12, students must demonstrate proficiency on each Keystone exam or successful completion of Project-Based Assessments. This is a local school board requirement for graduation.

### **ACADEMIC STANDARDS DEMONSTRATION**

Completion of a course sequence is the recommended process for demonstrating academic standards attainment. Other ways to demonstrate academic standards attainment are:

- Complete standards by meeting the goals of an Individual Education Plan (I.E.P.)
- Complete standards when the student is in a pre-approved foreign exchange program (NOTE: student standard completion will be evaluated upon the student's return to school)

### **SCHEDULING LIMITATIONS**

A full schedule in the high school consists of 30 class periods a week. Students must schedule all class periods. Many courses mandate specific requirements. The number of students electing a course and

the availability of teachers will determine whether or not a course will be offered. In these cases, students may be assigned to their other choices.

## **2018-2019 COURSE SEQUENCING GUIDE**

### **CORE CLASSES**

The Cyber Program will prepare students to demonstrate mastery of all graduation standards. In this curriculum, students will be asked to use their knowledge to solve real and/or simulated problems. Hands-on applications in science, mathematics, English language arts and problem solving will be emphasized. This program will prepare students to enter post-secondary schools or the work force.

<b>Grade</b>	<b>English Language Arts (ELA)</b>	<b>Mathematics</b>	<b>Science</b>	<b>Social Studies</b>
9	ELA 9	Algebra IA	Biology	Elective
10	ELA 10	Algebra IB	General Physical Science	Civics
11	ELA 11	Algebra II	Earth Science	Modern US History
12	ELA 12	Geometry	Elective	World History

## **ADDITIONAL PROGRAMS**

### **MONROE CAREER TECHNICAL INSTITUTE (MCTI)**

The career technical program begins in the tenth grade. Competitive admission quotas make it necessary for applicants to have a record of good conduct, attendance, and passing grades in their academic subjects before their application can be processed. (See Appendix)

### **SCHOOL-WORK ELECTIVE PROGRAM**

The School-Work Elective program is designed to offer high school credit to students with paid jobs outside of school. Students are responsible for finding part-time employment with a local employer. Students are encouraged to find jobs that are directly related to the career field they wish to pursue after graduating from high school. The School-Work Elective Program is supervised by a Pocono Mountain Academy Teacher.

### **CONCURRENT ENROLLMENT**

A senior can elect to participate in the concurrent enrollment program if they meet the following criteria:

- Enrolled in the concurrent enrollment program at any school in agreement with PMSD (check with the guidance department)
- A copy of the student's concurrent enrollment registration must be submitted to the student's guidance counselor
- Student must submit an official transcript from the college attended

### **HYBRID SCHEDULING**

Students may be enrolled in both Cyber School and their Home School Building. Hybrid scheduling allows students to take classes through the Cyber Platform while enrolling in other classes in the traditional school building.

### **INDEPENDENT STUDY**

Independent Studies Elective - The Independent Study Program is designed for students who have demonstrated a high degree of motivation and have the ability to work independently. To enroll in an independent study program, a student must have the approval of the teacher, the guidance counselor, and the high school principal. All students approved for an independent study must receive a percentage grade for the course.

**Advanced Placement Program** - courses that are based on curricula developed by College Entrance Examination Board. These programs require weekly writing assignments, a rigorous schedule of outside readings, and extensive homework assignments.

**Honors Program** - Students may participate in honors programs in grades 9-12. This program requires weekly assignments, a rigorous schedule of outside reading, and intensive homework assignments.

## **SPECIAL EDUCATION**

### **PHILOSOPHY**

The Pocono Mountain School District is committed to setting high standards for all students receiving Special Education services. Special Education supports and services in the Pocono Mountain School District include a full continuum of services and are in compliance with federal and state laws.

Every student in the Pocono Mountain School District is provided an educational program that fosters independence and success to transition successfully to post-secondary education or the workforce. Students are provided access to the general education curriculum with specially designed instruction based on the student's individual strengths and needs. An alternative curriculum/program will be provided, if and when appropriate, based on the student's individual strengths and needs.

## **GIFTED EDUCATION**

### **PHILOSOPHY**

Pocono Mountain School District is committed to providing quality Gifted Education supports and services, which encompass the following objectives: expansion of academic attainments and intellectual skills; stimulation of intellectual curiosity, independence and responsibility; development of originality and creativity; development of a positive attitude toward self and others; and development of desirable social and leadership skills.

Students identified as Mentally Gifted based on the results and recommendations of the Multi-Disciplinary Gifted Evaluation (MDGE) will be provided an array of academically challenging courses as outlined in the Gifted Individualized Education Program (GIEP). Further provisions for individual enrichment and/or acceleration will be provided based on the student's individual strengths and needs, such as college level courses and/or independent study.

### **SPECIAL EDUCATION STATEMENT OF LEAST RESTRICTIVE ENVIRONMENT**

The Pocono Mountain School District is committed to delivering curriculum for students with special needs in the Least Restrictive Environment (LRE) with specially designed instruction based upon the results and recommendations of a Multi-Disciplinary Evaluation (MDE) and as outlined in the Individualized Education Program (IEP). Least Restrictive Environment means that a student identified as having a disability will be educated with non-disabled peers to the maximum extent appropriate with supplementary aids and services necessary to achieve individual educational goals and objectives.

# ART

Art Education is a curriculum structured to enable all students to develop problem solving skills, artistic technical skills, and individual abilities and ambitions through creative experiences. The study of major artistic periods will be incorporated in the course offerings.

## **INTRODUCTION TO ART (ART DESIGN/APPRECIATION)**

.5 credit

Covering art appreciation and the beginning of art history, this course encourages students to gain an understanding and appreciation of art in their everyday lives. Presented in an engaging format, this one semester course provides an overview of many introductory themes: the definition of art, the cultural purpose of art, visual elements of art, terminology and principles of design, and two- and three-dimensional media and techniques. Tracing the history of art, high school students enrolled in the course also explore the following time periods and places: prehistoric art, art in ancient civilizations, and world art before 1400.

## **ART HISTORY**

.5 credit

Introducing art within historical, social, geographical, political, and religious contexts for understanding art and architecture through the ages, this course offers high school students an in-depth overview of art throughout history, with lessons organized by chronological and historical order and world regions. Students enrolled in this one-semester course cover topics including early Medieval and Romanesque art; art in the twelfth, thirteenth, and fourteenth centuries; fifteenth-century art in Europe; sixteenth-century art in Italy; the master artists; High Renaissance and Baroque art; world art, which includes the art of Asia, Africa, the Americas, and the Pacific cultures; eighteenth and nineteenth-century art in Europe and the Americas; and modern art in Europe and the Americas.

## **BUSINESS & COMPUTER TECHNOLOGY**

The Business & Technology Department is committed to preparing our students for leadership positions in the 21<sup>st</sup> century. Our goal is to provide a broad business background, entrepreneurial zeal, and up-to-date technological opportunities.

### **INTRODUCTION TO BUSINESS**

.5 credit

Students learn the principles of business using real-world examples—learning what it takes to plan and launch a product or service in today’s fast-paced business environment. This course covers an introduction to economics, costs and profit, and different business types. Students are introduced to techniques for managing money, personally and as a business, and taxes and credit; the basics of financing a business; how a business relates to society both locally and globally; how to identify a business opportunity; and techniques for planning, executing, and marketing a business to respond to that opportunity.

### **SMALL BUSINESS MANAGEMENT**

.5 credit

This course teaches the skills and key business concepts students need to know to plan and launch a business. Students learn about real-life teen entrepreneurs; characteristics of successful entrepreneurs; pros and cons of self-employment; sales stages, opportunities and strategies; planning and budgeting; and interpersonal communication in the workplace. Students also learn how to generate business ideas; create a business plan, mission, and vision; promote and market a company; attract investors; manage expenses; and set personal visions and goals. Topics include exploring factors of business success and failure; core business concepts; economic systems; competition; production; the global economy; financing a business; costs, pricing, and accounting; bookkeeping and financial reporting; the role of the government in business; regulations and laws; working with others; and successfully managing employees.

### **PERSONAL FINANCE**

Grade 12

.25 credit

This course prepares students to be financially responsible, engaging students in budgeting, planning, and being a smart consumer. Students learn about the relationship between education, employment, income, and net worth, and they plan for the cost of college. Students then broaden their study to include banking, spending, investing, and other money management concepts before exploring credit and debt. Students study microeconomics and entrepreneurship, with an overview of economic systems, supply and demand, consumer behavior and incentives, and profit principles.

### **CAREER PLANNING**

.5 credit

This course helps students investigate careers as they apply to personal interests and abilities, develop skills and job search documents needed to enter the workforce, explore the rights of workers and traits of effective employees, and address the importance of professionalism and responsibility as careers change



and evolve. This one-semester course includes lessons in which students create a self-assessment profile, a cover letter, and a résumé that can be used in their educational or career portfolio.

### **STRATEGIES FOR ACADEMIC SUCCESS**

.5 credit

Offering a comprehensive analysis of different types of motivation, study habits, and learning styles, this course encourages high school and middle school students to take control of their learning by exploring varying strategies for success. Providing engaging lessons that will help students identify what works best for them individually, this one-semester course covers important study skills, such as strategies for taking high-quality notes, memorization techniques, test-taking strategies, benefits of visual aids, and reading techniques.

### **DIGITAL CITIZENSHIP**

.5 credit

Students develop essential study skills for academic success, such as staying organized, managing time, taking notes, applying reading strategies, writing strong papers, and researching and properly citing information. Instruction on how to be a responsible online learner is threaded throughout the course, and these skills are directly addressed in lessons on cyberbullying, staying safe online, and learning how to be a digital leader. By the end of the course, students will have the tools they need to be academically successful in both traditional and digital learning environments.

### **COMPUTER LITERACY (REMEDIAL)**

.25 credit

This course reviews the essential technical and professional skills required in the field of Information Technology (IT). Through hands-on projects and written assignments, students gain an understanding of the operation of computers, computer networks, Internet fundamentals, programming, and computer support. Students also learn about the social impact of technological change and the ethical issues related to technology. Throughout the course, instructional activities emphasize safety, professionalism, accountability, and efficiency for workers within the field of IT.

### **ESSENTIAL COMPUTER AND APPLICATION SKILLS**

.5 credit

This course introduces students to the features and functionality of Microsoft® Office®. Through video instruction, interactive skills demonstrations, and hands-on practice assignments, students learn to develop, edit and share Office® 2010 documents for both personal and professional use. Students will develop proficiency in the most common tools and features of the Microsoft Office suite of applications.

## **ENGLISH LANGUAGE ARTS (ELA)**

The English Language Arts Curriculum, a total Language Arts Program, provides the targets for instruction and student learning essential for success in all academic areas. The ELA program represents the five components essential for successful Language Arts development: phonemic awareness, phonics, fluency, vocabulary and comprehension. The ELA program is researched based and follows sequential skill development commencing with the foundation skills in grades 6 -8, comprised of informational text, literature, writing, speaking and listening. Mastery of the PA Core Standards, is the driving force ensuring that all students are moving forward on the staircase of complexity from kindergarten through twelfth grade.

### **ENGLISH LANGUAGE ARTS (ELA) 9**

1 credit

Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Students are actively involved in the study of various literary genres, vocabulary/spelling, composition, and public speaking. The intensity of instruction is especially increased in the study of literature and composition. Oral discussion is an integral part of literature courses and written compositions are required.

### **ENGLISH LANGUAGE ARTS (ELA) 10**

1 credit

**American Literature** courses focus upon commonly known American authors and their work. Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of literature courses and written compositions are required.

### **ENGLISH LANGUAGE ARTS (ELA) 11**

1 credit

European Literature courses provide a focus from the Middle Ages to the present. Students will be able to see how earlier works influence later works and how forms and ideas have evolved over time. Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of literature courses and written compositions are required.

## **ENGLISH LANGUAGE ARTS (ELA) 12**

1 credit

World Literature courses use representative literature selections from ancient and/or modern times from countries around the world. Students improve their critical-thinking skills as they comprehend the diversity of literary traditions and the influences of those traditions. Oral discussion is an integral part of literature courses and written compositions are required.

## **KEYSTONE Literature Tutorial**

Grades 11, 12

.5 credit

Prerequisite – Students are selected based upon not demonstrating proficiency on the Keystone Literature exam and/or English Language Arts (ELA) 10.

The Keystone Literature Tutorial is an alternative way for a student to graduate if he/she does not demonstrate proficiency on the Keystone Literature Exam. The Keystone Literature Tutorial course will provide support to students in demonstrating their ability to meet the academic standards at a proficient or advanced level. Students may also be required to retake the Keystone Literature Exam. This course also offers diagnostic and remedial activities designed to correct reading difficulties and habits that interfere with students' progress in developing reading skills and understandings. Activities are chosen to increase or improve students' reading comprehension, reading technique, and general literacy skills. Ongoing assessment will tailor instruction and accelerate learning.

Successful completion of the Keystone Literature Tutorial course may fulfill the required ELA 10 course credit. Proficiency on the Keystone Literature exam retest or successful completion of the Keystone Literature Tutorial course will meet the local graduation requirement.

## **ELA ELECTIVES**

### **EXPOSITORY READING AND WRITING**

.5 credit

This elective English course is designed to develop critical reading and writing skills while preparing high school students to meet the demands of college-level work. While students will explore some critical reading skills in fiction, poetry, and drama the focus of this course will be on expository and persuasive texts and the analytical reading skills that are necessary for college success. Students will read a range of short but complex texts, including works by Walt Whitman, Abraham Lincoln, Cesar Chavez, Martin Luther King Jr., Langston Hughes, Julia Alvarez, Edna St. Vincent Millay, and Gary Soto.

### **SPEECH COMMUNICATION I**

.5 credit

Beginning with an introduction that builds student understanding of the elements, principles, and characteristics of human communication, this course offers fascinating insight into verbal and nonverbal messages and cultural and gender differences in the areas of listening and responding. High school students enrolled in this one-semester course will be guided through engaging lectures and interactive

activities, exploring themes of self-awareness and perception in communication. The course concludes with units on informative and persuasive speeches, and students are given the opportunity to critique and analyze speeches.

## **WRITER'S WORKSHOP I**

.5 credit

Motivating students in grades nine through twelve to become more articulate and effective writers, this one-semester course offers hands-on experience writing personal reflections, definition essays, research essays, persuasive essays, informative essays, and literary analysis essays. Offering targeted lessons on reputable research, effective communication, solid grammar, and compelling style, this one-semester course utilizes the Six Traits of Effective Writing as an overarching framework. Students enrolled in this course develop the skills necessary to evaluate their own writing and articulate and apply writing and researching strategies. In addition, students get further practice applying the grammatical rules of Standard American English in formal writing.

## **CLASSIC NOVELS AND AUTHOR STUDIES**

.5 credit

Classic Novels provides an in-depth study of classic novels and authors and gives students the opportunity to fully explore a large work of fiction or to be introduced to a celebrated author. Each mini-course guides students through the work with lectures, web activities, journals, and homework/practice. Students study the following novels: *Jane Eyre*, *Mrs. Dalloway*, *Portrait of the Artist*, *Robinson Crusoe*, *The House of Seven Gables*, and *The Three Musketeers* along with the following author studies: Jorge Luis Borges and Flannery O'Connor.

## **LITERATURE/COMPOSITION I**

.5 credit

This course is one of two, semester-long intervention courses designed to support the development of strategic reading and writing skills. These courses use a thematic and contemporary approach, including high-interest topics to motivate students and expose them to effective instructional principles using diverse content area and real-world texts. Both courses offer an engaging technology based interface that inspires and challenges students to gain knowledge and proficiency in the following comprehension strategies: summarizing, questioning, previewing and predicting, recognizing text structure, visualizing, making inferences, and monitoring understanding with metacognition. Aimed at improving fluency and vocabulary, self-evaluation strategies built into these courses inspire students to take control of their learning.

## **LITERATURE/COMPOSITION II**

.5 credit

*Prerequisite: Successful completion of Literature/Composition I*

Offering high-interest topics to motivate students who are reading two to three levels below grade, this course works in conjunction with Literacy & Comprehension I to use a thematic and contemporary approach to expose students to effective instructional principles using diverse content area and real-world texts. Presented as two, one-semester, reading-intervention courses, each offers an engaging, technology-based interface that inspires and challenges high school and middle school students to gain knowledge and proficiency in the following comprehension strategies: summarizing, questioning, previewing and predicting, recognizing text structure, visualizing, making inferences, and monitoring understanding with metacognition. Aimed at improving fluency and vocabulary, self-evaluation strategies built into these courses inspire students to take control of their learning.

## **WRITER'S WORKSHOP**

.5 credit

Writer's Workshop I is an introductory writing course for those students who enjoy writing of all types. The course focuses on fundamental principles like plot, structure, character, voice, dialogue, description, and point of view. Students will create and polish drafts for consideration by small and large group workshops. Further, students will distinguish between and practice the editing and revision of their writing

# HEALTH & PHYSICAL EDUCATION

## HEALTH

Our goal is to develop health literacy in all students. Health literacy is the capacity of an individual to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways that are health-enhancing. Health-literate individuals understand scientifically based principles of health promotion and disease prevention, incorporate that knowledge into personal health-related attitudes and behaviors, and make good health a personal priority.

### **Health Education Philosophy:**

To provide all students with the skills and knowledge to promote responsible lifetime decision making and contribute to a healthy and safe society.

### **Overview:**

Health Education in the Pocono Mountain School District is comprehensive, accurate, up-to-date and relevant. The Health Education program equips students with the skills necessary to weigh options, make responsible decisions and develop behaviors that promote healthful living. Students are encouraged to assess their attitudes and behavior patterns and to understand the impact their life choices have on their communities and on their own well-being.

### **HEALTH GRADE 9**

.25 credit

Topics in 9<sup>th</sup> grade Health range from students using communication skills which encourage responsible decision making to personal and social skill development. Content/Skills taught will relate to Human Growth and Development, Personal Health/Family/Social Health, Mental Health and Disease Prevention and Control. Topics discussed include healthy/unhealthy relationships, reproduction, birth control, child birth, abstinence (is promoted and defined as the most effective means of preventing pregnancy and Sexually Transmitted Infections), decision making, and social/personal skills. Students will be provided with up-to-date skills and knowledge relevant to today's rapidly changing society.

### **HEALTH GRADE 12**

.25 credit

Accurate up-to-date health information will be taught pertaining to Family/Personal/Social Health, Substance Abuse Prevention, Disease Prevention and Control, Mental Health, and Human Growth and Development. The course will include classroom experiences that help students acquire the knowledge, attitudes and skills necessary for making health promoting decision, achieving health literacy, adopt health enhancing behaviors and promoting health in other. Students will be provided with instruction that is relevant to today's rapidly changing world. Abstinence will be stressed when dealing with any content or concepts taught related to sexual behavior and relationships. Students will be encouraged to make healthy decisions concerning sexual behavior.

## **HEALTH ELECTIVES**

### **PROMOTING WELLNESS**

Grades 10, 11, 12

.5 credit

This course provides students the opportunity to expand their knowledge of wellness in a unique way. Students will spend time learning about self-awareness, stress reduction/management, personal and social skills development, nutrition, fitness concepts, meditation and relaxation techniques. The course is designed for all students who have the desire to live a healthy or healthier lifestyle. **Wellness** is an active process of becoming aware of and making choices toward a healthy and fulfilling life. "...a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." - The World Health Organization. The focus of this course is to increase knowledge of the specific benefits of living a healthy lifestyle.

### **WELLNESS & FITNESS**

.5 credit

This course provides students the opportunity to expand their knowledge of wellness and fitness in a unique way. Students will spend time learning about nutrition, wellness, exercise, fitness components and putting that knowledge into action. The course is designed for all students who have the desire to live a healthy or healthier lifestyle. "Without your health, everything else in life will be more difficult." The focus of this course is to increase their knowledge of the specific benefits of living a healthy lifestyle.

### **CONCEPTS OF HEALTH I**

.5 credit

Concepts of Health is an in-depth look at important concepts related to how the body functions. Topics covered will be Genetics, Cells, Tissues, Organs and Systems, Diseases and Disorders, and Anatomy of the Body.

### **CONCEPTS OF HEALTH II**

.5 credit

*Prerequisite - Concepts of Health 1*

Concepts of Health 2 is an in- depth look at the body systems, structure and function, diseases and disorders, as well as career choices for each system discussed.

## **PHYSICAL EDUCATION**

### **Physical Education Philosophy**

To expose all students to a variety of physical activities, sport, and fitness concepts to better provide enjoyment of physical activity, as well as build social, psychomotor, and cognitive skills that will lead to an active and healthy life.

### **Overview**

Physical Education contributes to the physical, intellectual, social and emotional well-being of the student. Our curriculum is devoted to purposeful instruction in developmentally appropriate activities to promote a positive self-concept through fitness, sport, dance and lifetime activities. Each student is able to achieve success according to his/her ability. Participation and involvement are required at all levels. Health related fitness is the goal for all students. The curriculum intent is to provide students of all abilities and interests with a variety of movement experiences that will lead to an active and healthy life. Activities are taught in a coeducational environment. The "Fitness gram/Fitness test" is administered each year with the focus on health-related fitness concepts. Students needing adapted physical education are scheduled into a program tailored to meet their needs.

## **PHYSICAL EDUCATION**

### **Grade 9**

1 credit

Physical Education contributes to the physical, intellectual, social and emotional well-being of the student. Physical Education includes an activity log with an expectation of a minimum of 90 minutes (3 – 30 minute sessions) of documented physical activity per five days of school weekly. The curriculum is devoted to promoting activities that promote a positive self-concept by engaging in activities such as fitness, sport, dance and lifetime activities. Each student is able to achieve success according to his/her ability. Participation and involvement are required at all levels. Health related fitness is the goal for all students.

### **Grade 10**

1 credit

Physical Education contributes to the physical, intellectual, social and emotional well-being of the student. Physical Education includes an activity log with an expectation of a minimum of 90 minutes (3 – 30 minute sessions) of documented physical activity per five days of school weekly. The curriculum is devoted to promoting activities that promote a positive self-concept by engaging in activities such as fitness, sport, dance and lifetime activities. Each student is able to achieve success according to his/her ability. Participation and involvement are required at all levels. Health related fitness is the goal for all students.

### **Grade 11**

1 credit

Physical Education contributes to the physical, intellectual, social and emotional well-being of the student. Physical Education includes an activity log with an expectation of a minimum of 90 minutes (3 – 30 minute sessions) of documented physical activity per five days of school weekly. The curriculum is devoted to promoting activities that promote a positive self-concept by engaging in activities such as fitness, sport, dance and lifetime activities. Each student is able to achieve success according to his/her ability. Participation and involvement are required at all levels. Health related fitness is the goal for all students.



**Grade 12**

1 credit

Physical Education contributes to the physical, intellectual, social and emotional well-being of the student. Physical Education includes an activity log with an expectation of a minimum of 90 minutes (3 – 30 minute sessions) of documented physical activity per five days of school weekly. The curriculum is devoted to promoting activities that promote a positive self-concept by engaging in activities such as fitness, sport, dance and lifetime activities. Each student is able to achieve success according to his/her ability. Participation and involvement are required at all levels. Health related fitness is the goal for all students.

# MATHEMATICS

Skills and processes are emphasized in mathematics classes which enable students to evaluate and analyze, think critically, use problem-solving strategies, organize data, apply and synthesize ideas, and express mathematical procedures. Students in the Pocono Mountain School District today will live and work in the 21st century, in a world dominated by computers, worldwide communication, and a global economy. The workers of tomorrow must be prepared to absorb new ideas, understand patterns and trends, and solve unconventional problems. Students need to see that mathematics is relevant to their lives. Pocono Mountain School District wants students to think mathematics, to understand mathematics, and to use mathematics. If they can do this, our students will have the confidence and the desire to meet the challenges and opportunities of tomorrow.

## **ALGEBRA IA**

1 credit

*Prerequisite: Successful Completion of 8<sup>th</sup> Grade Essentials of Algebra*

Get ready to meet the requirements for life in the 21st century by developing skills in algebra through applications from the first part of a multi-year sequence of Algebra I. This course covers the same topics as the first half of the Algebra I curriculum including the study of properties of rational numbers, ratio, proportion, the rectangular coordinate system, and solving first degree equations and inequalities. Making connections between equations, tables, and graphs of linear equations will be introduced in this course. By associating real-life applications of Algebra with classroom instruction, students are offered a unique way of looking at and learning concepts through the development of concepts, skills, and problem solving. Deficient skills will be emphasized and reinforced within the context of learning Algebra. Graphing calculators for making connections and developing concepts will be used as a teaching tool throughout the year.

## **ACADEMIC ALGEBRA I**

1 credit

*Prerequisite: Successful Completion of 8<sup>th</sup> Grade Essentials of Algebra*

Algebra is the language through which most of mathematics is communicated, and it is necessary for further work in nearly all mathematical subjects. This course presents algebraic methods as problem solving tools. The student will learn how to deal with variables, expressions, linear and quadratic equations, linear inequalities, and translating and solving word problems using equations and inequalities. Graphing calculators for making connections and developing concepts will be used as a teaching tool throughout the year. **\*Note: All students enrolled in this course are required to take the Keystone Exam.**

## **ALGEBRA IB**

1 credit

*Prerequisite: Successful Completion of Algebra IA OR teacher/administrative approval*

Algebra IB is the second course of the multi-year sequence for Algebra I. This course covers the same topics as the second half of the Algebra I curriculum while reinforcing the concepts from Algebra IA including linear and quadratic equations, linear inequalities, and translating and solving word problems using equations and inequalities. Making connections between equations, tables, and graphs of linear equations will be continued from Algebra IA along with the continued study of systems of equations and inequalities. Graphing calculators for making connections and developing concepts will be used as a teaching tool throughout the year. **\*Note: All students enrolled in this course are required to take the Keystone Exam.**

## **ACADEMIC GEOMETRY**

1 credit

*Prerequisite: Successful Completion of Academic Algebra II*

Geometry is a course that emphasizes logical reasoning, spatial visualization skills, and their application to problem solving. Students will write two column deductive formal proofs and use algebraic skills to set up and solve problems based on geometric representation. One of the most important connections in all of mathematics is that between geometry and algebra. The interplay between the two strengthens students' abilities to formulate and analyze problems from both within and outside mathematics. Geometry will emphasize an abstract, formal approach to the study of geometry. The course includes topics such as properties of plane and solid figures, deductive methods of reasoning and use of logic, the study of postulates, theorems and proofs, concepts of congruence, similarity, parallelism, perpendicularity, and proportion, and rules of angle measurement in triangles.

## **ACADEMIC ALGEBRA II**

1 credit

*Prerequisites: Successful Completion of Academic Algebra I*

Academic Algebra II enhances the depth of Algebra and is a continuation of Algebra I. Graphing calculators will play an important role as students interpret graphs, explore their properties, and determine relationships between graphs. The properties of real numbers will be extended. The course includes topics such as set theory, operations with rational and irrational expressions, factoring of rational expressions, in-depth study of linear equations and inequalities, quadratic equations, solving systems of linear and quadratic equations, graphing of constant, linear, and quadratic equations, properties of higher degree equations, and operations with exponents.

## **ALGEBRA II**

1 credit

*Prerequisite: Successful Completion of Academic Algebra I OR Algebra IA/Algebra IB, AND Geometry OR teacher/administrative approval.*

Algebra II enhances the depth of Algebra and is a continuation of Algebra I. The properties of real numbers will be extended. The course includes topics such as set theory, operations with rational and irrational expressions, factoring of rational expressions, in-depth study of linear equations and inequalities, quadratic equations, solving systems of linear and quadratic equations, graphing of constant, linear, and quadratic equations, properties of higher degree equations, and operations with exponents. Graphing calculators will play an important role as students interpret graphs, explore properties, determine relationships between graphs and develop the different concepts in Algebra II.

## **GEOMETRY**

1 credit

*Prerequisite: Successful Completion of Algebra IB OR teacher/administrative approval*

Geometry will examine connections between geometry and algebra. Many experiences will be provided to deepen the understanding of shapes and the properties. The course will emphasize logical reasoning, spatial visualization skills, and the application to problem solving. Students will explore and make sense out of how two column deductive formal proofs are written. The interplay between the two strengthens students' abilities to formulate and analyze problems from both within and outside mathematics. Geometry will emphasize an abstract, formal approach to the study of geometry. The course includes topics such as properties of plane and solid figures, deductive methods of reasoning and

use of logic, concepts of congruence, similarity, parallelism, perpendicularity, proportion, and rules of angle measurement in triangles.

### **KEYSTONE ALGEBRA I TUTORIAL**

Grades 11 and 12

.5 credit

*Prerequisite: Students are selected based upon not demonstrating proficiency on the Keystone Algebra I exam and/or Academic Algebra I or Algebra IB.,*

The Keystone Algebra I Tutorial is an alternative way for your child to graduate if he/she does not demonstrate proficiency on the Keystone Exam. The Keystone Algebra I Tutorial course will provide support to students in demonstrating their ability to meet or exceed the academic standards at a proficient or advanced level. Students may also be required to retake the Keystone Algebra I exam.

Successful completion of the Keystone Algebra I Tutorial course may fulfill the required Algebra course credit. Proficiency on the Keystone Algebra I exam retest or successful completion of the Algebra I Tutorial course will meet the local graduation requirement.

## **MATHEMATICS ELECTIVES**

### **STATISTICS**

Grades 11, 12 (Elective Credit)

1 credit

*Prerequisite: Successful Completion of Honors/Academic Algebra II OR College Algebra OR teacher/administrative approval.*

Students who have completed Algebra II may take Statistics as their 11<sup>th</sup> or 12<sup>th</sup> grade required math course. If students take Statistics during 11<sup>th</sup> grade, they would need to take a core math class during 12<sup>th</sup> grade to complete their math requirements. Statistical literacy is vital in today's society; numerical "information" confronts us daily. Today's students need to be able to determine whether claims based on numerical information are reasonable and accurate. Statistics focuses on the introduction of the study of statistics and probability. The course will include topics such as basic probability, odds, descriptive statistics (measures of central tendency, presentation of data (including graphs), normal distribution and measures of variability) and inferential statistics (confidence intervals, linear regression and hypothesis testing).

### **COLLEGE ALGEBRA**

Grade 11, 12

1 credit

*Prerequisite: Successful completion of Algebra II or teacher/administration approval.*

This course will be offered to 11<sup>th</sup> or 12<sup>th</sup> grade students who have completed Algebra II. College Algebra is geared for students who are not pursuing careers related to mathematics. This course will review and extend algebraic concepts for students who have already taken Algebra II. Course topics included (but are not limited to) operations with rational and irrational expressions, factoring of rational expressions, linear equations and inequalities, quadratic equations, solving systems of linear and quadratic equations, properties of higher degree equations, operations with rational and irrational exponents, and concepts of logarithms. This course will also include basic trigonometric concepts and look at college algebra from the perspective of college math entrance exams.

## **ACADEMIC FUNCTIONS**

1 credit

*Prerequisite: Successful Completion of Academic Geometry AND Academic Algebra II or teacher/administrative approval*

Functions include the study of functions that are circular, polynomial, logarithmic, and exponential. The focus on understanding the behavior of functions leads to an emphasis on using a graphing calculator. You will also learn to resolve vectors, use matrices and determinants to solve systems of equations, and discover that the complex numbers are not too complex after all. To help insure success in Functions, a student must successfully complete all outcomes for pre-requisite courses.

# SCIENCE

The science program for grades nine through twelve is presented as a process of inquiry, using scientific approaches for solving problems. The program is designed to help young people become aware of the forces shaping the environment so they may think and act intelligently in a rapidly changing scientific world. Major consideration is given to the process of thinking, concept, knowledge of the sciences, and laboratory experiences.

## **9<sup>TH</sup> GRADE BIOLOGY**

1 credit

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. These courses include (but are not restricted to) such topics as bioenergetics/homeostasis & transport, cell growth & reproduction/genetics basic biological principles/chemical basis for life, theory of evolution/ecology. \*Note: All students enrolled in this course are required to take the Keystone Exam.

## **10<sup>TH</sup> GRADE GENERAL PHYSICAL SCIENCE**

1 credit

This full-year course focuses on basic concepts in chemistry and physics and encourages exploration of new discoveries in the field of physical science. The course includes an overview of scientific principles and procedures and has students examine the chemical building blocks of our physical world and the composition of matter. Additionally, students explore the properties that affect motion, forces, and energy on Earth. Building on these concepts, the course covers the properties of electricity and magnetism and the effects of these phenomena. As students refine and expand their understanding of physical science, they will apply their knowledge to complete interactive virtual labs that require them to ask questions and create hypotheses.

## **11<sup>TH</sup> GRADE EARTH SCIENCE**

1 credit

Students enrolled in this course will explore the scope of Earth sciences, covering everything from basic structure and rock formation to the incredible and volatile forces that have shaped and changed our planet. The course will focus on oceanography, geology, astronomy, meteorology and geography.

## **CHEMISTRY**

1 credit

Grade 10 1.0 credit Prerequisite: Biology Chemistry courses involve studying the composition, properties, and reactions of substances. These courses typically explore such concepts as the behaviors of solids, liquids and gases; acid/base and oxidation/reduction reactions; and atomic structure. Chemical formulas and equations and nuclear reactions are also studied.

## **PHYSICS**

1 credit

Grades 11, 12 1.0 credit Prerequisite: Chemistry, Geometry, Algebra II (may be enrolled concurrently) (Physics should be taken by any student interested in a science-related career or college path) Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. The study of physics includes examination of sound, light, magnetic and electric phenomena.

## SCIENCE ELECTIVES

### ENVIRONMENTAL SCIENCE I

.5 credit

This course examines the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, this course covers the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.

### ENVIRONMENTAL SCIENCE II

.5 credit

*Prerequisite: Environmental Science I*

This course will expand upon the mutual relationships between organisms and their environment. Topics covered include ecological processes, the impact of humans on natural systems and the development of practices that will ensure sustainable systems.

### AEROSPACE I

.5 credit

Aerospace courses explore the connection between meteorology, astronomy, and flight across and around the earth as well as into outer space.

### AEROSPACE II

.5 credit

*Prerequisite: Aerospace I*

Aerospace II courses will continue to explore the connection between meteorology, astronomy, and flight across the around the earth as well as into outer space. In addition to principles of meteorology (e.g., atmosphere, pressures, winds and jet streams) and astronomical concepts (e.g., solar system, stars, and interplanetary bodies), course topics may include the history of aviation, principles of aeronautical decision-making, airplane systems, aerodynamics, and flight theory.

### KEYSTONE BIOLOGY TUTORIAL

.5 credit

*Prerequisite: Students are selected based upon not demonstrating proficiency on the Keystone exam and/or Biology Course.*

The Keystone Biology Tutorial is an alternative way for students to graduate if he/she does not demonstrate proficiency on the Keystone Exam. The Keystone Biology Tutorial course will provide support to students in demonstrating their ability to meet or exceed the academic standards at a proficient or advanced level. *Students may also be required to retake the Keystone Biology Exam.* Proficiency on the Keystone Biology exam retest or successful completion of the Keystone Biology Tutorial course will meet the local graduation requirement. Successful completion of the Biology Tutorial course will fulfill the required biology course credit. Proficiency on the Biology Keystone Exam retest or approval of the student's Project-Based Assessment will meet the Biology Keystone Exam graduation requirement.

# **SOCIAL STUDIES**

The social studies program is designed to foster global citizenship. The scope of the program is such that every student is given the opportunity to investigate and evaluate the cultural, political, social, and economic aspects of many societies. The development of research, critical and analytical thinking, writing, and communication skills is an integral component of the social studies program.

## **10<sup>TH</sup> GRADE CIVICS**

1 credit

The Civics course will examine the general structure and functions of American systems of government, the roles and responsibilities of citizens to participate in the political process, and the relationship of the individual to the law and legal system.

## **11<sup>TH</sup> GRADE MODERN US HISTORY**

1 credit

Modern U.S. History courses will examine the history of the United States from the Civil War or Reconstruction era through the present time. This course will include a historical review of political, military, scientific, and social developments.

## **WORLD HISTORY**

1 credit

This yearlong course examines the major events and turning points of world history from the Enlightenment to the present. Students investigate the foundational ideas that shaped the modern world in the Middle East, Africa, Europe, Asia, and the Americas, and then explore the economic, political, and social revolutions that have transformed human history. This rigorous study of modern history examines recurring themes, such as social history, democratic government, and the relationship between history and the arts, allowing students to draw connections between the past and the present, across cultures, and among multiple perspectives. Students use a variety of primary and secondary sources, including legal documents, essays, historical writings, and political cartoons to evaluate the reliability of historical evidence and to draw conclusions about historical events. Students also sharpen their writing skills in shorter tasks and assignments, and practice outlining and drafting skills by writing full informative and argumentative essays.

## **SOCIAL STUDIES ELECTIVES**

### **ECONOMICS**

1 credit

This semester-long course invites students to broaden their understanding of how economic concepts apply to their everyday lives—including microeconomic and macroeconomic theory and the characteristics of mixed-market economies, the role of government in a free-enterprise system and the global economy, and personal finance strategies. Throughout the course, students apply critical thinking skills while making practical economic choices. Students also master literacy skills through rigorous reading and writing activities. Students analyze data displays and write routinely and responsively in tasks and assignments that are based on scenarios, texts, activities, and examples. In more extensive, process-based writing lessons, students write full-length essays in informative and argumentative formats.

### **INTRODUCTION TO HUMAN GEOGRAPHY**



1 credit

Examining current global issues that impact our world today, this course takes a thematic approach to understanding the development of human systems, human understanding of the world, and human social organization. Divided into two semesters, this high school course will challenge students to develop geographic skills, including learning to interpret maps, analyze data, and compare theories.

Offering interactive content that will grow students' understanding of the development of modern civilization and human systems— from the agricultural revolution to the technological revolution—this course encourages students to analyze economic trends as well as compare global markets and urban environments.

## **PSYCHOLOGY**

1 credit

This two-semester course introduces high school students to the study of psychology and helps those master fundamental concepts in research, theory, and human behavior. Students analyze human growth, learning, personality, and behavior from the perspective of major theories within psychology, including the biological, psychosocial, and cognitive perspectives. From a psychological point of view, students investigate the nature of being human as they build a comprehensive understanding of traditional psychological concepts and contemporary perspectives in the field. Course components include an introduction to the history, perspectives, and research of psychology; an understanding of topics such as the biological aspects of psychology, learning, and cognitive development; the stages of human development; aspects of personality and intelligence; the classification and treatment of psychological disorders; and psychological aspects of social interactions.

## **SOCIOLOGY**

1 credit

Providing insight into the human dynamics of our diverse society, this is an engaging, one-semester course that delves into the fundamental concepts of sociology. This interactive course, designed for high school students, covers cultural diversity and conformity, basic structures of society, individuals and socialization, stages of human development as they relate to sociology, deviance from social norms, social stratification, racial and ethnic interactions, gender roles, family structure, the economic and political aspects of sociology, the sociology of public institutions, and collective human behavior, both historically and in modern times.

# WORLD LANGUAGES

The World Language Department provides a program that strives to prepare students for responsible and intelligent participation in our world. Knowledge of other languages and other cultures is an essential part of understanding others and living peacefully with them.

## **SPANISH I**

1 credit

Spanish I students will be introduced to basic vocabulary needed in order to communicate with foreign speakers. All information taught is that which deals with the real world and covers topics such as friends, dating, school, and sports. Students begin to compare cultures and examine ways in which customs in the United States differ from those of other countries.

## **SPANISH II**

1 credit

*Prerequisites: Spanish I*

Level II students increase and improve skills in the four major areas of language: listening, speaking, reading and writing. Communication in the foreign language is stressed. As students continue to study, they become more aware of the structure of the target world language.

## **SPANISH III**

1 credit

*Prerequisites: Spanish II*

In this expanding engagement with Spanish, high school students deepen their focus on four key skills in foreign language acquisition: listening comprehension, speaking, reading, and writing. In addition, students read significant works of literature in Spanish, and respond orally or in writing to these works. Continuing the pattern, and building on what students encountered in the first two years, each unit consists of a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major Spanish-speaking areas in Europe and the Americas.

## **GERMAN I**

1 credit

German I students begin their introduction to German with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major German-speaking areas in Europe.

# INTERMEDIATE/JUNIOR HIGH PROGRAM

## GRADES 6, 7, 8

### *ENGLISH LANGUAGE ARTS*

The English Language Arts Curriculum, a total Language Arts Program, provides the targets for instruction and student learning essential for success in all academic areas. The ELA program represents the five components essential for successful Language Arts development: phonemic awareness, phonics, fluency, vocabulary and comprehension. The ELA program is researched based and follows sequential skill development commencing with the foundation skills in grades 6 -8, comprised of informational text, literature, writing, speaking and listening. Mastery of the PA Core Standards is the driving force ensuring that all students are moving forward on the staircase of complexity from kindergarten through twelfth grade.

#### **6<sup>th</sup> GRADE ENGLISH LANGUAGE ARTS**

English Language Arts 6 is designed to prepare students to read grade-appropriate, complex literature and informational text and cite textual evidence to support analyses. Students analyze both the structure and content of complex, grade-appropriate texts, determining how sentences and paragraphs within texts influence and contribute to the unfolding of a plot and the development and elaboration of events or ideas. Sixth grade students become more attuned to using context, knowledge of Greek and Latin roots and affixes, and word analysis to determine the meaning of academic words. Students are increasingly challenged to sharpen their ability to write and speak with more clarity and coherence, providing clear reasons and relevant evidence.

#### **7<sup>th</sup> GRADE ENGLISH LANGUAGE ARTS**

Students grow as readers, writers, and thinkers in this middle school course. With engaging literary and informational texts, students learn to think critically, analyze an author's language, and cite evidence to support ideas. Students complete an in-depth study of Jack London's classic novel *White Fang* and read excerpts from other stories, poetry, and nonfiction. Explicit modeling and ample opportunities for practice help students sharpen their vocabulary, grammar, and listening skills. Students also respond routinely to texts they have read. In extensive, process-based writing lessons, students write topical essays in narrative, informative, analytical, and argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.

#### **8<sup>TH</sup> GRADE ENGLISH LANGUAGE ARTS**

In this course, students build on their knowledge and blossom as thoughtful readers and clear, effective writers. A balance of literary and informational texts engages students throughout the course in reading critically, analyzing texts, and citing evidence to support claims. Students sharpen their vocabulary, grammar, and listening skills through lessons designed to provide explicit modeling and ample opportunities to practice. Students also routinely write responses to texts they have read, and use more extensive, process based lessons to produce full-length essays in narrative, informative, analytical, and

argumentative formats. In this full-year course, students develop a mastery of reading, writing, and language arts skills.

## ***MATHEMATICS***

Students in the Pocono Mountain School District today will live and work in the 21st century, in a world dominated by computers, worldwide communication, and a global economy. The workers of tomorrow must be prepared to absorb new ideas, understand patterns and trends, and solve unconventional problems. Students need to see mathematics is relevant to their lives. Pocono Mountain School District wants students to think mathematics, to understand mathematics, and to use mathematics. If they can do this, our students will have the confidence and the desire to meet the challenges and opportunities of tomorrow.

### **6<sup>TH</sup> GRADE MATHEMATICS**

Students in this course work with fractions, decimals and percentages. They use these tools to solve problems relating to geometry, algebra and probability. They develop, implement and evaluate problem-solving plans for various types of mathematical problems.

### **7<sup>TH</sup> GRADE MATHEMATICS**

In grade 7, instructional time should focus on four critical areas based on the Pennsylvania Core Mathematical Standards: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

### **8<sup>TH</sup> GRADE MATH - ESSENTIALS OF ALGEBRA**

In grade 8, instructional time should focus on three critical areas based on the Pennsylvania Core Mathematical Standards: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

## ***SCIENCE***

The Science program is presented as a process of inquiry, using scientific approaches for solving problems. The program is designed to help young people become aware of the forces shaping their environment so they may think and act intelligently in a rapidly changing scientific world. Major consideration is given to the process of thinking, the concepts, and knowledge of the sciences, and laboratory experiences.

### **6<sup>th</sup> GRADE SCIENCE**

Sixth grade science courses are aligned to the PA Academic Standards for Science and Technology. The students will explore the physical and natural world around them. Student experiences will center on learning, and practicing the diverse skills and concepts of science.

### **7<sup>th</sup> GRADE PHYSICAL SCIENCE**

The middle school physical science course focuses on conservation of matter, conservation of energy, motion and forces, and energy. Students will work on developing skills in data recording, classifying, measuring, observing, hypothesizing, analyzing, evaluation and inferring.

### **8<sup>TH</sup> GRADE LIFE SCIENCE**

Life Science is the study of cells, heredity, biological populations and their changes over time. It includes human biology, ecology, diversity of organisms and the history and nature of science. In this course students will have the opportunity to conduct and design experiments, identify and classify organisms. Students will work on developing skills in data recording, classifying, measuring, observing, hypothesizing, analyzing, evaluation and inferring.

## ***SOCIAL STUDIES***

The Social Studies program is designed to foster global citizenship. The scope of the program is such that every student is given the opportunity to investigate and evaluate the cultural, political, social, and economic aspects of many societies. The development of research, critical and analytical thinking, writing, and communication skills is an integral component of the social studies program.

### **6<sup>th</sup> GRADE SOCIAL STUDIES**

Middle school students begin their study of world History by exploring human history from ancient civilizations to the modern world. They examine the major themes of world history (geography, economics, government, citizenship, culture, global relations, science and technology and constitutional heritage). The text is supported by primary sources, maps and online resources.

### **7<sup>TH</sup> GRADE WORLD GEOGRAPHY**

The World Geography course will focus on exploring patterns and relationships throughout the world using the five themes of geography and economic reasoning within the context of world regional study. Geographic and economic research tools will be used in order to make decisions and problem solve. Major course strands include: government, economics, geography, and culture.

### **8<sup>TH</sup> GRADE EARLY US HISTORY**

The Early US History course will focus on American history from the Exploration and Colonization period to the Reconstruction Period following the Civil War. Students will be exposed to the historical, geographic, political, economic, and sociological events which influenced the development of the United States and the resulting impact on world history.

## ***Related Arts***

### ***HEALTH AND PHYSICAL EDUCATION***

Health education in the Pocono Mountain School District is comprehensive, accurate, up-to-date and relevant. The health education curriculum provides all students with the skills and knowledge to promote responsible lifetime decision making and contribute to a healthy and safe society. Health choices and decision making are stressed. The program teaches students the skills necessary to weigh options, to make responsible decisions and to develop behaviors that promote healthful living. Students are encouraged to assess their attitudes and behavior patterns and to understand the impact their life choices have on their communities and on their own well-being.

### **HEALTH AND PHYSICAL EDUCATION**

Middle school students learn introductory health and wellness information they can utilize to develop healthy attitudes and behavior patterns. Topics include: fitness, first aid, nutrition, mental and emotional health, conflict resolution, substance abuse and reproductive health. They physical education

component includes an activity log with an expectation of at least 90 minutes of documental physical activity per five days of school weekly.

## **STRATEGIES FOR ACADEMIC SUCCESS**

Offering a comprehensive analysis of different types of motivation, study habits, and learning styles, this course encourages high school and middle school students to take control of their learning by exploring varying strategies for success. Providing engaging lessons that will help students identify what works best for them individually, this one-semester course covers important study skills, such as strategies for taking high-quality notes, memorization techniques, test-taking strategies, benefits of visual aids, and reading techniques.

## **DIGITAL CITIZENSHIP**

Students develop essential study skills for academic success, such as staying organized, managing time, taking notes, applying reading strategies, writing strong papers, and researching and properly citing information. Instruction on how to be a responsible online learner is threaded throughout the course, and these skills are directly addressed in lessons on cyberbullying, staying safe online, and learning how to be a digital leader. By the end of the course, students will have the tools they need to be academically successful in both traditional and digital learning environments.

## **\*WORLD LANGUAGE**

The World Language Department provides a program that strives to prepare students for responsible and intelligent participation in our world. Knowledge of other languages and other cultures is an essential part of understanding others and living peacefully with them.

\*Students who meet the prerequisites may earn a graduation credit for Algebra 1, Spanish, and German when taken in seventh or eighth grade.

### **SPANISH I**

Grades 7-8

1 credit

Spanish I students will be introduced to basic vocabulary needed in order to communicate with foreign speakers. All information taught is that which deals with the real world and covers topics such as friends, dating, school, and sports. Students begin to compare cultures and examine ways in which customs in the United States differ from those of other countries.

### **SPANISH II**

Grades 7-8

1 credit

*Prerequisites: Spanish I*

Level II students increase and improve skills in the four major areas of language: listening, speaking, reading and writing. Communication in the foreign language is stressed. As students continue to study, they become more aware of the structure of the target world language.

### **GERMAN I**

Grades 7-8

1 credit

German I students begin their introduction to German with fundamental building blocks in four key areas of foreign language study: listening comprehension, speaking, reading, and writing. Each unit consists of an ongoing adventure story, a new vocabulary theme and grammar concept, numerous interactive games reinforcing vocabulary and grammar, reading and listening comprehension activities, speaking and writing activities, and multimedia cultural presentations covering major German-speaking areas in Europe.



## ELEMENTARY K-5 PROGRAM

Students in our K-5 Cyber Program participate through various learning options. Students may enroll in our district's cyber program full time, or participate in a variety of customized Hybrid options.

### **FULL DAY OPTION**

- Students may take all traditional courses (Mathematics, ELA, Science, and Social Studies) through our online Learning Management System.

### **HYBRID OPTION ONE**

- Students attend their home school in the **morning**. They may take the bus to school and must be picked up after their academics for the morning are complete.
- Students may stay for Lunch with their peers.
- Students complete courses *not* taken at school through the cyber Learning Management System.

### **HYBRID OPTION TWO**

- Students attend their home school in the **afternoon**. Students must be transported to school and are able take the bus to school home at the end of the school day.
- Students may arrive in time for Lunch with their peers.
- Students complete courses *not* taken at school through the cyber Learning Management System.

### **INCLUDED IN BOTH HYBRID OPTIONS**

- Students may participate in all before and after school activities, including Band and Chorus.
- Students may attend all field trips and special events at school.
- Personalized learning plan customized for each student
- Students have full access to district resources and facilities, including guidance counseling and libraries

The Pocono Mountain School District Cyber Program strives to engage students in a highly motivational, student-centered educational program that relies on basic educational principles. It continues to incorporate the latest information and communications technology to promote student achievement and to foster higher-order thinking and problem-solving skills. Students have the opportunity to master essential content skills and to build a strong foundation enabling them to be successful throughout school.

## ***K-5 MATHEMATICS***

Students in the Pocono Mountain School District today will live and work in the 21st century, in a world dominated by computers, worldwide communication, and a global economy. The workers of tomorrow must be prepared to absorb new ideas, understand patterns and trends, and solve unconventional problems. Students need to see mathematics is relevant to their lives. Pocono Mountain School District wants students to think mathematics, to understand mathematics, and to use mathematics. If they can do this, our students will have the confidence and the desire to meet the challenges and opportunities of tomorrow.

## ***K-5 ENGLISH LANGUAGE ARTS***

The English Language Arts Curriculum, a total Language Arts Program, provides the targets for instruction and student learning essential for success in all academic areas. The ELA program represents the five components essential for successful Language Arts development: phonemic awareness, phonics, fluency, vocabulary and comprehension. The ELA program is researched based and follows sequential skill development commencing with the foundation skills in pre-k through 6, comprised of informational text, literature, writing, speaking and listening. Appropriate grade level resources support differentiated instruction and best practice. The needs of our student population are met through classroom instruction as well as specialized support services. Student progress is continually monitored through teacher observation and state and local assessments. Data teams ensure that all students, students needing remediation as well as those students functioning above grade level, continue to show growth. Mastery of the Pennsylvania core Standards is the driving force ensuring that all students are moving forward on the staircase of complexity from kindergarten through twelfth grade. The amplification of this ELA curriculum represents an evolved program ensuring all students will graduate college and career ready for success in the 21st century.

## ***K-5 SCIENCE***

The Science program is presented as a process of inquiry, using scientific approaches for solving problems. The program is designed to help young people become aware of the forces shaping their environment so they may think and act intelligently in a rapidly changing scientific world. Major consideration is given to the process of thinking, the concepts, and knowledge of the sciences, and laboratory experiences.

## ***K-5 SOCIAL STUDIES***

The Social Studies program is designed to foster global citizenship. The scope of the program is such that every student is given the opportunity to investigate and evaluate the cultural, political, social, and economic aspects of many societies. The development of research, critical and analytical thinking, writing, and communication skills is an integral component of the social studies program.



**2018 - 2019**

**PROGRAM**

**DESCRIPTIONS**



**The Monroe and Career Technical Institute serves the East Stroudsburg, Pleasant Valley, Pocono Mountain, and Stroudsburg School Districts**

## **See your Guidance Counselor To inquire about enrolling at MCTI**

The mission of the Monroe County Career & Technical Institute (MCTI) is “to provide high quality career and technical training and education for the students of our community.” We provide this training and education through a set of courses that we believe prepares students both academically and technically for a career or to pursue postsecondary education.

MCTI offers students 20 Program of Study (POS) and 3 Tech Prep Programs. These Programs are career and technical Pennsylvania Department of Education (PDE) approved programs that articulate the secondary career and technical education to a postsecondary degree, diploma, or certificate programs. These 23 Programs align the secondary courses to a postsecondary program to complete a degree or certificate.

### **PROGRAMS OF STUDY**

“Program of Study” is a Pennsylvania Department of Education approved statewide program that:

- Incorporate and align secondary and postsecondary education
- Include academic and CTE content in a coordinated, non-duplicative progression of courses
- Includes the opportunity for secondary students to acquire postsecondary credits
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate of baccalaureate degree
- Identify and address current or emerging occupational opportunities
- Build on career clusters, career pathways, and career academies
- State develops in consultation with local Occupational Advisory Committees (OAC) and standards

How SOAR high school programs are accepted at postsecondary schools:



Monroe Career & Technical Institute - 194 Laurel Lake Road, Bartonsville, PA 18321 • (570) 629.2001  
[www.monroecti.org](http://www.monroecti.org)

### **TECH PREP**

**Tech Prep programs combine at least two years of high school education with two years of postsecondary education to prepare students for technical careers in areas such as engineering technology, health and human services, and business/information technology. These articulated programs combine a common core of higher academics in math, science, and communications with a specific field of technical preparation. Tech Prep is a college prep program that leads to an associate degree, two-year certificate, or apprenticeship. Tech Prep students will be technically and academically prepared to join the workforce or continue their education towards a baccalaureate degree.**

## **Career & Technical Student Organizations**

Monroe Career & Technical Institute offers several co-curricular activities through our Career & Technical Student Organizations. Some organizations are supplemental to the career and technical programs.

### **American Welding Society – AWS**

The American Welding Society (AWS) was formed in 1919 to advance the science, technology and application of welding. Participation in a student chapter can provide valuable experience for career and personal development for members. AWS is recognized as the leading technical organization in the United States devoted to the advancement and interest of welding, joining and cutting processes. The organization includes welders, inspectors, and technicians of all levels as well as thousands of students who will become the workforce of the future.

### **DECA – An Association of Marketing Students**

DECA enhances marketing, management and entrepreneurship education. Students develop skills and competencies for careers, build self-esteem, experience leadership and practice community service. DECA promotes the partnership of education and business. DECA promotes leadership opportunities, competitive events and achievement/recognition activities on the local, state and national levels. Students enrolled in the Hotel, Resort & Tourism and Marketing Programs are eligible to join DECA.

### **National FFA Organization (Agricultural Education)**

FFA is a co-curricular student organization which is an integral part of agriculture education. FFA enhances the education of students preparing or advancing their careers in production agriculture, products processing, agribusiness, renewable natural resources, agricultural mechanics, horticulture and environmental occupations. FFA promotes leadership opportunities, competitive events and achievement/recognition activities on local, state and national levels. Students in both the Floriculture and Horticulture Programs participate in FFA.

### **Health Occupations Students of America – HOSA**

HOSA is a national student organization that provides a unique program of leadership development, motivation and recognition exclusively for secondary, post-secondary, collegiate and adult students enrolled in health occupations education course or instructional programs. HOSA is an integral part of approved health occupation programs. HOSA promotes leadership opportunities, competitive events and achievement/recognition activities on local, state and national levels. Health Occupation students join HOSA.

### **NAHB – National Association of Home Builders**

NAHB is an association whose mission is to enhance the climate for housing and the building industry. The student chapter of NAHB works to provide activities for students to develop professionalism in the construction trades and to introduce students to the construction business. NAHB strives to create an environment in which: All American have access to the housing of their choice and the opportunity to realize the American dream of homeownership. Builders have the freedom to operate as entrepreneurs in an open and competitive environment. Housing and those who provide it are recognized as the strength of the nation. The Pocono Builders Association is the sponsor of MCTI NAHB student organization.

### **National Technical Honor Society – NTHS**

NTHS is a non-profit, honor organization for students enrolled in occupational, career and technical programs. The purpose of NTHS is to promote service, leadership, honesty, career development, and skilled workmanship, and to reward student achievement. The NTHS is the benchmark for excellence in workforce education, encouraging students to give their BEST. It also helps students build workplace values that are demanded in today's quality-driven business and industry. Website: [www.nths.org](http://www.nths.org)

### **SkillsUSA**

SkillsUSA is a co-curricula student organization which is an integral part of trade, industrial, and technical education. SkillsUSA enhances the education of students by preparing or advancing their careers in the service, manufacturing, technical, trade and industrial occupations. SkillsUSA promotes leadership opportunities, competitive events and achievement/recognition activities at the local, district, state and national levels. All career and technical students can participate in SkillsUSA. Website: [www.Skillsusa.org](http://www.Skillsusa.org)

### **Student Government/Interact**

Student Government provides opportunities for active participation in the organization and management of school affairs; to further interest in all school activities; to teach and develop leadership qualities through domestic practices and to cooperate in promoting career and technical education in general, as well as the general welfare of the school.

**Interact:** A Rotary-sponsored service club for young people in their secondary-school ages, gives an opportunity for students to participate in fun and meaningful service projects. Interact clubs perform at least two projects a year, with one serving the community and the other furthering international understanding. Along the way, Interactors (Interact Club Members) develop their leadership skills and initiative while meeting new friends.

Through the service activities, Interactors learn the importance of:

- Developing leadership skills and personal integrity.
- Demonstrating helpfulness and respect for others.
- Understanding the value of individual responsibility and hard work.
- Advancing international understanding and goodwill.

Membership in the Student Government/Interact requirements:

- Each program session selects one representative and an alternate.
- Each representative and alternate is a bona fide member of a CTSO.
- Each representative (or alternate) attends meetings as called by the advisor.

# TABLE OF CONTENTS

<b>CIP CODE</b>	<b>PROGRAM NAME</b>
47.0603	AUTOMOTIVE COLLISION & REPAIR.....
47.0604	AUTOMOTIVE TECHNOLOGY .....
46.0201	CARPENTRY .....
11.0901	COMPUTER NETWORKING & SECURITY .....
12.0401	COSMETOLOGY .....
43.0107	CRIMINAL JUSTICE .....
12.0508	CULINARY ARTS .....
47.0613	DIESEL TECHNOLOGY .....
32.0105	DIVERSIFIED OCCUPATIONS.....
15.1301	DRAFTING & DESIGN TECHNOLOGY .....
46.0399	ELECTRICAL TECHNOLOGY .....
15.0303	ELECTRONIC TECHNOLOGY .....
10.0399	GRAPHIC COMMUNICATIONS .....
51.9999	HEALTH PROFESSIONS.....
01.0601	HORTICULTURE (Floriculture & Landscaping) .....
52.1905	HOTEL, RESORT, & TOURISM MANAGEMENT.....
47.0201	H.V.A.C TECHNOLOGY.....
52.1801	MARKETING .....
46.0101	MASONRY .....
47.0699	OUTDOOR POWER EQUIPMENT TECHNOLOGIES .....
46.0503	PLUMBING TECHNOLOGY .....
48.0501	PRECISION MACHINING.....
48.0508	WELDING TECHNOLOGY .....



# AUTO COLLISION AND REPAIR

## 47.0603 AUTOBODY/COLLISION AND REPAIR TECHNOLOGY/TECHNICIAN (PDE APPROVED PROGRAM OF STUDY)

The Auto Collision Repair Program is an instructional program that prepares individuals to apply technical knowledge and skills to repair damaged automotive vehicles such as automobiles and light trucks. Students learn to examine damaged vehicles and estimate cost of repairs; remove, repair and replace upholstery, accessories, electrical and hydraulic window and seat operating equipment and trim to gain access to vehicle body and fenders; remove and replace glass; repair dented areas; replace excessively damaged fenders, panels and grills; straighten bent frames or unibody structures using hydraulic jacks and pulling devices; and file, grind and sand repaired surfaces using power tools and hand tools. Students refinish repaired surfaces by painting with primer and finish coat. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Chief Easy Liner Collision Repair System Gas and MIG Welders Paint Mixing System Spray Booth Virtual Spray Painter	Automobile Body and Related Repairers Helpers-Installation, Maintenance and Repair Workers Automotive Specialty Technicians Painters, Transportation Equipment	Mechanical Aptitude Ability to Work Independently and in a Team Communication Skills Trouble Shooting Skills

### CAREERS:

HPO	49-3021.00	Automotive Body and Related Repairers
	49-3022.00	Automotive Glass Installers and Repairers
	51-9122.00	Painters, Transportation Equipment

### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
S/P2	S/P2

# AUTOMOTIVE TECHNOLOGY

## 47.0604 AUTOMOBILE/AUTOMOTIVE MECHANICS TECHNOLOGY/TECHNICIAN (PDE APPROVED PROGRAM OF STUDY)

Students enrolled in the Automotive Technology Program are prepared to apply technical knowledge and skills to engage in the servicing and maintenance of all types of automobiles and light trucks. This Program includes instruction in the diagnosis and testing, including computer analysis, of malfunctions in and repair of engines, fuel, electrical, cooling and brake systems and drive train and suspension systems. Instruction is also given in the adjustment and repair of individual components and systems such as cooling systems, drive trains, fuel system components and air conditioning and includes the use of technical repair information and the state inspection procedures. The Program consists of a list of PDE required tasks and additional local or value added tasks.

This Program is certified by the National Automotive Technicians Education Foundation (NATEF) and is designed for students who would like to work in the automotive service industry. Automotive technicians need knowledge of electronics, emission control, electricity, mechanics, and hydraulics.

The need for skilled technicians is rapidly increasing. Expanded use of electronics, new government requirements on safety and pollution control, and more extensive warranties on new vehicles require the work of highly skilled technicians and diagnosticians.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Computer-based Service Information Database Engine Analyzers Lab Scopes Scan Tools Road Force Balancer Machine/Computer Precision Measuring Instrument Pressure Gauges Digital Image – Alignment Machine On Vehicle Brake Lathe Hunter Tire Changer Machine	Automotive Service Technician and Mechanic Automotive Specialty Technician Administrative Service Manager	Trouble Shooting Skills Mechanical Aptitude Ability to Work Independently and in a Team Analytical Skills

### CAREERS:

	49-2096.00	Electronic Equipment Installers and Repairers, Motor Vehicles
HPO	49-3023.00	Automotive Service Technicians & Mechanics

### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Certified Safety Inspector, Cat I S/P2	Pennsylvania Department of Transportation S/P2
Section 609 Certification for Refrigerant Recycling and Recovery	Mobile Air Conditioning Society Worldwide
ASE	Automotive Service Excellence

Battery Starting and Charging System	AC Delco
Electrical State 1 & 2	AC Delco
AYES Certificate	Automotive Youth Educational Systems
Motor Oil Certification	Valvoline

# CARPENTRY

## 46.0201 CARPENTRY/CARPENTER (PDE APPROVED PROGRAM OF STUDY)

The Carpentry Program is an instructional program that prepares individuals to apply technical knowledge and skills to lay out, fabricate, erect, install and repair structures and fixtures using hand and power tools. This Program includes instruction in common systems of framing, construction materials, estimating, blueprint reading and finish carpentry techniques. The Program is designed to provide students with a combination of classroom theory and hands-on building experience in residential, commercial, and industrial construction trades. The Program consists of a list of PDE required tasks and additional local or value added tasks.

Specialized Equipment	Related Occupations Employment Opportunities	Personal Qualifications
Band and Table Saws Bench Shapers Drum and Disk Sanders Jig and Trim Saws Molder/Planer Planers and Jointers Nailers Radial Arm Saws Routers with Attachments Specialized Power Hand Tools Woodworking Lathes	Rough Carpenter Carpenter Helper Roofer Drywaller	Patience Endurance Ability to Work Independently and in a Team Mechanical Aptitude Communication Skills

### CAREERS:

HPO	47-2031.00	Carpenters
	47-3012.00	Helpers--Carpenters

### Certifications available to qualified students:

Industry Certification	Provider Name
CareerSafe/OSHA	Texas Engineering Extension Service
Pennsylvania Builders Association Skills Certificate	Pennsylvania Builders Association
Articulated Ladder	American Ladder Institute
Mobile Ladder	American Ladder Institute
Single and Extension Ladder	American Ladder Institute
Step Ladder	American Ladder Institute

# COMPUTER NETWORKING and SECURITY

## 11.0901 COMPUTER SYSTEMS NETWORKING AND TELECOMMUNICATIONS (PDE APPROVED PROGRAM OF STUDY)

The Computer Networking and Security Program is an instructional program that focuses on the design, implementation and management of linked systems of computers, peripherals and associated software and prepares individuals with the technical skills required to support networks and network users. This Program includes instruction in network technologies and standards: system design, architecture, operating systems, security, communications protocols, client support, messaging services, network management, troubleshooting and server optimization. Those completing the Program may be employed as a network administrator, network specialist, network technician, webmaster, client services analyst (end user) or network operator. The Program consists of a list of PDE required tasks and additional local or value added tasks.

The core content of this course is focused on nationally recognized certifications. Upon completion of the Program, students may be eligible to obtain up to 30 advanced standing credits at a post-secondary institution based on their career track.

<b>Specialized Equipment:</b>	<b>Related Occupations/Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Personal Computers Scanners Digital Cameras Data Projectors Servers Routers Firewalls Printers Network Sniffers	Network & Computer Systems Administrator Computer Security Specialist Computer Support Specialist Computer Security	Problem Solving Trouble Shooting Skills Manual Dexterity Analytical Skills Communication Skills Mechanical Aptitude

### CAREERS:

	15-1081.00	Network Systems and Data Communications Analyst
	15-1122.00	Information Security Analysts
	15-1134.00	Web Developers
HPO	15-1142.00	Network and Computer Systems Administrators
HPO	15-1152.00	Computer Network Support Specialists

Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
A+	Computing Technology Industry Association
Network+	Computing Technology Industry Association

Security+	Computing Technology Industry Association
Cisco Certified Network Associate (CCNA)	Cisco Systems
Network Cabling Specialist – Copper	C-TECH
A+ PC Pro	LabSim, Test Out
Network+ Pro	LabSim, Test Out
Security + Pro	Lab Sim, Test Out

# COSMETOLOGY

## 12.0401 COSMETOLOGY /COSMETOLOGIST, GENERAL (PDE APPROVED TECH PREP PROGRAM)

The Cosmetology Program is an instructional program that prepares individuals to apply technical knowledge and skills related to the cosmetology industry in a variety of beauty treatments including the care of the hair, skin, and nails. Instruction includes training in giving shampoos, rinses and scalp treatments; hair styling, setting, cutting, coloring, tinting and lightening; permanent waving; facials; manicuring; and hand and arm massaging. The Program includes instruction in bacteriology, anatomy, hygiene, sanitation, salon management including record keeping and customer relations. Instruction is designed to qualify students for the licensing examination upon successfully completing 1,250 hours of instruction. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
<p>For participation in the program, students are required to purchase a kit with the items mandated by the State Board of Cosmetology and MCTI.</p> <p>Students are also required to purchase a uniform selected by MCTI.</p>	<p>Manicurist Hairdresser Hairstylist Manager Skin Care Specialist</p>	<p>Ability to Work Independently and in a Team Problem Solving Analytical Skills Creativity Patience Endurance</p>

**CAREERS:**

	25-2032.00	Career/Technical Education Teachers, Secondary School
	39-5012.00	Hairdressers, Hairstylists and Cosmetologists

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Cosmetologist	Pennsylvania Department of State, State Board of Cosmetology

# CRIMINAL JUSTICE

## 43.0107 CRIMINAL JUSTICE/POLICE SCIENCE (PDE APPROVED PROGRAM OF STUDY)

The Criminal Justice Program is an instructional program that prepares individuals to apply technical knowledge and skills that relate to performing entry-level duties as a patrolman, corrections officer, juvenile officer, security officer and probation officer. The course stresses patrol and related duties such as traffic and crowd control, the American legal system, techniques used in the police laboratory and training in emergency and disaster situations. Also stressed is physical development with a strong emphasis on self-defense and the building of self-confidence. Investigatory techniques such as interviewing and evidence gathering, report writing, a study of juvenile law and procedure, the techniques of crime prevention, the criminal process from arrest through conviction and procedural matters affecting law enforcement such as arrest, search and seizure and legal principles developed in information lessons are utilized in supervised simulated situations. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Personal Protective Equipment CPR Mannequin Handcuffs Chemical Aerosols Law Enforcement Gear Belts	Police Patrol Officer Security Officer Correctional Officer Police, Fire and Ambulance Dispatchers Forensic Evidence Technician	Physical Stamina and Strength Weight Lifting Walking Good Hand and Eye Coordination Problem Solving Skills Ability to Work Independently and in a Team Patience Endurance Good Communication Skills

### CAREERS:

33-3011.00	Bailiffs
33-3012.00	Correctional Officers & Jailers
33-3021.00	Detectives and Criminal Investigators
33-3051.00	Police & Sheriff's Patrol Officers
33-9021.00	Private Detectives and Investigators

Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Certificate of Training - Recognition and Identification of Hazardous Materials (HAZMAT)	Pennsylvania State Fire Academy
First Aid	American Red Cross



Adult CPR	American Red Cross
AED Essentials	American Red Cross
Certified Protection Officer, CPO	International Foundation for Protection Officers

## CULINARY ARTS

### 12.0508 INSTITUTIONAL FOOD WORKERS (PDE APPROVED PROGRAM OF STUDY)

The Culinary Arts Program is an instructional program that prepares students for employment related to institutional, commercial or self-owned food establishments or other food industry occupations. Instruction and specialized learning experiences include theory, laboratory and work experience related to planning, selecting, preparing and serving of quantity food and food products; nutritive values; use and care of commercial equipment; safety; and sanitation precautions. Instruction of skills is provided to individuals desiring to become employed in all areas of the food service industry at entry level. The Program is certified by the American Culinary Federation. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Fully Gas-operated Kitchen Brazier and Pressure Steamer Ovens – Conventional and Convection Slicer Broiler Deep-fryer	Waiter/Waitress Food Prep Worker Food Service Manager Cook/Short Order Cook Baker Chef/Head Cook	Ability to Work Independently and in a Team Adapt to Situations Work within Time Constraints Endurance

#### CAREERS:

HPO	35-1012.00	First-Line Supervisors of Food Preparation and Serving Workers
	35-2014.00	Cooks, Restaurant
	35-2015.00	Cooks, Short Order
	35-2021.00	Food Preparation Workers

#### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Certified Junior Culinarian (CJC)	American Culinary Federation
Pennsylvania Food Employee Certification (ServSafe, etc.)	Pennsylvania Department of Agriculture
ProStart National Certificate of Achievement	Pennsylvania Restaurant & Lodging Association (PRLA)

# DIESEL TECHNOLOGY

## 47.0613 MEDIUM/HEAVY VEHICLE AND TRUCK TECHNOLOGY/TECHNICIAN (PDE APPROVED PROGRAM OF STUDY)

The Diesel Technology Program is designed to prepare individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. This Program includes instruction in diesel engine mechanics, suspension and steering, brake systems, electrical and electronic systems, preventive maintenance inspections, drive trains, HVAC systems, and auxiliary equipment installation and repair.

The Diesel Technology Program includes safety, theory, and general practice. Diesel technicians must like to work with machines and be able to use both hand and power tools. This Program is certified by the National Automotive Technicians Education Foundation (NATEF). The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Diesel Over-the-road Trucks Diesel Engines Transmissions Braking Systems Drive axles	Bus and Truck Mechanic Diesel Engine Specialist Industrial Machinery Mechanic Automotive Master Mechanic Helpers-Installation Farm Equipment Mechanic	Mechanical and Electronic Abilities Physical Stamina Commercial Driver's License Problem Solving/Trouble Shooting Skills Ability to Work Independently and in a Team

### CAREERS:

HPO	49-3031.00	Bus & Truck Mechanics & Diesel Engine Specialists
	49.3041.00	Farm Equipment Mechanics & Service Technicians
	49.3042.00	Mobile Heavy Equipment Mechanics

### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
AYES Certificate	Automotive Youth Educational Systems
Certified Safety Inspector, Cat I	Pennsylvania Department of Transportation
S/P2	S/P2
Section 609 Certification for	Mobile Air Conditioning Society

## DIVERSIFIED OCCUPATIONS

### 32.0105 JOB-SEEKING/CHANGING SKILLS (Diversified Occupations) (PDE APPROVED TECH PREP PROGRAM)

The Diversified Occupations Program (DO) is an instructional program that operates as an integral part of vocational education to provide a cooperative arrangement between the school and employers whereby the student receives general education instruction in the school and on-the-job training through part-time employment in business/industry. The area of training may be in any vocational education area where there are needs for trained persons and must relate to the student's career objective.

The DO Program is a partnership between MCTI, the sending district, the student and the student's parents, and the employer. This training program is designed to help the student to transition from school to the world of work while gaining valuable life and work experience. Students are responsible for finding part-time employment with a local employer which is directly related to the career field they wish to pursue after graduating from high school. This Program is conducted at the student's district high school campus.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Equipment will be specific to the industry and work place	Vary by career pathway	Dependent upon the specific career and work place

CAREERS: Career opportunities will be determined upon receiving employment in a specific industry.

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
CareerSafe/OSHA	Texas Engineering Extension Service

# DRAFTING & DESIGN TECHNOLOGY

## 15.1301 DRAFTING AND DESIGN TECHNOLOGY/TECHNICIAN, GENERAL (PDE APPROVED PROGRAM OF STUDY)

Drafting & Design Technology is an instructional program that generally prepares individuals to apply technical knowledge and skills as each relates to gathering and translating of data or specifications including basic aspects of planning, preparing and interpreting mechanical, architectural, structural, civil, electrical/electronic, topographical and other drawings and sketches used in various engineering fields. Instruction is designed to provide experiences in drawing and CAD; the use of reproduction materials, equipment and processes; the preparation of reports and data sheets for writing specifications; the development of plan and process charts indicating dimensions, tolerances, fasteners, joint requirements and other engineering data; the development of models; and drafting multiple view assembly and sub-assembly drawings as required for manufacture, construction and repair of mechanisms. The Program consists of a list of PDE required tasks and additional local or value added tasks.

Students who successfully complete the Program will have the opportunity to work as entry level CAD-Technicians with mechanical, architectural, and civil drafting professionals. Students may also work in many related careers such as surveying, construction estimating, and specification writing.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Parallel Sliders Triangles and Scales Auto-Cad Architectural Desktop Mechanical Desktop	Mechanical Drafter Architectural Drafter Civil Drafter Interior Designer Engineering	Problem Solving Manual Dexterity Analytical Skills Communication Skills Mechanical Aptitude

CAREERS:

	17-3011.00	Architectural and Civil Drafters
	17-3013.00	Mechanical Drafters
	17-3019.00	Drafters, All Others

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Autodesk Certified User	Autodesk

# ELECTRICAL TECHNOLOGY

## 46.0399 ELECTRICAL AND POWER TRANSMISSION INSTALLERS, OTHER (PDE APPROVED PROGRAM OF STUDY)

The Electrical Technology Program is an instructional program that prepares individuals to apply technical knowledge and skills necessary to install, operate, maintain and repair electrically-energized residential, commercial and industrial systems, and DC and AC motors, controls and electrical distribution panels. Instruction emphasizes practical application of mathematics, science, circuit diagrams and use of electrical codes and includes blueprint reading, sketching and other subjects essential for employment in the electrical occupations. Reading and interpretation of commercial and residential construction wiring codes and specifications, installation and maintenance of wiring, service and distribution networks within large construction complexes are also critical components of the program. The Program consists of a list of PDE required tasks and additional local or value added tasks.

Students are also given the opportunity to pursue advanced training in motor control circuits and power technology applications. Students are also afforded the opportunity to study home automation by using the Smart Home Technology. Students receive practical experience by completing many projects.

<b>Specialized Equipment:</b>	<b>Related Occupations / Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Basic and Advanced Electrical Trainers Conduit Bending Equipment Power Wire Pullers Smart House Technology Trainers Analog and Digital Testing Equipment Motor Control Trainers PLC Trainers	Electrician Helper Electrician, Apprentice First Line Supervisor and Manager Electric Motor and Switch Assembler and Repairer	Mechanical Aptitude Problem Solving Skills & Troubleshooting Skills Analytic Skills Ability to Work Independently and in a Team Ability to work in all Weather and heights Communication Skills Knowledge of Algebra

### CAREERS:

HPO	47-2111.00	Electricians
	47-3013.00	Helpers--Electricians
	49-2098.00	Security & Fire Alarm Systems Installers
HPO	49-9051.00	Electrical Power-Line Installers & Repairers

Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
CareerSafe/OSHA	Texas Engineering Extension Service

## ELECTRONICS TECHNOLOGY

### 15.0303 ELECTRICAL, ELECTRONIC AND COMMUNICATIONS ENGINEERING TECHNOLOGY/TECHNICIAN (PDE APPROVED PROGRAM OF STUDY)

Electronics Technology is an instructional program that prepares individuals to apply basic electronic principles and technical skills to the production, calibration, estimation, testing, assembling, installation and maintenance of electronic equipment. Emphasis is on passive components and solid-state devices; digital circuits; optoelectronic devices; operational amplifiers; audio and RF amplifiers; oscillators; power supplies; and AM, FM and PCM modulators. Knowledge is acquired through theoretical instruction, experimentation and hands-on activities. Instruction will develop basic levels of knowledge, understanding and associated skills essential for entry-level employment in communications, industrial electronics, digital processing, robotics, avionics, biomedical technology and other electronics occupations. Through collaborative curriculum planning with colleges and trade schools, students who participate in this Program are eligible to obtain up to 12 credits advanced standing in a post-secondary program. This Program participates in the Electronics Technicians Association, International Student Certification Program. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations / Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Oscilloscope Function Generator Power Supplies Logic Probes Multimeters	Production Repairer Electronic Assembler Electronic Technician Communication Technician Electronic Engineer	Communication Skills Analytical Skills Manual Dexterity Trouble Shooting Skills

#### CAREERS:

	17-3012.00	Electrical and Electronic Drafters
	17-3023.00	Electrical and Electronic Engineering Technicians
HPO	17-3024.00	Electro-Mechanical Technicians

#### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Student Electronics Technician (SET)	Electronics Technicians Association, Int.
EM1 – DC Basics	Electronics Technicians Association, Int.
EM2 – AC Basics	Electronics Technicians Association, Int.
EM 3 – Analog	Electronics Technicians Association, Int.

EM 4 – Digital Basics	Electronics Technicians Association, Int.
EM5 – Comprehensive	Electronics Technicians Association, Int.

# GRAPHIC COMMUNICATIONS

## 10.0399 GRAPHIC COMMUNICATIONS, OTHER (PDE APPROVED PROGRAM OF STUDY)

Graphic Communications is an instructional program that generally prepares individuals to apply technical knowledge and skills to plan, prepare and execute commercial and industrial visual image and print products using mechanical, electronic and digital graphic and printing equipment. Students learn desktop publishing, layout, composition, presswork and bindery as well as photography, and several graphic arts techniques. Emphasis is on typographical layout and design using computer graphics, photo typesetting, platemaking, offset preparation and operation, paper cutting, ink and color preparation and dynamics and airbrush and screen printing production.

Concentration in the area of graphic arts will permit the student to work in computer design, digital prepress, press work, Sign making/vehicle graphics, screen printing, sandblasting, and more. In addition, the student will be instructed in various finishing operations. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
ProPrint Offset/duplicator printers ABdick Offset/duplicator printers Xerox Color copier Xante Plate Maker 5 & Black & White Printer Epson 44"Large Format Color Plotter Morgan Folding, Scoring, Perforating Machine GBC 44" Hot Laminator & Mounting Machine Saddlestich Machine Multi-die Book Binding Machine Xante Illumina Digital Off-set Press Vinyl Graphic Cutter Hydraulic Paper Cutter Hydraulic 3-Hole Punch Machine 4-Color Screen Printing Machine Screen Printing 30" Dryer Imprinter 44" Cold Laminator Heat Press Transfer Machine Xcaliber Board Trimmer 40" Rotary Trimmer Air Brush Equipment Padding Equipment Bates Numbering System Hot Foil Stamping Machine Exposure Unit Light Table Digital Equipment: Camera - Computers Scanner	Graphic Designer Desktop Publisher Commercial Printing Plants Magazine Publishers Advertising Agencies Self-Employment Sign Company/Vinyl Applications Screen Printer Finishing/Production Worker Off-Set Press Operator Art Director Project Management Specialty Shops	Artistic Ability/Creativity Communication Skills Creative Drive with a Vision Goal Oriented Patience Enjoys Hands-on Work Problem solving troubleshooting Skills Professional Mannerism Works Well in Groups Cognitive Skills Highly Motivated Self-Starters Business Skills

### CAREERS:

	27-1021.00	Commercial and Industrial Designers
	27-1024.00	Graphic Designers
	43-9031.00	Desktop Publishers
	51-5111.00	Prepress Technicians and Workers
HPO	51-5112.00	Printing Press Operators
	51-9194.00	Etchers and Engravers



Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Adobe Certified Associate-Graphic Design & Illustration	Certiport

# HEALTH PROFESSIONS

## 51.9999 HEALTH CARE TECHNOLOGY (PDE APPROVED PROGRAM OF STUDY)

The Health Professions Program is designed to prepare individuals to apply knowledge and skills in the health occupations. Instruction is provided in the basic skills in a variety of areas associated with health occupations such as health and medical services, pharmaceutical and medical instruments and supplies. Instruction includes, but is not limited to, foundations of health (medical terminology); anatomy and physiology; legal, ethical and economic aspects of health care; clinical laboratory procedures; basic health occupational skills; aseptic techniques; OSHA regulations; and infection control. Clinical education is an integral part of the program. Science and math taught by certificated science and math teachers will be coordinated and deemed essential for students to successfully reach their career objectives.

Leadership is an integral part of the entire program through participation in HOSA (Health Science Technology Student Organization). A mandatory clinical assignment is integrated into the curriculum. Seniors take the Nurse Aide course and certification test. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Datascope Pulse Oximeter Computer and Software Dental Operatory Operational Patient Units Stretcher Rehabilitation Equipment Mechanical Lifts CPR Mannequins Wheelchairs	Nursing Aide Home Health Aide Nurse Physical Therapist Medical Physician	Dependable Problem Solving Skills Excellent Communication Skills Able to Work Independently and in a Team Critical Thinking Skills

### CAREERS:

	29-2099.00	Health Technologists and Technicians, All Other
	29-9099.00	Healthcare Practitioners and Technical Workers, All Other
HPO	31-1014.00	Nursing Assistants

### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
BLS Healthcare Provider	American Heart Association
Heartsaver AED	American Heart Association
First Aid	American Red Cross
Nurse Aide Registry	Pennsylvania Department of Health
Personal Care Home Direct Care Staff Certificate	Pennsylvania Department of Public Welfare

# HORTICULTURE (Floriculture & Landscaping)

**01.0601 APPLIED HORTICULTURE/HORTICULTURAL OPERATIONS, GENERAL  
(PDE APPROVED PROGRAM OF STUDY)**

An instructional program having a combination of organized subject matter and practical experiences that generally prepares individuals to produce, process and market plants, shrubs and trees used principally for ornamental, recreational and aesthetic purposes and to establish, maintain and manage horticultural enterprises. Instruction emphasizes knowledge, understanding and application important to establishing, maintaining and managing horticultural enterprises such as arboriculture, floriculture, greenhouse operation and management, landscaping, nursery operation and management and turf management. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations/Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Mowers Skid Steer Tractor String Trimmer Computers Tillers	Landscape Architect Landscaping and Grounds Keeping Agricultural Worker Nursery and Greenhouse Workers	Ability to Work Independently and in a Team Problem Solving Artistic Ability Analytical Skills Communication Skills

## CAREERS:

HPO	11-9013.00	Farmers, Ranchers, and Other Agricultural Managers
	11-9013.01	Nursery and Greenhouse Managers
	27-1023.00	Floral Designer
	37-1012.00	First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers
	37-3011.00	Landscaping & Groundskeeping Workers
	41-2031.00	Retail Salesperson
	45-2092.00	Farmworkers and Laborers, Crop, Nursery and Greenhouse

## Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
National Safe Tractor and Machinery Operator	Hazardous Occupations and Safety Training in Agriculture (HOSTA)
Certified Landscape Technician (CLT)	Pennsylvania Landscape & Nursery Association
Pennsylvania Certified Horticulturist (PCH)	Pennsylvania Landscape & Nursery Association
CareerSafe/OSHA	Texas Engineering Extension Service
Worker Protection Standard Training	US Environmental Protection Agency

Certification for Greenhouse Workers and Handlers	Region III
---	------------

## **HOTEL, RESORT & TOURISM MANAGEMENT**

### **52.1905 TOURISM AND TRAVEL SERVICES MARKETING OPERATIONS** **(PDE APPROVED TECH PREP PROGRAM)**

The Hotel, Resort & Tourism Management Program (HTMP) is an instructional program that prepares individuals to perform marketing and management functions in operational responsibilities associated with a wide variety of careers within the hospitality and tourism industries. Students will be instructed in the areas of personal development, communications, leadership, guest services, sales, financial processes, front office operations, housekeeping, food and beverage service, facilities management, property safety/security, resort management and other occupational preparation activities that will develop the student in the necessary competencies for employment in the hospitality and tourism industry.

The Program has been designed by the American Hotel & Lodging Association – Educational Institute with active industry involvement and approval. Through HTMP, partnerships are established with local hotels to provide student internships, field trips, and job shadowing.

<b>Specialized Equipment:</b>	<b>Related Occupations / Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Computers	Lodging Manager Sales Manager Food and Beverage Manager Housekeeping Supervisor Marketing Manager Guest Services Clerk Sales Representative	Excellent Communication Skills Decision Making Skills Problem Solving Skills Pleasant Personality Ability to Work Independently and in a Team

#### **CAREERS:**

	11-2011.00	Advertising and Promotion Managers
	11-2021.00	Marketing Managers
HPO	11-2022.00	Sales Managers
	11-9051.00	Food Service Managers
	37-1011.00	First-line Supervisors of Housekeeping & Janitorial Workers
HPO	41-4012.00	Sales Representatives
HPO	43-4051.00	Customer Service Representatives
HPO	43-4081.00	Hotel, Motel & Resort Desk Clerks

#### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
Certified Rooms Division Specialist (CRDS)	American Hotel and Lodging Educational Institute
ServSafe/Manager Food Safety Certification	National Restaurant Association

# HEATING, VENTILATION & AIR CONDITIONING

## 47.0201 HEATING, AIR CONDITIONING, VENTILATION AND REFRIGERATION MAINTENANCE TECHNOLOGY/TECHNICIAN (PDE APPROVED PROGRAM OF STUDY)

The Heating, Ventilation & Air Conditioning (HVAC) Program is an instructional program that combines classroom and practical learning experiences. This Program prepares individuals to apply technical knowledge and skills to install, repair and maintain commercial and domestic heating, air conditioning and refrigeration systems. Instruction includes theory and application of basic principles involved in conditioning of air (cooling and heating); filtering and controlling humidity; operating characteristics of various units and parts; blueprint reading; use of technical reference manuals; the diagnosis of malfunctions; overhaul, repair and adjustment of units and parts such as pumps, compressors, valves, springs and connections; and repair of electric/electronic and pneumatic control systems. This Program is certified by the National Center for Construction Education and Research. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Electric Pipe Threader Acetylene and Propane Gas Torches Bacharach Tester Arc Welders Reclaim and Recovery Unit Refrigerant High Pressure Indicators Electrical Meters Thermal Testers Compressor Testers	Helpers- Installation, Maintenance, and Repair Workers Refrigeration Mechanic Air Conditioning and Heating Mechanics First Line Supervisors of Production and Operating Workers Stationary Engineer	Mechanical Aptitude Ability to Work Independently and in a Team Problem Solving Troubleshooting Skills Communication Skills

### CAREERS:

HPO	49-9021.00	Heating, Air Conditioning, & Refrigeration Mechanics & Installers
-----	------------	---

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
CareerSafe/OSHA	Texas Engineering Extension Service
EPA 608 Certification	Air Conditioning, Heating & Refrigeration Institute

# MARKETING

## 52.1801 SALES, DISTRIBUTION AND MARKETING OPERATIONS, GENERAL (PDE APPROVED PROGRAM OF STUDY)

The Marketing Program is an instructional program that provides instruction in the fields of sales, distribution and marketing operations and focuses on the process and techniques of direct wholesale and retail buying and selling operations. This Program is concerned with marketing, sales, distribution, merchandising and management including ownership and management of enterprises engaged in marketing. Marketing education programs prepare individuals to perform one or more marketing functions such as selling, pricing, promotion, product/service management, distribution, financing and marketing information management. In addition, instructional programs include varying emphasis on technical knowledge of products and/or services marketed; related communication, economic, technological and computation skills; and abilities and attitudes associated with human relations. The Program may also include management functions associated with owning and operating a business. Sales, distribution and marketing operations prepares individuals for occupations in such businesses as retail and wholesale trade, finance, insurance, real estate, entertainment, hospitality, food service, communications, storage and distribution. The Program consists of a list of PDE required tasks and additional local or value added tasks.

This Program does not include warehousing/logistics functions.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Computers	General and Operations Manager Marketing Manager Sales Manager Advertising and Promotions Manager Supervisor/Manager Retail Sales Worker Customer Service Representative	Excellent Communication Skills Decision Making Skills Problem Solving Skills Pleasant Personality Ability to Work Independently and in a Team

### CAREERS:

	11-1021.00	General & Operations Managers (Entrepreneurship)
	11-2011.00	Advertising & Promotions Managers
	11-2021.00	Marketing Managers
HPO	11-2022.00	Sales Managers
HPO	41.1011.00	First-Line Supervisors of Retail Sales Workers
	41-2031.00	Retail Salespersons
HPO	41-4012.00	Sales Representatives, Wholesale and Manufacturing, Except Technical & Scientific Products

### Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
A*S*K Certification	A*S*K Institute
National Professional Certification in Customer Service	National Retail Federation Foundation

# MASONRY

## 46.0101 MASON/MASONRY (PDE APPROVED PROGRAM OF STUDY)

The Masonry Program is an instructional program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of brick, concrete block, glass block, hard tile, marble and related materials using trowels, levels, hammers, chisels and other hand tools. The masonry curriculum combines classroom and practical learning experience including projects. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Trowels Levels Hammers and Chisels Jointers Diamond Blade Saws Spacing Rulers Mortar Mixers Hydraulic Cutters Bull Floats	Brickmasons and Blockmasons Tile and Marble Setters Segmental Pavers Cement Mason and Concrete Finishers First-line Supervisors and Managers/Supervisors- Construction Trade Workers	Ability to Work Independently and in a Team Creativity Patience Communication Skills

### CAREERS:

HPO	47-2021.00	Brickmasons and Blockmasons
	47-2022.00	Stonemasons
	47-2044.00	Tile and Marble Setters
	47-3011.00	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters

Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
CareerSafe/OSHA	Texas Engineering Extension Service
Pennsylvania Builders Association Skills Certificate	Pennsylvania Builders Association

# OUTDOOR POWER EQUIPMENT TECHNOLOGY

## 47.0699 VEHICLE MAINTENANCE AND REPAIR TECHNOLOGIES, OTHER (PDE APPROVED PROGRAM OF STUDY)

The Power Equipment Technologies Program is an instructional program that prepares individuals to apply technical knowledge and skills to repair, service, maintain and diagnose problems on a variety of small internal-combustion gasoline engines and related systems used on portable power equipment such as lawn and garden equipment, chain saws, outboard motors, rototillers, snowmobiles, lawn mowers, motorcycles, personal watercraft and pumps and generators. This Program includes instruction in the principles of the internal-combustion engine and all systems related to the powered unit. Instruction also includes the use of technical and service manuals, state inspection code, care and use of tools and test equipment, engine tune-up/maintenance, engine overhaul, troubleshooting and diagnostic techniques, drive lines and propulsion systems, electrical and electronic systems, suspension and steering systems and service operations and parts management. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Drill Press Band Saw Jaw Table Vise Bench Grinders Mower Blade Balancer/Sharpener Hydraulic Press Grinding Machine Power Hone Boring Bar	Engine Repairer Service Gas-Engine Repairer Power-Saw Mechanic Small-Engine Mechanic	Handling and Moving Objects Making Decisions and Solving problems Standing Analytical Thinking Self-Control Mathematically inclined Able to interpret technical manuals

### CAREERS:

HPO	49-1011.00	First-Line Supervisors of Mechanics, Installers, & Repairers
	49-3051.00	Motorboat Mechanics and Service Technicians
	49-3052.00	Motorcycle Mechanics
	49-3053.00	Outdoor Power Equipment and Other Small Engine Mechanics

Certifications available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
-------------------------------	----------------------



Outdoor Power Equipment Technician Certification	Equipment & Engine Training Council
S/P2	S/P2

# PLUMBING TECHNOLOGY

## 46.0503 PLUMBING TECHNOLOGY/PLUMBER (PDE APPROVED PROGRAM OF STUDY)

Plumbing Technology is an instructional program that prepares individuals to practice as licensed plumbers by applying technical knowledge, safety and skills to lay out, assemble, install and maintain plumbing fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling and industrial processing systems in home and business environments. The Program includes instruction in source determination, water distribution, waste removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, brazing and soldering, plumbing inspection and applicable codes and standards.

The Program combines classroom and practical learning experiences. Students also become involved with many community service projects related to their program of study. This Program is certified by the National Center for Construction Education and Research. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
Electric Pipe Threader Acetylene and Propane Gas Torches Burner Test Bench Bacharach Tester Gas Welders	Pipefitter and Steamfitter Plumbers Plumber Heating and Air Conditioning Mechanics First Line Supervisor Managers and Mechanics, Installers and Repairers	Mechanical Aptitude Ability to Work Independently and in a team Problem Solving Troubleshooting Skills Communication Skills

### CAREERS:

HPO	47-2152.00	Plumbers, Pipefitters, & Steamfitters
	47-3015.00	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
CareerSafe/OSHA	Texas Engineering Extension Service
EPA 608 Certification	Air Conditioning, Heating & Refrigeration Institute

# PRECISION MACHINING

## 48.0501 MACHINE TOOL TECHNOLOGY/MACHINIST (PDE APPROVED PROGRAM OF STUDY)

The Precision Machining Program is an instructional program designed to give individuals instruction, knowledge and skills in all aspects of shaping parts for industrial application. Instruction involves making computations relating to work dimensions, tooling and feeds and speeds of machining. Emphasis is placed upon bench work and the operation of lathes, power saws, milling machines, grinders, drills and computer operated equipment (CNC and CIM). Instruction also includes the use of precision measuring instruments such as layout tools, micrometers and gauges; methods of machining and heat treatment of various metals; blueprint reading; and the layout of machine parts. Instruction prepares students to operate all types of hand and computer controlled machines.

The Program provides both practical skills and related theory in machine tool operation, CAD drawings along with the technical mathematics, science, and communication skills essential to a career in manufacturing. The Program is certified by the National Institute for Metalworking Skills, Inc. (NIMS). The Program consists of a list of PDE required tasks and additional local or value added tasks. Students can earn credentials from NIMS.

Specialized Equipment:	Related Occupations/Employment Opportunities:	Personal Qualifications:
CNC Lathe CNC Milling Machine Drill Press Horizontal and Vertical Band Saw Vertical/Horizontal Milling Machines Surface Grinders Computers with Mastercam Cad/Cam Software Lathes 3D Printer 3D Scanner CNC Router	Machine Tool Setter Machinist Machine Tool Operator Tool and Die Maker Mechanical Engineer Mechanical Inspector CNC Programmer	Mechanical Aptitude Manual Dexterity Ability to Work Independently and in a Team Communication Skills

### CAREERS:

HPO	51-4011.00	Computer-Controlled Machine Tool Operators, Metal & Plastic
HPO	51-4012.00	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
HPO	51-4041.00	Machinists
HPO	51-4081.00	Multiple Machine Tool Setters, Operators, & Tenders, Metal & Plastic
	51-4111.00	Tool & Die Makers

Certifications available to qualified students:

Industry Certification	Provider Name
NIMS Machining Level I	National Institute for Metalworking Skills, Inc
NIMS Machining Level I CNC milling	National Institute for Metalworking Skills, Inc
NIMS Machining Level I CNC turning	National Institute for Metalworking Skills, Inc
NIMS Machining Level I Manual Milling	National Institute for Metalworking Skills, Inc
NIMS Machining Level I Manual turning between centers	National Institute for Metalworking Skills, Inc
NIMS Machining Level I Manual turning with chucking	National Institute for Metalworking Skills, Inc
NIMS Machining Level I Manual Drill Press Operations	National Institute for Metalworking Skills, Inc
NIMS Machining Level I Measurement, Materials and Safety	National Institute for Metalworking Skills, Inc



# WELDING TECHNOLOGY

## 48.0508 WELDING TECHNOLOGY/WELDER (PDE APPROVED PROGRAM OF STUDY)

The Welding Technology Program is an instructional program that prepares individuals to apply technical knowledge and skills in gas, arc, shielded and non-shielded metal arc, brazing, flame cutting and plastic welding. Hand, semi-automatic and automatic welding processes are also included in the instruction. Students learn safety practices and types and uses of electrodes and welding rods; properties of metals; blueprint reading; electrical principles; welding symbols and mechanical drawing; use of equipment for testing welds by ultrasonic methods and destruction and hardness testing; use of manuals and specification charts; use of portable grinders; positioning and clamping; and welding standards established by the American Welding Society (AWS), American Society of Mechanical Engineers and American Bureau of Ships. The Program is certified by the American Welding Society. The Program consists of a list of PDE required tasks and additional local or value added tasks.

<b>Specialized Equipment:</b>	<b>Related Occupations /Employment Opportunities:</b>	<b>Personal Qualifications:</b>
SMAW, GMAW, GTAW, FCAW equipment Oxy-Acetylene, Plasma Cutting equipment All of the above is used with steel, stainless steel, and aluminum	Combination Welder Skilled production Welders and Laborers Engineering Technician	Mechanical Aptitude Manual Dexterity Patience Able to Work Independently Balance and Agility

### CAREERS:

HPO	51-4121.00	Welders, Cutters, Solderers, & Brazers
	51-4122.00	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Certification available to qualified students:

<b>Industry Certification</b>	<b>Provider Name</b>
American Welding Society Welding Certifications	American Welding Society

