



Danville Area High School

COURSE SELECTION GUIDE for 2020-2021 SY

Minimum Requirements for Graduation

It is the student's responsibility to know what requirements and credits are needed to graduate. All students in Grades 9, 10, 11, and 12 must complete a minimum of **24 credits** to graduate. In addition to the 24 credits listed below, students must meet state requirements on the following Keystone Exams: Algebra I, English Literature, and Biology. Additionally, students are required to meet the outlined expectations of the Pennsylvania College and Career-Readiness Standards. One Computer Science course may be used as a Math or Science credit towards graduation with administrative approval.

English	4.0 credits	(4 years of English courses)
Social Studies	3.0 credits	(3 years of Social Studies courses)
Science	4.0 credits	(4 years of Science courses)
Math	4.0 credits	(4 years of Math courses)
*Electives	7.5 credits	
*P.E. Health	1.5 credits	(0.5 Credit in Health MUST be taken by the end of 10 th Grade)

(Class of 2024 and Beyond - Only 1 Credit from a Core Course May Count for Elective Credit)

COLLEGE BOUND STUDENTS

Based on 4-year colleges' competitiveness and entrance requirements, recommendations include the following:

Social Studies	4.0 credits total
World Language	3.0 – 4.0 credits total

Three to four credits of the same language are highly recommended. A minimum of two credits in the same language plus one credit in another language is recommended. An 8th grade language class may count towards the recommended credits, but not towards graduation.

COLLEGE COURSES / DUAL ENROLLMENT

During their four years at Danville Area High School, students may enroll in college classes offered at nearby colleges and universities. Credit for these college courses may count as elective credits toward graduation with administrative approval. A written request to enroll must be sent to the building principal for approval before beginning any college class. Upon completion of each course, students must have an official college transcript sent to the high school guidance office before credit will be given. These completed classes will be included on the transcript but are not averaged into a student's GPA. All costs for these classes are the responsibility of the students and their families.

Sophomores interested in participating in the Bloomsburg University STEM Magnet Program during their junior and senior school years may submit application materials in time for the early April deadline. The STEM Magnet Program program occurs on campus at Bloomsburg University.

Danville Area High School has approved Dual Enrollment Programs with Lackawanna College and Penn College of Technology. These two Dual Enrollment Programs are taught by Danville Area High School teachers at Danville Area High School. For information regarding eligible Dual Enrollment courses, please contact the Guidance Department.

BELOW IS A LIST OF PENN COLLEGE AND LACKAWANNA APPROVED COURSES.

These courses will be labeled with a "PC NOW" or "LCC" after the course description.

Danville High School Course:

121 English 11 Honors
123 AP Language and Composition
131 English 12 Honors
132 AP Literature and Composition
220 AP US History
234 AP Economics
235 AP US Government and Politics
236 Psychology
238 Sociology
325 Honors Trigonometry and Pre-calculus
331 Intro to Calculus
332 AP Calculus AB
333 AP Statistics
334 AP Calculus BC
412 AP Biology
421 Honors Chemistry
422 AP Chemistry
431 Honors Physics
433 AP Physics C-Mechanics
584 Computer Programming with Java
623 Honors Spanish IV
925 AP Environmental Science
923 Honors Construction Hand & Power Tools
994 Bloomsburg University STEM

Lackawanna College Course:

College Writing
College Writing
Introduction to Literature
Introduction to Literature
US History I
Macroeconomics
American Government
Intro to Psychology
Intro to Sociology
College Algebra
College Algebra
Calculus
Intro to Statistics and Data Analysis
Calculus
General Biology I/Lab
General Chemistry I/Lab
General Chemistry I/Lab
General Physics I/Lab
General Physics I/Lab
Java Programming
Elementary Spanish
Environmental Science/Lab

Penn College Course:

923 Honors Construction

GRADE POINT AVERAGE

Only grades for classes taken at Danville Area High School will be calculated into a student's GPA. Class rank for seniors will be calculated at the end of the fourth marking period of their senior year. Only students who complete their junior and senior years at Danville Area High School will be considered for valedictorian and salutatorian honors. Valedictorian and salutatorian will be named based upon the GPA at the conclusion of the 4th marking period. For the purposes of scholarship requirements needed prior to the end of the school year, the GPA from the end of the 3rd marking period may be used.

COURSE LOAD REQUIREMENTS

To graduate, a student must pass six (6) credits in the senior year regardless of the number of credits previously earned. All students must schedule their core subjects and electives. All students shall carry a minimum of 7.0 credits on their schedule unless extenuating circumstances exist. Exceptions will be made for students enrolled in the Cooperative Education program, the Bloomsburg University STEM Magnet, and ACE programs. Students may only have one study hall included on their schedule, unless administrative approval is given.

COURSE REQUESTS & SCHEDULING PROCESS

During the winter, the course selection guide is distributed to 8th through 11th grade students. Students are given a two-week period to request courses for the following school year. A master schedule is then built to reflect projected staffing and the number of course requests submitted. Students should understand that not all course requests may be satisfied. In such cases, the guidance department may conference with students throughout the spring and summer months to complete student schedules based upon student interest and post-graduation plans. Students enrolled in Career and Technical Education programming will receive priority in scheduling.

SCHEDULE CHANGES

Students will be held responsible for completing a course once they have committed themselves to it. All students will have an opportunity in the first five (5) school days of each semester to make schedule changes. Any schedule changes requested once school begins will be closely monitored. No students will be admitted to a course after the first five (5) school days of each semester. Schedule changes will not be made after the first five (5) school days in each semester.

COOPERATIVE EDUCATION

Cooperative Education incorporates community businesses, schools, and local industries into the student-learner's education. Electing to participate in this program provides students with a better understanding of the world of work. Work experience enables students to evaluate career decisions and develop a better understanding of employment opportunities and responsibilities. In addition, students develop realistic work skills and social skills. Cooperative Education encompasses five primary goals:

- Allow the student-learner to explore, through employment, internship, or community service his/her career option and verify his/her career choice.
- Enable the student-learner to develop skills and knowledge applicable to an identified career field.
- Enhance the student-learner's educational experience with real-world experience.

- Increase the student-learner’s maturity level by exposure to the professional work environment.
- Establish credentials for the student-learner to enhance his/her opportunities after graduation for employment or admission to college.

** Course description on page 45**

COURSE WEIGHTING

To encourage students to challenge themselves, a weighted system is used to rank all students. The more difficult a course is, the higher the ranking. The scale used for this ranking is:

Course Rank 3 = 1.00

Course Rank 2 = 1.08

Course Rank 1 = 1.12

Students are encouraged to know the weighted ranking of their course selection and consider this when choosing courses. Each course’s weight is noted in the Course Selection Guide.

ACCELERATED CREDIT OPTION

A student wishing to take a course independent of Danville Area High School for acceleration through our high school curriculum must get pre-approval from the high school principal. When a class is offered through an educational entity other than Danville Area School District (i.e. online school, other school districts, etc.), the class must be approved to be considered for high school credit and/or accelerated placement within our curriculum. A minimum grade in the course will be required.

HONORS PROGRAM & COURSE OFFERINGS

The Honors Program includes many opportunities for students to distinguish themselves academically. Danville Area High School offers honors courses, advanced placement courses, and internship opportunities.

Honors courses are more rigorous and demanding than standard course offerings. Students are expected to achieve at a challenging level both independently and in group settings. Students must be academically responsible and have demonstrated academic success. Honors courses of study have content differentiated from standard courses of study. Increased critical-thinking and group problem-solving, along with traditional instructional strategies, are emphasized.

The following courses are assigned Honors Rank:

114	English 9 Honors	409	Honors Keystone Biology
111	English 10 Honors	421	Honors Chemistry
121	English 11 Honors	431	Honors Physics
131	English 12 Honors	621H	Honors Spanish II
222	World Cultures Honors	622H	Honors Spanish III
316	Keystone Algebra II Honors	623	Honors Spanish IV
318	Keystone Geometry Honors	912	Honors Veterinary Science
325	Honors Trigonometry/Pre-Calculus	918A	Botany
331	Introduction to Calculus	929	Mammalian Bioscience
923	Honors Construction Hand & Power Tools		

ADVANCED PLACEMENT COURSES

Danville Area High School offers nineteen (19) Advanced Placement courses to its students. These are college-level courses established by the Educational Testing Service and used nationwide. These courses are very demanding and require a great amount of independent study on the part of the student. To allow students an opportunity to achieve successfully, many of these courses are offered ten (10) class periods throughout the six-day cycle. Advanced Placement examinations in each area are available in the spring of each year. A student who performs well on these examinations may receive credit or be accelerated at a college. Each college or university establishes its own criteria for acceptance of Advanced Placement scores. Students should investigate the schools of their choice for specific information concerning acceptable scores on Advanced Placement courses and examinations.

Criteria for enrolling in an Advanced Placement course:

- (1) Students must meet the course prerequisites.
- (2) Students should be conscientious, diligent workers who have a definite plan for attending college.
- (3) Students must take the Advanced Placement exam in the spring of the year.**

The following courses are assigned Advanced Placement Rank:

333	AP Statistics	332	AP Calculus AB
422	AP Chemistry	433	AP Physics C
334	AP Calculus BC	925	AP Environmental Science
220	AP U.S. History	132	AP Literature & Composition
234	AP Economics ** AP with WE	123	AP Language & Composition
235	AP US Government & Politics	609	AP French Language and Culture
7111	AP Drawing	624	AP Spanish Language and Culture
725A	AP Studio Art 2-D	585	AP Computer Science
725B	AP Studio Art 3-D	587	AP Computer Principles
412	AP Biology		

**About AP with WE – The WE Schools program brings service-learning into the classroom across the United States, Canada, and the UK. The College Board and WE share a passion for enriching students’ learning experiences and developing well-rounded citizens. By combining the academic challenge and rigor of Advanced Placement with the education and citizenship model of WE, AP with WE Service creates an opportunity for students to consider their classroom work and how it applies to real-world issues, while working closely with their peers to address social issues. Students work on problems that make academic learning relevant while enhancing their leadership and social skills, analytic ability, and civic responsibility. By incorporating hands-on service-learning projects into AP courses, AP with WE Service empowers students to become leaders and agents of change. At DAHS, we currently only offer AP WE service distinction in the AP Economics course. This is an OPTIONAL distinction on the student’s transcript but does not provide additional credit hours.

INDEPENDENT STUDIES

Danville Area High School offers students the option of taking a course as an Independent Study. Students may request to take an Independent Study by filling out the appropriate paperwork through the Guidance Office and must have administrative approval. Independent Studies are approved only if the original course found in the Course Selection Guide cannot be scheduled into a student's schedule. Considerations will also be taken regarding the grade level of the student requesting the Independent Study. Independent Studies courses are Pass/Fail only and do not count towards a student's GPA.

CHOOSING COURSES FOR COLLEGE ATHLETICS ELIGIBILITY

To be eligible to participate in college athletics in the year following high school graduation, students must carefully select high school courses to include the proper number and difficulty of courses in English, Math, Science, and Social Studies.

Most courses will meet these requirements. The following is a list of courses that do NOT count towards NCAA requirements. Taking these courses in place of an English course or Science course may result in students being ineligible to participate in college athletics as a freshman.

English (Yearbook)

NOTE: Students are encouraged to speak to their guidance counselor for information on how to qualify for college athletics.



ENGLISH

All students at Danville Area High School must do the following:

- Complete at least 1.0 credit of English per year.
- Must meet state requirements on Pennsylvania State Exams.

115 English 9

1.0 Credit

Rank 3

6 periods per cycle

Grade 9

Year Course

Students taking English 9 should expect a workload that includes short-term and long-term deadlines, as well as cumulative study of concepts that will be evaluated in a final exam. It is a genre course that focuses upon the study of various forms of literature including short stories, novels, non-fiction, poetry, and drama. Students will be expected to analyze literature and to present their analysis through expository writing. Students will learn through an emphasis upon creative projects, vocabulary, grammar, writing, public speaking, and research skills.

114 English 9 Honors

1.0 Credit

Rank 2

6 periods per cycle

Grade 9

Year Course

English 9 Honors is offered to freshmen who wish to challenge themselves with the English Honors curriculum at Danville High School as well as prepare for English 10 Honors offered in the sophomore year. Students taking English 9 Honors should expect a workload that includes short-term and long-term deadlines, independent reading and writing assignments, as well as cumulative study of concepts that will be evaluated in a final exam. It is a genre course that focuses upon the study of various forms of literature including short stories, novels, non-fiction, poetry, and drama. Students will be expected to analyze literature and to present their analysis through expository writing. Students will also write narrative and persuasive pieces. In addition, students will learn through an emphasis upon creative projects, SAT vocabulary, grammar, writing, public speaking, and research skills. Prerequisites: Students must have one or more of the following: a 93% or higher in English 8 or Advanced on the Grade 7 ELA PSSA. Student data such as CDTs and PVAAS may also be utilized for placement.

110 English 10

1.0 Credit

Rank 3

6 periods per cycle

Grade 10

Year Course

English 10 is designed to continue the student's academic preparation in literature, composition, and grammar. In this course, students will review the process of writing the research paper, and they will continue to write and refine the literary essay and other composition forms. Students will practice reading, writing, grammar, and vocabulary skills needed for the Keystone Literature Exam, the PSAT, and the SAT. *Students enrolled in English 10 will take the Keystone Literature Exam during the fourth marking period.*

111 English 10 Honors

1.0 Credit

Rank 2

6 periods per cycle

Grade 10

Year Course

English 10 Honors is offered to sophomores who wish to challenge themselves with the English Honors curriculum at Danville Area High School as well as prepare for English 11 Honors or AP Language and

Composition offered in the junior year. Academic writing with a thesis is emphasized. Concentrating on the literary essay and the essay examination not only reinforces the five-step writing process and the MLA research style, but also organizational skills. Students will practice reading, writing, grammar, and vocabulary skills needed for the Keystone Literature Exam, the PSAT, and the SAT. *Students in English 10 Honors will take the Keystone Literature Exam during the fourth marking period.* Additional enrichment readings selected by the teacher are required for the course. A required summer reading list will be available for this course in May. Prerequisites: Students must have one or more of the following: an English teacher recommendation or a 93% or higher in English 9 or 85% or higher in English 9 Honors. Student data such as CDTs and PVAAS may also be utilized for placement.

120 **English 11**

1.0 Credit

Rank 3

6 periods per cycle

Grade 11

Year Course

English 11 is designed to continue the student's academic preparation in literature, composition, and grammar. Students will continue to refine the process of writing the persuasive essay and learn revision of essays for coherence, conciseness, and variety. Students will better understand the literary and cultural heritage of America as they read samplings of the writings of important American writers. The textbook is arranged chronologically beginning with Native American literature and ending with the modern American poets and short story writers. Students will learn to analyze and interpret what they read, with the goal of becoming more critical, independent, and analytical thinkers.

121 **English 11 Honors**

1.0 Credit

Rank 2

6 periods per cycle

Grade 11

Year Course

English 11 Honors is offered to juniors who wish to challenge themselves with the English Honors curriculum at Danville Area High School as well as prepare for English 12 Honors or AP English Literature courses offered in the senior year. Academic writing with a thesis is emphasized. Concentrating on the literary essay and the essay examination not only reinforces the five-step writing process and the MLA research style, but also organizational skills. Students will practice reading, writing, grammar, and vocabulary skills needed for the SAT. Students will better understand the literary and cultural heritage of America as they read samplings of the writings of important American writers. The textbook is arranged chronologically beginning with Native American literature and ending with the modern American poets and short story writers. Additional enrichment readings selected by the teacher are required for the course. A required summer reading list will be available for this course in May. Prerequisites: Students must have one or more of the following: an English teacher recommendation or a 93% or higher in English 10 or 85% or higher in English 10 Honors. Student data such as CDTs and PVAAS may also be utilized for placement. (LCC)

123 **AP Language and Composition**

1.0 Credit

Rank 1

6 periods per cycle

Grade 11

Year Course

The Advanced Placement English Language and Composition course prepares students to demonstrate their skills in reading and analyzing various types of nonfiction prose, through discussion and writing various types of essays. Students will be prepared to read with understanding and appreciation, to think critically, and to write effectively. At the conclusion of this course, students must take the AP English Language and Composition Exam. This exam and its standards are equivalent to those used to measure college students who

have completed an introductory college-level composition course. All students are required to take this exam, and those who receive a satisfactory grade may receive full credit for a required English course. **(LCC)**
Prerequisites: Students must have one or more of the following: earned a 93% or better in English 10/11 Honors or a teacher recommendation. Student data such as CDTs and PVAAS may also be utilized for placement.

130 English 12

1.0 Credit

Rank 3

6 periods per cycle

Grade 12

Year Course

English 12 is designed to continue the student's academic preparation in literature, composition, and grammar. Students will continue to refine the process of writing the persuasive essay and learn revision of essays for coherence, conciseness, and variety. Students will better understand the literary and cultural heritage of Western Civilization. The literature studied covers all genres and includes a wide variety of authors and works. Students will learn to analyze and interpret what they read, with the goal of becoming more critical, independent, and analytical thinkers.

131 English 12 Honors

1.0 Credit

Rank 2

6 periods per cycle

Grade 12

Year Course

English 12 Honors is designed to continue the student's academic preparation in literature, composition, and grammar. Students will continue to refine the process of writing the persuasive essay and learn revision of essays for coherence, conciseness, and variety. Students will better understand the literary and cultural heritage of Western Civilization. The literature studied covers all genres and includes a wide variety of authors and works. Students will learn to analyze and interpret what they read with the goal of becoming more critical, independent, and analytical thinkers. A required summer reading list will be available for this course in May. Prerequisites: Students must have one or more of the following: English teacher recommendation or 93% or higher in English 11 or 85% or higher in English 11 Honors course. Student data such as CDTs and PVAAS may also be utilized for placement. (LCC)

132 AP Literature and Composition

1.0 Credit

Rank 1

6 periods per cycle

Grade 12

Year Course

Advanced Placement English Literature is a college level course, which may be taken during the senior year. The rigorous nature of the course requires additional time for reading, composing, and discussing the varied assignments that are part of this course. The literature studied covers all genres and includes a wide variety of authors and works. The reading and writing required for this course is extensive. A required summer reading list will be available for this course in May. Upon completion of the course, students must take the AP English Literature exam.

Prerequisites: Students must earn a 93% in AP Language or your most recent English course or a teacher recommendation. Student data, such as grades and PVAAS scores may be utilized to determine placement. (LCC)

170 Yearbook

1.0 Credit

Rank 3

6 periods per cycle

Grades 10 - 12

Year Course

Yearbook is a course designed specifically to produce the high school yearbook, *Le Tresor*. Students in this course will write copy and captions, take pictures, design layouts, and sell advertisements to finance the publication. Students will also become familiar with Photoshop and Jostens' Yearbook Avenue online publishing program. The class is an excellent experience for any students interested in graphic arts or Journalism as a career. In addition to class time, yearbook students must be willing to devote extra hours

outside of the school day to the publication of this book in order to meet deadlines. Class size is limited to 22 students. Seniors are not permitted in the class unless previously enrolled or granted approval from adviser. Enrollment requires teacher recommendation.

760 SAT Prep: Math, Reading, and Writing/Language

Grades 10 - 12

.5 Credit Rank 3 6 periods per cycle

Semester Course

The SAT Prep course is designed so that students will gain valuable experience to boost their confidence on the SAT. The math portion of the SAT Prep course will review arithmetic, algebra, geometry, probability/statistics concepts, and test taking strategies that are used on the SAT Exam. The reading and writing/language portion of the SAT Prep course will teach students the format of the test and provide both strategies and practice for questions on critical reading, sentence completion, grammar, usage, and writing. This will serve as a .5 elective credit course. Prerequisite includes the following: Student will take or will have taken the PSAT. ***This course will be offered ON-LINE and graded PASS/FAIL.***

171 Public Speaking

Grades 10 – 12

.5 Credit Rank 3 6 periods per cycle

Semester/Year Course

This course is designed to provide students with the knowledge and skills to be more effective and confident public speakers in both formal (e.g. academic and occupational) and informal settings. Students will be introduced to a wide variety of applications of the spoken word including: impromptu, informative, persuasive, and extemporaneous speaking. Students will learn how to analyze the effectiveness of various forms of speaking as critical audience members, and then apply that knowledge to write and present their own speeches to diverse audiences. The speech writing process will involve research, evaluation of sources and arguments, outlining, drafting, revising/editing, and the final presentation. In addition to creating speeches, students will learn how to incorporate effective visual aids to match their spoken words and enhance the impact of their speech. The course will also help students develop the “soft skills” of communication that are necessary in professional settings such as interviews and the workplace. This course counts as an English .5 credit but MUST be scheduled in conjunction with another English Course to fulfil 4 years of English Courses. **This course will be not be offered in the 2020-21 school year.**

PLEASE NOTE: SUMMER READING INSTRUCTIONS AND BOOK DISTRIBUTION FOR THE 2020-21 SCHOOL YEAR WILL BE MANAGED WITHIN EACH STUDENT'S CURRENT ENGLISH CLASS.

ENGLISH COURSE SEQUENCE

Current Course	Next Possible Course
English 8	English 9
	English 9 Honors
English 9	English 10
	English 10 Honors
English 9 Honors	English 10
	English 10 Honors
English 10	English 11
	English 11 Honors
English 10 Honors	English 11
	English 11 Honors
	AP English Language & Composition
English 11	English 12
	English 12 Honors
English 11 Honors	English 12
	English 12 Honors
	AP English Language & Composition
AP English Language and Composition	English 12 Honors
	AP English Literature & Composition

Students must meet the course prerequisites to move to next course



SOCIAL STUDIES

206 US History

1.0 Credit

Rank 3

6 periods per cycle

Grade 9

Year Course

This course is a study of the history of the United States from Industrialism through the present day completing the study of US History begun in 8th grade. Students will become familiar with resources available at the high school, work cooperatively, and are encouraged to participate in class discussions and think critically about relevant historical topics and how they relate to today. This course is a requirement for all 9th grade students.

231 Economics

0.5 Credit

Rank 3

6 periods per cycle

Grade 10

Semester Course

Economics is a one-semester course with a final at the end of study. The course focuses on three main areas of economics including basic economic principles, supply and demand, and macroeconomic measures and policy.

232 American Government

0.5 Credit

Rank 3

6 periods per cycle

Grade 10

Semester Course

American Government is a one-semester course with a final at the end of study. The course focuses on the study of the Constitution including the system of federalism, government institutions, and the roles of political parties, political participation, and the electoral process. A state mandated Civics Knowledge Test will be administered at the end of the course.

234 AP Economics

1.0 Credit

Rank 1

6 periods per cycle

Grades 11 & 12

Year Course

Advanced Placement Economics is a yearlong course focusing on the study of microeconomics and macroeconomics. Students who enroll in the course must complete a summer introductory assignment and be prepared for a rigorous college-level workload. Enrollment in the course includes the expectation of taking at least one of the AP Economics exams in May to earn possible college credit. Prerequisites: Successful completion of Keystone Algebra II and a 93% or higher in Economics or teacher recommendation. Student data such as CDTs and PVAAS may also be utilized for placement. (LCC)

235 AP US Government & Politics

1.0 Credit

Rank 1

6 periods per cycle

Grades 10 - 12

Year Course

Advanced Placement US Government & Politics is a yearlong course focusing on the Constitution, government bodies, and the political system of the American Government. Students who enroll in the course must complete a summer introductory assignment and be prepared for a rigorous college-level workload. Enrollment in the course includes the expectation of taking the AP US Government & Politics exam in May to earn possible college credit. Prerequisites: 93% or higher in US History or teacher recommendation (Grade 10). Student data such as CDT's and PVAAS may also be utilized for placement. (LCC)

220 **AP US History** **Grade 12**
 1.0 Credit Rank 1 6 periods per cycle Year Course

AP US History is a college level course with the objective of increasing the student’s understanding of United States history from discovery to the present. Students who enroll in the course must complete a summer introductory assignment and be prepared for a rigorous college-level workload. Enrollment in the course includes the expectation of taking the AP US History exam in May. Areas of concentration include historical, political and economic history, along with concentrated study of cultural and intellectual institutions and their development. Emphasis is placed on critical and evaluative thinking skills, essay writing, interpretation of original documents, and historiography. Prerequisites: 93% or higher in U.S. History course and 93% or higher in 10th grade American Government (or 85% or higher in AP Government) or teacher recommendation. Student data such as CDT’s and PVAAS may also be utilized for placement. (LCC)

This course may be offered every other year due to low enrollment. This course will be offered in the 2020-21 school year and then every other year after.

221 **World Cultures** **Grades 11 & 12**
 1.0 Credit Rank 3 6 periods per cycle Year Course

This course is designed to give students an awareness of the world in which they live. The varieties of culture throughout the world will be the focal point of the course. The content will begin with the development of man and culture and continue through the diversities of culture. Emphasis will be placed on the interrelation of geography, climate, history, economics and political systems on culture. The program will compare and contrast the cultural regions around the world and examine the interaction of these in light of current events and issues as man moves into the future.

222 **World Cultures Honors** **Grades 11 & 12**
 1.0 Credit Rank 2 6 periods per cycle Year Course

This course is designed to challenge students who plan to study international relations, political science or international business. Emphasis will be placed on the interrelation of geography, climate, history, economics, political systems, and cultures of the people in the assigned countries. Expectations include completing a book critique based on the summer reading assignment and various written research based projects. Prerequisites: Students must have one or more of the following: 93% or higher in American Government and Economics OR 85% or higher in AP US Government & Politics or AP Macroeconomics or teacher recommendation. Student data such as CDT’s and PVAAS may also be utilized for placement.

236 **Psychology** **Grade 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course

From the beginning of civilization, human beings have sought to "know themselves." Psychology, the science of mental processes and behavior, is an attempt to do just that. Psychology is a one-semester social studies elective presented on an introductory level suitable for all students. Through this course students will study such topics as sensation-perception, motivation, memory, learning, thinking, intelligence, personality, and abnormal psychology and will be provided with a general understanding of basic mental processes. **(LCC)**

This course does not replace the requirements of US History, Government, Economics or World Cultures.

238 Sociology

0.5 Credit

Rank 3

6 periods per cycle

Grade 12

Semester Course

Sociology is the systematic and scientific study of human social life. Sociologists investigate people as they form groups and interactions with one another. The groups they study may be small, such as married couples, or large, such as a subculture of suburban teenagers. Sociology places special emphasis on studying societies, both as individual entities and as elements of a global perspective. Sociology is a one-semester social studies elective presented on an introductory level suitable for all students. The course serves as an introduction to the field of sociology and will provide students with a general understanding of basic societal characteristics. **(LCC)**

This course does not replace the requirements of US History, Government, Economics or World Cultures.

PLEASE NOTE: Social Studies sequence of courses is as follows: US History (9th grade), American Government & Economics (10th grade), World Cultures (11th grade), elective courses (Sociology and Psychology) in 12th grade.

SOCIAL STUDIES COURSE SEQUENCE

Current Course	Next Possible Course
US History	Economics & American Government AP US Government and Politics
Economics & American Government	World Cultures World Cultures Honors AP Economics AP US Government and Politics
World Cultures	Psychology/Sociology AP US History
World Cultures Honors	Psychology/Sociology AP US History
AP Economics AP US Government and Politics	AP US History Psychology/Sociology

Students must meet the course prerequisites to move to next course



MATH

All students at Danville Area High School must do the following:

- Possess a scientific calculator.
- Complete at least 1.0 credit of mathematics per year.
- Must meet state requirements on Pennsylvania State Exams.

311 Algebra

1.0 Credit Rank 3 6 periods per cycle Year Course

Algebra is the first of three Algebra courses. This course is aligned to the Pennsylvania Keystone Assessment Anchors, focusing on operations with real numbers, solving single-variable equations and inequalities, graphing linear equations, and solving and applying proportions.

315 Keystone Algebra I

1.0 Credit Rank 3 6 periods per cycle Year Course

Keystone Algebra I is the second of three Algebra courses. This course is aligned to the Pennsylvania Keystone Assessment Anchors, focuses on simplifying Algebraic expressions, graphing / interpreting linear equations and inequalities, solving systems of equations, analyzing functions, simplifying exponents, factoring, simplifying rational expressions, probability, and data analysis including "line of best fit." *The Keystone Algebra I Exam will be administered during the fourth marking period.* Prerequisites: Successful Completion of Algebra course.

312 Keystone Algebra Remediation

0.17 - 0.5 Credit Rank 3 Semester Course

Students who do not achieve proficient or advanced on the Keystone Algebra Exam will be scheduled into a remediation class. The class will review algebraic concepts needed in preparation for the Winter Keystone Algebra Exam.

316 Keystone Algebra II Honors

1.0 Credit Rank 2 6 periods per cycle Year Course

This course is the last of three Algebra courses. It is aligned to the Pennsylvania Keystone Assessment Anchors, focusing on complex numbers, solving/graphing quadratic equations, solving/graphing exponential and logarithmic equations, solving/graphing rational equations, applications of functions, simplifying radical expressions, solving radical equations, sequences and series, and probability. Students will be required to complete honors level work at a pace designed to prepare them for additional honors caliber and advanced placement coursework. Enrichment will occur through in-depth analysis of all topics as well as acceleration towards Trigonometric and Pre-Calculus skills. Prerequisites: Students must have one or more of the following: Minimum grade of 93% in Keystone Algebra I or Keystone Geometry or 85% in Keystone Geometry Honors. (Keystone Geometry may be taken concurrently.) Student data such as CDT's and PVAAS may also be utilized for placement.

317 Keystone Algebra II

1.0 Credit Rank 3 6 periods per cycle Year Course

This course is the last of three Algebra courses. It is aligned to the Pennsylvania Keystone Assessment Anchors, focuses on complex numbers, solving/graphing quadratic equations, solving/graphing exponential and logarithmic equations, solving/graphing rational equations, applications of functions, simplifying radical expressions, solving radical equations, sequences and series, and probability. Prerequisites: Successful completion of Keystone Algebra I and successful completion of Keystone Geometry. (Keystone Geometry may be taken concurrently.)

318 Keystone Geometry Honors

1.0 Credit Rank 2 6 periods per cycle Year Course

Course topics focus on the Pennsylvania state Keystone anchors and include, but are not limited to, angles and segments, an in-depth study of two-column proofs, parallel lines, triangles and their congruency and similarity, parallelograms and other polygons, circles, area and volume, transformations, and the application of basic trigonometric functions. Students will be required to complete honors level work at a pace designed to prepare them for additional honors caliber and advanced placement coursework. Enrichment will occur through in-depth analysis of all topics as well as acceleration towards trigonometric skills. Prerequisites: Minimum grade of 93% in Keystone Algebra I or teacher recommendation. Student data such as CDT's and PVAAS may also be utilized for placement.

319 Keystone Geometry

1.0 Credit Rank 3 6 periods per cycle Year Course

Course topics focus on the Pennsylvania state Keystone anchors and include, but are not limited to, angles and segments, parallel lines, triangles and their congruency and similarity, parallelograms and other polygons, circles, area and volume, transformations, and the application of basic trigonometric functions. Prerequisite: Successful completion of Keystone Algebra I.

320 Topics of Math

1.0 Credit Rank 3 6 days per cycle **Grade 11 & 12**
Year Course

This course is a junior or senior course that will model and solve real-world themes that are based upon standards from Algebra I, Algebra II, and Geometry. Topics include set theory, logic, financial literacy, constructions and indirect measurements, and basic probability and statistics. If a student has received credit for a Trigonometry course, the student is not eligible to take this course without a teacher recommendation.

324 Trigonometry and Pre-Calculus

1.0 Credit Rank 3 6 days per cycle Year Course

The focus of the analytical trigonometry portion of the course will be on fundamental trigonometry concepts such as trigonometric functions, right triangle trigonometry, radian measure, trigonometric equations, and trigonometric identities, as well as applications thereof. The Pre-Calculus portion of this course includes topics such as arithmetic and geometric sequences, introductory limits and derivatives, conic sections, natural and common logarithms, and the application and use of graphing calculators. Prerequisites: Successful completion of Keystone Geometry and successful completion of Keystone Algebra II. Student data such as CDT's and PVAAS may also be utilized for placement.

325 Honors Trigonometry and Pre-Calculus

1.0 Credit Rank 2 6 days per cycle Year Course

The focus of the analytical trigonometry portion of the course will be on fundamental trigonometry concepts such as trigonometric functions, right triangle trigonometry, radian measure, trigonometric equations, and trigonometric identities, as well as applications thereof. The Pre-Calculus portion of this course includes topics such as arithmetic and geometric sequences, introductory limits and derivatives, conic sections, natural and common logarithms, and the application and use of graphing calculators. Students will be required to complete honors level work at a pace designed to prepare them for additional honors caliber and advanced placement coursework. Prerequisites: 93% or higher in both Keystone Algebra II and Keystone Geometry or 85% or higher in both Honors Keystone Algebra II and Honors Keystone Geometry or teacher recommendation. Student data such as CDT's and PVAAS may also be utilized for placement. (LCC)

331 Introduction to Calculus

1.0 Credit Rank 2 6 periods per cycle Year Course

This course is designed for the student that wants to take an honors level course without the academic rigor of the Advanced Placement Calculus AB course. Topics will include conic sections, limits, derivatives, application of derivatives, basic integrals and their application.

Prerequisites: Successful completion of Honors Trigonometry/Pre Calculus or Trigonometry and Pre-Calculus, or teacher recommendation. (LCC)

332 AP Calculus AB

1.0 Credit Rank 1 6 periods per cycle Year Course

AP Calculus is designed for the serious mathematics student who wants to earn college credit. Instruction is aligned to the Advanced Placement Exam which is given in May each year. Students are expected to take the Advanced Placement Exam at the end of the course. Course topics include, but are not limited to, limits, derivatives, application of derivatives, integrals, and application of integrals. A TI-89 Graphing Calculator is required for this course. Students must take the Advanced Placement exam in the spring of the year. Prerequisites: Successful completion of Honors Trigonometry and Pre-Calculus, Introduction to Calculus, or teacher recommendation. Student data, such as grades and PVAAS scores may be utilized to determine placement. (LCC)

333 AP Statistics

1.0 Credit Rank 1 6 days per cycle Year Course

The AP Statistics course is intended to involve students in the rigor of a college-level mathematics course. The course will introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Four major themes will be covered: exploratory analysis, planning a study, probability and statistical inference. It is required that students purchase a graphing calculator (the teacher recommends the TI-89 Graphing Calculator). Students must take the Advanced Placement exam in the spring of the year. Prerequisite: Successful completion of Trigonometry and Pre-Calculus or the course can be taken concurrently with Trigonometry and Pre-Calculus or teacher recommendation. Student data such as CDT's and PVAAS may also be utilized for placement. (LCC)

334 AP Calculus BC

1.0 Credit Rank 1 6 days per cycle Year Course

Advanced Placement Calculus BC is a full year course that will require a single period each day. Students in this course must have satisfactorily completed AP Calculus AB. Calculus BC will include a review of all topics covered in Calculus AB along with parametric, polar, and vector functions, integration by parts, partial fractions, indefinite integrals, logistic differential equations and Taylor Series. Students must take the Advanced Placement exam in the spring of the year. Prerequisite: Successful completion of AP Calculus AB or teacher recommendation. Student data, such as grades and PVAAS scores may be utilized to determine placement. (LCC)

339 Probability and Statistics

1.0 Credit Rank 3 6 days per cycle Year Course

This course is a senior course that stresses fundamental statistics without the academic rigor of the Advanced Placement Statistics course. Topics will include: the gathering and analysis of data, description and display of a data set, uses for statistics, an introduction to probability theory, probability distributions, confidence intervals, and hypothesis testing. Prerequisite: Successful completion of all Keystone courses or teacher recommendation.

760 SAT Prep: Math, Reading, and Writing/Language**Grades 10 - 12**

.5 Credit Rank 3 6 periods per cycle Semester Course

The SAT Prep course is designed so that students will gain valuable experience to boost their confidence on the SAT. The math portion of the SAT Prep course will review arithmetic, algebra, geometry, probability/statistics concepts, and test taking strategies that are used on the SAT Exam. The reading and writing/language portion of the SAT Prep course will teach students the format of the test and provide both strategies and practice for questions on critical reading, sentence completion, grammar, usage, and writing. This will serve as a .5 elective credit course. Prerequisite includes the following: Student will take or will have taken the PSAT. ***This course will be offered ON-LINE and graded PASS/FAIL.***

317C Keystone Algebra II Concepts**Grades 9 - 12**

1.0 Credits Rank 3 6 periods per cycle Year Course

This course is aligned to the Pennsylvania Keystone Assessment Anchors. It focuses on the fundamentals of complex numbers, solving/graphing quadratic equations, solving/graphing rational equations, applications of functions, simplifying radical expressions, solving radical equations, and probability. Prerequisites: Successful completion of Keystone Algebra I and either not passing the Keystone Algebra Exam or teacher recommendation.

MATH COURSE SEQUENCE

Current Course	Next Possible Course
8 th Grade Math	Algebra
Algebra	Algebra Keystone Algebra
Keystone Algebra	Keystone Geometry Honors Keystone Geometry
Keystone Geometry Algebra II Concepts	Keystone Algebra II Honors Algebra II Topics of Math
Honors Keystone Geometry Algebra II Concepts	Honors Algebra II Algebra II
Keystone Algebra II Algebra II Concepts	Trigonometry/Pre-Calculus Honors Trigonometry/Pre-Calculus AP Statistics Probability and Statistics (Seniors Only)
Honors Algebra II	Honors Trigonometry/Pre-Calculus Trigonometry/Pre-Calculus AP Statistics
Trigonometry/Pre-Calculus	Introduction to Calculus Probability and Statistics (Seniors Only) AP Statistics Introduction to Calculus
Honors Trigonometry/Pre-Calculus	AP Calculus AB Introduction to Calculus AP Statistics
Introduction to Calculus	AP Calculus AB AP Statistics
AP Calculus AB	AP Calculus BC AP Statistics
AP Statistics	Introduction to Calculus AP Calculus AB AP Calculus BC

Students must meet the course prerequisites to move to next course



SCIENCE

All students in the Class of 2017 and beyond must take at least one of the following three courses prior to their junior year: 409 Keystone Biology Honors, 410 Keystone Biology, or 412 AP Biology. The purpose for this requirement is to ensure that all students are properly prepared to successfully achieve proficiency on state-mandated exams.

All students at Danville Area High School must do the following:

- Complete at least 1.0 credit of Science per year.
- Must meet state requirements on Pennsylvania State Exams.

400 Integrated Science

1.0 Credit

Rank 3

6 periods per cycle

Grade 9

Year Course

Integrated Science is an introductory course that will help prepare students for Keystone Biology Exam by examining the key concepts of Ecology, scientific investigation, physical science, and levels of biochemical organization. This course leads directly into the Keystone Biology course in 10th grade.

409 Keystone Biology Honors

1.0 Credits

Rank 2

6 periods per cycle

Grades 9 and 10

Year Course

Honors Keystone Biology covers the same topics as Keystone Biology, but includes Ecology standards addressed in the Integrated Science course. This course is designed for students who are considering a major in science or health-care professions. Students should anticipate more independent reading and assignments than in Keystone Biology. This course will also emphasize a hands-on laboratory component. *Students enrolled in Keystone Biology Honors will take the Keystone Biology Exam during the spring of the school year.*

Prerequisite: 93% or higher in 8th grade science and teacher recommendation. Student data such as CDT's and PVAAS may also be utilized for placement.

410 Keystone Biology

1.0 Credits

Rank 3

6 periods per cycle

Grade 10

Year Course

Biology is the study of life! This course examines structure, function, energy use, behavior and relationships in the world around us. The emphasis will be on cellular, molecular, and environmental aspects of life. Students will acquire skills needed to continue their education in science and develop the ability to address biosocial issues throughout their lives. This course will also emphasize a hands-on laboratory component. *Students enrolled in Keystone Biology will take the Keystone Biology Exam during the spring of the school year.* Prerequisite: Successful completion of Integrated Science.

412 AP Biology

1.0 Credits

Rank 1

6 periods per cycle

Grades 10 - 12

Year Course

Danville Area High School and The College Board's Advanced Placement Biology program provide able and motivated students with an opportunity to pursue college level biological studies while still in secondary school. The course is equivalent to a two-semester college introductory biology course. Students enrolling in the course are expected to take the AP Biology National Exam at the completion of the course. Recently in

2013, the College Board revised the curriculum by shifting from a traditional “content coverage” model of instruction to one that focuses on the enduring, conceptual understandings and the content that supports them. **(LCC)**

Students who take this course will develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. College-level textbooks are used and an emphasis is placed on laboratory experiments and written lab reports.

This course is extremely accelerated and tremendous responsibility will be placed on the student to succeed in this course. Summer and winter break assignments will be required. Students who wish to take AP biology should consider doing so during their junior or senior year. Students must take the Advanced Placement exam in the spring of the year.

Prerequisites: 85% or higher Honors Keystone Biology or 93% or higher in Keystone Biology or teacher recommendation. The College Board recommends Honors Biology and Chemistry as prerequisites. Student data, such as grades and PVAAS scores may be utilized to determine placement.

420 Chemistry

1.0 Credits

Rank 3

6 periods per cycle

Grades 10 - 12

Year Course

Chemistry is designed to cover all of the standards needed to prepare for the Keystone Chemistry Exam, but does not include the additional topics that are a part of Honors Chemistry. This course is designed for students who do not intend to major in science at the post-secondary level. There will be an emphasis placed on hands-on experiments, and the everyday applications of scientific principles. *This course may be taken concurrently with Physics.* Prerequisites: Successful completion of Keystone Algebra 1 and Keystone Biology teacher recommendation.

421 Honors Chemistry

1.0 Credits

Rank 2

6 periods per cycle

Grades 10 - 12

Year Course

Honors Chemistry is designed to provide students who are considering science majors in postsecondary education with a rigorous experience with chemical principles and laboratory procedures that will ensure their initial success in additional coursework at the university level. This course will maximize opportunities for the individual to polish mathematical skills and scientific skills. Students selecting Honors Chemistry should have above average grades in previous math and science courses, should be motivated and willing to work independently, and be willing to ask for extra assistance, when needed. This course may be taken concurrently with other science courses. Prerequisites: 93% or higher in Keystone Algebra II or concurrent enrollment in Keystone Algebra II Honors and one of the following: 85% or higher in Honors Biology or 93% or higher in Keystone Biology teacher recommendation. Student data such as CDT's and PVAAS may also be utilized for placement. (LCC)

422 AP Chemistry

1.0 Credits

Rank 1

6 periods per cycle

Grades 10 - 12

Year Course

The Advanced Placement Chemistry course is designed to be the equivalent of the general chemistry course taken as a college freshman. The pace, performance expectations, grading and time spent outside of class are equivalent to a freshman college course. In addition to quizzes, test, and homework, students will conduct inquiry lab experiments and complete an extensive lab notebook for many of the suggested 16 laboratory experiments recommended by the College Board. The AP student will acquire an extensive conceptual understanding of chemical fundamentals that is based on competence in chemical problem solving. Honors Chemistry serves as a basis for AP Chemistry where additional topics and concepts are

covered. Testing is at a more challenging level than Honors Chemistry in order to ensure that students are prepared for the AP exam. The successful AP Chemistry student is self-motivated and a responsible learner who prioritizes tasks wisely and manages time efficiently. All AP Chemistry students are expected to take the AP Chemistry Exam in May. The course is designed primarily for juniors and can replace Chemistry, but may also be taken by any student who has satisfied the prerequisites. It can be taken concurrently with another science course. For example, AP Chemistry may be taken concurrently with AP Biology or Honors Biology, AP Environmental Science, AP Physics, Honors Physics or Physics, or Astronomy. Students must take the Advanced Placement exam in the spring of the year. Prerequisites: Successful completion of Keystone Algebra II/Keystone Algebra II Honors and 85% or higher in Honors Chemistry or 93% in Chemistry. Student data, such as grades and PVAAS scores may be utilized to determine placement. (LCC)

423 Organic Chemistry

0.5 Credit

Rank 3

6 periods per cycle

Grades 11 & 12

Semester Course

This course is designed for students who are considering the pursuit of a science major or students who plan to pursue health-care professions. The course will emphasize the identification, naming and drawing of organic molecules with the following functional groups: alkanes, alkenes, alcohol, carboxylic acids, aldehydes, ketones, amines, amides, ethers, and esters. Characteristic chemical reactions of these functional groups will be introduced. Common organic laboratory skills, techniques and equipment will also be used. Prerequisites: Successful completion of Chemistry OR science teacher recommendation. This course will be offered in the 2021-22 school year and then every other year after.

425 Astronomy

0.5 Credit

Rank 3

6 periods per cycle

Grades 11 & 12

Semester Course

Astronomy is presented on a general level with texts, computer simulations, and supplemental materials aimed at both making things clearer and enriching the subject matter. There is an emphasis placed on naked-eye astronomy to encourage students to routinely look at the night sky and broaden their knowledge of what they can see. There is also an emphasis placed on equipping students to find and use any number of good online astronomy sources. Topics include naked-eye viewing, sun-earth-moon relationships, and the historical development of astronomy, stars, galaxies, and our solar system.

426 Anatomy and Physiology

0.5 Credit

Rank 3

6 periods per cycle

Grades 11 & 12

Semester Course

This course examines human anatomy by exploring the body, system by system. This will be accomplished through lecture, audio-visual aids, demonstrations, and extensive laboratory activity, including, but not limited to, the dissection of cats and other mammals.

430 Physics

1.0 Credit

Rank 3

6 periods per cycle

Grades 10 - 12

Year Course

Physics uses mathematics to describe the world around you. This course will introduce the student to the area of mechanics, heat, waves, electricity, and magnetism. Studying physics will improve deductive problem-solving skills and relate applying mathematics to real-life situations through hands-on lab experiences. Students who do not intend to be science majors at the post-secondary level should select this course. *(This course may be taken concurrently with Keystone Biology or Chemistry.)* Prerequisites: Keystone Algebra II and Keystone Geometry or science teacher recommendation.

431 Honors Physics **Grades 10 - 12**
1.0 Credit Rank 2 6 periods per cycle Year Course
Honors Physics will cover the same topics as Physics while placing students in a more mathematically challenging environment with hands-on labs. This course is designed for students desiring a challenging curriculum, but who choose not to enroll in AP Physics.
Prerequisite: Trigonometry & Pre-Calculus or currently enrolled in Trigonometry & Pre-Calculus or science teacher recommendation. (LCC)

433 AP Physics C-Mechanics **Grades 11 & 12**
1.0 Credits Rank 1 6 periods per cycle Year Course
Advanced Placement Physics C - Mechanics is designed to be the equivalent of a general physics course taken as a college freshman. The pace, performance, expectations, grading and time spent outside of class are equivalent to those expected in a freshman college course. In addition to quizzes, tests and homework, students will conduct and complete write-ups for laboratory experiments. This course will cover Newtonian Mechanics, which includes: Kinematics, Laws of Motion, Energy, Momentum, Circular Motion and Simple Harmonic Motion. This is a calculus-based course. All AP Physics students are expected to take the AP Physics exam in May. This course is designed for science and engineering majors and can replace Honor Physics, but may also be taken by students at any grade level who have completed the prerequisites. Students must take the Advanced Placement exam in the spring of the year.
Prerequisite: AP Calculus AB or must currently be enrolled in AP Calculus AB. Student data, such as grades and PVAAS scores may be utilized to determine placement. (LCC)

448 Zoology **Grades 11 & 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course
Zoology is a semester course that focuses on animal biology. It presents a survey of the animal kingdom with emphasis on diversity, evolutionary relationships, and functional adaptation. Students will be able to explain the position of a group in the animal kingdom, identify the characteristics that distinguish one group from another, discuss the shared properties of living systems within the animal kingdom, discuss the structural levels of organization of animal body plans, and compare anatomical and physiological function among various members of the animal kingdom. This will be accomplished through lecture, observation, laboratory exercises (including dissection), presentations, projects, and demonstrations.
Prerequisite: Successful completion of Keystone Biology.

912 Honors Veterinary Science **Grades 11 & 12**
0.5 Credit Rank 2 6 periods per cycle Semester Course
Students enrolled in this course will have the opportunity to investigate animal anatomy and physiology, handling and restraining, diseases and methods of control, surgical skills, examinations and treatments, laboratory techniques, and identification. Practical hands-on experience with animals will be used whenever possible in laboratory sessions. (*Honors Veterinary Science may be used as a science credit.*)
Prerequisite: Successful completion of Keystone Biology or Keystone Biology Honors.

915A Animal Science/Nutrition and Welfare

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

This course allows students to explore the animal anatomy. Students will also have the opportunity to investigate animal rights issues. Special emphasis is given to animal safety. (*Animal Science/Nutrition and Welfare may be used as a science credit.*)

918A Botany

1.0 Credit

Rank 2

6 periods per cycle

Grades 10 - 12

Year Course

This Honors level course will expose students to the world of plants. Students will work on major projects and problems similar to those faced by modern plant scientists through a variety of exciting activities and projects. Most lessons have a teamwork focus with students working on collaborative research and lab experiments. Units of study will include: Worlds of Opportunity, Mineral Soils, Soilless Systems, Anatomy and Physiology, Taxonomy, The Growing Environment, Sexual Reproduction, Asexual Reproduction, and Surviving a Harsh Environment. Based on the inquiry based instructional model STEM, this course will develop a diverse set of skills and problem solving techniques that can be used in all areas of study. (*Botany may be used as a science credit.*)

925 AP Environmental Science

1.0 Credits

Rank 1

6 periods per cycle

Grades 9 - 12

Year Course

Advanced Placement Environmental Science is designed to be the equivalent of an introductory college course in environmental science. The course topics include Earth Systems and Resources, The Living World, Population, Land and Water Use, Energy Resources and Consumption, Pollution, and Global Change. Intensive study in these areas provides a solid foundation in preparation for the AP Environmental Science exam. This course is based upon scientific principles and analysis from a variety of scientific fields and approaches and includes a laboratory and field investigation component. Students must take the Advanced Placement exam in the spring of the year. (*AP Environmental Science may be used as a science credit.*) **(LCC)**

929 Mammalian Bioscience

1.0 Credit

Rank 2

6 periods per cycle

Grades 9 - 12

Year Course

This honors-level STEM life science course will allow students to explore mammalian nutrition, reproduction, genetics, health, behavior, anatomy, physiology, marketing, and selection. This is an activity driven course with an inquiry approach which will allow students to work on major projects and problems similar to those that animal science specialists, such as veterinarians, zoologists, livestock producers, and industry personnel face in their respective careers. (*Mammalian Bioscience may be used as a science credit.*)

SCIENCE COURSE SEQUENCE

Current Course	Next Possible Course
Integrated Science	Keystone Biology
	Honors Biology
Honors Biology	AP Biology
	Chemistry
	Honors Chemistry
Keystone Biology	Chemistry
	Honors Chemistry
	Physics
	Electives
Honors Chemistry	AP Biology
	AP Chemistry
	Physics
	Honors Physics
	Electives
Chemistry	Physics
	Honors Physics
	Electives
Honors Physics	AP Biology
	AP Chemistry
	AP Physics
	Electives

Students must meet the course prerequisites to move to next course



BUSINESS & COMPUTER TECHNOLOGY

507 Business and Personal Law

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

Business and Personal Law takes a real-world approach to law as it relates to the life of a teenager in the 21st century. Using real and fictional case studies students will dissect evidence, discover motive and formulate findings based on classroom readings, discussions and role-plays. Within each case study students will learn basic law concepts including civil/criminal law, tort law, contracts, consumer rights and cyber law. The completion of this course will enable students to better understand the world in which they live and understand their legal rights and responsibilities.

585 AP Computer Science A

1.0 Credit

Rank 1

6 periods per cycle

Grades 10 - 12

Year Course

Students will learn advanced methods of programming taught at the college level. Areas of emphasis will include basic program design, object-oriented design, data and information processing, and software development. Students will apply their knowledge through required, hands-on structured lab components consisting of three AP Computer Science A labs. The programming language may vary from year to year, based upon the standard set by the College Board. Students must take the Advanced Placement exam in the spring of the year. Prerequisites: Successful completion of Computer Programming with Java, AP Computer Science Principles, or teacher recommendation. This course will be offered in the 2020-21 school year and then every other year after.

503 Financial Management

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

This course will inform students how individual choices directly influence occupational goals and future earnings potential. Real world topics covered will include income, money management, spending and credit, as well as saving and investing. Unique topics include paying for college, purchasing a car, protecting your identity, and remaining debt-free.

505 Multimedia Marketing

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

The teen market is more competitive than ever for today's businesses. Multimedia Marketing encourages students to think critically about the media and its effects on culture by providing them with a thorough understanding of how media technologies develop, operate, converge, and affect society.

514 Creative Digital Design I

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

This course offers a variety of creative digital design topics including photo editing, video production, desktop publishing and web design. A variety of programs are used in this course to create visually enhanced projects and designs.

584 Computer Programming With Java**Grades 9 - 12**

0.5 Credit

Rank 3

6 periods per cycle

Semester Course

Computer Programming with Java is an introductory programming course designed to teach students basic programming code, theories, and strategies using a text-based integrated development environment. Students will learn to program using an object-oriented approach that focuses on building and implementing class structures and hierarchies. This course is an excellent choice for students who wish to take AP Computer Science. Prerequisite: Successful completion of Android Game Design or Keystone Algebra I. (LCC)

551 Entrepreneurship**Grades 9-12**

0.5 Credit

Rank 3

6 periods per cycle

Semester Course

This course provides students with the opportunity to learn skills necessary to run their own business. These concepts include: marketing, acquiring financing, managing, and the legal requirements of owning and operating a small business will be explored.

552 Android Game Design**Grades 9 - 12**

0.5 Credit

Rank 3

6 periods per cycle

Semester Course

This course combines the popularity of Android with the theory of game development and design to build Android apps that will not only educate but entertain. By using MIT's Android App Inventor 2 environment, students will quickly develop Android apps that can immediately be used on Nexus tablets. Each app concludes with a discussion on game theory and design. Check out <https://sites.google.com/a/danvillesd.org/mfleming/android-apps> for more information on Android Game Design.

587 AP Computer Science Principles**Grades 10 – 12**

1.0 Credit

Rank 1

6 periods per cycle

Year Course

This course introduces students to the foundations of modern computing and challenges them to explore how computing and technology can impact the world. A broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing will be covered. This course was designed with the goal of creating leaders in computer science fields and attracting and engaging those who are traditionally underrepresented with essential computing tools and multidisciplinary opportunities. Students must take the Advanced Placement exam in the spring of the year.



WORLD LANGUAGES

- 610 French I** **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
This course is an introduction to the French language and culture. We will learn the new sounds of the French language through oral repetition, listening exercises, video clips, and examples drawn from current events. We will study a modest vocabulary and will begin conversation on basic topics, such as clothing, colors, and telling time. We will also learn how to read and write simple French. Prerequisite: 80% or higher in the most recent English course.
- 611 French II** **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
This course creates new opportunities for the student to use French on a daily basis, as we learn how to give directions, purchase items from a store, express feelings, describe illnesses and travel. The students will expand their vocabulary and proficiency in French grammar through daily reading and listening exercises. The majority of the verb tenses will be introduced along with cultural studies and basic concepts about the construction of meaning.
Prerequisite: 80% or higher in French I or French teacher recommendation.
- 612 French III** **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
This course is conducted mostly in French as we master grammatical forms and conduct daily conversations and simulated activities, from ordering and paying for food to car problems and popular culture. Students will compose more complex French, listen to up to the minute news broadcasts, and read authentic French from a wide variety of sources and eras. We introduce the French literary tenses and delve into the French thinkers of the 20th and 21st centuries.
Prerequisites: French I and II (80% or higher in French II) or teacher recommendation.
- 609 AP French Language and Culture** **Grades 10 - 12**
1.0 Credit Rank 1 6 periods per cycle Year Course
AP French emphasizes the three modes of communication (Interpersonal, Interpretive, and Presentational) and provides students with opportunities to demonstrate their proficiency in each of the three modes in the Intermediate to Pre-Advanced range. The course takes a holistic approach to language proficiency and cultivates vocabulary usage, listening comprehension, language control, communication strategies, and cultural awareness. AP French strives to promote both fluency and accuracy in language use and clarity in thinking and expression and not only grammatical accuracy. The course is conducted entirely in French and the students must take the AP Exam in May.
Prerequisite: 93% or higher in French III or teacher recommendation. Student data, such as grades and PVAAS scores may be utilized to determine placement. This course may not be offered depending on enrollment numbers.

620 Spanish I **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
By using a balanced-skills approach, Spanish I introduces the student to the Spanish language and Hispanic culture. Emphasis is placed on learning the vocabulary and grammar necessary for communication in situations in everyday life. Basic conversational topics include describing oneself, the classroom, the family, likes and dislikes, and daily activities. Spanish I is an academic course designed for students who are college-bound. Although the focus is on production, this course requires significant amounts of memorization of vocabulary and grammatical structures. Prerequisites: 80% or higher in the most recent regular English course.

621 Spanish II **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
The second year of Spanish focuses on acquisition of vocabulary and grammar skills as well as refining skills learned in the first year of Spanish. The course is taught in both Spanish and English and focuses on student production and use of the target language. Students focus on their reading, writing, speaking and listening skills in the target language. Cultural aspects are studied as well. Prerequisites: 80% or higher in Spanish I/Spanish 1B or teacher recommendation.

621H Honors Spanish II **Grade 9**
1.0 Credit Rank 2 6 periods per cycle Year Course
Honors Spanish II is designed for those students coming from level 1B at the middle school who have consistently demonstrated the capability to learn at an accelerated pace and with a high degree of accuracy. The course will be taught primarily in Spanish and the goal will be to continue to develop proficiency in the use of the language. Cultural awareness and themes will be embedded throughout the course. Prerequisites: 93% or higher in Spanish 1B or teacher recommendation.

622 Spanish III **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
Spanish III will focus on continued development of student ability to use the Spanish language in the 4 skill areas: reading, writing, speaking, and listening. Emphasis is placed on student production of the language in discussing present, future, and past events. An introductory understanding of some advanced grammatical concepts will be included. Appreciation of the various cultures of Spanish-speaking countries will be integrated throughout the course. Prerequisites: 80% or higher in Spanish I and Spanish II/Honors Spanish II or teacher recommendation.

622H Honors Spanish III **Grade 9**
1.0 Credit Rank 2 6 periods per cycle Year Course
Honors Spanish III will focus on continued development of an intermediate level of proficiency in Spanish. Similar to Spanish III, emphasis is placed on student production of the language in discussing present, future, and past events, though with significant extension and increased pacing. An introductory understanding of some advanced grammatical concepts will be included. Appreciation of the various cultures of Spanish-speaking countries will be integrated throughout the course. Honors Spanish III will be conducted in Spanish. Prerequisites: 85% or higher in Honors Spanish II, 93% or higher in Spanish II or teacher recommendation.

623 Honors Spanish IV

1.0 Credit

Rank 2

6 periods per cycle

Grades 10 - 12

Year Course

In Spanish IV the student is provided with an in-depth study of the four language skills - speaking, listening, reading, and writing - and a deepening appreciation for the cultures of the Spanish-speaking world. Basic to all language learning, grammar is a fundamental part of this course. We build upon the grammatical concepts taught in Spanish II and III. Integrated with the grammar study is a variety of reading, writing, speaking, and listening experiences. The students also have many opportunities to learn about Spanish speaking people and cultures by reading authentic literary texts.

Prerequisites: 85% or higher in Honors Spanish III, 93% or higher in Spanish III, or teacher recommendation.

(LCC)**624 AP Spanish Language and Culture**

1.0 Credits

Rank 1

6 periods per cycle

Grades 11 & 12

Year Course

During the summer before taking AP Spanish, students are required to read several articles, short stories, and / or passages, and write summaries and essays. Designed to be the equivalent of a 5th or 6th semester university course, emphasis is placed on the advanced development of all five-language components. Students will have the opportunity to: (1) speak in Spanish; (2) listen to native speakers on tapes and videos; (3) read authentic materials and various literary works; (4) communicate through speaking and writing; and (5) learn about practices and customs in Spanish-speaking countries. Students also view several Spanish and Latin American films. Students must take the AP exam given in May. Prerequisites: Spanish IV Honors 85% or higher in Spanish IV or teacher recommendation.

629 Spanish VI

1.0 Credit

Rank 1

6 periods per cycle

Grade 12

Year Course

This course is offered to those students who successfully completed AP Spanish Language and Culture. The course will continue to develop intermediate-mid to intermediate-high levels of proficiency in all skill areas and focused concentration on Spanish and Hispanic cultures. Students may opt to prepare for the AP Spanish Literature and Culture Exam offered in May, although this course does not carry the College Board AP designation for Literature. *This course is a Pass/Fail course.* Prerequisite: 85% or higher in AP Spanish or teacher recommendation.



ART

- 710 Art I** **Grades 9 - 12**
1.0 Credit Rank 3 6 periods per cycle Year Course
Art 1 students will be presented with a series of teacher-initiated assignments designed to meet the artistic needs of all students. Students should expect to explore design concepts in drawing, mechanical perspective, color theory, painting, printmaking, computer graphics, ceramics arts, and sculpture.
- 712 Ceramics** **Grades 10 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course
This course includes all forms of hand building, throwing on the wheel, design, sculpture, glaze mixing and firing. Prerequisite: Art I.
- 715 Art Independent Projects** **Grade 12**
0.5 -1.0 Credits
This course will allow seniors to pursue individual areas of interest. Projects may include the following: photography, woodcarving, weaving, textile design, drawing, sculpture, ceramics, painting, computer graphics, printmaking, jewelry design, illustration, and mural work. *This course is a Pass/Fail course.* Prerequisite: Art I.
- 718 Painting** **Grades 10 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course
Students will learn the academic style of oil painting and how to stretch and prime canvas. Students will work from still life for the first quarter, and then abstract painting and self-portrait. Prerequisite: Art I.
- 725A AP Studio Art 2-D** **725B AP Studio Art 3-D** **7111 AP Drawing** **Grades 10 - 12**
1.0 Credit Rank 1 6 periods per cycle Year Course
AP Studio Art is designed to accommodate serious art students who have the interest and drive to complete the AP Studio Art portfolio. Through studio practice, application of design concepts, and informed decision making, these students will assemble a body of artwork that demonstrates a high level of quality within content, technique and process. This course is designed for the students who are seriously interested in the practical experience of art and wish to develop mastery in concept, composition, and execution of their ideas. In building the portfolio, students experience a variety of techniques and approaches designed to help the AP Art student demonstrate their abilities as well as their versatility with techniques, problem solving, and ideation. This course may require additional work to be completed outside of the classroom. Students are to develop and submit a comprehensive 2-D design portfolio for credit evaluation near the completion of the school year. *Only one AP Studio Art course can be taken at one time unless administrative approval is given.* Prerequisite: Successful Completion of Art 1 and a minimum of one studio art elective. Student data, such as grades and PVAAS scores may be utilized to determine placement.

- 726 2D Design** **Grades 10 – 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 Throughout the course of this year, students will work to meet the artistic needs of the district and the community as they will assist in set design for the musicals, create murals, and take on community projects as they become available. Additionally, students will combine modern and traditional 2D design techniques to create an etching, engraving, digital art, and a silk screened t-shirt design concept. Prerequisite: Art I.
- 727 Communication Design** **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 This course is taught in the art computer lab and will focus on developing skills within the Communication Design field. Students will use Adobe Illustrator and InDesign to design various graphic images such as logos, business cards, brochures and fliers. This is a half year course.
- 7112 Interior Design** **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 In this course, student will use the elements and principles of design to create functional as well as visually appealing commercial and residential spaces. Students will get to showcase their creativity and design aesthetics by creating 3D models, virtual walkthroughs, and printed renderings. Students will use Sketchup Pro to digitally build the space, Podium to render the 2D images, and Photoshop to create digital color boards. No prior computer skills are required. This is a half year course taught in the art computer lab.
- 7113 Introduction to Architecture** **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 This course will allow students to become familiar with various architectural styles and how they have evolved over time. Students will use design concepts as well as creative problem solving skills to generate designs that solve modern housing problems. In this course, students will use Sketchup Pro and Podium to render the work. Students will also construct a physical ¼" scale model of their final home design. This course will be offered in the 2021-22 school year and then every other year after.
- 7114 Digital Art and Photography** **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 This course focuses on Photography and digital manipulation of photos. Students will use a combination of stock images mixed with student photos to create a portfolio of work. Students will learn various lighting and composition techniques as well as how to digitally enhance photos from portrait photography to surreal landscapes. This course will allow students to gain advanced level skills in Photoshop and is a great foundation for any of the other digital art classes.
- 7115 Interior Design II** **Grades 10 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 This course builds off the foundational knowledge from Interior Design I. Students will have the opportunity to work on more student driven projects and build a portfolio of work. Part of the course includes creating a unique fabric design and digitally applying this new fabric to a piece of furniture.

7116 Adobe Animate

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

In this course, students will create 2D animations and gifs with Adobe Animate. Students will use Photoshop or Illustrator to build the layers of their cartoon and then give them action commands in Animate. *Digital Art and Photography* or *Communication Design* are great prerequisites for the course, but not required. (This course can be used to fulfill 0.5 required credit in Computer Technology.)



PERFORMING ARTS

730	<u>Band</u>			Grades 9 - 12
	0.5 Credit	Rank 3	3 periods per cycle	Year Course
	1.0 Credit	Rank 3	6 periods per cycle	Year Course

Band offers a diverse instrumental music experience. Guided by professional instruction, the student will be exposed to various styles of instrumental music literature while discovering the technical and physical requirements of performance on a brass, percussion, or woodwind instrument. A rotating pullout lesson schedule will be utilized to execute this instruction, similar to the rotating lesson schedule used at Danville Middle School. An addendum articulating the organization of this plan will be furnished to all band students, illustrating the care taken to ensure continued academic success.

The academic year begins with marching band activities. As the fall progresses toward the holiday season the student will begin to meld many of the performance techniques developed in marching activities with techniques needed in concert band. The concert band continues winter through early spring. We wrap up the year by returning to marching band for a parade and early exploration of literature for the following fall. Through a competitive audition process, the individual band students in grades 10, 11, 12 have the opportunity to participate in the Pennsylvania Music Educators Association sponsored District, Region and State Band Festivals. Throughout this course, the band unites students within an organization that plays as one while encouraging the development of each individual musician. Participation in 2019 Band Camp (July 30-August 3 & August 6-August 10) is required of every band member.

734	<u>Concert Choir</u>			Grades 9 - 12
	0.5 Credit	Rank 3	3 periods per cycle	Year Course
	1.0 Credit	Rank 3	6 periods per cycle	Year Course

Choir members will share experiences relating to (1) learning and developing proper vocal techniques; (2) becoming familiar with and performing various musical styles; (3) nurturing the idea of "group concept" while improving individually as a vocal performer; and (4) presenting a number of public performances. Choir students in grades 10, 11 and 12 are also eligible to audition for participation in District and Regional Chorus Festivals held each academic year throughout the state. Choir is a rewarding and an excellent educational and musical opportunity for students with an interest in vocal music.

745	<u>Music Theory</u>			Grades 9 - 12
	0.5 Credit	Rank 3	6 periods per cycle	Semester Course

Music Theory will provide an opportunity for students to explore music theory through a technical approach. This course is directed to two areas: Basic written theory of the elements of music and Aural theory skills, including ear training, sight training, sight singing, and melodic dictation. *Music Theory is strongly recommended for students planning to pursue a music-related career.*

7341 Chamber Choir **Grades 9 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course

This course, available to students by audition at the end of the previous school year, is akin to Honors level classes in other areas. Music repertoire will explore advanced concepts and technical challenges as well as a variety of repertoire representing styles from history and cultures of the world.

7301 Wind Ensemble **Grades 10 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course

This course, available to students by audition at the end of the previous school year, is akin to Honors level classes in other areas. Music repertoire will explore advanced concepts and technical challenges as well as a variety of repertoire representing styles from history and cultures of the world.

733 Musical Theater **Grades 9 - 12**
0.5 Credit Rank 3 6 periods per cycle Spring Semester Course

Students electing to take this course will delve into the history of musical theater, as well as the artistic, technical, organizational and performance aspects of musical theater. Students will also have the opportunity to participate in the construction and painting of set pieces, designing and making costumes, and learn how to operate the sound and light equipment used in a production (fog machines, spotlights, etc.) Students participating in this course are required to participate in at least one school production per year as a cast, crew, or support (door ushers, make-up assistant, etc.) member.

736 Theater Design **Grades 9 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course

Theater design is open to students in all grades who are interested in supporting and promoting the performing arts in our school. In this class students will be involved in various promotional activities such as creating programs, posters, and T-shirts. They will also help to design and construct various aspects of the stage and backdrops. This is an interdisciplinary class that will bring music, visual and performing arts together.

737 Theater Arts I: History and Acting **Grades 9 - 12**
0.5 Credit Rank 3 6 periods per cycle Semester Course

Theater Arts I is open to students of all grade levels who are interested in drama and the performing arts. Theater Arts I is performance-based and delivers an overview of many areas of performance and theater history. Students will participate in the study of theater history, acting techniques, and memorized performances. Students are encouraged to participate in the school production during the semester in which they take the course. This course will be offered in the 2021-22 school year and then every other year after.



FAMILY & CONSUMER SCIENCES

752 Child Development

1.0 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Year Course

This course will include both classroom instruction and the practical application of concepts in the on-campus Head Start laboratory preschool class. Whether you become a parent, work in a career that involves children, or just spend time with children, this class will offer you many opportunities for learning useful skills.

753 Foods

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

This half semester course will focus on the preparation and serving of food while studying the nutritional implications of that food on wellness throughout our life cycle. Basic knowledge will be provided in kitchen safety, sanitation, food preparation, tools, techniques, table setting, and meal management.

759 Textiles 101

0.5 Credit

Rank 3

6 periods per cycle

Grades 9 - 12

Semester Course

In this course you will create original textile creations using various techniques including crocheting, batik, sewing and dyeing. This course is designed for students to explore different techniques and design aspects within each textile media.

750 Adulting 101

0.5 Credit

Rank 3

6 periods per cycle

Grades 9-12

This course is designed to provide general knowledge in multiple disciplines of the Family and Consumer Science Curriculum. You will study information that will help prepare you for adult life such as planning and preparing meals, child growth and development, housing and home management, and basic textile construction and repair. In this course students will learn basic daily living skills to include but not limited to: shopping for groceries, budgeting, cooking, laundry, sewing, child care, personal care, etc.



AGRICULTURAL SCIENCE

An Agricultural Science and Engineering Education at Danville High School will provide students with an understanding of and an appreciation for the production, utilization, and management of food, fiber, natural resources, and mechanical systems through laboratory and inquiry-based learning opportunities. A complete Agricultural Science and Engineering Education at Danville High School has three components: Classroom/Laboratory Instruction where knowledge and skills are acquired; Supervised Agricultural Experience where knowledge and skills are used in real world settings; and FFA where knowledge and skill are tested and leadership skills are developed. Numerous Agricultural Science courses also count as science credit towards graduation requirements.

Students who complete the required Agricultural Science & Engineering coursework have the opportunity to earn 3 college credits when they take the NOCTI Exam their senior year. Seniors who have completed all of their required Ag Science & Technology coursework, commit to taking the NOCTI, and have met their DHS graduation requirements may be eligible for Independent SAE their senior year.

In addition, the DHS Ag Science & Technology Department also offers courses eligible for Lackawanna College or Penn College of Technology credit. In addition, Danville High School also has an Articulation Agreement with Johnson College, where students seeking a degree in Veterinary Technology at Johnson College can receive college credit while taking the required DHS Animal Science coursework.

Exceptions to program sequencing will be made on a case-by-case basis with Administrative and Ag teacher approval.

**** A COURSE SEQUENCING CHART IS AVAILABLE AT THE END OF THIS SECTION. ****

900 Introduction to Agricultural Science

Grade 9

1.0 Credit

Rank 3

6 days per cycle

Year Course

This required course for incoming 2019-20 freshmen agricultural students will provide students with an introduction to concepts and careers in Agricultural Science. Areas of exploration include animal science (including small animals, horses, livestock, poultry, and aquaculture,) plant production and management, working with concrete, environmental studies, and woodworking, all with an emphasis on developing leadership and career opportunities.

907 Small Gas Engines I

Grades 9 - 12

0.5 Credit

Rank 3

6 days per cycle

Semester Course

This course covers a basic overview of the systems and operation of a four-stroke engine. Both classroom and laboratory (shop) work are combined in this class. Students will learn the basic concepts behind the ignition, fuel, lubrication, and cooling systems of gasoline engines, and they will also learn how those systems interact to make an engine durable and dependable. The main project of the course is the complete disassembly and reassembly of a four-stroke Briggs and Stratton engine. Shop safety is emphasized. Freshmen Corequisite: 900 Introduction to Agricultural Science

- 907A Small Gas Engines II** **Grades 9 -12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
 Two stroke engine theory and overhaul will be covered, as well as advanced troubleshooting techniques in both 2 and 4 stroke small gasoline engines. Advanced engine theory and performance enhancement will also be touched upon in this class. Time permitting, this course may include instruction and repair/overhaul of large agricultural engines and power trains.
Prerequisite: Small Gas Engines I. Freshmen Corequisite: 900 Introduction to Agricultural Science
- 908 Welding I** **Grades 9 - 12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
 This hands-on course is designed to teach basic welding skills and how to use common welding equipment. This course includes instruction in flat and horizontal position stick and MIG welding, plasma cutter use, tool sharpening, and bench grinder use. Student skills are improved through practice and theory applications in a safe and quality conscious manner. This class prepares students for further study in welding.
Freshmen Corequisite: 900 Introduction to Agricultural Science
- 908A Welding II** **Grades 9 - 12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
 This course includes instructions in welding processes including advanced stick and MIG welding. Also included will be instruction on advanced cutting and fabrication methods. The capstone project is the construction an independent project that matches student skill level. Prerequisite: Welding I. Freshmen Corequisite: 900 Introduction to Agricultural Science
- 909 Senior Agricultural Science** **Grade 12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
 This senior level course combines agricultural production with technology principles. Topics covered include but are not limited to: conservation and sustainable natural resources, animal science and technology, soil management, plant science and technology, agri-business, and current agricultural issues. Students will take the National Occupational Competency Testing Institute (NOCTI) exam. Prerequisite: Students must have completed at least 5 credits (including Sr. year) of agricultural science coursework.
- 911 Wildlife Habitats and Management** **Grades 9 - 12**
 1.0 Credit Rank 3 6 days per cycle Year Course
 This course will focus on the major wildlife species in North America such as small and large mammals, upland game birds, waterfowl, songbirds, avian predators, shorebirds, reptiles, amphibians, and freshwater fishes. The management and habitat of these species will be investigated by conducting hands-on studies.
Freshmen Corequisite: 900 Introduction to Agricultural Science
- 912 Honors Veterinary Science** **Grades 11 & 12**
 0.5 Credit Rank 2 6 days per cycle Semester Course
 Students enrolled in this course will have the opportunity to investigate animal anatomy and physiology, handling and restraining, diseases and methods of control, surgical skills, examinations and treatments, laboratory techniques, and identification. Practical hands-on experience with animals will be used whenever possible in laboratory sessions. (*Honors Veterinary Science may be used as a science credit.*)
Prerequisite: Successful completion of Keystone Biology/Keystone Biology Honors. Freshmen Co-requisite: 900 Introduction to Agricultural Science

914 Animal Management **Grades 9 - 12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
 Focus on the management of animals by studying the growth and development of chickens while conducting a chicken feed trial or explore embryology by artificially incubating your own eggs. Enrolling in this course will also give you hands-on experience in other areas such as meat science and the hands-on management of all types of animals. Special emphasis is given to animal welfare and safety. Freshmen Co-requisite: 900 Introduction to Agricultural Science This course is offered every other year. This course will NOT be offered in the 2020-21 School Year, but will be available in 2021-22.

914A Animal Behavior **Grades 9 - 12**
 0.5 Credit Rank 3 6 days per cycle Semester Course
~~This course is offered every other year. This course will NOT be offered in the 2019-20 School Year, but will be available in 2020-2021.~~

This course allows students to explore animal behavior as you run mice through the mouse maze that you have designed and built or learn about animal facility design while you build your own scale model of an animal facility. Students will have the opportunity to investigate various types of animal training techniques such as using positive reinforcement to teach a fish to do tricks. Special emphasis is given to animal welfare and safety. Freshmen Co-requisite: 900 Introduction to Agricultural Science

915 Animal Science/Reproduction and Genetics **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
 This course allows students to conduct reproductive and genetic studies using animals. Special emphasis is given to animal welfare and safety. *(Animal Science/Nutrition and Welfare may be used as a science credit.)* Freshmen Co-requisite: 900 Introduction to Agricultural Science This course is offered every other year. This course will NOT be offered in the 2020-21 School Year, but will be available in 2021-22.

915A Animal Science/Nutrition and Welfare **Grades 9 - 12**
 0.5 Credit Rank 3 6 periods per cycle Semester Course
~~This course is offered every other year. This course will NOT be offered in the 2019-20 School Year, but will be available in 2020-2021.~~

This course allows students to explore the animal anatomy involved in these processes. Students will also have the opportunity to investigate animal rights issues. Special emphasis is given to animal safety. *(Animal Science/Nutrition and Welfare may be used as a science credit.)* Freshmen Co-requisite: 900 Introduction to Agricultural Science

917 Greenhouse Operation and Management **Grades 10 - 12**
 0.5 Credit Rank 3 6 days per cycle Spring Semester
 Students will receive instruction in basic plant growth, physiology, reproduction, nutrition, and marketing. Plant pest control and plant production will be stressed. Also, greenhouse plant production activities and the management of greenhouse structures will be covered. Students will create and implement plant production schedules while growing and marketing horticultural plants in the school greenhouse. This course is offered every other year. This course will NOT be offered in the 2020-21 School Year, but will be available in 2021-22.

918A Botany

1.0 Credit

Rank 2

6 days per cycle

Grades 10 - 12

Year Course

This Honors level course will expose students to the thrilling world of plants. Students will work on major projects and problems similar to those faced by modern plant scientists through a variety of exciting activities and projects. Most lessons have a teamwork focus with students working on collaborative research and lab experiments. Units of study will include: Worlds of Opportunity, Mineral Soils, Soilless Systems, Anatomy and Physiology, Taxonomy, The Growing Environment, Sexual Reproduction, Asexual Reproduction, and Surviving a Harsh Environment. Based on the inquiry based instructional model STEM, this course will develop a diverse set of skills and problem solving techniques that can be used in all areas of study. (*Botany may be used as a science credit.*)

923 Honors Construction Hand & Power Tools

1.0 Credit

Rank 2

Grades 10-12

6 days per cycle

THIS IS AN HONORS LEVEL COURSE. 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. This course will include technical as well as practical instruction **(PC Now)** This course is offered every other year. This course will be available in the 2020-2021 School Year.

924 Basic Wiring & Plumbing

0.50 Credit

Rank 3

6 days per cycle

Grades 9-12

Fall Semester Only

Students will learn and demonstrate skills in planning and installing agricultural and residential electrical and plumbing systems. Wiring to include the selection and installation of electrical wiring, switching, lighting, and receptacles. Plumbing to include supply and drainage using PVC/CPVC, Steel, Copper, and PEX where applicable. This course will include technical as well as practical instruction. Freshmen Co-requisite: 900 Introduction to Agricultural Science This course is offered every other year. This course will NOT be offered in the 2020-21 School Year, but will be available in 2021-22.

925 AP Environmental Science

1.0 Credits

Rank 1

6 periods per cycle

Grades 9- 12

Year Course

Advanced Placement Environmental Science is designed to be the equivalent of an introductory college course in environmental science. The course topics include Earth Systems and Resources, The Living World, Population, Land and Water Use, Energy Resources and Consumption, Pollution, and Global Change. Intensive study in these areas provides a solid foundation in preparation for the AP Environmental Science exam. This course is based upon scientific principles and analysis from a variety of scientific fields and approaches and includes a laboratory and field investigation component. (*AP Environmental Science may be used as a science credit.*) Student data, such as grades and PVAAS scores may be utilized to determine placement.

928 A, B, C, D SAE: Supervised Agricultural Experience (SAE 9th, 10th, 11th, and 12th)

Varying Credit

Rank 3

Grades 9 – 12

Students will establish and maintain a supervised agricultural experience program and submit various required records. Students must complete computerized record books from the Pennsylvania FFA, and the project must be pre-approved by an agricultural instructor. Credit will be awarded based on the scope of the individual SAE project book. This course can be taken multiple years. Freshmen Co-requisite: 900 Introduction to Agricultural Science

929 Mammalian Bioscience

Grades 9 - 12

1.0 Credit

Rank 2

6 days per cycle

Year Course

This honors-level STEM life science course will allow students to explore mammalian nutrition, reproduction, genetics, health, behavior, anatomy, physiology, marketing, and selection. This is an activity driven course with an inquiry approach which will allow students to work on major projects and problems similar to those that animal science specialists, such as veterinarians, zoologists, livestock producers, and industry personnel face in their respective careers. (*Mammalian Bioscience may be used as a science credit.*) Freshmen Co-requisite: 900 Introduction to Agricultural Science

931 A, B, C, D Ag Exploration in the Real World (Summer SAE 9th, 10th, 11th, and 12th)

Grades 9 – 12

1.0 Credit

Rank 3

Students meet with instructor(s) to establish and maintain an independent agricultural research, improvement, work or entrepreneurial experience program for the summer. This project must be approved in June. Students will be required to submit various required records, and credit will be awarded based on the scope of the individual project book. Students must complete computerized record books from the Pennsylvania FFA. Instructor(s) will schedule project visits throughout the summer. Student records will be due at the beginning of the school year. This course can be taken multiple years.

will consist of the physical education teacher, the school nurse, the physical therapists, and any other appropriate staff members. Information pertinent to the placement will be required from a physician.

940 **Net Sports** **Grades 10-12**
0.5 Credit Rank 3 6 days per cycle Semester Course

Net sports will provide you with the opportunity to master the rules of a variety of net sports, be tested on the understanding of the rules, practice the skills needed, study a variety of strategies, participate in sport in class settings, and compete in class tournaments. The focus of this class is to develop and enhance skills and knowledge necessary to play and enjoy a variety of racquet sports. The emphasis is on understanding that most net sports can be lifetime activities and have positive fitness components. Net sports that may be included are: tennis, badminton, volleyball, pickle ball, and table tennis.

950 **Physical Education** **Grades 9-12**
0.5 Credit Rank 3 6 days per cycle Semester Course Spring Only

This Physical Education class will continue the development of the student's physical skills through participation in variety physical activities and sports previously learned. Emphasis is placed on lifetime activities, fitness improvement/maintenance and sportsman-like behavior.

951 **Advanced Competitive Sports / Elite PE** **Grades 10-12**
0.5 Credit Rank 3 6 days per cycle Semester Course Spring Only

These are advanced physical education classes for students interested in participating in traditional activities at a competitive level. Class activity emphasizes fitness through participation as well as higher level of skills and strategy. This class is recommended only for students who have achieved the highest fitness levels based on the department fitness protocol. Prerequisite: Has taken at least 1 PE elective before Sophomore year and approval from 2 PE teachers.

947 **Bikes and Hikes** **Grades 10-12**
0.5 Credit Rank 3 6 days per cycle Semester/Year Course

Students will learn to ride mountain bikes and hike safely on all types of surfaces. Focus on cardiorespiratory fitness using stationary bicycles when inside. Develops general endurance of the respiratory and circulatory systems, reduces or maintains body fat levels, and provides knowledge in safe and sound activity principles.

754 **Health Careers Foundations** **Grades 11 & 12**
0.5 Credit Rank 3 6 days per cycle Semester/Year Course

This class includes presentations and hands-on activities from various health care professionals throughout the year. ***Please note that Health Careers is an elective credit but does not count towards the 1 ½ credit Health & PE requirement.***

Health 943 is required **BEFORE JUNIOR YEAR. Courses 945, 946, 947, 948, 949,950, 951, 952 and 754 are elective credit.*

** Physical Education courses cannot be repeated for credit.*



SPECIAL PROGRAMS

930 Driver Education

0.5 Credit

Rank 3

6 day per cycle

Grades 10 - 12

Semester Course

The Driver Education course is a two-phase program. The first phase is 30 hours of classroom instruction. The second phase is 6 hours of behind the wheel instruction that is scheduled by the student through the CSIU. The scope of driver and traffic safety classroom instruction encompasses many facts of the field of knowledge not related specifically to the skill of vehicle manipulation. The following areas are covered: process of earning a PA driver license, skills judgment, accident problems, psychology of the driver, effects of alcohol and drugs, insurance, trip planning, buying and selling a vehicle and basic maintenance.

Note: The scheduling of Physical Education courses will take priority over Driver's Education in the scheduling process.

951 Cooperative Education

1.0 – 2.0 Credits

Rank 3

6 days per cycle

Grade 12

Year Course

The Cooperative Education course description is located on page 4. Students complete an application packet including two teacher recommendations to the Co-op supervisor. Good attendance during your junior year (10 days or less) and a cumulative grade point average of 80% or higher (with no single grade below 77%) are required. Students are allowed a maximum of 3 class periods for up to 2 credits. Students are expected to attend on all school days. The final step in the selection process is a formal interview and selection by the participating training agency. Sophomores and juniors can participate based upon the IEP team recommendation. Unique circumstances need to be approved by Co-op supervisor and a building administrator.

739 Study Skills

0.5 – 1.0 Credits

Rank 3

3-6 days per cycle

Grades 9-12

Semester/Year Course



STEM

1000 Fundamentals of Engineering and Design

1.0 Credit

Rank 3

6 days per cycle

Grade 10 - 12

Year Course

~~This course is designed to expose students to the basics of drafting and industry-leading Computer-Aided Design (CAD) software programs (Autodesk AutoCAD and Google SketchUp) in order to provide background for students interested in pursuing careers in architecture, design, and/or engineering. This course will provide students with a broad introduction into 2-dimensional and 3-dimensional CAD and modeling with a focus on construction and architecture specific applications. Students will use both traditional drafting equipment and CAD software to create functional sets of working drawings. Throughout the course students will create model representations of their designs and be expected to complete a portfolio of their work. Prerequisite: Successful completion of Geometry. This course is offered every other year. This course will NOT be offered in the 2019-20 School Year, but will be available in 2020-2021.~~