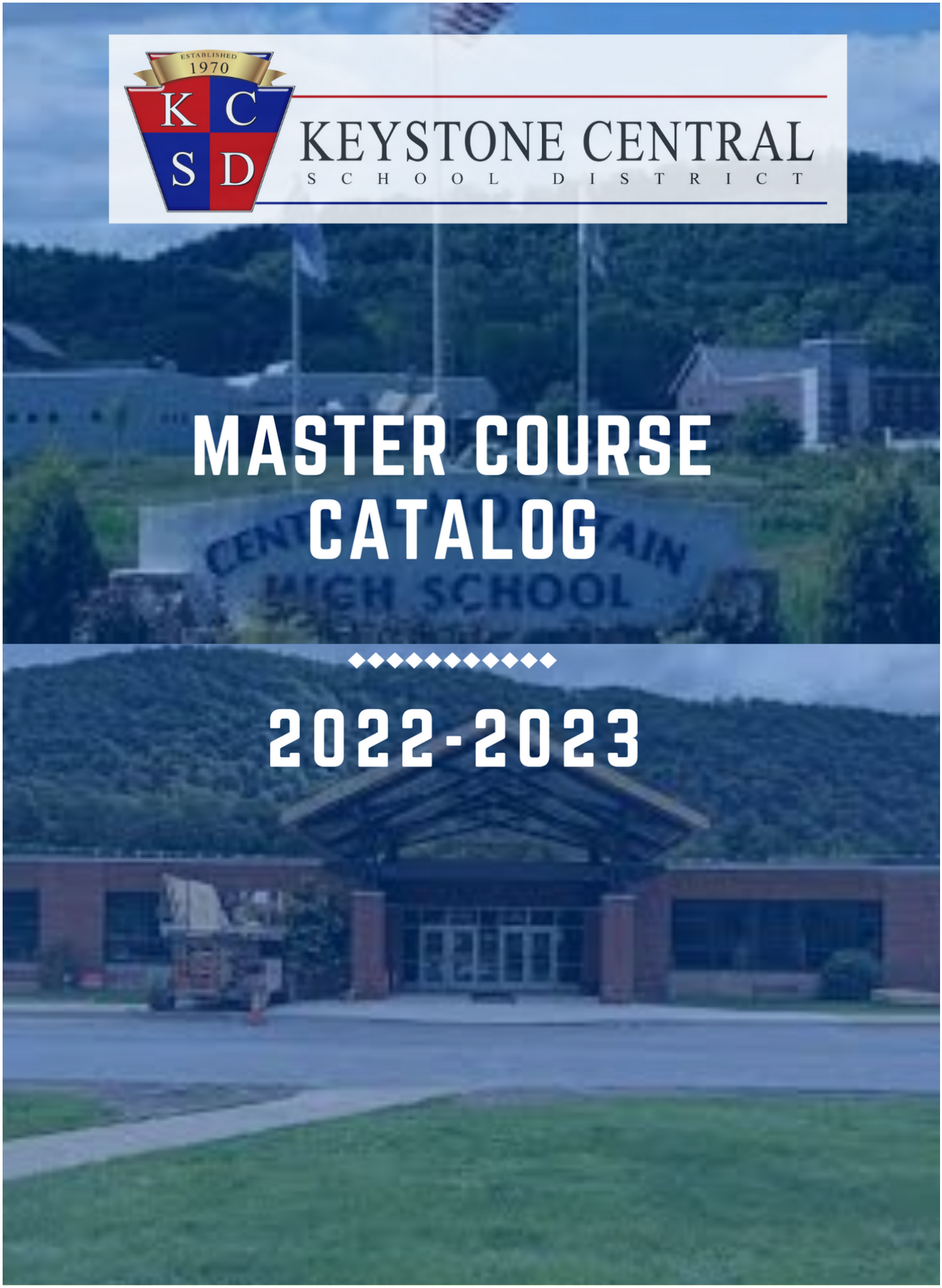

KEYSTONE CENTRAL
SCHOOL DISTRICT

MASTER COURSE CATALOG

2022-2023

Table of Contents

Mission Statement: We are committed to developing life-long learners who are adaptable, resilient, productive, and of high moral character.

Vision Statement: Preparing citizens for the challenges and opportunities of the future!

Shared Values:

We value:

- Equitable access to rigorous curriculum and effective instruction
- Critical thinking and solution-focused learners
- A safe, healthy, and inclusive culture
- High expectations and support for all
- Engaged and empowered communities and families
- Policies and procedures that promote learning and leadership

A graduate of the Keystone Central School District is one who thinks critically and creatively, exhibits tolerance and respect for others, behaves responsibly and ethically, and embraces technology as it impacts the local and global society. This ongoing journey is one that invites all stakeholders to participate and embrace the opportunities for personal, professional, and community growth available through the Keystone Central School District.

Notice of Nondiscrimination

The Keystone Central School District is an equal opportunity education institution and will not discriminate on the basis of race, color, national origin, sex, or disability in its admission procedures, educational programs, activities, or employment practices as required by Title VI, Title IX and Section 504. For information regarding civil rights or grievance procedures, contact the Office of Superintendent, Keystone Central School District, 86 Administration Drive, Mill Hall, PA 17751

Introduction

This catalog has been developed by Keystone Central School District to be a source of information and to guide students in selecting the courses of study in each curriculum area. All of the courses offered to our students are listed in this guide. Course descriptions are brief to provide those reading it with an overview of the course content. In order to run a course in the upcoming school year, there must be enough students enrolled. It is our goal to provide information to students and parents that will assist them in making informed decisions regarding course selection. Teachers, counselors, and administrators are all a part of the scheduling process and are ready to work with students and their families to accomplish education objectives. When selecting courses, it is imperative that students consider their future goals. Whether the long term plan involves college, trade school, work force, military, technical school, or other; each requires prerequisites to prepare students for the next step.

Take note that some classes are only offered every other year. We encourage students to take the time and map out a plan for all four years, or the remainder of their high school career.

What are your goals?

The answer to this question should be the driving force in how students select courses and develop their schedules. We expect students to challenge themselves, set goals, and reach their highest level of academic achievement. Our student's future starts here.

Keystone Central School District Graduation Requirements:

To graduate from the Keystone Central School District, students must successfully complete the academic credits distributed across a variety of content areas, fulfill a Graduation Pathway, and complete a Graduation Project.

Required Components	Academic Course Requirements on Page 6	Academic Course Requirements on page 7	Graduation Pathways Requirement	Graduation Project Requirement
Class of 2023	✔		✔	✔
Class of 2024		✔	✔	✔
Class of 2025		✔	✔	✔
Class of 2026		✔	✔	✔

Academic Credit Requirements for the Class of 2023:

Minimum Credit Graduation Requirements

(for students entering 9th grade for the first time prior to 2018)

This chart represents the minimum required academic course credits for graduation from Keystone Central School District for the Class of 2023.

Course	Credits Required
English	4
Math	3
Science	3
Additional Math or Science	1
Social Studies	4 (CTE completers only need 3)
Health	.5
Physical Education	2 (.5 required each year)
Business/Technology	1
Fine Arts	.5
Family Consumer Science	.5
Additional Elective Courses	As desired

Academic Credit Requirements for the Class of 2024, 2025, and 2026:

Minimum Credit Graduation Requirements

(for students entering 9th grade for the first time prior to 2018)

This chart represents the minimum required academic course credits for graduation from Keystone Central School District.

Course	**Credits Required**
English	4
Math	3
Science	3
Additional Math or Science	1
Social Studies	4 (CTE completers only need 3)
Health	.5
Physical Education	2 (.5 required each year)
Business/Technology	1
Fine Arts	.5
Family Consumer Science	.5
Additional Elective Courses	8.5 (class of 2024 and beyond)
Total Credits	28

Academic Credit Requirement Tracking Checklist:

Keystone Central School District
ACADEMIC CREDIT TRACKING SHEET
(for students entering 9th grade for the first time in 2019 and beyond)

Student Name:_____ KCSD ID:_____ 9th Grade Enrollment Date:_____

Standard Track (28 credits)					**CTC Track** (22 credits & 1 CTE concentrator)				
English (4)	09 ☐	10 ☐	11 ☐	12 ☐	English (4)	09 ☐	10 ☐	11 ☐	12 ☐
Social Studies (4)	09 ☐	10 ☐	11 ☐	12 ☐	Social Studies (3)	09 ☐	10 ☐	11 ☐	
Math (3)	09 ☐	10 ☐	11 ☐		Math (3)	09 ☐	10 ☐	11 ☐	
Science (3)	09 ☐	10 ☐	11 ☐		Science (3)	09 ☐	10 ☐	11 ☐	
Additional Math or Science (1) _____ ☐					Additional Math or Science (1) _____ ☐				
Physical Education (2)	09 ☐	10 ☐	11 ☐	12 ☐	Physical Education (2)	09 ☐	10 ☐	11 ☐	12 ☐
Health (.5) ☐					Health (.5) ☐				
Fine Arts (.5) _____ ☐					Fine Arts (.5) _____ ☐				
Family/Consumer Science (.5) _____ ☐					Family/Consumer Science (.5) _____ ☐				
Computer/Technology (1) _____ ☐					Computer/Technology (1) _____ ☐				
_____ ☐					_____ ☐				
Electives (8.5)					CTE Concentrator (2 courses)				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					Electives (minimum 4.5)				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				
_____ ☐					_____ ☐				

Graduation Pathways (PA Act 158):

Effective with the graduating class of 2023, students have the option to demonstrate postsecondary preparedness through one of four additional pathways that more fully illustrate college, career, and community readiness. Keystone Exams will continue as the statewide assessment Pennsylvania uses to comply with accountability requirements set forth in the federal Every Student Succeeds Act (ESSA). Starting with the Class of 2023, the following options exist to meet the statewide graduation requirements:

- ☐ **PATHWAY 1: KEYSTONE PROFICIENCY**
  - ☐ Proficiency Pathway (Goal Proficient or Advanced on each exam)
    Algebra 1: Biology: Literature:
- ☐ **PATHWAY 2: KEYSTONE COMPOSITE SCORE**
  - ☐ Composite Score Pathway (Goal 4452) :
- ☐ **PATHWAY 3 ALTERNATE ASSESSMENT**
  - ☐ Grade requirements for Keystone content areas AND one of the following
    - ☐ PSAT Composite (Goal 970):
    - ☐ SAT Composite (Goal 1010):
    - ☐ ASVAB (Goal 31) :
- ☐ **PATHWAY 4: EVIDENCE BASED**
  - ☐ Grade requirements for Keystone content areas AND 3 pieces of evidence including one of the following
    - ☐ Attainment of SAT subject test score of 630, AP exam score of 3
    - ☐ Postsecondary Acceptance (other than 4-year institution)
    - ☐ Industry recognized credential
    - ☐ Successful completion of concurrent enrollment or post secondary course AND two of the following
      - ☐ Satisfactory completion of service project
      - ☐ Satisfactory completion of an internship or cooperative education program
      - ☐ Documentation of full-time employment
      - ☐ Satisfactory compliance with NCAA core courses with minimum GPA of 2.0
- ☐ **PATHWAY 5: CTE**
  - ☐ Grade requirements for Keystone content areas AND one of the following
    - ☐ Satisfactory completion of local requirements & attain industry certification
    - ☐ NOCTI exam
- ☐ Met IEP Goals

Graduation Project Requirements:

Graduation Project Components:
Academic-Career Portfolio, Proposal, Community Activity, Culminating Reflection Paper, and Presentation

Point Value	Items
Total: 60 points 20 - 9th Grade 20 - 10th Grade 20 - 11th Grade	Academic - Career Portfolio through SmartFutures and Senior Survey
15 points	Proposal - Due by October 1st of Senior year
50 points	Community Activity - Completed by March 1 of Senior year
25 points	Culminating Reflection Paper - Due by March 1 of Senior year
50 points	Presentation - Scheduled for March of Senior year

Students must earn a minimum total of 70 points

NCAA Course Regulations for Student Athletes and Families:

If participation in college athletics is a possible future consideration, it is important for you to read and understand the following information. If you have any questions about the academic standards, you should contact a high school counselor or call the NCAA eligibility hotline at (877) 262-1492.

In order to participate as a college freshman in Division I or II athletics, the NCAA Initial-Eligibility Clearinghouse must certify a student. Although a student does not begin the certification process before the end of the junior year in high school, he/she begins to meet the eligibility requirements in ninth grade with the courses selected and the grades achieved. Thus, course selection is extremely important.

To be certified by the Clearinghouse, you must:

- Graduate from high school.
- For Division I: The minimum grade-point average in the 16 core courses and required ACT or SAT score vary according to the Initial-Eligibility Index. (See your high school counselor for more information) The minimum grade point average is based on a core curriculum from at least 16 academic courses, which were successfully completed during grades nine (9) through twelve (12). Only courses that satisfy the NCAA definition of a core course can be used to calculate the NCAA GPA. Keystone Central School District courses meeting these requirements are listed throughout the catalog. The following chart shows what core courses must be included at a minimum.
- For Division II: Earn a grade-point average of at least a 2.0 from a core curriculum in at least 16academic courses which were successfully completed during grades nine (9) through twelve (12). Only courses that satisfy the NCAA definition of a core course can be used to calculate the NCAA GPA. Keystone Central School District courses meeting these requirements are listed throughout the catalog. The following chart shows what core courses must be included at a minimum.

NOTE: Must earn an ACT sum score of 68 or combined score, math & verbal of at least 820 on the SAT on a national test date.

	Division I	**Division II**
English Core	4 years	3 years
Math Core - Algebra I or higher	3 years	2 years
Science Core - one year with lab	2 years	2 years
Social Studies Core	2 years	2 years
Additional Core courses from English, Math, or Science	1 years	3 years
Additional academic (Core) courses in any of the above (English, Math, Science, Social Studies) or world language, computer science or non-doctrinal religion	4 years	4 years
Total Core Units Required	16	16

If you are a student who intends to enroll on or after August 1, 2016, the pages below offer a quick reference to the Initial-Eligibility Requirements and the new "sliding scale." Please work with your guidance counselor to complete the checklist for NCAA and college enrollment requirements so that you can plan your high school courses appropriately.

Division I Academic Quick Reference Sheet

Division II Academic Quick Reference Sheet

Key Information about Academics:

Courses and Impact on Class Rank

Type of Program or Opportunity	Fulfills Graduation Requirements	Used to Calculate GPA and Class Rank
Dual Enrollment	Yes, if approved or No, if approved as non-graduation requirement elective	Yes
Approved College Course	Yes, if approved	Yes
Unapproved College Course, taken for enrichment	No	No
Approved Online Course to Satisfy Graduation Requirement	Yes, if approved	Yes
Step 1: Final course grade is multiplied by the added value for the course, then multiplied by the credit earned Grade x Added Value x Credit = points toward Class Rank		
Step 2: Total all points for grades 9-12 and divide by credits attempted		

Calculating Honor Roll

9 week grade earned x credit for each class=points earned.
Total of points earned divided by credit attempted.
Be sure to take into account courses that are worth more than 1 credit.
Added value of a course is not figured into Honor Roll.

Honor Roll: 91.5-95.49 High Honor Roll: 95.5-100

Converting a Percentage into a 4.0 Grade Point Average

X represents the percentage. The formula to use when converting a percentage into a GPA (with a scale of 4.0) is (X/20)-1=GPA

Example: You earned an 89% in Geography. Plug in the formula to get the following:

- 89/20-1=4.45-1=3.45
- The GPA equivalent of 89% is 3.45

Course Change Process

Circumstances under which a course change request may be granted once the scheduling process is complete or the school year begins are limited to specific situations. A student should meet with their school counselor to discuss the need for a course change.

Full Time Student Status:

Students who carry at least 5 full credit hours (not including lunch) will be considered full-time students. Students who wish to request part-time student status (carry fewer than 5 full credit hours) will need administrative approval. Full time student status affects students' ability to earn college scholarships, grants, discounts on insurance plans, receive support funding, receive Social Security funds, and receive certain benefits of public housing and other benefits families may not realize. Please consider this carefully.

A Note About Advanced Placement Classes

Although every student is required to meet the minimum requirements for high school graduation, many students will want to consider college, university, and a variety of post-high school education requirements. Colleges and universities specify that a student must take a college preparation level course of study. Colleges look for students who complete Honors and AP level courses where possible. Please research admission information for your desired post-high school pursuit. All students successfully enrolled in Advanced Placement (AP) classes are expected to take the AP exam associated with the course. Counselors will send a letter to parents/guardians regarding the payment process. For fees and calendars, please refer to http://apcentral.collegeboard.com. It is recommended that students take no more than two (2) AP courses a school year.

Transcripts and Letters of Recommendation

Students and parents, please complete the transcript/counselor letter of recommendation form and return to the Student Services/Guidance office. You must allow at least 15 school days for processing and mailing transcripts and/or letters of recommendation. We cannot guarantee transcript delivery by your deadlines for forms that are submitted late. Please see the due dates for major college, scholarships, or program deadlines.

Keystone Exam Graduation Requirements

Keystone Exams are given at the completion of **Algebra 1, Literature and Biology** (or any level of those courses). In order to meet the graduation requirements set forth by PA Act 158, students must take the exam. For more information on the score requirements, please see the information about PA Act 158 in this course catalog. More information about the exams can be found here.

How to Use the Course Guide:

Key to Reading this Course Selection Guide

The information on the following pages is provided to describe each of the courses offered at our high schools; and where appropriate, additional information has been listed on a subject-by-subject basis. The following terms are used in the course guide:

Credit Type: indicates whether a course is a core content or elective course.

Credit Hours: assigned to the course, typically the number of periods in a full year course or indicates if a course is less than a full year.
(Examples: Full Year=1.0; Semester=0.5; 3 periods/Full Year = 3.0, etc.)

Added Value: the weight assigned to the course. This is what determines difficulty of the course and is used to calculate class rank. Class rank compares the academic quality of a student's work to that of other classmates.

IEP Team: for some courses the guide indicates that students need recommendation from the *IEP Team* in order to take the course. IEP stands for Individualized Education Plan, and students who receive special education services will work with the team of educators and parents to consider courses marked this way.

Key Icons:

Throughout the course selection guide, this symbol indicates a course meeting NCAA requirements.

Throughout the course selection guide, this symbol indicates a course with potential dual enrollment credit from Pennsylvania College of Technology.

Academic Course Options:

English Courses:

Full Year Courses

Course Name and Number	Credit Type	Credit Hours	Added Value
Introductory Literature (2107)	ENG	1.0	1.0

Course Description
Introductory Literature is an English course that blends reading and writing with an emphasis on preparing students for the English Literature Keystone Exam. Enrichment activities are added as appropriate. It also contains the beginnings of the career/college readiness activities.

Course Name and Number	Credit Type	Credit Hours	Added Value
Literature (2109)	ENG	1.0	1.0

Course Description
Literature is an English course that emphasizes wide reading in order to prepare students for the English Literature Keystone Exam. Students will demonstrate comprehension, analysis, and interpretation of a variety of genres with particular attention to poetry, short stories, and informational texts (including speeches and editorials) through formative and summative assessments such as constructed-response items, tests, essays, and projects. Enrichment activities are added as appropriate. It also contains career/college readiness activities. (Keystone Exam)

Course Name and Number	Credit Type	Credit Hours	Added Value
Exploratory Literature (2111)	ENG	1.0	1.0

Course Description
Exploratory Literature surveys literature from its origin to the present for the purpose of developing an understanding of literature as it coincides with history. This course attempts to instill a love for reading and an appreciation for the best writers. Additionally, vocabulary, grammar, usage, and mechanics are taught in conjunction with composition. MLA formatting is emphasized. Enrichment activities are added as appropriate. It also contains career/college readiness activities.

Course Name and Number	Credit Type	Credit Hours	Added Value
English Composition (2113)	ENG	1.0	1.0

Course Description
English Composition is a composition course. It surveys British literature from its origin with Beowulf to the present for the purpose of developing an understanding of British literature as it coincides with British history. This course attempts to instill a love for reading and an appreciation for the best of Britain's writers. Additionally, vocabulary, grammar, usage, and mechanics are taught and reviewed in conjunction with composition. Enrichment activities are added as appropriate. Career/college readiness activities are brought to fruition through the senior project.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Introductory Literature (2108)	ENG	1.0	1.05
Honors Literature (2110)	ENG	1.0	1.05
Honors Exploratory Literature (2112)	ENG	1.0	1.05
Honors Composition (2114)	ENG	1.0	1.05

Course Description
These classes build on the regular English course content but involve lengthier writings, deeper analytical discussion, and projects that may require research or be cross-curricular in nature.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP English Language & Composition (0040)	ENG	1.0	1.07

Course Description
This course is an introductory college-level composition course. Students cultivate their understanding of writing and rhetorical arguments through reading, analyzing, and writing texts as they explore topics like rhetorical situation, claims and evidence, reasoning and organization, and style.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP English Literature & Composition (0044)	ENG	1.0	1.07

Course Description
This course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery,

and symbolism. Writing assignments include expository, analytical, and argumentative essays that require student to analyze and interpret literary works.

Course Name and Number	Credit Type	Credit Hours	Added Value
Reading Intervention 1 (2105) Reading Intervention 2 (2106)	ENG	1.0	1.0

Course Description
Research-based reading instruction formulated from teacher recommendations and reading inventory data. This course is targeted to close multiple grade-level gaps in reading skills.

Course Name and Number	Credit Type	Credit Hours	Added Value
Keystone Literature Remediation (2122)	ENG	1.0	1.0

Course Description
This course is designed to prepare students to achieve a proficient score on the Keystone Literature Exam. Students will continue to explore the fundamentals of Literature. This course will be required for any student scoring basic or below basic on the Keystone Literature Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value
English/Language Arts (Alternative Curriculum) (7040)	ENG / SpecEd	1.0	1.0

Course Description
Researched-based reading instruction formulated from teacher recommendations and reading inventory data. This course is targeted to close multiple grade-level gaps in reading skills.

Course Name and Number	Credit Type	Credit Hours	Added Value
PCN English Composition I (PCNENL111)	ENG	1.0	1.07

Course Description
Fundamental writing and research skills with an emphasis on expository writing. Emphasis on analysis, discussion, and practice of writing that explores, explains, and argues. Course work includes a significant research component. Senior-Only Course. Enrollment requirement: (C) minimum overall GPA and Penn College English Test, level 3. All students must be fully enrolled in this course by the first day of school. 3 Credits (3 Lecture)

Semester Courses

Course Name and Number	Credit Type	Credit Hours	Added Value
Creative Writing (0062)	ENG	.05	1.0

Course Description
This class will introduce students to the process and techniques of creative writing. Students will experiment with various types of writing, including the writing of prose and poetry. Class readings will expose students to various writing styles and provide examples of the strategies of other writers. Class time will be spent discussing writing techniques, assigned readings, and student writing. Students will be responsible for creating a portfolio of their work.

Course Name and Number	Credit Type	Credit Hours	Added Value
Public Speaking (0060)	ENG	0.5	1.0

Course Description
The ability to speak confidently and deliver a persuasive message is an essential skill for today's world. This course will provide the opportunity to significantly improve the student's public speaking skills by practicing and delivering speeches and presentations in a safe environment with personalized feedback.

Course Name and Number	Credit Type	Credit Hours	Added Value
Holocaust Literature (0059)	ENG	.05	1.0

Course Description
Study of novels, essays, poetry, and other art centered on genocide in the Second World War and the post-Holocaust world. This course will also explore global implications of the Holocaust.

Course Name and Number	Credit Type	Credit Hours	Added Value
Contemporary Literature (2120)	ENG	.05	1.0

Course Description
Study of post-modern literature from 1946 to the present. Includes reading and discussion of poems, essays, short stories, plays and novels representative of the global and multi-cultural nature of contemporary society.

Course Name and Number	Credit Type	Credit Hours	Added Value
Public Speaking (online learning) (VRT0060)	ENG	0.5	1.0

Course Description
This course will offer students the opportunity to develop public speaking skills in a safe virtual environment. Using the Compass software, students will learn the different styles of speeches and the process for composing these speeches. Supplemental software programs, including Schoology and FaceTime, will allow students to study famous historical speeches and hone their own speaking skills through personalized peer and teacher feedback. Students taking this course will be required to attend one on site session in order to present their final speech.

Elective Courses

Course Name and Number	Credit Type	Credit Hours	Added Value
Journalism 1 (0516) Journalism 2 (0526)	ENG / ELEC	1.0	1.0

Course Description
Journalism will provide students with the skills and knowledge necessary to produce written copy. The first segment of instruction will include lessons in the basics of news information collection, writing, editing, and rewriting. This study will include various forms of publication writing such as newspaper straight news, feature, editorial, advertising, yearbook, and public relations releases. It will also include magazine writing. Current affairs will be a vital component of the course. The development of responsibility, truthfulness, integrity, accuracy, impartially, and fair play as ethics of modern journalists will be stressed. The students will learn journalistic writing as well as ethics and copyright law. The students will use digital technology to take the photos used on their yearbook pages.

Course Name and Number	Credit Type	Credit Hours	Added Value
Media 1 (0536) Media 2 (0546)	ENG / ELEC	1.0	1.0

Course Description Pre-requisite: Journalism 1
Communication through the media is a great introduction to journalism with a specific emphasis on video production and school broadcasting. Students will learn the fundamentals of video production.

Mathematics Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value	
Algebra 1 (0121)	MATH	1.0	1.0	

Course Description
Algebra I is a Keystone Trigger Course designed to build upon foundational skills established in Intermediate Algebra. This course will develop a student's understanding of the fundamentals of algebra, including linear equations, linear inequalities, graphing, relations and functions, polynomials, polynomial operations, probability and statistics, and all their multiple representations. A primary focus of the course is to develop mathematical literacy which is necessary for success in subsequent math courses, as well as to achieve proficiency on the Keystone Algebra I Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value	
Algebra 1A (0111a)	MATH	1.0	1.0	.5 CREDIT

Course Description
Algebra IA designed to build upon foundational skills established in Intermediate Algebra. This course will develop a student's understanding of the fundamentals of algebra, including linear equations, linear inequalities, graphing, relations and functions. A primary focus of the course is to develop mathematical literacy which is necessary for success in subsequent math courses, as well as to achieve proficiency on the Keystone Algebra I Exam at the conclusion taken at the conclusion of Algebra IB.

Course Name and Number	Credit Type	Credit Hours	Added Value	
Algebra 1B (0111b)	MATH	1.0	1.0	.5 CREDIT

Course Description *Pre-requisite – Algebra 1A*
Algebra IB is a Keystone Trigger Course designed to build upon foundational skills established in Intermediate Algebra and Algebra 1A. This course will develop a student's understanding of polynomials, polynomial operations, probability and statistics, and all their multiple representations. A primary focus of the course is to develop mathematical literacy which is necessary for success in subsequent math courses, as well as to achieve proficiency on the Keystone Algebra I Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Algebra 1 (0122)	MATH	1.0	1.03

Course Description
Honors Algebra I is a Keystone Trigger Course designed to build upon foundational skills established in Intermediate Algebra. This course will develop a student's understanding of the fundamentals of algebra, including linear equations, linear inequalities, graphing, relations and functions, polynomials, polynomial operations, probability and statistics, and all their multiple representations. A primary focus of the course is to develop mathematical literacy which is necessary for success in subsequent math courses, as well as to achieve proficiency on the Keystone Algebra I Exam.
This course is designed for students with a math aptitude and will move at a more rapid pace than traditional Algebra 1. This course is assigned through teacher recommendation and review of student academic data.

Course Name and Number	Credit Type	Credit Hours	Added Value
Algebra 2 (0141)	MATH	1.0	1.0

Course Description *Pre-requisite*: *Algebra 1 or Honors Algebra 1*
Algebra 2 begins with an overview of Algebra 1 and then introduces more advanced concepts, such as completing the square, deriving the quadratic formula, complex numbers, advanced equations, motion, problems, and geometric applications.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Algebra 2 (0142)	MATH	1.0	1.05

Course Description *Pre-requisite*: *Algebra 1 or Honors Algebra 1*
The material covered in Honors Algebra 2 is the same as that covered in Algebra 2. However, there is more depth of coverage of topics associated with this course. It may also entail individual projects and/or group projects.

Course Name and Number	Credit Type	Credit Hours	Added Value
Algebra Keystone Remediation (0125)	MATH	1.0	1.0

Course Description *Pre-requisite: Algebra 1 or Honors Algebra 1 and a score of Basic or Below Basic on the Keystone Exam.*
Keystone Remediation
This course is designed to prepare students to achieve proficient on the Algebra Keystone Exam. Students will continue to explore basic Algebraic concepts, including variables, expressions, inequalities, exponents, polynomials, quadratics, as well as systems of equations and inequalities. The course will also explore more in depth understanding of linear relationships, quadratic functions and inequalities, rational expressions and equations, matrices, as well as exponential and logarithmic relations. (Keystone Exam)

Course Name and Number	Credit Type	Credit Hours	Added Value
Geometry in Action (0135)	MATH	1.0	1.0

Course Description
Geometry is designed to provide students with the opportunity to develop an understanding of geometric relationships and figures in a plane and in space. Logical thinking skills will be developed through the use of deductive and inductive reasoning. This course will focus on using basic geometric principles in everyday life through project based learning that is applicable to multiple career and educational pathways.

Course Name and Number	Credit Type	Credit Hours	Added Value
Math (Alternative Curriculum) (7101)	MATH SPECEDUC	1.0	1.0

Course Description
Students will access the alternate eligible content of the PA Core Standards, with emphasis on the functional development of mathematics. *Students will join this class through the recommendations of the IEP team.*

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Geometry (0134)	MATH	1.0	1.05

Course Description
The material covered in Honors Geometry is the same as that covered in Geometry. However, there is more depth of coverage of topics associated with this course. It may also entail individual projects and/or group projects.

Course Name and Number	Credit Type	Credit Hours	Added Value
Pre-Calculus (0151)	MATH	1.0	1.03

Course Description *Pre-requisite: Algebra 1, Honors Algebra 1, Algebra 2, and Geometry.*
This course is advanced mathematical concepts and applications. It includes defining the six basic functions for right triangles and circular functions, analytical proofs, solving right and non-right triangles, graphing trigonometric functions, verifying trigonometric identities, conics, vectors, polar coordinates, exponential and logarithmic functions. This course will give students the foundation to continue with the study of Calculus.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Pre-Calculus (0152)	MATH	1.0	1.05

Course Description *Pre-requisite: Algebra 1, Honors Algebra 1, Algebra 2, Honors Algebra 2, and Geometry/Honors Geometry.*
The material covered in Honors Trigonometry is the same as that covered in Trigonometry. However, there is more depth of coverage of topics associated with this course. It may also entail individual projects and/or group projects.

Course Name and Number	Credit Type	Credit Hours	Added Value
Calculus (0161)	MATH	1.0	1.05

Course Description *Pre-requisite*: *Trigonometry/Honors Trigonometry.*
This elective math course is designed for college-bound students who would like to increase their algebra and research skills. In this course, students will be doing advanced algebra topics and hands-on projects using calculators and computers.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Calculus AB (0162)	MATH	1.0	1.07

Course Description *Pre-requisite*: *Trigonometry*
This college-level course is designed as part of the AP program in cooperation with the College Board. All the topics covered in Calculus are covered in this course, but explored at a greater depth and at a faster pace. Its purpose is to prepare students for the AP exam and may ultimately lead to advanced college placement and college credit. All students will be required to adhere to a rigorous assignment schedule.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Calculus BC (0163)	MATH	1.0	1.07

Course Description *Pre-requisite*: *AP Calculus AB*
This course is the second in a series of AP Calculus. See AP Calculus, AB for a complete description.

Course Name and Number	Credit Type	Credit Hours	Added Value
Introduction to Computer Science, Statistics and Probability (0170)	MATH	1.0	1.03

Course Description *Pre-requisites*: *Honors Algebra 1 (or Algebra 2/Honors Algebra 2) and Geometry/Honors Geometry.*
In this course students will learn about the fundamentals of statistics and probability through the study of Computer Science. Students will utilize technology that allows them to collect and evaluate data. Students will use probability systems to predict the likelihood of future events. Students will also use statistical formulas to analyze the frequency of past events.

Course Name and Number	Credit Type	Credit Hours	Added Value
Financial Literacy (0175)	MATH	1.0	1.0

Course Description
This math course will include units that contain information that students will use daily during high school and beyond. Topics will include critical math skills, learning how to choose a loan to buy a car, buying a car verses leasing a car, insurance (car and life), checking accounts, savings accounts, taxes, credit cards and the dangers, and living on a budget.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Computer Science Principles	MATH	1.0	1.07

Course Description
AP Computer Science Principles is an introductory college-level computing course that introduces students to the breadth of the field of computer science. Students learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They incorporate abstraction into programs and use data to discover new knowledge. Students also explain how computing innovations and computing systems—including the internet—work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Statistics	MATH	1.0	1.07

Course Description
AP Statistics is an introductory college-level statistics course that introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students cultivate their understanding of statistics using technology, investigations, problem solving, and writing as they explore concepts like variation and distribution; patterns and uncertainty; and data-based predictions, decisions, and conclusions.

Course Name and Number	Credit Type	Credit Hours	Added Value
PCNMTH124 Technical Algebra and Trigonometry I	MATH	0.5 (each semester)	1.07

Course Description

Study of intermediate algebra and trigonometry, designed to prepare students for course work in college majors. Topics include algebraic expressions, linear equations, systems of equations, right triangle trigonometry, functions, and graphs. Emphasis on problem solving and application as well as the use of technology. Not designed to prepare students for calculus. Senior-only course. Enrollment requirement: (C) minimum overall GPA and Penn College math test, level 3. All students must be fully enrolled in the course by the first day of school.
3 Credits (3 Lecture)

Course Name and Number	Credit Type	Credit Hours	Added Value
PCNMTH125 Technical Algebra and Trigonometry II	MATH	0.5 (each semester)	1.07

Course Description

Study of intermediate algebra and trigonometry, designed to prepare students for course work in college majors. Topics include algebraic fractions and equations, trigonometric functions and graphs, radicals, complex numbers, exponential and logarithmic functions and graphs, nonlinear systems, and inequalities. Emphasis on problem solving and technical application as well as the use of technology. Not designed to prepare students for calculus. Senior-only course. Enrollment requirement: (C) minimum overall GPA and Penn College math test, level 3. Pre-requisite(s): MTH124 (waiver not available).
3 Credits (3 Lecture)

Science Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Science 9 (0211)	SCI	1.0	1.0

Course Description
In this course, students will explore a variety of biological concepts and process skills emphasizing biochemistry and ecological systems. Students will carry out laboratory experiments and classroom activities using standards developed by PDE. Students will develop and use models, create arguments supported by evidence, recognize patterns and analyze and interpret data through the use of mathematical and computational thinking. Through a variety of experiences driven by student interest, this introduction to high school level science course will prepare students for higher level science courses in the future.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Science 9 (0210)	SCI	1.0	1.05

Course Description
In this course, students will explore a variety of biological concepts and process skills emphasizing biochemistry and ecological systems. Students will carry out laboratory experiments and classroom activities using standards developed by PDE. . Students will develop and use models, create arguments supported by evidence, recognize patterns and analyze and interpret data through the use of mathematical and computational thinking. Through a variety of experiences driven by student interest, this introduction to high school level science course will prepare students for higher level science courses in the future. As a weighted science course, Honors students will be expected to commit a significant amount of time to study in this course. This course will move more swiftly than the non-honors course and will cover material in greater depth.

Course Name and Number	Credit Type	Credit Hours	Added Value
Biology Plus Lab (Grade 9) (0214)	SCI	1.0	1.05

Course Description *Pre-Requisites:* Students will be admitted to this course based on review of academic performance and teacher recommendation.
Lab Science - This course is designed for college preparatory 9th grade students who plan to have a scientific career. The material covered is an extensive overview of living things and biological processes. The covered material will prepare students for the Biology Keystone Exam. Topics include the Scientific Method, Basic Chemistry, Biochemistry, Cell Structure and Function, Cell Transport, Mitosis/Meiosis, Photosynthesis, Cell Respiration, DNA/RNA, Protein Synthesis, Genetics, Evolution, Ecology, Viruses, and Kingdoms of Life. Students will need good communication skills as they will be writing formal lab reports for most laboratory experiments. As a weighted science course, Biology Plus will be expected to commit a significant amount of time to study in this course. Students completing this course will be prepared to pass the Biology Keystone Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value
Biology Lab (0212)	SCI	1.0	1.0

Course Description
Lab Science - The primary goal of this course is to enable students to acquire a detailed understanding of the basic concepts of biology, the study of living things. The course content includes in-depth discussion, activities, and laboratory experiences in areas such as cellular and molecular biology, genetics, evolution, and ecology. Students completing this course will be prepared to pass the Biology Keystone Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Biology Lab (0213)	SCI	1.0	1.05

Course Description
Lab Science - The primary goal of this highly challenging course is to enable students to acquire a detailed understanding of the basic concepts of biology, the study of living things. The course content includes in-depth discussion, activities, and laboratory experiences in areas such as cellular and molecular biology, genetics, botany, evolution, and zoology. The course will be helpful to students who are planning for a career in the life sciences, as well as those enrolling in biology courses at the post-secondary level. Selected topics will be taught at an accelerated pace and in more detail than in biology. Additionally, students will be involved in independent project work and will be expected to commit a significant amount of time to studying in this course. Students completing this course will be prepared to pass the Biology Keystone Exam.

Course Name and Number	Credit Type	Credit Hours	Added Value
Keystone Biology Remediation Lab (0215)	SCI	1.0	1.05

Course Description *Pre-requisite: Biology or Biology Plus and a score of Basic or Below Basic on the Keystone Biology Exam*
Lab Science - This course is designed to prepare students to achieve a proficient score on the Keystone Biology test. Students will continue to explore basic biological principles, the chemical basis of life, bioenergetics, homeostasis, cell growth and reproduction, genetics, evolution, and ecology. The course will also explore the chemistry principles of the identification of the different types of matter, the atomic theory and atomic structure, periodic principles, ionic and covalent bonding, stoichiometry, gas laws, solutions, and equilibrium.

Course Name and Number	Credit Type	Credit Hours	Added Value
Chemistry Lab (0222)	SCI	1.0	1.0

Course Description *Pre-requisite: Algebra 1*
Lab Science - In this course, students will study the structure and function of matter as well as the changes that matter undergoes at the macroscopic and atomic levels. Students will study atomic structure and progress to explore many aspects of chemical activity including: electron structure, ionic bonding, covalent bonding, metallic bonding, and basic chemical reactions. Students will carry out laboratory experiences and explore mathematical relationships.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Chemistry Lab (0223)	SCI	1.0	1.05

Course Description *Pre-requisite: Algebra 1*
Lab Science - In this course, students will study the structure and function of matter. Students will begin with a detailed study of the atom and progress to explore many aspects of chemical activity. Students will carry out laboratory experiments and explore mathematical relationships. Selected topics will be taught at an accelerated pace and in more detail than in Chemistry. This course will be helpful to students who are planning for a career in the sciences, as well as those enrolling in chemistry courses at the post-secondary level. As a weighted science course, Honors students will be expected to commit a significant amount of time to study in this course.

Special Note: *Students taking Honors Chemistry Lab (0223) have the option of taking CHM100 through Penn College of Technology for Dual Enrollment credit. Those interested should read the course description below and note that taking Honors Chemistry for Dual Enrollment earns an Added Value of 1.07.*

Course Name and Number	Credit Type	Credit Hours	Added Value
PCNCHM100: Fundamentals of Chemistry	SCI	1.0	1.07

Course Description
Basic principles of chemistry and its practice in the laboratory. Emphasis on the underlying structure of matter (atoms, ions, molecules) and how structure determines properties. Designed to teach chemistry terminology and symbols, as well as to develop analytical and critical thinking skills. Appropriate for non-science majors needing one term of chemistry or to satisfy a lab science requirement. Also appropriate for those who desire background before taking General Chemistry I (CHM111) No prior knowledge of chemistry is assumed, but some algebra skills are needed. Sophomore-approved course. Enrollment requirement: (C) minimum overall GPA.
4 Credits (3 Lecture – 3 Lab)

Course Name and Number	Credit Type	Credit Hours	Added Value
Physics Lab (0232)	SCI	1.0	1.03

Course Description *Pre-requisite*: *Trigonometry or taking Trigonometry concurrently*
Lab Science - This course is a mathematical study of the physical laws of nature. Topics include Newton's Laws of Motion (velocity, acceleration, and force), thermodynamics (energy, heat), wave motion (circular motion, electromagnetic spectrum, and electricity) and nuclear physics. It is recommended for all students who plan to pursue the study of science at the post-secondary level. This course includes laboratory experiences.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Physics Lab (0233)	SCI	1.0	1.05

Course Description *Pre-requisite*: *Trigonometry or taking Trigonometry concurrently*
Lab Science – This course is a mathematical study of the physical laws of nature. Topics include Newton's Laws of Motion (velocity, acceleration, and force), thermodynamics (energy, heat), wave motion (circular motion, electromagnetic spectrum, and electricity) and nuclear physics. It is recommended for all students who plan to pursue the study of science at the post-secondary level. This course includes laboratory experiences and is designed to probe more deeply into the subjects studied in physics. Students should be prepared for additional reading, projects, and out-of-class assignments. Higher-order math skills are required. As a weighted science course, Honors students will be expected to commit a significant amount of time to study in this course.

Course Name and Number	Credit Type	Credit Hours	Added Value
Principles of Technology 1 (0231)	SCI	1.0	1.0

Course Description *This course is available to 11th or 12th grade students.*
This applied physics course is designed for students who plan to pursue careers as technicians or who want to solve problems through project-based applications. It is a course that builds a firm foundation for understanding advances in technology. Specific topics of study include forces, work, rates, resistance, and energy as they apply in a variety of systems with an emphasis on experimentation and problem solving. This course does not meet the NCAA requirements for a science lab and is not considered to be a college preparatory course.

Course Name and Number	Credit Type	Credit Hours	Added Value
Principles of Technology 2 (0241)	SCI	1.0	1.0

Course Description *Pre-requisite: Principles of Technology 1*
This applied physics course is designed for students who plan to pursue careers as technicians or who want to solve problems through project-based applications. It builds on concepts learned in Principles of Technology 1. Specific topics of study include power, force transformers, momentum and waves, and vibrations with an emphasis on experimentation and problem solving. This course does not meet the NCAA requirements for a science lab and is not considered to be a college preparatory course.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Physics 1: Algebra-Based (0276)	SCI	1.0	1.07

Course Description
AP Physics 1 is an algebra-based, introductory college-level course. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like systems, fields, force interactions, change, conservation, and waves. This course is equivalent to the first semester of an introductory, algebra based Physics college course. Because this course is intended to be a yearlong course, teachers have time to foster deeper conceptual understanding through student-centered, inquiry-based instruction. Students have time to master foundational physics while engaging in science practice to earn credit or placement (http://apcentral.collegeboard.org/apphysics1).

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Biology Lab (0243)	SCI	1.0	1.07

Course Description
Lab Science – AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore topics such as evolution, energetics, information storage and transfer, and system interactions.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Chemistry Lab (0244)	SCI	1.0	1.07

Course Description Pre-requisite: Chemistry
AP Chemistry is an introductory college-level chemistry course. Students cultivate their understanding of chemistry through inquiry-based lab investigations as they explore the four Big Ideas: scale, proportion, and quantity; structure and properties of substances; transformations; and energy.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP Environmental Science (0237)	SCI	1.0	1.07

Course Description
Students cultivate their understanding of the inter-relationships of the natural world through inquiry-based lab investigations and field work as they explore concepts like the four Big Ideas: energy transfer, interactions between earth systems, interactions between different species and the environment, and sustainability.

Course Name and Number	Credit Type	Credit Hours	Added Value
Anatomy and Physiology (0741)	SCI	1.0	1.0

Course Description *Pre-Requisites: Biology, Biology Plus, or Honors Biology*
COURSE STRUCTURE CHANGE
This course examines the structure and function of the human body from the cellular through the body system level, with special attention to the biochemical processes involved in cellular activity. Students will apply biological principles to their anatomy and physiology studies and employ the scientific method in research activities. This challenging course is designed for students planning on a career in some aspect of the health sciences.

Course Name and Number	Credit Type	Credit Hours	Added Value
Honors Anatomy and Physiology 1 (0722)	SCI	1.0	1.05

Course Description *Pre-Requisite: Biology, Biology Plus, or Honors Biology*
This course examines the structure and function of the human body from the cellular through the body system level, with special attention to the biochemical processes involved in cellular activity. Students will apply biological principles to their anatomy and physiology studies and employ the scientific method in research activities. This challenging course is designed for students planning on a career in some aspect of the health sciences. This course meets the NCAA requirements for a science lab and is considered to be a college preparatory course. As a weighted course, honors students will be expected to commit a significant amount of time to study in this course.

Course Name and Number	Credit Type	Credit Hours	Added Value
Ecology Lab (0235)	SCI	1.0	1.05

Course Description Pre-requisite: Biology, Biology Plus, or Honors Biology
This science elective course will review major ecological concepts, identify the techniques used by ecologists, provide an overview of local and global environmental issues, and examine individual, group and governmental activities important for protecting natural ecosystems. Technical information will be provided to allow students to identify problems and issues and to utilize research methodology for the study of natural ecosystems, and to consider appropriate solutions and analytical techniques. The in-site campus wetlands area will provide an outdoor laboratory setting for on-going monitoring and study of the flora and fauna of this region.

To be offered every other year: '19-'20, '21-'22, '23-'24, etc.

Course Name and Number	Credit Type	Credit Hours	Added Value
Science (Alternate Curriculum) (7102-S/7200-Y)	SCI SPECEDUC	1.0	1.0

Course Description
Students will access the alternate eligible content of the PA Core Standards, with emphasis on the functional domain of science as it relates to the student in his/her environment. *Students will join this class through the recommendations of the IEP team.*

Social Studies Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value	
9th Grade – American Studies (2130)	SSCI	1.0	1.0	

Course Description
U.S. History teaches the history of the 1900s through current U.S. issues. It provides the students with a global perspective and parallel modern history in order to study the historical, geographical, political, and social economic developments in the United States. Students will develop an appreciation of the national heritage of the United States, an understanding of how past events relate to current events in an interdependent world, and the development as a recognized world leader.

Course Name and Number	Credit Type	Credit Hours	Added Value	
9th Grade – Honors American Studies (2131)	SSCI	1.0	1.05	

Course Description
U.S. History teaches the history of the 1900s through current U.S. issues. It provides the students with a global perspective and parallel modern history in order to study the historical, geographical, political, and social economic developments in the United States. Students will develop an appreciation of the national heritage of the United States, an understanding of how past events relate to current events in an interdependent world, and the development as a recognized world leader. Honors students will be asked to study the American experience in a broader and more in-depth manner by which they will use critical conversations, readings, and compositions. Honors Students will be challenged with higher level thinking questions with demanding projects and assessments with higher expectations.

Course Name and Number	Credit Type	Credit Hours	Added Value	
10th Grade – Global Studies (0331)	SSCI	1.0	1.0	

Course Description
Global Studies will introduce students to global affairs focusing on contemporary issues in world politics such as conflict and cooperation, business and trade, population, environment, and human rights. Students will analyze major questions concerning the shaping of the modern world based upon the study of the growth of civilizations and nations spanning ancient times through the present. The course will investigate the contributions of various cultures to the shaping of world history.

Course Name and Number	Credit Type	Credit Hours	Added Value
10th Grade – Honors Global Studies (0332)	SSCI	1.0	1.05

Course Description
Honors Global Studies will allow students to explore global affairs focusing on contemporary issues in world politics such as conflict and cooperation, business and trade, population, environment, and human rights. Students will research major questions concerning the shaping of the modern world based upon the study of the growth of civilizations and nations spanning ancient times through the present. The course will investigate the contributions of various cultures to the shaping of world history.

Course Name and Number	Credit Type	Credit Hours	Added Value
11th Grade - Civics and Government (0341)	SSCI	1.0	1.0

Course Description
Students will be exposed to two semester courses: Problems of Democracy and Economics. Students will acquire the attitudes, skills, and knowledge necessary to become a self-supporting member of a democratic society. Students will also acquire an appreciation of the main economic systems used in an interdependent world.

Course Name and Number	Credit Type	Credit Hours	Added Value
11th Grade - Honors Civics and Government (0342)	SSCI	1.0	1.05

Course Description
Honors Civics & Government offers students the opportunity to explore the inner-workings of the American Government and to understand the importance of democracy in the world today. An emphasis will be placed on current events that shape our world and students will be expected to contribute to discussions on a regular basis. Honors Economics teaches students the basics of microeconomics and macroeconomics. The course is designed so that students will have the knowledge to apply the fundamentals of economics to real world situations. An emphasis will be placed on global economics and the interdependency of countries in the world today.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP US Government and Politics (0347)	SSCI	1.0	1.07

Course Description
This course will give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret United States government and politics and the analysis of specific examples. This course requires familiarity with the various institutions, groups, beliefs, and ideas that constitute United States government and politics.
Note: Students will be admitted to this course based on review of academic performance and teacher recommendation.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP World History (0335)	SSCI	1.0	1.07

Course Description
The purpose of AP World History is to prepare students for the AP exam and may ultimately lead to advanced college placement and college credit. The main theme of the course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP US History (0344)	SSCI	1.0	1.07

Course Description
The AP US History course is designed to represent college-level history studies. The scope of the course begins with the age of exploration and ends with present day America. Students are expected to leave the course with college-level writing skills, knowledge of historical events and concepts, and the ability to interpret historical documents. This course is intended for students who possess strong backgrounds in history and writing and prepares them to take the AP exam which may lead to advanced college placement and college credit.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP European History (0336)	SSCI	1.0	1.07

Course Description
This course is designed to give students an understanding of European history and its impact on today's global society. This will be taught using a variety of methods and sources of information (primary sources, video clips, discussion, lecture, individual and group projects). The course will cover European civilization beginning with the Black Death of 1348 through the present day. Not only will this class increase student knowledge of the evolution of European societies, but it will also prepare them for the AP European History exam. This class will also reinforce critical reading, writing and thinking skills.

Course Name and Number	Credit Type	Credit Hours	Added Value
Psychology (0746)	SSCI	1.0	1.0

Course Description
The content area of this course includes: background information relative to what psychology is, psychology methods, human development, biological influences on behavior, personality and personality theories, principles of learning and theories on learning, thinking processes, motivation and emotions, coping with stress, personality disturbances and treatments, group behavior, social influences, and social interactions. **(Recommended for grades 11 and 12 only)**

Course Name and Number	Credit Type	Credit Hours	Added Value
Social Studies (Alternate Curriculum) (7301-S/7300-Y)	SSCI SPECEDUC	1.0	1.0

Course Description
Students will access the alternate eligible content of the PA Core Standards, with emphasis on the functional domain of social sciences as it relates to the student in his/her environment. *Students will join this class through the recommendations of the IEP team.*

Semester Electives

Course Name and Number	Credit Type	Credit Hours	Added Value
War and Peace (0369)	SSCI	0.5	1.0

Course Description
One of the cornerstones of World History is the way in which humans conduct conflicts against one another. It has led to many major innovations, it has bred the foundations of democracy, and it has prematurely ended the lives of tens of millions. Therefore, we must seek to understand the infinite aspects of war to understand our future and ourselves.
The War and Peace elective course is a survey course that will examine world history from a military perspective. The course will analyze major military topics throughout history from ancient to modern times. The course will explore the leaders, soldiers and citizens who waged these wars along with the evolution of technology and its impact on warfare.

Course Name and Number	Credit Type	Credit Hours	Added Value
Citizens in a Global Society (0364)	SSCI	1.0	1.0

Prerequisite: Civics and Government

Course Description

In this semester-long course, designed for seniors interested in practicing their role as a citizen in a democracy, students learn the skills needed to discuss contemporary political issues. Students analyze current issues, such as health care, the national debt, and education reform, and conduct problem-solving sessions to find a common ground for action in shaping public policy. Activities include class discussions, research, and written and oral presentations that utilize technology skills.

Course Name and Number	Credit Type	Credit Hours	Added Value
Sociology (0365)	SSCI	0.5	1.0

Course Description

In this semester-long senior course, students study human relationships in society. The course focuses on the use of a sociological perspective to examine culture, social structure, the individual in society, social institutions, and social inequality. Our changing global society and its implications are presented and analyzed. Students learn to apply sociological theories and research techniques to modern-day problems. Students may participate in a variety of activities including class lectures, role-playing, discussions, field trips, problem-solving activities, simulation games, research, and class presentations.

Family Consumer Science Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Career Exploration (0753)	FCS	0.5	1.0

Course Description (9th Grade/Paired with Computer Skills)
This semester-long course allows the students to venture into the expansive world of careers. Students will have the chance to participate in a career interest survey that will identify possible areas of job opportunity based upon their current interest. Other activities will include a career display board, research paper and the creation of a career portfolio. The portfolio will be a collection of mock documents used when entering the workforce—i.e. resume, references, and job application. Guest speakers will inform students about their personal journey through his/her chosen field.

Course Name and Number	Credit Type	Credit Hours	Added Value
Living On Your Own (0751)	FCS	0.5	1.0

Course Description (11^{th} & 12^{th} grade only)
Learn about independent life after high school: wise use of resources, selecting a living space, budgeting and money management, as well as preparing for parenthood.

Course Name and Number	Credit Type	Credit Hours	Added Value
Sports Nutrition (0754)	FCS	0.5	1.0

Course Description
Sports Nutrition will give athletes and others the knowledge needed to make healthy decisions based on nutrition and fitness. This course enables students to realize the lifelong benefits of nutrition and wellness practices and empowers them to apply these principles in their everyday lives.

Course Name and Number	Credit Type	Credit Hours	Added Value
Baking (0755)	FCS	0.5	1.0

Course Description
Have you ever walked past the bakery at your favorite grocery store and wondered how the roses on the cake were made or how the baker was able to make the bread melt in your mouth? Now you can learn the answer. Baking is designed for students to learn the art and science behind these wonderful treats. Just imagine the joy you can give someone by simply taking the time to prepare a sweet treat to give as a gift to brighten someone's day.

Course Name and Number	Credit Type	Credit Hours	Added Value
Foods 1 (0735)	FCS	0.5	1.0

Course Description *(9th Grade / Paired with Exploratory Art)*
Foods 1 is a semester course designed to introduce students to the history, science and math of basic food preparation. Emphasis will be on nutrition, food safety and sanitation, and basic cooking methods. Students will learn how to read a recipe, use proper culinary terms, evaluate the nutritive value of food and use kitchen equipment properly.

Course Name and Number	Credit Type	Credit Hours	Added Value
Foods 2 (0745)	FCS	0.5	1.0

Course Description *Pre-requisite: Foods 1*
Foods 2 is a semester course designed to enhance what was learned in Foods 1. Students will practice using and adapting recipes to enhance the nutritive value of food and adapt recipes to address health needs such as heart disease and diabetes. Foods 2 students will prepare main dishes, salads, meats, and gourmet and ethnic foods.

Course Name and Number	Credit Type	Credit Hours	Added Value
Child Development (0733)	FCS	1.0	1.0

Course Description *Suggested 9th or 10th grade elective for students interested in the Vocational Child Care program.*
This course focuses on the development of children from conception through middle childhood. You will gain an understanding of the prenatal, physical, social/emotional and intellectual development of the child. If you are interested in working with children, this course will help you prepare for further study.

Course Name and Number	Credit Type	Credit Hours	Added Value
Daily Living (7500)	ELECTIVE SPECEDUC	0.5	1.0

Course Description
Students will join this class through the recommendations of the IEP team.

Health and Physical Education Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Health - Grade 9 (0414)	HEALTH	0.5	1.0

Course Description

9th grade Health Education is a skills-based class designed to provide students with the knowledge and skills needed to become health literate individuals. Health-literate people are able to address their own health needs along with the needs of others. Topics such as personal health and wellness, social and emotional health, safety, nutrition and physical activity, alcohol/tobacco/other drugs, CPR/AED training, HIV and STI's prevention, and sexuality education will be discussed as well as ongoing review of the body systems. Emphasis will be placed on the students acquiring knowledge and assuming responsibility for one's own health.

Course Name and Number	Credit Type	Credit Hours	Added Value
Physical Education 9 (0412)	PE	0.5	1.0
Physical Education 10 (0422)	PE	0.5	1.0
Physical Education 11 (0432)	PE	0.5	1.0
Physical Education 12 (0442)	PE	0.5	1.0

Course Description

High School Physical Education is a 45-day sequential and comprehensive activity-based class designed to create physically literate students while simultaneously meeting National and PA State standards. Physical literacy is the ability, confidence, and desire to be physically active for life. Students will participate in a wide range of physical activities in order to enhance their overall wellness, as well as acquire necessary skills and knowledge to obtain and maintain lifelong fitness.

Course Name and Number	Credit Type	Credit Hours	Added Value
Adaptive Physical Education (7401-S/7400-Y)	PE	0.5	1.0

Course Description

Adaptive Physical Education (APE) is an adapted, or modified physical education program available to students who need temporary or long-term alternatives and accommodations to the general education class. APE is designed to meet individualized gross motor needs, or other disability-related challenges, of an identified student according to each of the enrolled students' Individualized Education Plan (IEP). The APE program provides the lease restrictive environment in order to achieve instructional goals that target specific skills.

ELECTIVE ONLY

Course Name and Number	Credit Type	Credit Hours	Added Value
Driver Education (0420)	ELECTIVE	0.5	1.0

Course Description

The purpose of Driver Education is to prepare students to be safe, competent, and economical drivers. This course is designed to teach safe driving practices and attitudes combined with an understanding of traffic laws and driving procedures.

Visual Arts Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Art 1 (0511)	FINE	1.0	1.0

Course Description
Art 1 is intended to teach the student basic drawing skills, knowledge, and processes in drawing and painting to apply for self-expression, enrichment, or as a foundation for further study in the arts. Strategies will be explored to develop foundational practices in the creative process, including ideation, compositional development, design techniques, creation, and reflection.

Course Name and Number	Credit Type	Credit Hours	Added Value
Art 2 (0519)	FINE	1.0	1.0

Course Description
This course builds upon students' skills and knowledge in drawing and painting media, techniques, processes, and further develops the exploration and study of two-dimensional and three-dimensional media. Concentration will be focused to enhance artistic thinking habits and behaviors, the creative process, and self-expression through artmaking.

Course Name and Number	Credit Type	Credit Hours	Added Value
Art 3 (0520)	FINE	1.0	1.0

Course Description *Pre-requisite: Art 2*
Art 3 is intended for advanced art students who plan on continuing their education in the arts. Students will have the opportunity to create original artworks for the development of a portfolio.

Course Name and Number	Credit Type	Credit Hours	Added Value
Applied Arts and Technology (0910)	FINE	0.5	1.0

Course Description
This course offers basic exposure and hands-on experiences with Photoshop, Illustrator, Flash, PowerPoint, and 3D still and animation software. In addition to teacher-guided projects, the students will have the opportunity to pursue independent and personally creative projects that are in line with their acquired skills and interest.

Course Name and Number	Credit Type	Credit Hours	Added Value
Computer Graphics 1 (0538)	FINE	1.0	1.0

Course Description
This course is designed to provide the student with a basic foundation in the vocabulary, techniques, and applications associated with creating and manipulating digital imagery. We will be using a variety of software packages, which include Photoshop, Illustrator, and Flash, all of which are the new CS5 versions. Also, we will explore 3D imaging and animation with Blender 3D.

Course Name and Number	Credit Type	Credit Hours	Added Value
Computer Graphics 2 (0548)	FINE	1.0	1.0

Course Description *Pre-requisite: Computer Graphics 1*
This course is designed to provide the advanced computer graphics student with extended competencies in creating and manipulating digital imagery. Emphasis will be on long-term projects that reflect applied technical skills and communicative and artistic expression. Students may specialize in one or more of the following: image capture, raster graphics, vector graphics, mathematical images-fractals/tessellations, 3D stills, 2D animation, 3D animation, interactive 3D content, video, and web page design.

Course Name and Number	Credit Type	Credit Hours	Added Value
Art History (Grades 9 - 12) (0555)	FINE	0.5	1.0

Course Description
Art History is a survey course of art in historical and cultural context and explorations of basic concepts in art.

Course Name and Number	Credit Type	Credit Hours	Added Value
Exploratory Art (Grades 9 - 12) (0556)	FINE	0.5	1.0

Course Description (9th Grade / Paired with Foods 1)
Exploratory Art will enable students to develop their knowledge, abilities and appreciation for art. Problem-solving, self-expression, aesthetic awareness, and critical thinking skills will be developed. Students in exploratory art class will explore a variety of different materials and will develop skills and techniques in two and three-dimensional art production.

Course Name and Number	Credit Type	Credit Hours	Added Value
Pottery 1 (Grades 10 - 12) (0557)	FINE	0.5	1.0

Course Description
This course introduces the beginning student to the basics of pottery. Students will become proficient in hand-building techniques (pinch, slab and coil) as well as have an understanding of and ability to throw on the potter's wheel. Emphasis will be on originality, creativity and experimentation. Hand-building projects will include a mug and bowl. Students will maintain an academic vocabulary and reflection notebook and learn about the first pottery, kilns and famous potters.

Course Name and Number	Credit Type	Credit Hours	Added Value
Pottery 2 (Grades 10 - 12) (0558)	FINE	0.5	1.0

Course Description *Pre-requisite: Pottery 1*
This course focuses on techniques and skills to provide students the opportunity to produce a more mature and professional work of pottery. Students will create using advanced techniques in hand-building (pinch, slab and coil) as well as have an understanding of and the ability to throw advanced techniques on the potter's wheel. Students at this level will be encouraged to increase his/her technical proficiency and sensitivity to the subject matter. Pottery 2 students will maintain an academic vocabulary and reflection notebook. At this level, students will read a novel, maintain a journal and construct a piece of pottery from the novel. Emphasis will be on originality, creativity and experimentation. Hand-building projects will include an advanced coil and slab sculpture. Wheel throwing projects will include a pitcher, marbled vessel, and vessel with lid.

Course Name and Number	Credit Type	Credit Hours	Added Value
Digital Photography (0539)	FINE	0.5	1.0

Course Description *Pre-requisite: All students must own or have access to some digital device to take their own original photographs for the completion of the production projects of this course.*
This course is for photography enthusiasts who would like to master their camera's controls as they learn the foundational skills and techniques or composition in order to become better photographers and digital editors. This course will also look at photography from a historical sense and highlight some of the great photographers of all time. This course will be highly hands-on and project oriented.

Course Name and Number	Credit Type	Credit Hours	Added Value
Basic Art (7604)	FINE	1.0	1.0

Course Description

Various art mediums will be explored by students who participate in the alternate curriculum. Students will be exposed to a variety of techniques which can be incorporated into daily living and leisure activities. *Students will join this class through the recommendation of the IEP team.*

Music Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Band (0591-Full Year) / (0591a-Semester)	FINE	1.0 or 0.5	1.0

Course Description
The high school band program represents a continuation and extension of the middle school band program with additional performance ensembles designed to supplement the daily program. Skills and concepts are developed and cultivated through many performance opportunities.

Course Name and Number	Credit Type	Credit Hours	Added Value
Chorus (0592-Full Year) / (05921a-Semester)	FINE	1.0 or 0.5	1.0

Course Description
This course is designed for students interested in choral singing. Choral skills will show growth, refinement, and complexity through many performance opportunities.

Course Name and Number	Credit Type	Credit Hours	Added Value
Performing Arts (0594-Full Year) / (0598-Semester)	FINE	1.0 or 0.5	1.0

Course Description
This course is designed for students who wish to take a combination of band, chorus, and/or orchestra.

Course Name and Number	Credit Type	Credit Hours	Added Value
Orchestra (0590-Full Year) / (0595-Semester)	FINE	1.0 or 0.5	1.0

Course Description
The Orchestra performs music of varying musical styles from throughout history while striving to attain a high level of musical proficiency. The group gives two or more concerts per school year and performs as a fiddle/strolling string group periodically.

Course Name and Number	Credit Type	Credit Hours	Added Value
History of Rock and Roll (0587)	FINE	0.5	1.0

Course Description
The History of Rock and Roll is a Music class exploring the social, cultural and political impact of Rock and Roll Music on American Society and the World. Tracing the history of rock music from its origins in the southern plantations to the urbanization of African Americans and the resistance to, influences on and impediments utilized by American Society in general, and concludes with the acceptance of and full flowering of this truly American Art Form.

Course Name and Number	Credit Type	Credit Hours	Added Value
Music and Movies (0589)	FINE	0.5	1.0

Course Description
Students will study the history of movies and sound from the "Silent Era" to the development of "Talkies" to the "Modern Era" of various computer generated techniques. The evolution of recording techniques, visual soundtrack, as well as pre-sound track uses of music will be explored.

Course Name and Number	Credit Type	Credit Hours	Added Value
Music Theory (0581)	FINE	1.0	1.03

Course Name and Number	Credit Type	Credit Hours	Added Value
Guitar 1 (0571) Semester	FINE	0.5	0.5
Guitar 2 (0572) Semester	FINE	0.5	0.5
Guitar 3 (0573) Semester	FINE	0.5	0.5

Course Description *Offered to 10th, 11th, and 12th grade students*
These multi-level courses are designed to meet the musical needs of students with little or no prior experience and those possessing technical proficiency with the guitar. Students will learn the fundamentals of music theory while learning to play the guitar. Students scheduling intermediate and advanced sections of guitar should have prior guitar experience.

Course Name and Number	Credit Type	Credit Hours	Added Value
Piano Keyboard 1(0565)	FINE	1.0	1.0

Course Description
This course is an introduction to the keyboard designed for students who have not had prior keyboard experience. The course will help students gain keyboard proficiency will learn the fundamentals of theory and musical form.

Course Name and Number	Credit Type	Credit Hours	Added Value
Piano Keyboard 2 (0566)	FINE	1.0	1.0
Piano Keyboard 3 (0567)	FINE	1.0	1.0

Course Description *Pre-requisite: Keyboard 1*
Students will continue to gain keyboard experience while learning the fundamentals of music theory.

Course Name and Number	Credit Type	Credit Hours	Added Value
Basic Music (7605)	FINE SPECEDUC	1.0	1.0

Course Description
Various music mediums will be explored by students who participate in the alternate curriculum. Students will be exposed to a variety of techniques and skills, which can be incorporated into daily living and leisure activities. *Students will join this class through the recommendation* of the IEP team.

World Language Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Spanish 1 (0512)	FRGN	1.0	1.0

Course Description
Introduces the language and culture, including current life today, music, art and notable people of the Spanish-speaking world. Students learn the sound system of the language, basic conversational skills in the present tenses and the near future. As in all Spanish courses, students practice listening, speaking, reading and writing of the language.

Course Name and Number	Credit Type	Credit Hours	Added Value
Spanish 2 (0522)	FRGN	1.0	1.0

Course Description Pre-requisite: Successful completion of Spanish 1
The second year of Spanish continues use of the same skills as in the previous course. Students continue to learn vocabulary needed in all careers and everyday life. At this level students use their Spanish skills to learn more about everyday life in Hispanic countries and other cultures and to connect with math, science, geography and culinary arts. Students begin to be able to read, write, listen and speak in the past tense.

Course Name and Number	Credit Type	Credit Hours	Added Value
Spanish 3 (0532)	FRGN	1.0	1.03

Course Description Pre-requisite: Successful completion of Spanish 2
In the third level of Spanish students continue to learn more thematic vocabulary about everyday life, increase their knowledge of grammar and add two more past tenses. Using Spanish students connect to the Hispanic world to learn about art, music, products of the Hispanic countries and careers where Spanish is needed.

Course Name and Number	Credit Type	Credit Hours	Added Value
Spanish 4 (0542)	FRGN	1.0	1.05

Course Description Pre-requisite: Successful completion of Spanish 3
In the fourth year of Spanish, students learn Spanish for use in the health care professions, about disasters, accidents and injuries. This vocabulary is also useful to emergency responders, firefighters and paramedics. Students learn about health care and social security in the Hispanic countries. This course continues the study of culture, everyday life, literature and the fine arts. Students learn the compound verb tenses, the present subjunctive and to begin using the language in the future.

Course Name and Number	Credit Type	Credit Hours	Added Value
Spanish 5 (0552)	FRGN	1.0	1.05

Course Description Pre-requisite: Successful completion of Spanish 4
This course appeals to students who enjoy using Spanish to learn about Hispanic culture and its products, poetry, short stories and one book. Students discuss and write reflections of what they have read. They also write a three part autobiography, illustrated and decorated in an album for the final exam, to show everything they have learned in Spanish 1-5.

Course Name and Number	Credit Type	Credit Hours	Added Value
German 1 (0514)	FRGN	1.0	1.0

Course Description
German I students begin to develop listening, speaking, reading, and writing skills. The main emphasis is on oral communication. Students will learn about America's German heritage, the geography of German speaking countries, and about the cultural differences and similarities between German and American young people.

Course Name and Number	Credit Type	Credit Hours	Added Value
German 2 (0524)	FRGN	1.0	1.0

Course Description Pre-requisite: Successful completion of German 1
German 2 students will be able to handle typical social situations in an appropriate manner and to tend to their welfare in a limited manner in the target culture. Students will be able to converse, read, and write about events in the present, past, and future.

Course Name and Number	Credit Type	Credit Hours	Added Value
German 3 (0534)	FRGN	1.0	1.03

Course Description Pre-requisite: Successful completion of German 2
German 3 students will continue to improve the four basic communicative skills of listening, speaking, reading, and writing. Students will be able to interact socially in an appropriate manner and be able to tend to their own welfare in the target culture. The study of literature will continue with fables, short stories, fairy tales, and other literary texts suitable to this skill level.

Course Name and Number	Credit Type	Credit Hours	Added Value
German 4 (0544)	FRGN	1.0	1.05

Course Description Pre-requisite: Successful completion of German 3
German 4 students will continue to improve the four basic communicative skills. Students will be able to interact socially in an appropriate manner. The study of literature will continue with longer texts suitable to this skill level. The vast portion of this class will be instructed in German.

Course Name and Number	Credit Type	Credit Hours	Added Value
AP German (0564)	FRGN	1.0	1.07

Course Description Pre-requisite: Successful completion of German 4
AP German students will attain the level of mastery needed to travel in a German speaking country. Students will know what to expect and how to behave in different social contexts and situations. They will comprehend more difficult conversations, television programs, movies, and study an extended drama. They will read, discuss, and write about articles and books of ever increasing difficulty. Students will be able to describe, discuss related events, and give opinions on an ever-increasing variety of topics. The cultural emphasis is on travel and daily life in German speaking countries. This class will be instructed totally in German. Students are expected to converse fully in German during the class.

Course Name and Number	Credit Type	Credit Hours	Added Value
German 5 (0554)	FRGN	1.0	1.05

Course Description Pre-requisite: Successful completion of German
The fifth year of German study is a culmination of a student's high school German studies and is ideal for students who have a genuine interest in the German culture/language and/or plan to continue their German studies in college (major, minor or otherwise). In this course students use and develop all the German skills they have acquired in previous courses. Students are further encouraged to investigate cultural topics of their own interest and will continue to advance their skills of reading, writing, speaking and listening using a variety of new and previously learned verb tenses. Topics covered include fine arts, literature, history and student selected topics.

Business Technology Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Computer Skills I (0627)	BUS/TECH	0.5	1.0

Course Description
This course will emphasize computer skills using Microsoft Word, PowerPoint, and Excel.
***Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Computer Skills II (0628)	BUS/TECH	0.5	1.0

Course Description Pre-requisite: Computer Skills I
This course will review Microsoft Office software and emphasize advanced computer skills. Students will utilize the Internet; apply computer skills, and complete presentations. Additional computer applications will be covered as time permits.
Note: Dual Enrollment is for CS I, not CS II

Course Name and Number	Credit Type	Credit Hours	Added Value
Basic Web Page Design (0629-S)	BUS/TECH	0.5	1.0

Course Description
In this course, students will learn the most important skills of Google Sites, Weebly, Wordpress, Wix, and Adobe Dreamweaver CS5. We will also cover the basics of HTML and CSS. No prior computer experience is assumed. Students will learn how to create web pages and develop a web site.

Course Name and Number	Credit Type	Credit Hours	Added Value
Advanced Web Page Design (0630)	BUS/TECH	0.5	1.0

Course Description
This course involves coverage of the Internet and on-line web technologies. Skills learned include how to plan, create, and maintain static web pages using HTML and CSS.
***Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value	
PCNBWM150: Introduction to Web Page Development	BUS/TECH	1.0	1.07	PENN COLLEGE NOW

Course Description
Introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. Enrollment requirement: (C) minimum overall GPA and (C) minimum overall Algebra I final grade.
3 Credits (3 Lecture – 0 Lab)

Course Name and Number	Credit Type	Credit Hours	Added Value
Computer Design Using 3D Printers (0620)	BUS/TECH	1.0	1.0

Course Description
Grade Levels 11, 12
This hands-on class will utilize computer technology to edit, create and design items using 3D printers. This class is intended to unlock students' creative potential to construct, innovate, design and fabricate personal and practical items.

Course Name and Number	Credit Type	Credit Hours	Added Value
Accounting 1 (0632)	BUS/TECH	1.0	1.0

Course Description
Students will learn the basic accounting cycle for a service business organized as a sole proprietorship. Next, students expand their knowledge to include the accounting cycle for a merchandising business operated as a partnership. A brief introduction to corporations is also presented in the class. Students will learn both general and special journal systems. Microsoft Excel will be used to prepare financial statements.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Accounting 2 (0642)	BUS/TECH	1.0	1.03

Course Description Pre-requisite: Accounting 1
This one year, advanced accounting course will expand knowledge acquired in Accounting 1. Students will review the basic accounting cycle as well as expand the accounting cycle to corporation accounting. Emphasis will be given to more in-depth understanding of analysis and interpretation of financial information for departmental businesses. Automated accounting is a major portion of this class.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Introduction to Business (0611)	BUS/TECH	0.5	1.0

Course Description
In this introductory course students learn the fundamentals of business including basic economics, private enterprises, career exploration, budgeting and finance, entrepreneurship and small business, and consumer awareness.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Business Management (0644)	BUS/TECH	0.5	1.0

Course Description
From basic business to entrepreneurship, students learn how to function successfully in the world of business. Business Management focuses on basic business skills, business enterprise, national and international business, and fundamentals of management, marketing, finance, and entrepreneurship.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Personal Finance (0635)	BUS/TECH	0.5	1.0

Recommended for Grades 10-12
Course Description
This course is designed to teach the student about financial responsibility. The course will focus needs vs. wants, saving and investing, responsible spending, credit, completing taxes, living on your own, purchasing a car/car loan, insurance, consumer credit, and financial decision-making skills. Students will learn how the stock market works, will monitor the market and trends, and participate in an on-line stock market game.
**Suggested Course
*****Dual Enrollment credits are available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Entrepreneurship (0650)	BUS/TECH	0.5	1.0

Course Description
An entrepreneur is a person who attempts to earn profit by taking the risk of owning and operating his or her own business. Thousands of people become entrepreneurs each year. They may start their own business from scratch, buy existing businesses or buy franchised businesses. In this course, students learn about self-employment through reading, research and classroom activities.

Course Name and Number	Credit Type	Credit Hours	Added Value
Sports and Entertainment Marketing (0651)	BUS/TECH	0.5	1.0

Course Description
This course will provide students with the skills that are helpful in getting a job in some area of the marketing process. Product planning, research, development, pricing, distribution, advertising, and selling will be emphasized to increase the student's knowledge of the marketing process and customer behavior.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Investing (0637)	BUS/TECH	0.5	1.0

Course Description
This course teaches the basics of stock marketing investment, research and evaluation of stocks, trade in common stock and mutual funds. It will cover the understanding of customer behavior and why people choose to buy what they buy. This course emphasizes long-term investment strategies.

Course Name and Number	Credit Type	Credit Hours	Added Value
Business Law 1 (0633)	BUS/TECH	1.0	1.0

Course Description
This course provides students with a general background in law and progresses to a study of the law of contracts. Students will study various legal situations that affect businesses and individuals. An emphasis is given to business related laws.
*****Dual Enrollment is available through Lackawanna College**

Course Name and Number	Credit Type	Credit Hours	Added Value
Business Law 2 (0645)	BUS/TECH	1.0	1.0

Course Description Pre-requisite: Business Law 1
Students will build on an understanding from Business Law I as it relates to them currently and the implications of the law in their future lives as well as the lives of their family and friends. They will also work to gain an understanding of basic legal vocabulary. Students will gain an understanding of sales and other contractual situations, property, the law of jobs, forms of business organizations, and borrowing money and paying bills.

Course Name and Number	Credit Type	Credit Hours	Added Value

Computer Programming (0634)	BUS/TECH	0.5	1.0

Course Description

This introductory computer-programming course is designed to introduce problem-solving techniques required to develop structured programs. A current high-level language, Java, is used to illustrate how to implement program development. Java is a popular programming language used for mobile applications, desktop applications, web applications, and more. Required materials include: Java, Text Edit Program, Hour of Code, and W3Schools.

***Dual Enrollment is available through Lackawanna College**

Miscellaneous Courses:

Course Name and Number	Credit Type	Credit Hours	Added Value
Study Hall (00006-S)/(00007-Y)	ELECTIVE	0.5 or 1.0	0.0

Course Description *Requirement of Dual Enrollment or 2 AP Courses to apply*
Study Hall courses provide students with the opportunity and time to complete classroom assignments or school projects. Students typically work on their own, without the help of a tutor; however, they are supervised and usually remain in the classroom. These will be offered both as single semester and year-long courses.

Course Name and Number	Credit Type	Credit Hours	Added Value
Study Skills (00008-S)/(00009-Y)	ELECTIVE SPEC ED	0.5 or 1.0	0.0

Course Description
Study Skills courses prepare students for success in high school and/or for postsecondary education. Course topics may vary according to the students involved, but typically include reading improvement skills, such as scanning, note-taking, and outlining; library and research skills; listening and note-taking; vocabulary skills; and test-taking skills. The courses may also include exercises designed to generate organized, logical thinking and writing. *This course will be assigned through consultation with the IEP team.*

Course Name and Number	Credit Type	Credit Hours	Added Value
Social Skills 1 (5900)	ELECTIVE SPEC ED	1.0	1.0

Course Description
Students will join this class through the recommendations of the IEP team.

Course Name and Number	Credit Type	Credit Hours	Added Value
Social Skills 2 (5600)	ELECTIVE SPEC ED	1.0	1.0

Course Description
Students will join this class through the recommendations of the IEP team.

KCSD Virtual Academy

Course Options

The KCSD Virtual Academy offers vendor courses through 5 major vendors: Edison Learning, Odysseyware, Apex Learning, Accelerate Education and eDynamic.

There are 2870 courses available K-12 from our consortium vendors. We currently mirror traditional KCSD course offerings but also have the ability to meet the needs of specific students with Credit Recovery, Foundational, Comprehensive, NCAA, Honors, and AP courses.

We do offer some expanded options online such as Astronomy, Forensics, Latin, Animal Systems and Genetics for our online learners as well as students who have a unique academic schedule.

Courses are aligned to the PA Standards and we only use courses that are taught by a PA certified teacher.

The online course master catalog is available at:
https://caiu.geniussis.com/PublicStudentCourseList.aspx?aid=173

NOTE: Online PE K-12 – Offered through Google Classroom and Schoology by a KCSD Health/PE teacher

OLL Physical Education 9 (VRT0412)
OLL Physical Education 10 (VRT0422)
OLL Physical Education 11 (VRT0432)
OLL Physical Education 12 (VRT0442)
OLL Elementary Physical Education (VRT10096)

Course Description Offered through Google Classroom and Schoology
The physical activities of these courses will allow students to participate in health-enhancing activities designed to promote lifetime personal fitness. The students will be taught movement concepts, skills, and strategies through a variety of individual and team activities. These activities will also teach students to recognize and apply safe practices, rules, etiquette, fair play, and the ability to work with others while participating in wellness activities.

Credit Recovery:

Throughout the school year, high school guidance counselors, administrators, students, and parents will review student progress toward graduation. Students who have failing grades in a core area will need to retake a course (or courses) in order to earn credit toward graduation. Students and families can seek credit recovery on their own through The Keystone School's Credit Recovery Curriculum: http://keystoneschoolonline.com/credit-recovery/faq

The Keystone School is a fee based on-line or correspondence course provider, but it is not associated with the Keystone Central School District. Please review their website for more information.

As funding allows the district will offer on-site credit recovery options. These courses will be listed on the student transcript as CREDIT RECOVERY and are not considered college preparatory in nature. The CREDIT RECOVERY courses will not be calculated in Honor Roll, GPA or Class Rank. Only the original course grade will calculate toward Honor Roll, GPA, or Class Rank. The following course descriptions are provided for families to consider:

KCSD Credit Recovery:
Students are able to gain credit if they have previously completed a course but did not successfully earn credit. Teachers certified in the content area will administer a diagnostic test to each student that assesses his/her current knowledge of fundamental content. The results of these tests are used to create individualized study plans. Through the use of programs such as Compass, Study Island and teacher-generated materials, the students will work toward goal(s) that have been individually designed in order to earn the necessary credit.

Students will work to complete a course of study over an abbreviated period of time after school or during the summer. Students must complete at least 30 hours of work and earn at least a 70% on work completed. The CREDIT RECOVERY courses will not be calculated in Honor Roll, GPA or Class Rank. Only the original course grade will calculate toward Honor Roll, GPA, or Class Rank.

If using The Keystone School's Virtual Academy Credit Recovery Curriculum or other Credit Recovery not provided by the district: The student's parent/guardian works with guidance to determine if the course selected will be approved for the graduation requirement that has not been met through completing the district course. Once approval is granted, the family works with the outside service to set up the course. Students will complete all work outside of the school district following the expectation of the credit recovery program. Once grades are assigned at the end of the course, the student requests for the grade transcript to be sent from the approved credit recovery program to the guidance office.

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery English (911000)	ENG	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Math (912000)	MATH	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Science (913000)	SCI	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Social Sciences (914000)	SSCI	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Family and Consumer Science (915000)	FCS	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Physical Education (916000)	PE	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Fine Arts (917000)	FINE	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery World Languages (918000)	FINE	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Business Technology (919000)	BUS/TECH	0.5 or 1.0	0.0

Course Name and Number	Credit Type	Credit Hours	Added Value
Credit Recovery Elective (920000)		0.5 or 1.0	0.0

Transfer Courses:

When students transfer to KCSD from other districts, the counseling department hand enters historical grades. The KCSD counseling department will use the weights and values assigned by the sending school (adjusted to our grade scale if necessary) when recording the courses. Transfer Courses will calculate in Honor Roll, Class Rank, and GPA. These courses and grades will appear on a transcript as:

Course Name and Number	Credit Type	Credit Hours	Added Value
Transfer English (901000)	ENG		
Transfer Mathematics (902000)	MATH		
Transfer Science (903000)	SCI		
Transfer Social Sciences (904000)	SSCI		
Transfer Health (906000)	HEALTH		
Transfer Physical Education (906001)	PE		
Transfer Fine Art (907000)	FINE		
Transfer World Languages (908000)	FINE		
Transfer Business Technology (909000)	BUS/TECH		
Transfer Elective (910000)	ELECTIVE		

KCSD Career and Technology Center

Introduction and Programs of Study:
Career and Technical Education is designed to prepare students for work ready or post-secondary education upon graduation. These programs are based on industry standards and are reviewed on a regular basis by leaders in business and industry.

Agriculture Mechanics:

Classification of Instructional Program/CIP Code: 01.0201

Course Overview
This is an instructional program that prepares individuals to sell, select and service agriculture or agribusiness technical equipment and facilities including computers, specialized software, power units, machinery, equipment, structures and utilities. This program includes instruction in agriculture power units, mechanical systems, the planning and selection of materials for the construction of agriculture facilities, safe mechanical practices associated with water conservation, erosion control and data processing systems.

Scope and Sequence / Courses

Introduction to Agricultural Mechanics and Natural Resources (2 periods): (Grade 9 only)
This course will introduce students to careers in the fields of agriculture, natural resources, metal fabrication, and equipment repair. Students will focus on safety and basic skills in the areas of welding, small gas engines, machinery operation, woodworking, and construction. Students will operate plasma cutters and MIG and Flux core welders. Students will learn to trouble shoot a small gas engine, operate equipment used in various agricultural enterprises and will have the opportunity to receive the Safe Tractor/Equipment Operators Certification. Students will learn forest management, wildlife management, and wood products and processing. Students will learn identification of trees and wildlife.

Agriculture Mechanics I: (2 periods/1 period SAE online)
Through instruction in both the classroom and shop setting, students will learn to safely use hand and power equipment to plan, design, and construct projects using a variety of wood and metal working skills and techniques. Students will study the theory of hot and cold metal work, plasma cutting, Oxy fuel cutting and arc welding. Students will learn to identify the select lumber for use in construction projects based on the physical properties and characteristics of the lumber. Students will cover the management

techniques for the preservation and control of animal populations, and methods of improving wildlife habitat. Students will learn the identification of trees, measurement of trees for manufacture into lumber products, and the management of forests for timber, wildlife and recreation.

Agriculture Mechanics II: (2 periods/1 period SAE online)
This course covers wood and metal fabrication for project construction. Topics include welding, wood construction, plumbing, electrical wiring, masonry construction, and maintenance of structural systems. Students will receive instruction in safety, hand and power tool usage, planning, selection materials, and usage related to the construction of items used in agriculture, shop, and home. Students will be using their own ideas and methods in design and fabrication of projects. Must also schedule SAE.

Agriculture Mechanics III: (2 periods/1 period SAE online)
This course will prepare students for careers in several areas relating to agriculture. Students will study small gas engines, welding, machinery operation and repair, fundamentals of soil, framing and construction of farm buildings, woodworking, and basic forestry. Must also schedule SAE.

Supervised Agricultural Experience (1 Credit Online)
Through their involvement in the SAE program, students are able to consider multiple careers and occupations, learn expected workplace behavior, develop specific skills within an industry, and are given opportunities to apply academic and occupational skills in the workplace or a simulated workplace environment. Through these strategies, students learn how to apply what they are learning in the classroom as they prepare to transition into the world of college and career opportunities. Open to students in grade 11-12 must be scheduled with Ag Mechanics I, Ag Mechanics II, and Ag Mechanics III as their third period.

Scope and Sequence for Agriculture Mechanics:
- 9th Grade: Intro to Agricultural Mechanics and Natural Resources
- 10th Grade: Ag Mechanics I and SAE
- 11th Grade: Ag Mechanics II and SAE
- 12th Grade: Ag Mechanics III and SAE

Automotive Mechanics Technology/Technician:

Classification of Instructional Program/CIP Code: 47.0604

Course Overview

An instructional program that prepares individuals 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.

Automobile/Automotive Mechanics Technology/Technician program consists of the following courses:

Scope and Sequence / Courses

Introduction to Auto-Tech (Grade 9 only)

This course is designed as an entry-level class that gives an overview of the basic skills of automotive technology and repair. This includes safety skills, work habits and basic hand tool use. The class is designed to familiarize the student with hands on training and working in a repair facility environment.

Auto-Tech I

This course is designed to expand upon the skills learned in the introduction course. Auto-Tech 1 provides the opportunity for students to build on the basic skills taught in the introduction course and begin to understand the mastery skills needed for automotive technology and repair. This program includes safety skills, work habits, and basic hand tool use. The class is designed to familiarize the student with hands on training and working in a garage repair facility environment.

Auto-Tech II

The purpose of the program is designed to give students practical instruction in the design, repair, and diagnosis of today's automobiles. The theory of functions and designs are learned through the use of textbooks, videos and hands on training. Emphasis is given in engine overhaul, transmission, brakes, tires, and wheels, cooling systems, fuel systems, and various other systems that make up today's automobiles. Students will have the opportunity to learn competency-based skills, develop good work related attitudes, safety and trade pride while working in a repair facility.

Auto-Tech III

This program prepares students to become automotive technicians who are trained in the latest automotive service technologies and methods. Courses include technical training on current model vehicles and components with emphasis on the latest developments in engine repair, automotive electrical and electronic engine control systems, brakes and suspension systems, fuel systems, and emission control systems.

Building Construction Occupations/ Construction Trades:

Classification of Instructional Program/CIP Code: 46.9999

Course Overview

The construction and building environment sector covers a wide range of work from more familiar activities like installing windows, fitting carpets and mending broken water pipes, to installing solar panels and creating new structures around the world. Different jobs in the construction industry need different skills. Operatives and craftspeople need practical hand skills for using tools and machinery as well as skills in communication, teamwork, problem solving, numeracy and the ability to work with deadlines. This program of study prepares individuals for a variety of trade areas, including carpentry, masonry, plumbing, heating, electrical, and painting and decorating. Carpenters construct, erect, install, and repair structures and fixtures made from wood and other materials. As part of a single job, they might frame walls and partitions, put in doors and windows, build stairs, install cabinets and molding, and complete may other tasks. Each carpentry task is somewhat different, but most involve the same basic steps. By working from blueprints or instructions from supervisors, carpenters first perform the layout, measuring, marking, and arranging materials, in accordance with local building codes. They cut and shape wood, plastic, or drywall using hand and power tools. Bricklayers build and repair walls, floors, partitions, fireplaces, chimneys, and other structures with brick, precast masonry panels, concrete block, and other masonry materials. Plumbers also install and repair water pipes, waste disposals, drainage, and gas systems in homes, commercial and industrial buildings. Plumbers also install plumbing fixtures in bathtubs, showers, sinks, and toilets, and appliances such as dishwashers, water filtration systems and water heaters. Electricians specializing in construction primarily install and maintain electrical and power systems in homes and businesses. They install and maintain the wiring and control equipment through which electricity flows. Painters apply paint, stain, varnish, and other finishes to buildings and other structures. They select the right paint or finish for the surface to be covered, taking into account the durability, ease of handling, method of application, and customers' wishes.

Scope and Sequence / Courses

Introduction to Construction Trades (Grade 9 only)

Students will be introduced to the basic skills in the trade areas in Building Construction Occupations including: Operating and maintain hand and power tools, Masonry, Carpentry, Plumbing, Electrical, Surveying and safety including OSHA.

Construction Trades I

The basic skills and techniques learned in the introduction course are expanded upon in Level l. Students will broaden their knowledge and begin to master the basic skills learned in the introduction course concentrating in the following areas: Masonry, Carpentry, Plumbing, Electrical, etc.

Construction Trades II

Level 2 techniques are expanded to strike a balance between the knowledge of the trade skills, materials and methods involving the construction process, to the point that a student will be prepared for an entry level position in the construction field. There will be extensive work in blueprint reading.

Construction Trades III

The student will complete a core competency based requirement for each trade area. The studies in each area will be expanded to strengthen the students' knowledge and skills. Co-op will be offered to students who qualify.

PCNBCT103: Construction Hand and Power Tools

Survey of hand and power tools typically used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. 1 Credit (0 Lecture – 3 Lab). Sophomore-Approved Course. Enrollment requirement: (C) minimum overall GPA.

1 Elective credit/1 period

Child Care:

Classification of Instructional Program/CIP Code: 19.0708

Course Overview

Child Care is an instructional program that prepares the student for a variety of occupations working with children including a daycare center or to enter college for Early Childhood Education. The program's focus is the education and care of the whole child through instruction of child growth and development, lesson planning, health and safety, curriculum development, classroom management and guidance, play activities, child abuse, and clinical experience.

Scope and Sequence / Courses

Introduction to Child Care (Grade 9 only)

This course will provide basic developmental needs of newborns, infants, toddlers, and preschoolers. Students will design a pleasing environment for an early childhood center. Areas will be covered on theories of development, career, health and safety.

Child Care I

This course will continue to study the basic developmental needs of children, birth through age 12. Students will learn about classroom management and positive guidance. Areas of study will be covered on standards, curriculum, and assessment.

Child Care II

This course will focus on health, safety, guidance, and limits. Students will study the value of play and handling common problems. Writing and presenting lesson plans based on specific themes will be completed. The student will have clinical experience as they interact with preschoolers in the Playdays preschool program.

Child Care III

In this course we will continue to review planning and presenting lesson plans. We will study the topic of professionalism. We will study how to keep children healthy and safe. Students taking this course will have the opportunity to participate in the Playdays preschool program.

Cosmetology:

Classification of Instructional Program/CIP Code 12.0401

Course Overview

An instructional program that prepares individuals to apply technical knowledge and skills related to experiences in a variety of beauty treatments including the care and beautification of the hair, complexion and hands. Instruction includes training in giving shampoos, rinses and scalp treatments; hair styling, setting, cutting, dyeing, tinting and bleaching; permanent waving; facials; manicuring; and hand and arm massaging. Bacteriology, anatomy, hygiene, sanitation, salon management including record keeping and customer relations are also emphasized. Instruction is designed to qualify pupils for the licensing examination.

Scope and Sequence / Courses

Intro to Cosmetology (Grade 9 only)

Students beginning the Cosmetology program will focus on the basics and progress through salon-based competencies. Students will be introduced to the arts and sciences behind the careers in Cosmetology, bacteriology, Cosmetology history, client protection, professional image, and client communication. The study of hair, skin disorders, and diseases will be studied in depth to develop recognition and confidence in working on clients. The student will then progress into task completion with scalp and hair care, shampoos, and the chemistry of products. Basic manicuring will be practiced while simultaneously learning the anatomy of the arm and hand. Other practical tasks learned include hair removal, scalp treatments, and arm and hand massages. Many of these units will include medical terminology and vocabulary. All practical exercises will be practiced on mannequins and students in the class. Basic math skills, fractions, and geometric angles are skills that will be utilized throughout the course.

Cosmetology I

Students beginning the Cosmetology program will focus on the basics and progress though the salon based competencies. Students will be introduce to the arts and sciences behind careers in Cosmetology, bacteriology, proper sanitation, beauty culture laws, client protection, professional image, and professionalism. The study of hair and disease will be studied in depth to develop recognition and confidence in the salon setting. Haircutting will combine lines and geometric angles along with the art of sculpting and design. Hairstyling will include braiding, blow-dry styling, thermal styling, and wet styling. Basic manicuring skills nail wraps will be practiced as well as pedicuring. Other practical skills learned include hair removal, permanent waving, and introduction to hair coloring. Many of these units will include medical terminology and vocabulary. Student practical exercises and tasks are practiced on mannequins and students in the class. Basic math skills, fractions and geometric angles are skills that will be utilized throughout the course. Upon completion of 300 satisfactory hours, and successful performance tests, the student will be able to begin servicing clients.

Cosmetology II

The student will continue to work through the science and art of hair coloring. Competencies such as depositing hair color, hair lightening, highlighting, balayage techniques, and other advanced creative coloring techniques will be demonstrated and practiced to perform on clients. The knowledge of the pH scale will expand to include chemicals and their effects on the hair. The color wheel and color theory will be studied to prevent and correct color mistakes. Advanced braiding techniques, such as cornrows,

individual braids, and dreadlocks will be practiced. Additional competencies in nail care including nail tip application, acrylic work, and gel nails will be introduced. Concentration in Anatomy and Physiology will be incorporated into skills such as facials, arm and hand massages, and other massage. Thermal pressing and curling, razor clipping and cutting, makeup application, epilating and hair removal, and formal styles will be taught. The student will focus on the art of styling and hair shaping while combining the elements of balance and harmony. Client communications and people skills are a must as the students work on clinical and receptionist duties. For a salon business, basic math skills will be used as well as knowledge of fractions and measurements will be implemented in color formulation. The students will expand on clinical experience and be working the clinic floor to gain on the job experiences and build confidence in their abilities.

Cosmetology III

The students will review all competencies and theoretical principles in preparation for the State Board Licensing Exam and the NOCTI exam. Chemical services such as permanent waving, coloring, and hair lightening will be concentrated on during the course. Ethnic hair care, chemical relaxing, wigs and hair extensions, and nail sculpting will be practiced. Students will cover job acquisition skills and develop a resume, letter of application and interviewing skills to prepare them to secure a position in the field of Cosmetology. Salon business includes computing salaries and commissions, taxation, assets and liabilities, retailing and computations. The Level 3 students will be the primary operators on the clinic floor and handle all clients and services requested to gain a salon experience. Students will have the opportunity to Job Shadow, and upon completion of 1250 hours of training, will be eligible to sit for State Board Testing.

Culinary Arts:

Classification of Instructional Program/CIP: 12.0503

Course Overview

The Keystone Central Career and Technology Center Culinary Arts program serves the needs of the students by preparing them to continue their culinary career either through continued education or gaining employment after graduation. We serve the needs of the community by providing students with the basic skills required for someone beginning a culinary career.

Our Culinary Arts program consists of a thorough grounding in culinary basics. These basics skills follow the path set forth by the PA Department of Education's Program of Study for Food Workers (CIP 12.0508). The students begin with kitchen safety and sanitation, knife handling and safety, theory, preparation techniques, and cooking styles. Students then flow into breakfast cookery, meat fabrication and cookery, culinary math, menu basics, laboratory and work experiences related to planning, selecting, preparing, and serving of quantity foods and food products and much more. The program also emphasizes the use and maintenance of commercial equipment safety practices and sanitary precautions. Industry certifications including ServSafe, ProStart National Certificate of Achievement, OSHA, and Heartsaver CPR can be obtained through the Culinary Arts program as well.

As with any career and technology program, the instructor expects/demands a certain level of maturity due to the hazardous nature of learning in a lab environment with knives, hot liquids, gas/fire, slicers, etc.

Scope and Sequence / Courses

Intro to Culinary Arts (Grade 9 only)

Prerequisite(s): Self-Discipline, Self-Motivated, Positive Work Ethic, Team Player, Work in a hot environment (95°F-110°F).

Students will be introduced to the basics of food safety and sanitation, kitchen safety and sanitation, use and care of commercial kitchen tools and equipment, preparation of standardized recipes, and procedures for purchasing, receiving, and storage. Students will study a wide range of theory and skills directly related to the Culinary field. Students will be able to use this knowledge as building blocks as they proceed through the Culinary program on their way to a Culinary career.

Culinary Arts I

Prerequisite(s): Successful completion of Intro to Culinary, Self-Discipline, Self-Motivated, Positive Work Ethic, Team Player, Work in a hot environment (95°F-110°F).

Students will revisit the basics of food safety and sanitation, kitchen safety and sanitation, use and care of commercial kitchen tools and equipment, preparation of standardized recipes, and procedures for purchasing, receiving, and storage. Students will then be introduced to the skill of garde manger and gain knowledge of the food industry.

Culinary Arts II

Prerequisite(s): Successful completion of Culinary 1, Self-Discipline, Self-Motivated, Positive Work Ethic, Team Player, Work in a hot environment (95°F-110°F).

Students will review the basics of food safety and sanitation and kitchen safety and sanitation. Students will have an opportunity to continue honing a wide range of skills they have previously learned. New skills and knowledge will also be introduced in the areas of stocks, soups, and sauces; cheese; vegetables

and fruits; salads and salad dressings; breakfast foods; seasonings; pasta and rice; and beverages. Students will also gain valuable skills by participating in the students run restaurant.

Culinary Arts III

Prerequisite(s): Successful completion of Culinary 2, Self-Discipline, Self-Motivated, Positive Work Ethic, Team Player, Work in a hot environment (95°F-110°F).

As in previous years, students will begin with a review of food safety and sanitation and kitchen safety and sanitation. In correlation with the safety and sanitation review, students will have the opportunity to earn ServSafe, OSHA, CPR, and ProStart certification throughout this course. The final skills taught in the Culinary program include meat, poultry, and seafood cookery; nutrition; baking and pastry practices; planning and costing menus; institutional food service procedures; "front and back of the house" operations; dining room service; and foodservice information technology.

PCNFHD118: Sanitation

Food safety standards, practices and strategies of implementation for the prevention of foodborne illness in the hospitality industry. Hazard analysis and allergens. Completion of a national certification exam with a 75% or higher as a graduation requirement. Enrollment requirement: (C) minimum overall GPA.
1 Credit (1 Lecture)

Drafting Design Technology:

Classification of Instructional Program/CIP Code: 15.1301

Course Overview

Drafting is the language that the technical world speaks.

Since the industrial revolution, every machine, building project, invention or idea that has shaped our lives has been explained to the world through this technical language.

Our drafting design technology program begins with basic drafting knowledge and skills and progresses through the use of the industry standard computer programs for designing and preparing drawings and/or sketches. Mechanical, architectural, structural, pneumatic, electrical/electronic, civil, topographical and other types of drawings will be included in the curriculum. Students will receive a diverse background of basic engineering and architectural concepts that are explained through daily lab exercises, as well as through major projects and other real life situations. Students will be responsible to research, gather, and translate data and/or specifications into drawings. Students will have the opportunity to design and create a complete set of architectural working drawings, work with conventional and computer aided land survey equipment, as well as build models and prototypes utilizing 3D printers. This course is designed and specifically targeted toward students' careers in Engineering and Architecture. Many dual enrollment opportunities are available through Penn College NOW and the PDE SOAR program. Most Drafting and Design students are eligible to earn up to 16 college credits while in high school.

Academic Prerequisites: Solid math skills up to and including Algebra I and good communication skills.

Scope and Sequence / Courses

Introduction to Drafting Design Technology (Grade 9 only)

This year-long class is designed to expose 9th grade students to various engineering concepts in Drafting and Design. The Drafting and Design Coursework includes a brief examination of mechanical drawings and structural shapes. The engineering portion of the course exposes students to the basic principles and theories of engineering and the machining and manufacturing of metal parts. In addition, students will study safety and how it relates in the construction, engineering, manufacturing, and shop environments. Finally, students will be briefly introduced to AutoCAD and MasterCAM. When students have successfully completed this course, they should be able to make an educated decision on the selection of future coursework within the engineering pathway.

Drafting Design Technology I (Blueprint Reading and Computer Aided Drafting I)

This course introduces and prepares students to apply basic drafting principles, technical skills, and computer aided drafting techniques for the purpose of reading, working, drawing, and sketching. Learning experiences will emphasize theory, laboratory, and shop work. This course is also an introduction to drafting and Computer Aided Drafting software applications. This program prepares individuals to apply basic drafting and engineering principles, technical skills and CAD techniques for the purpose of designing and preparing two-dimensional working drawings. This course is designed and specifically targeted toward students interested in pursuing college programs in Engineering and Architecture. Students taking this course may enroll in Penn College NOW CAD122 – Parametric Modeling.

Drafting Design Technology II
Drafting Design Technology will continue with a basic review of drafting knowledge and skills and will progress through the use of computers for designing and preparing prints. Learning experiences will emphasize theory, laboratory, and shop work as each relates to gathering and translating of data and/or specifications into drawing and design. The students will also receive extensive two and three-dimensional hands-on training with state-of the-art CAD systems and software. Mechanical, architectural, structural, pneumatic, electrical/electronic, civil, topographical and other types of drawings are included in the curriculum. Students taking DDT2 can enroll in Dual Enrollment courses in AutoCAD Comprehensive (CAD 120), Technical Drawing I (CCD103) and Detailing (CCD104) through the Pennsylvania College of Technology.

Drafting Design Technology III
Drafting Design Technology will continue with more advanced applications of drafting knowledge and skills. Learning experiences will continue to emphasize theory, laboratory, and shop work as each relates to gathering and translating of data and/or specifications into drawing and design. The students will also receive extensive two and three-dimensional hands-on training with state-of the-art CAD software. Mechanical, architectural, structural, pneumatic, electrical/electronic, civil, topographical and other types of drawings are included in the curriculum. Students taking DDT3 can enroll in Dual Enrollment courses in Parametric Modeling -Inventor (CAD122) and Architectural Computer Aided Drafting (ACH 135) through the Pennsylvania College of Technology.

PCNACH135: Architectural Computer Aided Drafting

Introduction and practical application of Computer-Aided Drafting (CAD) techniques and standards used to create two-dimensional architectural drawings. Focus on hardware and software components, operating systems, file management, CAD commands, system variables, drawing setup, creation of lines and shapes, and the editing, saving, and printing of drawings. Advanced topics include external references, layouts, paper space, attributes, dimensioning, text, and the creation of a symbols library. Enrollment requirement: (C) minimum overall GPA.
3 Credits (2 Lecture – 3 Lab)

PCNCAD120: AutoCAD-Comprehensive

Comprehensive application of 2D and 3D techniques using AutoCAD® software. Topics include the generation, editing, and analysis of geometry in alignment with industry standards with an emphasis on productivity. Enrollment requirement: (C) minimum overall GPA.
3 Credits (2 Lecture – 3 Lab)

PCNCAD122: Parametric Modeling Using Autodesk Inventor

Study and application of solid and surface modeling using Autodesk Inventor® parametric modeling software. Topics include the generation of editing and mechanical parts and assemblies, analysis of mass properties, rendering and animation, and the development of physical models using rapid prototyping

(additive manufacturing) equipment. Also included are basic 3D to 2D documentation techniques. Sophomore-approved course. Enrollment requirement: (C) minimum overall GPA.
3 Credits (2 Lecture – 3 Lab)

PCNCCD103: Technical Drawing I

Basic principles and skills of drafting as a graphic using the parametric modeling approach. Topics include technical sketching, SolidWorks® CAD operations and procedures, shape description, geometric construction, multiview projection, sectional views, auxiliary views, revolutions, threads and fasteners, and application of dimensions and tolerancing. Other topics include detail views, part drawings, assembly drawings, manufacturing processes, surface finishing, descriptive geometry, and the use of vendor part catalogs. ANSI/ASME drawing standards and practices are emphasized. Co-requisite(s): CCD104 (waiver not available). Enrollment requirement: (C) minimum overall GPA.
4 Credits (3 Lecture – 3 Lab)

Health Occupations:

Classification of Instructional Program/CIP Code: 51.0899

Course Overview
Health Occupations is a multi-level course that will help students explore careers in the health care industry. Students will gain entry-level skills and knowledge that will help them to be successful for a career in healthcare directly out of high school or some types of post-secondary education.

Scope and Sequence / Courses

Intro to Health Occupations (Grade 9 only)
This is an introductory course that is designed to explore health care careers and investigate the medical field. Other topics covered in this course would include safety, introduction to medical terms and basic clinical skills.

Health Occupations I
Students who take this course will revisit some careers in the health care industry with a focus on their career expectations and how to get to that career. Other topics included in this level include human needs, growth and development, medical terminology, vital signs and more basic clinical skills.

Health Occupations II
In this level, students will again visit careers in healthcare that interest them specifically. Students will take prior knowledge to learn how to manage patient care in multiple aspects. Students will learn about anatomy, medical law and ethics, nutrition, death and dying, growth and development, and human needs. Students will also learn more clinical skills that include a head to toe patient assessment, ambulating a patient, and patient transfers.

Health Occupations III
In this last year, students will begin to problem solve patient issues and understand why a patient is experiencing their signs and symptoms. Students will learn more advanced content such as cardiac rhythms and pharmacology. There is also a continuation with medical terminology. Students may also have the ability to participate in an internship program with a local health care facility.

PCNMTR104: Basics of Medical Terminology
Foundation for the use of the language of medicine, with emphasis on correct pronunciation and spelling, various word parts, abbreviations and symbols, and terms pertaining to body systems. Etiology, symptomatology, pathology, and diagnostic procedures for identifying various disease processes provide an increased understanding of medically related conditions and procedures. Enrollment requirement: (C) minimum overall GPA.
1 Credit (1 Lecture)

Natural Resource Management:

Classification of Instructional Program/CIP Code: 03.0299

Course Overview
An instructional program having a combination of subject matter and planned learning experiences concerned with the principles and processes involved in the conservation, protection and/or improvement of natural resources found in the environment such as air, forests, soil, water, fish, plants and wildlife for economic and recreational purposes. Instruction also emphasizes such factors as the establishment, management and operation of forest lands for recreational purposes.

Scope and Sequence / Courses

Introduction to Agriculture, Mechanics, and Natural Resources (2 periods): (Grade 9 only)
This course will introduce students to careers in the fields of agriculture, natural resources, metal fabrication, and equipment repair. Students will focus on safety and basic skills in the areas of welding, small gas engines, machinery operation, woodworking, and construction. Students will operate plasma cutters and MIG and Flux core welders. Students will learn to trouble shoot a small gas engine, operate equipment used in various agricultural enterprises and will have the opportunity to receive the Safe Tractor/Equipment Operators Certification. Students will learn forest management, wildlife management, and wood products and processing. Students will learn identification of trees and wildlife.

Natural Resource Management I (2 periods/1 Period SAE online)
Through instruction in both the classroom and shop setting, students will learn to safely use hand and power equipment to plan, design, and construct projects using a variety of wood and metal working skills and techniques. Students will study the theory of hot and cold metal work, plasma cutting, Oxy fuel cutting and arc welding. Students will learn to identify the select lumber for use in construction projects based on the physical properties and characteristics of the lumber. Students will cover the management techniques for the preservation and control of animal populations, and methods of improving wildlife habitat. Students will learn the identification of trees, measurement of trees for manufacture into lumber products, and the management of forests for timber, wildlife and recreation.
Must also schedule SAE.

Natural Resource Management II (2 periods/1 period SAE online)
This course covers the history and management of forest and individual trees in the United States and Pennsylvania. Students will focus on the identification of trees, measurement of trees for manufacture into lumber products, and the management of forests for timber, wildlife and recreation. In addition students will be introduced to the care and culture of trees for the urban environment, and learn the safe practices and use of chainsaws and wood processing equipment. Must also schedule SAE

Natural Resource Management III (2 periods/1 period SAE online)
This course will address careers in the natural resource management fields. Students will study soil conservation, forest management and wildlife management. Students in this course will manage a woodlot as a multiple use site. Students will operate a chainsaw to harvest trees, operate a sawmill to produce lumber, construct recreational trails, climb and prune trees, and make habitat improvements for wildlife conservation. Students will use a variety of skills and equipment to design, build and repair equipment, and produce finished projects. Must also schedule SAE.

Supervised Agricultural Experience (1 Credit Online)
Through their involvement in the SAE program, students are able to consider multiple careers and occupations, learn expected workplace behavior, develop specific skills within an industry, and are given opportunities to apply academic and occupational skills in the workplace or a simulated workplace environment. Through these strategies, students learn how to apply what they are learning in the classroom as they prepare to transition into the world of college and career opportunities. Open to students in grade 10-11-12 must be scheduled with NRM I or NRM II, NRM III.

Natural Resource Management Scope and Sequence:

- 9th Grade: Intro to Agriculture, Mechanics, and Natural Resources
- 10th Grade: NRMI and SAE
- 11th Grade: NRM II and SAE
- 12th Grade: NRM III and SAE

Precision Machine Technology:

Classification of Instructional Program/CIP Code: 48.0501

Course Overview

Precision Machining Technology is an instructional program that prepares individuals to apply technical knowledge and skills in all aspects of shaping metal parts. 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.

Scope and Sequence / Courses

Introduction to Precision Machining (Grade 9 only)

This course is designed to introduce the student to the Manufacturing industry. This includes safety skills, work habits and basic measuring tools. The class is designed to familiarize the student with hands on training and working in a manufacturing facility. In addition, the engineering portion of the course exposes students to the basic principles and theories of engineering and Drafting and Design. Students will also study safety and how it relates in the engineering, manufacturing, and shop environments. Finally, students will be briefly introduced to Computer Aided Drafting (CAD) and Computer Aided Machining (CAM). Precision Machining students should possess a strong background in math, ability to stand for long periods of time, and be in good physical condition to perform the competencies of the program.

Precision Machining I

Precision Machining l tasks include; Safety and Environmental Practices, Fraction to Decimal Conversion, Metric to Inch Conversion, Basic Measuring tools, Manual and CNC machine Orientation, Introduction to Computer Aided Drafting, and Computer Aided Machining. Required projects include: NIMS Layout certification, NIMS Benchwork certification, OSHA 10 certification, and year one portfolio content.

Precision Machining II

Precision Machining II tasks include; Manual Lathe Operations, CNC Turning Center Operations, Introduction to Blueprinting, Precision Measuring Tools, introduction to G and M Code Programming, Basic Geometry and Trigonometry, Basic Computer Aided Drafting, and Computer Aided Machining. Required projects include: NIMS Turning Between Centers certification, NIMS Chucking certification, NIMS CNC Lathe Set Up & Programming certification, NIMS CNC Lathe Operator certification, and year two portfolio content.

Precision Machining III

Precision Machining III tasks include; Manual Mill Operations, CNC Machining Center Operations, Advanced Blueprinting, Quality Control Processes, Advanced G and M Code Programming, Complimentary Geometric Angles, Right Triangle Trigonometry, Advanced Computer Aided Drafting, and Computer Aided Machining. Required projects include: NIMS Drill Press, NIMS Step Block certification, NIMS CNC Machining Set Up & Programming certification, NIMS CNC Mill Operator certification, completion of a senior portfolio.

PCNMTT128: Mill Applications
Introduction to the theory and practical applications of basic metal working. Emphasis on mill applications, industrial shop safety, material selection, job planning, bench-work, quality control, and inspection. Milling machines, hand tools, drill presses, pedestal grinders, band saws, and precision-measuring equipment are used to complete required projects. Enrollment requirement: (C) minimum overall GPA.
4 Credits (1 Lecture – 9 Labs)

PCNMTT129: Lathe Applications
Introduction to the theory and practical applications used to safely set up and operate a metal turning engine lathe. Operations such as turning, facing, boring, grooving, drilling, turning tapers, single-point threading, and performing cut-off procedures are implemented. Three and four-jaw chucking techniques and turning between centers are used to complete required projects. Enrollment requirement: (C) minimum overall GPA.
4 Credits (1 Lecture – 9 Labs)

Work Experience Opportunities

Co-op Education
Students participating in Co-op will extend and refine mastery of work skills *aligned with areas of study currently offered through CTE courses.*

Course Name and Number	Credit Type	Credit Hours	Added Value
Co-op Auto Technology (1945)	ELECTIVE	VARIES	1.0
Co-op Construction Trades (1963)	ELECTIVE	VARIES	1.0
Co-op Health Occupations (0729)	ELECTIVE	VARIES	1.0
Co-op Natural Resource Mgmt. (0851)	ELECTIVE	VARIES	1.0
Co-op Child Care (1745)	ELECTIVE	VARIES	1.0
Co-op Culinary Arts (1755)	ELECTIVE	VARIES	1.0
Co-op Cosmetology (1775)	ELECTIVE	VARIES	1.0
Co-op Agriculture Mechanics (1819)	ELECTIVE	VARIES	1.0
Co-op Machining (1916)	ELECTIVE	VARIES	1.0
Co-op Drafting (1924)	ELECTIVE	VARIES	1.0

Course Description
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. However, specifically, the program was designed to provide training for those vocational areas not presently being offered at the vocational school or comprehensive high school and to serve students who are unable to gain admission to a vocational program due to excessive applications.
Note: Credit Hours vary by student based on work hours.

Diversified Occupations:

For students interested in obtaining work skills *in areas of study not currently offered through CTE courses*

Course Name and Number	Credit Type	Credit Hours	Added Value
Diversified Occupations (1900)	ELECTIVE	5.0	1.0

Course Description *State-required minimum of 720 hours*
Diversified Occupations help students enter the workforce through career exploration, job search and application, and the development of positive work attitudes and work-related skills. These courses typically cover such topics as career planning and selection, money management, communication skills, interpersonal business relationships and behaviors, and personal responsibility. Employment may be a required component of these courses, or students may be required to enroll concurrently in a work experience course.

Intro to Career Readiness:

11th & 12th Grade Students

Intro to Career Skills is designed to give students the opportunity to explore various career fields through theory and hands-on experience. Students have the opportunity to rotate through the mini courses within this program pathway; this option allows students to not only explore various pathways, but also gain essential employability and daily living skills.

- **Intro to Industry:**
  This course will cover topics in Auto Technology, Natural Resource Management, Construction Trades, Agriculture Mechanics and Machine Trades. Topics of study will include safety, tool identification**,** measurement, and basic skills needed on a construction/manufacturing site.

- **Pathway to Human Services:**
  This course will cover topics in Cosmetology, Health Occupations, and Childcare. Topics of study will include basic child development and health and safety requirements in a childcare facility, basic salon based competencies to include client communication/safety, and basic scalp and manicure care, entry level skills and knowledge to be successful in the healthcare industry.

- **Business:**
  In this course, students explore and learn basic computer skills. Students will be introduced to fundamental concepts in order to effectively and efficiently use computers. Emphasis is placed on basic functions and familiarity with computer use.

- **Food Service Basics:**
  In this course, students receive both theory and hands-on experience in order to gain fundamental knowledge and experience with kitchen sanitation and safety, food safety, tool and equipment identification and usage, recipe preparation, and hands-on food preparation. Students will learn skills that can help them transition into entry level food service positions.

- **Personal Wellness:**
  In this course, students will learn about various health topics relevant to their lives. Students will receive instruction on the importance of making healthy decisions in order to stay healthy and safe. Emphasis is placed on teaching students to take responsibility for their own health and safety in relation to the workplace and life after high school.

Empowering Futures Work Program:

11th & 12th Grade Students

The Empowering Futures Program provides students with access to and participation in pre-employment skills training and community integration through on the job learning and assessment, while also providing opportunities that will prepare students to independently join the competitive workforce.

Candidates for the program go through an assessment process with the Transition Coordinator. Students complete assessments to gauge their individual areas of interest and skill level(s). Job placement is sought based on assessment results. Students may participate in paid or unpaid work experience and assessed

Dual Enrollment and Keystone Central School District:

Dual enrollment opportunities are available through Penn College and Lackawanna College.

Courses with the Penn College NOW program allow students to take college classes while in high school. The courses are taught at the high school or the Career and Technology Center by Penn College approved high school instructors.

To qualify for Penn College NOW courses, all students must maintain an overall C-average or better in grades 9 through 12. For Biology, Chemistry, or BWM 150, students must have a C-average or better in Algebra I. Students taking ENL111 or MTH124 must also take additional placement tests.

Certain courses may also require that students meet pre- or co-requisites required for individual courses.

Generally, 11th and 12th grade students are eligible to participate in the program. A limited number of classes are available to 10th grade students. Penn College NOW credits will appear on a Penn College transcript and may be applied toward specific Penn College degrees. The extent to which a course will transfer to another college or university is at the discretion of that college or university.

Penn College NOW courses are free of charge to all KCSD students who qualify.

Dual Enrollment Opportunity

Penn College NOW is a nationally accredited dual enrollment program that features Pennsylvania College of Technology courses taught by approved teachers in the home school or career and technology center.

Benefits of the Penn College NOW Program:

TIME: With college credits "in the bag," participating students can either ease their workload by taking fewer courses in a semester once at college OR complete their chosen degree more quickly.

MONEY: Since tuition is free for Penn College NOW courses, students save money by taking fewer courses to complete their chosen degree. Students can of course use their credits here at Penn College, or they can transfer their credits to a different institution.

CONFIDENCE: Students gain experience with rigorous college coursework in a supportive and familiar setting--their home school or career and technology center. They learn that they can be successful at the next level!

CONNECTION: Our Penn College NOW classrooms connect students to the "college experience." They visit campus, tour our facilities, become familiar with college-level services and resources, and are visited in their classrooms by our PC Now faculty.

Penn College NOW Course Descriptions:

PCNACH135: Architectural Computer Aided Drafting
Introduction and practical application of Computer-Aided Drafting (CAD) techniques and standards used to create two-dimensional architectural drawings. Focus on hardware and software components, operating systems, file management, CAD commands, system variables, drawing setup, creation of lines and shapes, and the editing, saving, and printing of drawings. Advanced topics include external references, layouts, paper space, attributes, dimensioning, text, and the creation of a symbols library. Enrollment requirement (C) minimum overall GPA.
3 Credits (2 Lecture - 3 Lab)

PCNBCT103: Construction Hand and Power Tools
Survey of hand and power tools typically used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. 1 Credit (0 Lecture – 3 Lab). Sophomore-Approved Course. Enrollment requirement: (C) minimum overall GPA.
1 Elective credit/1 period

PCNBWM150: Introduction to Web Page Development
Introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. Enrollment requirement: (C) minimum overall GPA and (C) minimum overall Algebra I final grade.
3 Credits (3 Lecture – 0 Lab)

PCNCAD120: AutoCAD-Comprehensive
Comprehensive application of 2D and 3D techniques using AutoCAD® software. Topics include the generation, editing, and analysis of geometry in alignment with industry standards with an emphasis on productivity. Enrollment requirement: (C) minimum overall GPA.
3 Credits (2 Lecture - 3 Lab)

PCNCAD122: Parametric Modeling Using Autodesk Inventor
Study and application of solid and surface modeling using Autodesk Inventor® parametric modeling software. Topics include the generation and editing of mechanical parts and assemblies, analysis of mass properties, rendering and animation, and the development of physical models using rapid prototyping (additive manufacturing) equipment. Also included are basic 3D-to2D documentation techniques. Sophomore-approved course. Enrollment requirement: (C) minimum overall GPA.
3 Credits (2 Lecture – 3 Lab)

PCNCCD103: Technical Drawing I
Basic principles and skills of drafting as a graphic using the parametric modeling approach. Topics include technical sketching, SolidWorks® CAD operations and procedures, shape description, geometric construction, multiview projection, sectional views, auxiliary views, revolutions, threads and fasteners, and application of dimensions and tolerancing. Other topics include detail views, part drawings,

assembly drawings, manufacturing processes, surface finishing, descriptive geometry, and the use of vendor part catalogs. ANSI/ASME drawing standards and practices are emphasized. Enrollment requirement: (C) minimum overall GPA.
4 Credits (3 Lecture - 3 Lab) Co-requisite(s): CCD104 (waiver not available)

PCNCCD104: Detailing I
Technical drawing procedures using SolidWorks® CAD operations in compliance with the ANSI standards to develop finished drawings. Drawing assignments involve technical sketching, shape description, geometric construction, multiview projection, sectional views, auxiliary views, revolutions, threads and fasteners, application of dimensions and tolerancing, detail views, part drawings, and assembly drawings. Other topic will include manufacturing processes, surface finishing, descriptive geometry, and acquiring and using vendor part catalogs. ANSI/ASME drawing standards and practices are emphasized. Enrollment requirement: (C) minimum overall GPA.
3 Credits (0 Lecture - 9 Lab) Co-requisite(s): CCD103 (waiver not available)

PCNCHM100: Fundamentals of Chemistry
Basic principles of chemistry and its practice in the laboratory. Emphasis on the underlying structure of matter (atoms, ions, molecules) and how structure determines properties. Designed to teach chemistry terminology and symbols, as well as to develop analytical and critical thinking skills. Appropriate for non-science majors needing one term of chemistry or to satisfy a lab science requirement. Also appropriate for those who desire background before taking General Chemistry I (CHM111) No prior knowledge of chemistry is assumed, but some algebra skills are needed. Sophomore-approved course. Enrollment requirement: (C) minimum overall GPA.
4 Credits (3 Lecture – 3 Lab)

PCNENL111: English Composition I
Fundamental writing and research skills with an emphasis on expository writing. Emphasis on analysis, discussion, and practice of writing that explores, explains, and argues. Course work includes a significant research component. Senior-Only Course. Enrollment requirement: (C) minimum overall GPA and Penn College English Test, level 3. All students must be fully enrolled in this course by the first day of school.
3 Credits (3 Lecture)

PCNFHD118: Sanitation
Food safety standards, practices and strategies of implementation for the prevention of foodborne illness in the hospitality industry. Hazard analysis and allergens. Completion of a national certification exam with a 75% or higher as a graduation requirement. Enrollment requirement: (C) minimum overall GPA.
1 Credit (1 Lecture)

PCNMTH124: Technical Algebra and Trigonometry I
Study of intermediate algebra and trigonometry, designed to prepare students for course work in college majors. Topics include algebraic expressions, linear equations, systems of equations, right triangle trigonometry, functions, and graphs. Emphasis on problem solving and application as well as the use of technology. Not designed to prepare students for calculus. Senior-only course. Enrollment requirement: (C) minimum overall GPA and Penn College math test, level 3. All students must be fully enrolled in the course by the first day of school.
3 Credits (3 Lecture)

PCNMTH125: Technical Algebra and Trigonometry II

Study of intermediate algebra and trigonometry, designed to prepare students for course work in college majors. Topics include algebraic fractions and equations, trigonometric functions and graphs, radicals, complex numbers, exponential and logarithmic functions and graphs, nonlinear systems, and inequalities. Emphasis on problem solving and technical application as well as the use of technology. Not designed to prepare students for calculus. Senior-only course. Enrollment requirement: (C) minimum overall GPA and Penn College math test, level 3. Pre-requisite(s): MTH124 (waiver not available).
3 Credits (3 Lecture)

PCNMTR104: Basics of Medical Terminology
Foundation for the use of the language of medicine, with emphasis on correct pronunciation and spelling, various word parts, abbreviations and symbols, and terms pertaining to body systems. Etiology, symptomatology, pathology, and diagnostic procedures for identifying various disease processes provide an increased understanding of medically related conditions and procedures. Enrollment requirement: (C) minimum overall GPA.
1 Credit (1 Lecture)

PCNMTT128: Mill Applications
Introduction to the theory and practical applications of basic metal working. Emphasis on mill applications, industrial shop safety, material selection, job planning, bench-work, quality control, and inspection. Milling machines, hand tools, drill presses, pedestal grinders, band saws, and precision-measuring equipment are used to complete required projects. Enrollment requirement: (C) minimum overall GPA.
4 Credits (1 Lecture – 9 Labs)

PCNMTT129: Lathe Applications
Introduction to the theory and practical applications used to safely set up and operate a metal turning engine lathe. Operations such as turning, facing, boring, grooving, drilling, turning tapers, single-point threading, and performing cut-off procedures are implemented. Three and four-jaw chucking techniques and turning between centers are used to complete required projects. Enrollment requirement: (C) minimum overall GPA.
4 Credits (1 Lecture – 9 Labs)