LOYALSOCK TOWNSHIP HIGH SCHOOL

PROGRAM OF STUDIES

2021-22

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Purpose of Guide

This document serves as one of the primary tools for guiding Loyalsock students toward their eventual post-secondary school goals. The courses listed exist as the vehicle in which students will strive to reach their greatest potential in a variety of content areas. We are proud to offer a wide array of coursework to meet the needs of a diverse set of learners. Coupled with sound teaching and learning practices that students will experience, we firmly believe that we are preparing Loyalsock students for virtually any future they choose to pursue. Please take your time and reflect on the required courses and elective/related arts opportunities as you peruse this guide.

Schedule Change Policy and Procedure

Students wishing to make changes to their schedule for the upcoming school year should do so by no later than **AUGUST 15th** of the given academic year**. An appointment with the respective school counselor should be made via email, phone call, or physical visit.** (Exceptions will be made only for extenuating circumstances, i.e., new students, family emergencies, upgrading to a more rigorous course, etc.).

Specifically, a student who wants to change an AP level course BEYOND the designated drop/add period will be subject to the following options:

1. Choose another AP course currently offered, OR
2. Withdraw/failure (WD/F) from the course. This grade will be listed on the student's transcript and calculates as a 55, even if prior to the start of the course. The student may then take another course, pending it fits into his/her schedule, OR
3. The AP course teacher recommends the student to drop the course. The course grade will exist as the average of the course to that date. The student then selects another course, OR
4. An extenuating medical issue inhibits the student from continuing in the course.

As required of many colleges/universities to which the student has already applied and/or been accepted, updated transcripts will be sent to the college/university to which the student has applied or been accepted.

Course Selection

It is very important that students consult parents/guardians, teacher(s), and school counselor while selecting courses and complete the course selection form. *It is helpful and necessary to talk with your current teachers and teachers whose courses you may plan on taking about next year's courses*. **Honors and AP course selection requires teacher recommendation to indicate that a student is aware of rigorous expectations associated with a course.** Please be careful making course selections. **In order to change a course, after the Course Selection process has been completed, it shall be necessary for a parent or guardian to come to school for a conference. Each student must choose eight (8) subjects/credits.**

Important note: Loyalsock students can earn up to eight (8) credits per year which will be applied to a student's transcript. Credits pertain specifically to Loyalsock Township School District authorized courses and programs. Any credit(s), whether through LTHS or another approved program, taken beyond eight (8) will not be factored into the student's cumulative weighted average, GPA, and class rank.

Class Rank

Class rank is a procedure by which the performance of a student's work is compared with that of his/ her classmates. It is usually expressed as a fraction. For example, a class rank of 12/120 indicates that a student is twelfth from the top in a class of 120. At LTHS, class rank is calculated using a formula that recognizes both achievement, grade, and challenge level of courses. Achievement is determined by the final grade earned in each course. Challenge is determined by the weight of the course which reflects the academic rigor and the value assigned (Academic, Honors, AP, Dual Enrollment) to each course. ***Final class rank is calculated at the end of each school year; prior to the end of the school year, class rank is a prediction.*** Rank is cumulative, incorporating all courses completed by the student since entry into the high school (grades 9-12).

Requirements for Graduation

Students are required to earn **28 credits,** which must include the following courses for graduation from Loyalsock Township HS. Graduation requirements apply to all students unless determined otherwise by an IEP team in compliance with the Every Student Succeeds Act (ESSA) and the Individual with Disabilities Education Act (IDEA).

GRADUATION REQUIREMENTS	
Subject Area	**Required # of Courses**
English	4.0
Mathematics	4.0
Science	4.0
Social Studies	4.0
Physical Education/Health	1.5
Freshman Seminar	1.0
Law & Finance	1.0
Senior Seminar	0.5
Technology course (beginning with graduating Class of 2025)	1.0
Electives (For Class of 2022, 2023, 2024)	8
Electives (For Class of 2025 and beyond)	**7**

All students are also required to complete a **Graduation Portfolio** in order to be eligible to receive a high school diploma. Our staff has worked diligently to make LTHS graduation portfolio elements relevant to all students, regardless of their post-secondary plans. All of these requirements conform to the Future Ready Pennsylvania Future Index.

**** Beginning with the Class of 2025, students must earn at least one (1) technology course as a requirement for graduation.**

Course Level Descriptions

LTHS utilizes a 100-point cumulative weighted average system (CWA). GPA is derived from the CWA. The following is a description of the identified course levels.

Academic (Weight - 1.0)

Most of the coursework offered at Loyalsock Township High School is considered an academic level. Courses at this level are considered rigorous, but are not at the pace and level of honors, college or AP level. Academic courses will prepare any student for a comprehensive two or four-year college program as well as any other post-secondary career focus, including serving in our nation's military.

Honors (Weight – 1.04)

Specific coursework that is considered to be more rigorous than Academic coursework, but not at the level of AP (Advanced Placement) coursework, is designated at the honors level. These courses will be taught at an **accelerated level**. Such courses often require at least 1-hour minimum per night of extra study/homework completion. Students who seek such coursework must be organized and realize the work ethic required to be successful in such coursework. Like Loyalsock's academic courses, honors courses will also prepare any student for a comprehensive two or four-year college program as well as any other post-secondary career focus.

Dual Enrollment (Weight - 1.06)

Dual Enrollment courses refer to any course taken by one the colleges/universities with whom Loyalsock Township School District has an articulation agreement. These courses are taught at an introductory college level, typically referred to as general education ("gen ed") courses. DE courses are available to juniors and seniors, and offer students opportunities for additional coursework that is typically not offered by LTHS. Most of the DE courses available are online courses that require payment by the family in advance of taking the course. DE courses provide the student with possible transfer college credit to many colleges to which a student is eventually choosing to gain acceptance.

Advanced Placement (AP) (Weight – 1.08)

AP courses taken at LTHS occur within a prescribed curriculum defined by the College Board. **AP courses are the most challenging/rigorous courses** offered at Loyalsock which is applied to a student's rank and GPA. Loyalsock offers more than a dozen AP courses, with several more available on-line through our virtual education program. AP coursework requires students to be highly motivated, organized, and capable of spending 1-2 hours of study/homework completion per evening. **It is highly recommended that students who choose to take AP coursework also take the requisite AP exam in May of the given school year**. *It should be noted that the school district pays the entire AP exam cost for each student*; therefore, there is no disadvantage to a student taking the respective exam.

Core Course Sequencing (by Grade Level) and Educational Requirements

Grade 9	Grade 10	Grade 11	Grade 12
English (1.0 Credit)	**English (1.0 Credit)**	**English (1.0 Credit)**	**English (1.0 Credit)**
• Academic English 9 OR • Honors English 9	• Academic English 10 OR • Honors English • NOTE: Literature Keystone Exam administered in Grade 10	• Academic English 11 OR • Honors English 11 OR • AP English Literature & Comp	• College Prep English 12 OR • Honors English 12 OR • AP English Language & Comp OR/And • AP English Literature & Comp
Mathematics (1.0-2.0 Credits)	**Mathematics (1.0-2.0 Credits)**	**Mathematics (1.0-2.0 Credits)**	**Mathematics (0 - 2.0 Credits)**
• CC Algebra ½ and CC Algebra I OR • NOTE: Algebra I Keystone Exam administered in Grade 9 • Honors Geometry (For Keystone Algebra 8 students) OR • Geometry (For Keystone Algebra 8 students)	• Geometry OR Honors Geometry • CC Algebra II OR Honors CC Algebra II OR • CC Algebra II and Advanced or Academic Trigonometry OR • Honors CC Algebra II and Advanced or Academic Trigonometry	• Math Analysis I OR • College Prep Math OR • Statistics OR • CC Algebra II OR • Honors CC Algebra II OR • CC Algebra II and Advanced Trigonometry or Academic Trigonometry OR • Honors CC Algebra II and Advanced Trigonometry or Academic Trigonometry OR • Advanced Trigonometry OR • Honors Calculus OR • Honors Calculus and AP Calculus AB	• College Prep Math OR • Statistics OR • CC Algebra II OR • Honors CC Algebra II OR • CC Algebra II and Advanced or Academic Trigonometry OR • Honors CC Algebra II and Advanced or Academic Trigonometry OR • Advanced Trigonometry OR • Honors Calculus OR • Honors Calculus and AP Calculus AB OR • AP Calculus BC
Social Studies (1.0 Credit)	**Social Studies (1.0 Credit)**	**Social Studies (1.0 Credit)**	**Social Studies (1.0 Credit)**
• U.S. History	• World History OR • AP World History	• Civics	• Modern History
Science (1.0 Credit)	**Science (1.0-2.0 Credits)**	**Science (1.0 Credit)**	**Science (0- 2.0 Credit)**
• Earth & Environment OR • Honors Earth & Environment	• Biology OR • Honors Biology • NOTE: Biology Keystone Exam administered in Grade 10	• Academic Chemistry OR Honors Chemistry • AP Chemistry and AP Biology are available as electives • Note: IPS may be available for students in certain circumstances	• Academic Physics OR Honors Physics • AP Physics and AP Biology are available as electives. • Note: IPS may be available for students in certain circumstances
Physical Education & Health (1.5 Credits)			
• 10th PE (0.5) • 10th Health (0.5) • 12th grade PE (0.5)			
Other LTHS Required Graduation Requirements (2.5 Credits)			
• Law and Finance (1.0) • *** NEW! Technology Course (1.0) – students can choose from one of any technology-related course** • Senior Seminar (0.5)			

* **Beginning with the Class of 2025, students must earn at least one (1) technology course as a requirement for graduation.**

Career and Technical Education

Through *career and technical education*, students have opportunities to earn college credit while still in high school, earn industry-specific credentials in a variety of fields, and participate in paid and unpaid internships. LTHS partners with the Lycoming County Career and Technology Center for career and technical coursework offered to students in multiple concentrations. The following are the career and technical education opportunities currently available to LTHS students. You can learn more about out CTE programs HERE.

Automotive Technology: Are you interested in cars and want to repair high tech vehicles? Learn about performance, computer electronics, engine diagnosis and repair. Earn Automotive Service Excellence (ASE) Certification and PA State Inspection.

Computer Systems Technology: Become part of the team of experts who repair or maintain computers and networks. Prepare for a career in computer science – this program is an excellent foundation for post-secondary education. Prepare for Net Plus Certification and CompTIA A+ Certification.

Construction Technology: Do you enjoy working with your hands, building, operating power tools, working with electricity, connecting piping systems? Earn the National Center for Construction Education & Research (NCCER) Certification.

Criminal Justice (Law Enforcement): Are you interested in becoming a police officer, corrections officer, security officer, detective, or private security person? The combination of our program and post-secondary education is designed to prepare you for a rewarding career in private security, law enforcement, and criminal justice.

Culinary Arts: Do you like to be in the kitchen and enjoy cooking? Maybe you would like to own a restaurant, host a cooking show, or become a chef. You will learn proper use of kitchen utensils and equipment, food sanitation and storage, table settings, and food preparation. Earn the ServSafe Certification (a necessary requirement to enter the food service industry).

Drafting & Design Technology: Are you interested in combining your creativity with your interests in the industrial and mechanical world? Learn the latest version of AutoCAD, and become an Architect, Engineer, Surveyor, CAD Operator, or Technical Illustrator. This program is American Design Drafting Association Certified.

Early Childhood Education: Are you interested in teaching or childcare services? This course provides a solid base for students planning to enter the fields of Occupational Child Care, Para educator, or Elementary Education. Become Child Development Associate CDA Test Ready!

Health Careers: As the world of medicine and science changes and grows virtually every day, the number of jobs in the health field grows as well. Are you interested in nursing and learning about the behind-the-scenes work that happens in a hospital setting? Would you like to learn about human anatomy and acquire skills for lab and technical employment? If you answered yes to these questions, this is the program for you! Opportunities to receive a Nurse Aide Certification and/or Medical Assistant Certification.

ALL Lycoming County Career and Technology Center programs offer the following Third Year possibilities:

Penn College Option (earn college credits while still in high school)
Work Based Option (participate in both paid and unpaid internships)

Dual Enrollment Coursework - Earn College Credit in High School

Overview

As you may already know, LTHS contracts with several colleges and universities to provide students dual enrollment coursework. Dual enrollment allows students to take a college-level course while still attending high school. The student can choose a college-level course(s) that may transfer to the student's eventual postsecondary college or university to which the student has applied and/or been accepted. Each college/university uses a **Transfer Credit Equivalency tool** to determine what courses may transfer from one of the dual enrollment institutions connected with Loyalsock to the student's school of choice.

Benefits of Dual Enrollment

Students can graduate from Loyalsock with 3 or more college credits to apply toward the cost of his/her college education. Often, dual enrollment courses transfer to the student's chosen college/university as a general education equivalent, or "gen ed," satisfying various distribution requirements that every student at a given college or university must satisfy. Other courses, depending on the students' chosen major and school selection, MAY satisfy as a direct core requirement. There is a potential cost savings because *the cost of a dual enrollment course through Loyalsock is much less than credit* typically taken at a variety of institutions on site when students become a full college student.

How Does It Work?

As a junior or senior, students may opt to take 1 or more dual enrollment courses, assuming it meets all the requirements and fits within your schedule. **To be eligible, the student must:**

1. Have a cumulative weighted average of 80 or better.
2. Be in good standing with attendance at Loyalsock.
3. Have room in one's schedule to take a dual enrollment course(s).
4. Principal discretion can be used for any individual extenuating circumstances.

How to Apply for Dual Enrollment

1. Student discusses the possibilities with his/her parents and decides to pursue dual enrollment coursework for next school year.
2. Students discuss the options available with their school counselor, Mrs. Campman, during their scheduling meeting.
3. Student should check credit/course transferability of a given dual enrollment course with the college/university to which the student anticipates attending.
4. Student completes the steps of the individual college/university to enroll by using the links provided to become a non-degree student at the given school. Steps will include enrolling, becoming accepted, getting an account, and paying for the course(s) directly from the family to the college.
5. Student begins to take the applicable dual enrollment course(s) when that college's semester begins. **(NOTE: This may or may not be the same time frame of Loyalsock's semester.)** In most cases, students will have the choice of doing so at Loyalsock in the library or online from home.

In some cases, dual enrollment courses may be able to be taken on-site at one of the schools to which we are affiliated so long as the student has his/her own transportation. **** NOTE**: At the conclusion of the course **with a grade of C or better**, LTSD will reimburse the family $150 per course (**maximum reimbursement of $300 for two courses** in one school year).

Reimbursements will be made and mailed home after the school year is concluded in early June.

Dual Enrollment Partnerships (Current)

Dual Enrollment Program	**Mansfield U Early Start Program**	**Harrisburg Area CC**	**Keystone College**	**Bloomsburg U ACE Program**	**Lock Haven U Guest Student Program**
Nature of Course	Online	Online	LTHS School-based	On campus	Online or on campus
Instructor	MU Professor	HACC Professor	Loyalsock Teacher	BU Professor	LHU Professor
Course Weight	1.06	1.06	1.06	1.06	1.06
Cost	*** * $150** paid by family directly to college. Payment due prior to course beginning. **LTSD will reimburse family $150**	**** $375** paid by family directly to college. Payment due prior to course beginning. **LTSD will reimburse family $150**	**** $300** paid by family directly to college. Payment due prior to course beginning. **LTSD will reimburse family $150**	**** $375** paid by family directly to college. Payment due prior to course beginning. **LTSD will reimburse family $150**	**** $375** paid by family directly to college. Payment due prior to course beginning. **LTSD will reimburse family $150**
Text & Materials	All texts & materials paid for by the student, except those courses affiliated with a Loyalsock teacher/course (Keystone College).				
Transport	Students must be able to provide their own transportation as necessary to attend on-campus courses.				

Courses by Department

Art

Course title	Weight	Open to Grades	Prerequisites	Credit
Introduction to 3-D Art	1.0	9-12	None	1
Foundations of Drawing & Painting	1.0	9-12	None	1
Drawing & Painting 1	1.0	9-12	Foundations of Drawing & Painting OR Portfolio Review	1
Honors Drawing & Painting 2	1.04	10-12	90 or higher in Drawing & Painting 1 OR Portfolio Review	1
AP 2-D Art & Design	1.08	10-12	90 or higher in Drawing & Painting 2	2
AP Drawing	1.08	10-12	80 or higher in AP Studio Art: 2D	2
Ceramics & Glass 1	1.0	9-12	None	1
Honors Ceramics & Glass 2: Hand-Building	1.04	9-12	90 or higher in Ceramics & Glass 1	1
Honors Ceramics & Glass 2: Wheel-Throwing	1.04	10-12	90 or higher in Ceramics & Glass 1	1
AP 3-D Art & Design	1.08	10-12	90 or higher in EITHER Ceramics & Glass 2: Hand-Building OR Wheel-Throwing	2
Digital Photography	1.0	9-12	None	1
AP Art History	1.08	10-12	Completed or currently taking World History OR AP World History	1
Portfolio Development	1.0	10-12	Currently taking AP Studio Art	.5-2.5

AP ART HISTORY 1.0 Credit

A.P. Art History emphasizes understanding works of art within their historical context by examining issues such as politics, class, religion, patronage, audience, gender, function, and ethnicity. Topics include Global Prehistory, Ancient Mediterranean, Early Europe and Colonial Americas; Later Europe and Americas; Indigenous Americas; Africa; West and Central Asia; South, East, and Southeast Asia; The Pacific; and Global Contemporary. The AP Art History course is treated as an equivalent of a college-level survey course in art history. Students will be expected to maintain the highest standards of academic excellence throughout the course. It is the expectation that students in this course will take the AP Art History examination.

Prerequisite: Completed or concurrently enrolled in World History or A.P. World History

FOUNDATIONS OF DRAWING & PAINTING 1.0 Credit

Foundation of Visual Arts is an introductory course where students are given a sampling of various 2-D mediums. The principles of art and design are stressed with each project.

DRAWING AND PAINTING I 1.0 Credit

This is an intermediate course for those students who wish to improve their drawing skills and explore a variety of painting techniques and styles. An emphasis will be placed on the rules of design, composition, and student imagination. Students will explore advanced perspective, portraiture, scratchboard, and stipple-drawing.

Prerequisite: Foundations of Drawing and Painting or portfolio review by instructor

HONORS DRAWING AND PAINTING II 1.0 Credit

This is an advanced course for those students who wish to further improve their drawing skills and explore a variety of painting techniques and styles. An emphasis will be placed on the rules of design, composition, and student imagination. Students will explore advanced perspective, portraiture, print-making, and pointillism.

Prerequisite: 90% or higher in Drawing and Painting I or portfolio review by instructor

AP 2-D ART & DESIGN 2.0 Credits

This is a highly advanced art course for those students who are ready to dedicate a serious amount of time both in and out of the classroom in order to develop a large portfolio. Students must be self-driven and ready to produce large amounts of high quality work which will be submitted to the College Board for evaluation. Students should plan on doing a good deal of work outside of the classroom including over the summer prior to the start of the school year. It is the expectation that students in this course will submit the full portfolio to The College Board for evaluation.

Prerequisite: 90% or higher in Drawing & Painting II
A portfolio review will be conducted to determine the extent of each student's summer assignment.

AP DRAWING 2.0 Credits

These are highly advanced art courses for those students who are ready to dedicate a serious amount of time both in and out of the classroom in order to develop a large portfolio. Students must be self-driven and ready to produce large amounts of high-quality work which will be submitted to the College Board for evaluation. Students will continue to maintain a personal sketchbook and should plan on doing a good deal of work outside of the classroom including over the summer prior to the start of the school year. It is the expectation that students in this course will submit the full portfolio to The College Board for evaluation.

Prerequisite: 85% or higher in AP 2-D ART & DESIGN
A portfolio review will be conducted to determine the extent of each student's summer assignment.

DIGITAL PHOTOGRAPHY 1.0 Credit

Digital Photography is an intermediate course that focuses on the capturing, adjustment and modification of images. The principles of design are heavily stressed with each project. This course is excellent for visual learners who have "good eyes" and creative ways of thinking. Sample projects include, but are not limited to: portraits, special effects, photo collages, ghost imagery, twin photography, photo repair, and beauty/glamour shots.

INTRODUCTION TO 3-D ART 1.0 Credit

Open to grades 9-12, Introduction to 3D Art is an introductory course where students create various 3D pieces of art. This class focuses on making and working with three-dimensional objects out of a variety of materials.

Prerequisite: NONE

CERAMICS AND GLASS I 1.0 Credit

Ceramics and Glass is an intermediate course that focuses on the heated transformation of raw materials into functional and sculptural forms. The principles of design, ergonomics, and utility are stressed with each project. This course is excellent for visual and kinetic learners who are good with their hands and are not afraid to get dirty. Sample projects include, but are not limited to: cups/tumblers, tea-bowls, mugs, tiles, stained glass, and fused glass. **Long and/or fake fingernails are not permitted and hair must be pulled back during class.**

HONORS CERAMICS AND GLASS II: Hand-building 1.0 Credit

This is an advanced art course for those students who wish to seriously explore wheel-thrown forms. Students will learn to create vases, perforated forms, covered jars, pitchers, goblets, teapots, and other utilitarian forms. **Long and/or fake fingernails are not permitted and hair must be pulled back during class.**

Prerequisite: 90% or higher in Ceramics and Glass I

HONORS CERAMICS AND GLASS II: Wheel-Throwing 1.0 Credit

This is an advanced art course for those students who wish to seriously explore hand-built forms. Students will learn to create various sculptures including, but not limited to: boxes, roasters, teapots as well as human and animal forms. **Long and/or fake fingernails are not permitted and hair must be pulled back during class.**

Prerequisite: 90% or higher in Ceramics and Glass I

AP 3-D ART & DESIGN 2.0 Credits

These are highly advanced art courses for those students who are ready to dedicate a serious amount of time both in and out of the classroom in order to develop a large portfolio. Students must be self-driven and ready to produce large amounts of high-quality work which will be submitted to the College Board for evaluation.

Students will continue to maintain a personal sketchbook and should plan on doing a good deal of work outside of the classroom including over the summer prior to the start of the school year. It is the expectation that students in this course will submit the full portfolio to The College Board for evaluation. **Long and/or fake fingernails are not permitted and hair must be pulled back during class.**

Prerequisite: 90% or higher in Ceramics & Glass II: Hand-building and/or Ceramics & Glass II: Wheel-Throwing

A portfolio review will be conducted to determine the extent of each student's summer assignment.

PORTFOLIO PREPARATION 1.0 Credit

This course is to provide additional studio time for AP Studio Art students who have space in their schedule. Additional assignments are not given, but instead the grade will mirror the grade for AP Studio Art. Please note that this course does NOT carry the additional AP weight.

Prerequisite: Currently enrolled in A.P. Studio Art

Business and Career Education

Course title	Weight	Open to Grades	Prerequisites	Credit
Accounting I	1.0	9-12	None	1
Accounting II	1.0	10-12	Accounting I	1
Law and Finance	1.0	11-12	None	1
Marketing	1.0	9-12	Introduction to Business	1
Introduction to Business	1.0	9-12	None	1
Entrepreneurship	1.0	10-12	Introduction to Business	1
Introduction to Digital Literacy*	1.0	9-12	None	1
Apps for College and Career*	1.0	9-12	None	1
Computer Science I*	1.0	9-12	Algebra I	1
Computer Science II*	1.0	10-12	Computer Science Principles	1
Video Game Design and Programming*	1.0	9-12	Intro to Digital Literacy or Advanced Apps or Computer Science I or Web Design	1
Web Design*	1.0	9-12	Intro to Digital Literacy or Advanced Apps or Computer Science I or Freshmen Sem	1

- **NEW REQUIREMENT!** Beginning with the Class of 2025, **students must earn at least one technology course credit in addition to the Law and Finance course credit as requirements for graduation.**

There are four (4) NEW business courses available for students in grades 9-12 for the 2021-22 school year.

NEW COURSE! INTRODUCTION TO DIGITAL LITERACY 1.0 Credit

In this course students will complete a series of micro units to cover a variety of digital literacy topics and preview topics covered in detail in our other technology courses. Students will have a better understanding of how information is represented digitally and sent over the internet. Students will learn some basic fundamentals of JavaScript and web design as well as general skills in a variety of application software. With a focus on creativity, problem solving and project-based learning, Introduction to Digital Literacy will give students the opportunity to explore several important topics and continue to develop skills to further endeavors in any career field.

NEW COURSE! APPS FOR COLLEGE AND CAREER 1.0 Credit

In this hands-on intermediate/advanced course students will go beyond the basic operations of commonly used application software (Microsoft Office, iWorks, Google Suite). This course will build on student's prior knowledge and experience with personal uses of computers/technology to include various business and industrial use at a higher level in order to prepare for college or the workforce. Students will continue to examine some of the social and ethical implications of computers in our society as well as a variety of current trends in computer security, and digital citizenship.

NEW COURSE! VIDEO GAME DESIGN AND PROGRAMMING 1.0 Credit

This course will cover the foundational skills of creating basic video games using JavaScript. While this course is introductory, it is an honors-level course. Its curriculum teaches the foundations of computer science and basic programming, with an emphasis on helping students develop logical thinking and problem-solving skills. This is a programming class – so there will be typing and writing JavaScript programming commands. Once students complete the course, they will have learned material equivalent to a semester college introductory course in Computer Science and be able to program in JavaScript.

NEW COURSE! WEB DESIGN 1.0 Credit

In this project-based course students will learn HTML and CSS programming languages, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi page websites. Students will learn the foundations of user interface design, rapid prototyping and user testing, and will work together to create professional, mobile responsive websites. In today's world, web pages are the most common medium for sharing ideas and information. Learning to design websites is an incredibly useful skill for any career path.

ENTREPRENEURSHIP 1.0 Credit

Entrepreneurship focuses on recognizing a business opportunity, starting a business, operating, managing and maintaining a business. Students will be exposed to the development of critical thinking, problem solving, and innovation in this course as they will either be the business owner or individuals working in a competitive job market in the future. In the United States small businesses make up close to 90% of all businesses. Integration of accounting, finance, marketing, business management, legal and economic environments will be developed throughout projects in this course. Students will work to develop a business plan that includes structuring the organization, financing the organization, and managing information, operations, marketing, and human resources. Through various projects, team building activities and lessons students will be engaged in the creation and management of a business and the challenges of being a small business owner. Various forms of technologies will be used to expose students to resources and application of business principles for starting, operating and maintaining a business. Professional communication skills and practices, problem-solving, ethical and legal issues, and the impact of effective presentation skills are enhanced in this course to prepare students to be college and career ready. Employability skills are integrated into activities, tasks, and projects throughout the course standards to demonstrate the skills required by business and industry.

ACCOUNTING I 1.0 Credit

Accounting I provide a valuable skill for all students who are college bound, and who are entering the field of self-employment, or who intend to seek employment in the business world. Students are encouraged to take this course if they plan to take the advanced course in Accounting. Students will learn accounting applications for a service business as well as for a merchandising business. Emphasis is on the basic principles, concepts, and procedures of accounting which will insure all students' maximum opportunity when entering the world of business. Areas of concentration include:

- completion of the accounting cycle using double entry accounting for a sole proprietorship
- preparation of financial reports
- reconciling bank statements
- money and banking applications
- preparation of a payroll

ACCOUNTING II 1.0 Credit

Accounting II is a recommended subject for all students who have satisfactorily completed Accounting I. Completed as an Independent Study, this course is designed to give the students a brief review of Accounting I concepts and procedures. These concepts include the accounting cycle for a merchandising business, preparation of a payroll, money and banking applications and financial statements. After a review of concepts learned in Accounting I this course will concentrate on (1) analyzing problems involving partnership and departmental accounting applications, (2) analyzing problems using automated accounting software, (3) utilizing the computer for weekly corporate news reports and preparation of summary analysis, (4) preparing Federal and State income tax forms, and (5) analyzing corporate annual reports.

Prerequisite: Accounting I

LAW AND FINANCE 1.0 Credit

The course provides basic knowledge of our legal and investment environment and helps facilitate understanding of the laws that govern human conduct in a civilized society. The law portion of the course will provide an in-depth and extensive study in consumer law, civil law, criminal law, and court structure, rights/duties of minors and parents, incurrence, contracts, employee/employer relationships. Also, the students will have the opportunity to interact with law enforcement officers, as well as viewing criminal/civil cases at the Lycoming County Courthouse. The investment portion of the course will emphasize financial/estate planning, as well as developing an understanding of stocks, bonds, mutual funds, investment terminology and the future of social security. The financial portion of the course will cover college degrees, budgets, financial aid, letter composition, as well as beginning cost factors affecting incoming freshmen. L & F is designed to provide the student with practical knowledge which will not only benefit them in everyday life situations, but will also provide a valuable foundation for the college-bound student. ***This course is required for graduation***.

INTRODUCTION TO BUSINESS 1.0 Credit

Introduction to Business will introduce the student to the world of business and will help prepare you for the economic roles of consumer, worker, and citizen. Some of the topics covered include: economic systems, decisions, resources and supply/demand; entrepreneurship, global economy, social responsibility, and finance. This course will also serve as a background for other business courses offered in high school and in college, assist you with consumer decision making, prepare you for future employment, and help you effectively perform your responsibilities as a citizen.

MARKETING 1.0 Credit

Marketing will focus on providing students with a foundation in basic marketing principles. Students will discover how businesses convince customers to buy their products. This knowledge is beneficial for not only someone selling goods and services, but for the everyday consumer to understand how they are being targeted by companies all the time. Students will explore topics such as the marketing concept, global marketplace, technology and marketing, advertising, product branding, social media marketing and marketing plans within various industries.

COMPUTER SCIENCE I 1.0 Credit

Computer Science I curriculum is a rigorous, entry-level course that introduces high school students to the foundations of modern computing. The course covers a broad range of foundational topics such as programming, algorithms, the Internet, big data, digital privacy and security, and the societal impacts of computing. Computing affects almost all aspects of modern life and all students deserve access to a computing education that prepares them to pursue the wide array of intellectual and career opportunities that computing has made possible. This course is not a tour of current events and technologies. Rather, it seeks to provide students with a "future proof" foundation in computing principles so that they are adequately prepared with both the knowledge and skills to live and meaningfully participate in our increasingly digital society, economy, and culture.

COMPUTER SCIENCE II 1.0 Credit

Computer Science II is continuation of concepts presented in Computer Science Principles. It is a rigorous, hands-on, project-based course that will allow students to continue to build their foundations of modern computing and programming skills. Students will have an opportunity to select the type of programming language they would like to study, to build on their knowledge and understanding of current programming concepts. The skills learned in this course will help to adequately prepare students with both the knowledge and skills to live and meaningfully participate in our increasingly digital society, economy, and culture.

Prerequisite: Computer Science I

English

Four credits in English are required for graduation. One credit must be taken at each grade level, nine through twelve (9-12). Students are encouraged to consult with their present English teacher for guidance in selecting the proper course and course level for next year. Except in rare cases, such as remediation or AP, students may not accumulate more than one (1) English credit per year. Students repeating English classes must enroll in the same or a lower level of English when rescheduling for remediation.

Course title	Weight	Open to Grades	Prerequisites	Credit
Academic English 9	1.0	9	None	1
Honors English 9	1.04	9	90% average or above in 8th grade reading and 8th grade language arts	1
Academic English 10	1.0	10	Successful completion of English 9	1
Honors English 10	1.04	10	90% average or above in Academic English 9, or 80% average or above in Honors English 9	1
Academic English 11	1.0	11	Successful completion of English 10	1
Honors English 11	1.04	11	90% average or above in Academic English 10, or 80% average or above in Honors English 10	1
AP Literature and Composition	1.08	11-12	90% average or above in an English 10 and/or 11 course, and no previous high school English failures	1
Academic English 12	1.0	12	Successful completion of English 11	1
AP Language and Composition	1.08	12	90% average or above in an English 11 course, and no previous high school English failures	1
Honors English 12	1.04	12	90% average or above in Academic English 11, or 80% average or above in Honors English 11	1
Yearbook and Media Journalism 1	1.0	10-11	Completion of an application assignment and satisfactory attendance and discipline records	1
Yearbook and Media Journalism 2	1.0	11-12	Completion of Yearbook and Media Journalism 1 with 80% average or above	1
Yearbook and Media Journalism 3	1.0	12	Completion of Yearbook and Media Journalism 2 with 80% average or above	1

ACADEMIC ENGLISH 9 1.0 Credit

Ninth-grade English class provides a foundation for language-arts learning that students can build upon throughout the rest of their high school years. This is a standards-based course designed to build reading, writing, and vocabulary skills. Reading will focus on comprehension, vocabulary, inference, elements of literature, and literary devices (such as simile and allusion). Students will read a selection of short stories, novels, poetry, and a play by William Shakespeare. Mechanics of grammar will be reviewed -- including capitalization, run-ons, and fragments -- and writing will be studied at the paragraph, essay, and research paper level. There will be regular vocabulary practice and quizzes through Membean.com. There will also be a brief unit on using Latin prefixes.

HONORS ENGLISH 9 1.0 Credit

This is an intensive reading and writing course. In addition to providing a foundation for future English classes, this course prepares students for honors work in higher grades and for high-level work in college. In reading the stories, novels, and plays, students will be expected to demonstrate thorough comprehension and to use evidence from the text to make assertions about the author's purpose. We will review grammar, including capitalization and run-ons, and will work on writing at the paragraph, essay, and research paper level. Honors students will cover a variety of extended material, will be expected to work at a much quicker pace than academic students, and will work collaboratively in a more 'discovery learning' based atmosphere.

Prerequisites: 90% average or above in 8th grade reading and 8th grade language arts

ACADEMIC ENGLISH 10 1.0 Credit

Academic English 10 is a standards-based course designed to enhance the skills necessary for success in a career, college, or any postsecondary training the student chooses to pursue. The year contains a review of the mechanics of the language—capitalization, punctuation, usage, and grammar. These will be addressed through the student's writing and in as-needed mini-lessons. In literature, students study poetry, short stories, the novel, and drama as a part of theme-based units. Specifically, students study the themes of The American Dream, Moral Struggle, Coming-of-Age, and Innocence to Experience. In addition, students read four independent novels over the course of the semester. During this semester, students are required to take weekly vocabulary quizzes using Membean, an online, interactive program. Students also will be exposed to Latin with weekly cumulative quizzes. Vocabulary and Latin lessons are designed to improve students' vocabulary skills with the intent to improve SAT scores and reading comprehension. Students will complete multiple writing assignments, ranging from speeches to analytical essays as a part of this course. Students will also participate in Keystone Exam targeted preparation designed to ensure their success on the Keystone Exam. Students will also engage in weekly writing assignments, ranging from creative to research-based.

HONORS ENGLISH 10 1.0 Credit

Honors English 10 introduces British literature beginning with the Anglo-Saxon period and *Beowulf* and progressing through the Age of Reason in England. Big ideas addressed through this course are the changing religious and cultural values in England, evidenced in the literature. Key literary works/authors will include *Beowulf, The Canterbury Tales*, the Arthurian Legend, and Shakespeare (drama and poetry). In addition to an intensive literary focus, students will begin a two-year study of Latin, combined with weekly Membean.com vocabulary, both of which are designed to help prepare students for the Keystone Exam, the PSAT, and the SAT. Students will also work extensively with both writing and speaking. Writings will include creative, analytical, and research-based compositions. Speech topics will also range from creative assignments to research-based topics. Honors English 10 and Honors English 11 are sequential courses, covering the beginnings of British and American literature and progressing through the modern period. The English department recommends that Honors students take both courses in order to truly appreciate the literature of the two countries.

Prerequisites: Students planning to take Honors English 10 must have earned an 80% or higher in Honors English 9 course OR a 90% or higher in Academic English 9.

ACADEMIC ENGLISH 11 1.0 Credit

Academic English 11 is a total program of English literature, Membean vocabulary, grammar, formal composition, and a required research project. The study of literary works is theme-based. Students will have exposure to fiction and non-fiction works, ranging from Shakespeare to more contemporary novels, poems, and essays. Through the writing process, elements of grammar, usage, and punctuation will be covered on an individual, as-needed basis. The writing program encourages students to write effectively about personal experiences and critically about literature. During their junior English class, students will continue with their Graduation Project through the completion of the ASVAB, and exploration of post-high school options for themselves. Specific preparation is also given for the SAT and remediation for the Keystone Exam.

HONORS ENGLISH 11 1.0 Credit

Honors English 11 continues where Honors English 10 ended. Literature will resume with the Age of Reason in England and America and move into the modern era of both countries. Key authors include Shakespeare, the Romantic Poets. In addition to literature, students will continue their study of Latin and Membean vocabulary, designed to prepare them for the PSAT and the SAT. Junior English also focuses on College and Career Readiness with the Graduation Project, which involves extensive career exploration including ASVAB testing and personal reflections, both facilitated by the appropriate English department faculty. Honors English 11 is a writing intensive course, with students writing creative, analytical, and research-based compositions. In addition, students will continue to hone their public speaking skills through various in-class speech opportunities.

Prerequisites: Students planning to take Honors English 11 must have earned an 80% or higher in Honors English 10 course OR a 90% or higher in Academic English 10.

A.P. ENGLISH LITERATURE AND COMPOSITION 1.0 Credit

AP English is an advanced reading and writing course in which students will examine the search for life's meaning in a variety of literary works from all eras spanning the classical period to the present day. This will include short stories, poems, novels, memoirs, theatrical plays, and selected films. Students will read approximately 15 major works, answer complex analytical questions about the reading, participate in extensive discussions, give individual and group presentations, and complete numerous in-class writing assignments. This course will also prepare students for the College Board's Advanced Placement Examination in Literature and Composition through multiple choice practice tests, in-class discussion, timed writings, and course specific vocabulary lists. Students earning a score of "3" or higher may qualify for up to one year's credit in English and/or exemption from freshman English in college. Students signing up for this course must see the instructor before the end of sophomore/junior year to get the required summer assignment. Completion of this course fulfills an 11th or 12th grade English requirement.

Prerequisites: 90% average or above in an English 10 and/or 11 course(s), and no previous high school English failures.

ACADEMIC ENGLISH 12 1.0 Credit

Academic English 12 is an intensive reading and writing course in which students will examine a variety of poems, short stories, novels, plays, and nonfiction materials. Through class discussion and personal reflection, students will respond critically, personally and collaboratively to a variety of archetypal themes, examining storytelling and its connection to human nature across cultures

and time periods. Comprehensive units on Greek mythology and theater, Shakespearean tragedy and media literacy will be studied. Connections will be drawn between current events and the literature being read and students will research a variety of issues and ideas to supplement assigned readings. As a capstone experience, students will write and deliver a personal legacy speech. In addition, students will expand their vocabulary through the use of Membean, complete personal essays, and explore a variety of ways research and language is used in professional practice. Methods of assessment include, but are not limited to, projects, writings, tests, quizzes, presentations and journals

Prerequisites: 90% average or above in Academic English 11, or 80% average or above in Honors English 11.

HONORS ENGLISH 12 1.0 Credit

The course is comprised of various thematic units, including archetypes and storytelling, Greek mythology, Shakespearean tragedy, and media literacy, while adding a focus on satire, allegory, rhetoric, and analyzing nonfiction text. Students will explore storytelling forms and meaning across various cultures and time periods through research and comparative analysis while moving through our fiction units, and will switch to a focus on nonfiction text, current media, and college preparatory writing for the second half of the semester. Students will continue to use our self-based vocabulary platform, Membean, while also learning about Greek roots as a word decoding strategy. Students will also complete a Legacy Speech as a capstone project for the course.

A.P. ENGLISH LANGUAGE AND COMPOSITION 1.0 Credit

The AP course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. The emphasis on reading and writing will cause students to become aware of the interactions among a writer, his/her purpose, the subject, and audience expectations. Students will also gain an understanding of the way genre conventions, writing style, and the resources of language contribute to effectiveness and style in writing.

Prerequisites: Students planning to take AP Language and Composition must have earned a 90% or higher in Honors English 11 course or higher in Academic English 11 or an 85% or higher in AP English Literature. Students can have no previous high school English failures.

YEARBOOK AND MEDIA JOURNALISM I 1.0 Credit

Yearbook and Media Journalism is designed to offer students (grades 10 and 11) an experience in photography, graphic design, journalism, technology integration, and business management. Students will explore the art of storytelling without words through photography and photojournalism. Likewise, students will uncover the elements of journalistic writing by developing an understanding of reporting, writing, editing, publishing, and promoting news while and publishing the APALACO yearbook. While developing as leaders in a global community, students will embrace the challenge of learning more about the use of 21st century technology and tools with publication. Lastly, students will manage communication and networking, timelines and deadlines, advertisements and budgets, and continue to strive to become forward-thinkers with problem solving.

Level I staff members should plan to attend an extracurricular event for photography coverage each month, as well as contribute to business incentives each marking period. Staff members should budget two additional hours of work time outside the typical school day each marking period.

Prerequisites**:** Completion of an application assignment and satisfactory attendance and discipline records.

YEARBOOK AND MEDIA JOURNALISM II 1.0 Credit

Yearbook & Media Journalism II is designed as a year-long course to offer students (primarily grade 11 and 12) an experience in photography, journalism, technology integration, and business management. The design and publication of the APALACO yearbook is the primary responsibility for level II students. Students will uncover the elements of journalistic writing by offering readers a look into the greater-Williamsport area through the inclusion of feature articles, and writing yearbook copy articles for assigned sections. While developing as leaders in a global community, students will embrace the challenge of learning more about the use of 21st century technology and publication tools. Lastly, students will manage communication and networking, timelines and deadlines, advertisements and budgets, and continue to strive to become forward-thinkers with problem solving.

Level II staff members have the opportunity to assume leadership positions as section editors. Editors are required to clock four additional hours of work time outside the typical school day each marking period, while staff members are required to clock two additional hours. Responsibilities also include: covering school events, completing business incentives, and keeping a portfolio of his/her work, including a self-analysis of writing, design, and involvement. Students are responsible for assuring fact/source credibility, peer-editing and motivating/managing section staff to meet deadlines.

Prerequisites**:** Completion of Yearbook and Media Journalism I with 80% average or above.

YEARBOOK AND MEDIA JOURNALISM III 1.0 Credit

Yearbook & Media Journalism III is designed as a year-long course to offer students (primarily grade 12) an experience in photography, journalism, technology integration, and business management. Level III staff members will assume the role of team leader and/or section editor. The layout and design of the APALACO yearbook is the primary responsibility for editors. It is the responsibility of level III students to initiate communication and networking, set staff timelines and deadlines, implement advertisements and budgets, and mentor other staff members with task completion and problem solving.

Editors are required to clock four additional hours of work time outside the typical school day each marking period. Responsibilities also include: covering school events, attending editor meetings, planning weekly for staff responsibilities, and keeping a portfolio of his/her work and progress.

Level III leaders and editors will also take on the responsibility of planning and facilitating the summer journalism workshop.

Prerequisites**:** Completion of Yearbook and Media Journalism II with 80% average or above.

NOTE: Yearbook & Media I, II, & III sections all meet during the same period in the same classroom.

Mathematics

Four credits in Mathematics are required for graduation plus successful proficiency on the Algebra I Keystone Exam as well as a MINIMUM of 2 credits in Algebra and 1 credit in Geometry. One (1) of the four (4) must be earned during the freshman year.

Course title	Weight	Open to Grades	Prerequisites	Credit
CC Algebra ½	1.00	9	Successful completion of Math 8	1
CC Algebra I	1.00	9	Successful completion of CC Algebra ½	1
Geometry	1.00	9-10	Successful completion of CC Algebra I or Keystone Algebra 8	1
Honors Geometry	1.04	9-10	Successful completion of Keystone Algebra 8 with a grade of 80% or better	1
Math Analysis	1.00	10-12	Successful completion of CC Algebra I OR Keystone Algebra 8 AND Successful completion of Geometry OR Honors Geometry AND Required for students who are not proficient on the Algebra I Keystone Exam	1
College Prep Math (taken BEFORE CC Algebra II)	1.00	10-12	Successful completion of CC Algebra I OR Keystone Algebra 8 Successful completion of Geometry OR Honors Geometry Successful completion of Math Analysis I	1
Statistics	1.00	11-12	Successful completion of CC Algebra I OR Keystone Algebra 8 Successful completion of Geometry OR Honors Geometry	1
CC Algebra II	1.00	10-12	Successful completion of CC Algebra I OR Keystone Algebra 8 Successful completion of Geometry OR Honors Geometry Proficient or Advanced on the Algebra I Keystone Exam OR Successful completion of Math Analysis I and College Prep Math	1
Honors CC Algebra II	1.04	10-12	Successful completion of CC Algebra I with a 90% or better OR Keystone Algebra 8 with an 80% or better Successful completion of Geometry with a 90% or better OR Honors Geometry with an 80% or better and Proficient or Advanced on the Algebra I Keystone Exam	1
Adv Trigonometry	1.06	10-12	Successful completion of CC Algebra II with a 90% or better OR Honors CC Algebra II with an 80% or better	1
Academic Trigonometry	1.0	10-12	Successful completion of CC Algebra II with an 80% or better OR successful completion of Honors CC Algebra II	1
Honors Calculus	1.04	11-12	Successful completion of Adv Trigonometry with an 80% or better OR Academic Trigonometry with a 90% or better	1
AP Calculus AB	1.08	11-12	Successful completion of Honors Calculus with a 90% or better	1
AP Calculus BC	1.08	11-12	Successful completion of AP Calculus BC with a 80% or better	1

CC ALGEBRA 1/2 1.0 Credit

CC Algebra 1/2 continues the algebraic concepts learned in 8th grade mathematics. Topics include solving linear equations and inequalities, graphing linear equations and inequalities, functions and their absolute value equations and inequalities, systems of equations and inequalities, exponents, polynomials, applications, and reasoning.

CC ALGEBRA I 1.0 Credit

CC Algebra I reviews and extends the concepts of CC Algebra 1/2. The concept of the real number system is extended through rational, irrational, real numbers, and complex numbers. Students continue to learn the techniques and applications (models) of a variety of topics including factoring, simplifying radicals and rational expressions, solving rational equations, systems of equations and inequalities including linear programming, a review and extension of probability and statistics, and arithmetic and geometric sequences and series, and basic quadratic equations.

GEOMETRY 1.0 Credit

The principal aim in the study of Geometry is to develop and apply the properties of points, lines, and planes and the figures they form, properties of circles, and right triangle trigonometry. The relationships of triangles, quadrilaterals, and other polygons are extended to applications of area and volume. Inductive and deductive reasoning is stressed throughout the course.

HONORS GEOMETRY 1.0 Credit

This honors level course will provide a faster-paced, deeper study of the same content offered in Geometry including developing and applying the properties of points, lines, and planes and the figures they form. The relationships of triangles, quadrilaterals, and other polygons are extended to applications of area and volume. Inductive and deductive reasoning are stressed throughout the course. This honors level course will also provide more rigorous applications of Geometry to increase thinking skills and problem-solving skills.

MATH ANALYSIS *(required for non-proficient students on the Keystone Exam)* 1.0 Credit

Although Keystone Exams were eliminated from the course is designed to focus on the keystone assessment anchors, thus building a more focused foundation in Algebra I to improve to a proficient level on the Algebra I Keystone Exam. Students will have the opportunity to develop a deeper conceptual and practical understanding of numbers and operations, algebraic concepts (such as linear equations, inequalities, and functions), geometry, measurements, and data organizations (including probability). Through the use of higher order thinking skills and problem solving, students will implement a wide variety of mathematics to real world applications. CDT and other assessments will be used to determine necessary targeted instruction. Students who do not meet proficiency on the Algebra I Keystone Exam will automatically be placed in Math Analysis (after successfully completing Geometry).

COLLEGE PREP MATH 1.0 Credit

College Prep Math is a mathematics course for students who need additional assistance, practice, and time to master high-level math concepts and skills. The course focuses on reviewing geometry concepts and developing skills needed to understand radicals, complex numbers, exponents, linear, quadratic, and polynomial functions and concepts on the SAT mathematics exam. After taking this course, students would have a better understanding of the basic skills needed to take CC Algebra II.

Graphing calculators will be used extensively, and therefore it is strongly recommended that each student have a TI-84+ calculator for this course.

STATISTICS 1.0 Credit

Statistics is designed to help students who anticipate entering professions such as engineering, education, psychology, social work, or business administration. Topics include measures of central tendency, measures of variability, hypothesis testing, and probability. The emphasis in each of these areas is upon giving the student enriching experiences in presentation, analysis, and interpretation of data. This course has a strong emphasis on the use of technology, hands-on activities, case studies, and using real data in applications. There will be mini-projects and formal assessments in every unit.

CC ALGEBRA II 1.0 Credit

CC Algebra II is a mathematics class for students who have successfully taken either CC Algebra I or Keystone Algebra 8 and either Geometry or Honors Geometry. Emphasis is placed on strengthening and extending the skills learned in previous mathematics courses. Topics covered will include: : factoring, exponents, radicals and radical equations, complex numbers, quadratic equations, rational exponents, polynomial identities and equations of higher order, rational expressions and equations, solving and graphing equations and inequalities of various types, polynomials, transformations across function types, and applications. Graphing calculators will be used extensively, and therefore it is strongly recommended that each student have a TI-84+ calculator for this course.

HONORS CC ALGEBRA II 1.0 Credit

Honors CC Algebra II is an honors level mathematics class for students who have successfully taken either CC Algebra I or Keystone Algebra 8 and either Geometry or Honors Geometry. Emphasis is placed on strengthening and extending the skills learned in these previous courses. Topics covered include: factoring, exponents, radicals and radical equations, complex numbers, quadratic equations, rational exponents, polynomial identities and equations of higher order, rational expressions and equations, solving and graphing equations and inequalities of various types, polynomials, exponential, transformations across function types, probability and applications. Due to the honors level, students should expect a faster-paced environment with more rigorous problem-solving, discussions for deeper understanding of the concepts listed above, and extended applications. Graphing calculators will be used extensively, and therefore it is strongly recommended that each student have a TI-84+ calculator for this course.

ACADEMIC TRIGONOMETRY 1.0 Credit

Trigonometry is the study of triangles and the functions formed by the ratio of a right triangle embedded in a circle of radius one. Topics covered include a basic introduction to trigonometric functions, identities, and applications of trigonometric functions, exponential functions, logarithmic functions, and conic sections. This course has a strong emphasis on the use of technology with the learning of mathematics. This course is recommended for all college-bound students and is required for Honors Calculus.

ADVANCED TRIGONOMETRY *(also a Keystone College Dual Enrollment course - Math 1135: Trigonometry - 3 college credits)* 1.0 Credit

This advanced level course will provide a faster-paced, more rigorous course-work, and deeper study of the same content offered in the Academic Trigonometry course including the study of triangles and the functions formed by the ratio of a right triangle embedded in a circle of radius one. Topics covered in this course include trigonometric functions, identities, and applications of trigonometric functions, exponential functions, logarithmic functions, and conic sections. This course has a strong emphasis on the use of technology with the learning of mathematics. This course is recommended for all college-bound students and is required for Honors Calculus.

HONORS CALCULUS 1.0 Credit

Calculus is a complete course in differential and integral calculus of algebraic and trigonometric functions. Essential topics of analytic geometry are studied as are the many applications of calculus. Students completing this course would have a good foundation for the advanced placement examination in Calculus AB, but would need further study to be successful at the exam.

AP CALCULUS AB 1.0 Credit

AP Calculus is designed to prepare students to take the college placement test offered by the College Entrance Examination Board. It extends the material covered in Honors Calculus to include the topics of the AP Calculus AB Syllabus. Students completing this course will be prepared to take the AP Exam in Mathematics AB to obtain college credit. It is expected that students taking this course will take the AP Calculus AB exam in May. *(also a Keystone College Dual Enrollment course - Math 2150: Calculus - 4 credits)*

AP CALCULUS BC

AP Calculus BC is designed to prepare students to take the college placement test offered by the College Entrance Examination Board. It extends the material covered in AP Calculus AB to include the topics of the AP Calculus BC Syllabus.

Because of the intellectual challenges associated with the mastery of so much material and with the creative application of new ideas, students should be prepared to handle a rigorous course at a college-level. The course philosophy requires students to represent and connect calculus concepts in graphical, numerical, analytical, and verbal ways. While limits, derivatives, integrals, sequences, and series are studied individually, connections between all of them are constantly emphasized and each are used as tools to further study the others. The following types of functions are studied: polynomials, rationals, radicals, trigonometric, transcendental, parametric, polar, and vector. Applications include: tangent lines, differentials, optimization, related rates, area, volume, surface area, arc length, center of mass, exponential decay, and rotational systems. A strong and quick pace is required in order to complete the syllabus outlined by the College Board.

Students completing this course will be prepared to take the AP Exam in Calculus BC to obtain college credit. It is expected that students taking this course will take the AP Calculus BC exam at the end of the course.

Music

All students may elect any course for which they are qualified. A student may enroll for both Symphonic Band and Lancer Choir. Students with a combination of band and choir will attend band and choir rehearsal on alternating days and will receive one (1) credit for the combined courses.

Course title	Weight	Open to Grades	Prerequisites	Credit
Symphonic Band	1.0	9-12	Proficiency on an Instrument (Director Approval if not in MS Band)	1
Honors Symphonic Band	1.04	10-12	Currently enrolled in Symphonic Band and successful proficiency audition	1
Lancer Concert Choir	1.0	9-12	None	1
Underclassmen Ensemble	1.0	9-11	Currently enrolled in Symphonic Band	1
Music for the Masses	1.0	9-12	None	1
Guitar	1.0	9-12	None	1
Digital Studio Recording I	1.0	9-12	Proficiency on an Instrument or Voice (instructor approval)	1
Digital Studio Recording II	1.0	10-12	Digital Studio Recording I	1
AP Music Theory*	1.08 (?)	10-12	Music Department Recommendation	1

UNDERCLASSMEN ENSEMBLE 1.0 Credit

Underclassmen Ensemble is designed to meet the instructional and performance needs of the developing instrumentalist. Underclassmen Ensemble is open to all students who play a band instrument, or who are interested in learning to play an instrument for the first time. Students enrolled in Underclassmen Ensemble must also be simultaneously enrolled in Symphonic Band. Students enrolled in Underclassmen Ensemble do so with the understanding that a portion of the grade for the course is derived from participation in performances, which may take place outside of the school day. Students are also expected to make a positive contribution to rehearsals and class discussion. In addition to playing techniques and musical rudiments, the course covers a vast range of styles and genres, ranging from rock and pop transcriptions to the more serious and advanced music representing the core of the wind band literature. Members are also eligible for various enrichment opportunities such as chamber ensembles, solo festivals, and auditioning for district, all-state and national honor bands. This is a full year course.

SYMPHONIC BAND 1.0 Credit

Symphonic Band is open to all students who play or are interested in learning a band instrument. Students are expected to have reached at least an intermediate level of performance on a band instrument and must possess minimum music reading skills commensurate with the level of music studied in ensemble settings. Students enrolled in Symphonic Band do so with the understanding that a portion of the grade for the course is derived from participation in performances which may take place outside of the school day. Students are also expected to make a positive contribution to rehearsals and attend regular lessons scheduled during the day. In addition to playing techniques and musical rudiments, the course covers a vast range of styles and genres, ranging from pop and rock transcriptions to the more serious and advanced music representing the core of the wind band literature. Additional units of study will include: individual and ensemble performance skills, music

theory, music history, conducting, performance on secondary instruments, history of wind music, and instrumental repertoire.

HONORS SYMPHONIC BAND 1.0 Credit

Honors Symphonic Band is open to any member of the high school band (by audition). This course option is designed for the advanced instrumentalist desiring a more intense program of study. The grade for this course is weighted when figured into class rank and GPA. Students must take a proficiency audition prior to enrolling for honors credit. Students enrolled in Honors Band must also be simultaneously enrolled in Symphonic Band. In addition to meeting all regular Symphonic Band course requirements, students will be required to prepare and perform two solo performances, once at the end of each semester. The solo performance will consist of a 5-10-minute performance of solo literature. The music must be serious in nature and representative of the student's ability level. Honors Band students will be expected to register for participation in Lycoming Senior County Band and audition for the PMEA District 8 Band Festival. The honors portion of the grade during first and third marking periods is based on progress toward the jury, whereas the honors portion of the grade in the second and fourth marking periods is based on the jury performance. In addition to individual study, additional units of study will include: music theory, music history, conducting, performance on secondary instruments, history of wind music, and instrumental repertoire. Applied study with a private teacher on the student's instrument is highly recommended for any student enrolled in this course.

LANCER CONCERT CHOIR 1.0 Credit

Lancer Choir represents the culmination of the Loyalsock Township choral experience. Available to all grade levels, students will build and develop their musicianship skills, including sight-singing, vocal technique, and knowledge of style and historical periods in music. The Lancer Choir repertoire spans the gamut from Renaissance motets and madrigals, to musical theatre and pop. Performances include the annual Holiday Concert, Spring concerts, and the bi-annual All-District Concert at the Community Arts Center. In the past, the Lancer Choir has been involved with performances with the Lycoming College choir and other adult performing groups. Students in choir have many performance and enrichment opportunities, including performances in the community and a trip to see a Broadway show in the spring. Students involved with Lancer Choir have the opportunity to audition for Knight Music, the small a cappella group, that performs within the community at many events.

MUSIC FOR THE MASSES 1.0 Credit

Music is an important part of human existence; it tells a story, captures emotions, provides us with an escape, and often provides us the inspiration for our greatest triumphs and consolation for our humblest of defeats. For students with little or no training in music, this course will approach music from a variety of examples in which music is integral in every-day life and used strategically in the world we live, including business/marketing, athletics, drama and dance, and media/TV, among many more examples. This course explores, in a nontechnical way, the basic elements of music and discusses the various cultural contexts in which music is found and how these affect the nature of the music and the listener's perception. It will provide students with a foundation for intelligent and appreciative listening and discussion of music through an understanding of the ways in which music is put together and the characteristics of various musical styles of non-classical music. Students will explore the relationships between music and other facets of society and culture (government, sport, film, fashion, dance, etc) while considering how the music we experience helps to define us as individuals and as a society. Upon the completion of this course, students will be able to thoughtfully analyze and discuss how music shapes their individual cultural identity and the profound impact of music in our society.

GUITAR 1.0 Credit

Get out your "axe" and come on tour! Regardless of your playing level, there is a place for you in Guitar. This course will explore the many different directions with one of the most versatile instruments. Included in this course will be song performance, chords (rock and jazz), Tablature, finger picking, scales for soloing and improvisation, small ensembles and rock/familiar chord progressions. Sign up and crank it to eleven!

DIGITAL STUDIO RECORDING I and II 1.0 Credit (for each level)

Using a musical instrument or voice, this course will have you cruising on the highway of digital sound recording and performance. Regardless of your musical ability level, you will start at your own comfort level. Then the course will take a quick dive into studio track recording, utilizing Studio One and GarageBand software. Sometimes you will be in the studio playing and other times in the sound booth doing the post production work. You will also get to create your own loops as part of the recording. You will explore track recording using Studio One, which is used in professional recording studios.

NEW COURSE! AP MUSIC THEORY 1.0 Credit

AP Music Theory seeks to develop a thorough grasp of the fundamentals of music through the study of scales, intervals, keys, and triads, leading to the writing of simple four-part harmonization. A strong emphasis is placed on ear-training and the improvement of music reading. This course will prove most beneficial to those planning to engage in lifetime music making or pursuing a career in music or music education. Other pupils who want to acquire a good basic musical knowledge would find this course very helpful. AP Music Theory moves at an accelerated pace and is designed to prepare students for the AP Music Theory Exam, taken upon the conclusion of the course.

Students interested in taking this course must first receive recommendation from one of the members of the Music Department Faculty. Students should have previously have completed at least one of the following courses: Lancer Choir, Symphonic Band, Honors Band, Underclassmen Ensemble, Guitar, or Digital Studio Recording.

Physical Education and Health

Physical Education Philosophy

The purpose of physical education is to teach the whole student, not just their body and movement. Physical education provides the opportunity to teach students about movement, strategies, teamwork, problem solving and health related fitness. Exposing students to various physical activities, sports, and methods of fitness can better provide enjoyment of physical activity, as well as build social, psychomotor, and cognitive skills.

Health Education Philosophy

The overarching theme of our health curriculum is to provide all students with the skills and knowledge to practice behaviors that promote making wise choices, and have healthy responses to issues in life.

Course title	Weight	Open to Grades	Prerequisites	Credit
Grade 10 Physical Education	1.0	10	None	.5
Grade 10 Health	1.0	10	None	.5
12th Grade Physical Education	1.0	12	None	.5
Competitive Team & Lifetime Sports	1.0	9-12	None	1

GRADE 10 PHYSICAL EDUCATION AND HEALTH 1.0 credit

The 10th grade Physical Education course will focus on Team and Lifetime activities. The purpose of this course is to teach students the value of staying physically active and developing their athletic skills for present and future leisure pursuits. This class is structured so that the students will meet the PA State Standards for Physical Education through a variety of team and individual activities. Students will also be encouraged to maintain and improve their fitness levels. The 10th grade Health course is designed to help students learn about their changing bodies, to help them sort out emotions and personal values, to aid them in maintaining optimum health as a lifelong process, and to show students how to take responsibility for making healthy decisions. Health is all about the student: topics include real-life situations for teens. The topics areas are based on teen pressures and teenage risk behaviors:

- Mental Health: dealing with stress, depression, suicide; having empathy for others; violence prevention; positive self-esteem; handling peer pressures; making decisions; anger management; communication skills; dealing with bullies; and more.
- Sexuality: understanding reproductive anatomy and related issues; preventing sexually transmitted infections (diseases) and pregnancy; benefits of abstinence; recognizing healthy and unhealthy relationships; birth control.
- Smoking/ Alcohol/ Drugs: understanding the dangers of substance use and helping them know how to be above the influence to use.
- Nutrition: balanced eating; understanding nutrients; reading food labels; the importance of exercise; the dangers of many diets and eating disorders.

GRADE 12 PHYSICAL EDUCATION .5 credit

This course will focus on team, lifetime, wellness and fitness activities. The primary goal of the course is to teach the value of staying physically active and provide skills to attain and maintain fitness throughout life.

COMPETITIVE TEAM AND LIFETIME SPORTS (Open to Grades 9 -12) 1.0 credit

This PE elective occurs in a block for the semester and will focus on Team and Individual Lifetime activities for those students who are interested in participating in a competitive environment. The purpose of this course is to teach students the value of staying physically active and developing their athletic skills for present and future leisure pursuits. The elective is open to any 9th-12th grade student who enjoys participating in team activities. This elective will provide opportunities to achieve skills, knowledge, and attitudes that will allow the individual to attain an optimal quality of life and well-being.

Course Requirements: ONLY students that are interested *in being competitive in a co-ed setting* in both team and lifetime activities.

Science

Course title	Weight	Open to Grades	Prerequisites	Credit
Earth & Environment	1.0	9	None	1
Honors Earth & Environment	1.04	9	90% or better in 8th Grade Science class	1
Biology	1.0	10	None	1
Honors Biology	1.04	10	90% or better in Earth & Environment 85% or better in Honors Earth & Environment	1
AP Biology	1.08	11-12	Successful completion of Honors Biology with a grade of 90% or better. Advanced on the Biology and Algebra I Keystone Exams recommended.	1
Chemistry	1.0	11-12	Proficient or better on the Biology and Algebra I Keystone Exams Completion of at least Algebra 1	1
Honors Chemistry	1.04	11-12	Successful completion of CC Algebra II or taking CC Algebra II concurrently 90% or better in Biology or 85% or better in Honors Biology Proficient or better on the Biology and Algebra I Keystone Exams	1
AP Chemistry	1.08	11-12	Successful completion of Honors Chemistry with a grade of 90% or better Successful completion of CC Algebra II or higher Advanced on the Biology and Algebra I Keystone Exams *recommended*	1
Physics	1.0	11-12	Completion or are concurrently enrolled in College Prep Math or higher. Proficient or better on the Biology and Algebra I Keystone Exams	1
Honors Physics	1.04	11-12	Successful completion of CC Algebra II 90% or better in Chemistry or 80% or better in Honors Chemistry Strongly recommended that students are concurrently enrolled in Trigonometry or higher Proficient or better on the Biology and Algebra I Keystone Exams	1
AP Physics	1.08	11-12	Successful completion of Honors Physics with a grade of 90% or better Successful credit and completion of Trigonometry Taking Honors Calculus and AP Calculus concurrently	1
Integrated Physical Science	1.0	11-12	Successful completion of Earth & Environment and Biology *Intended for those students pursuing a technical/vocational pathway.*	1
Honors Human Anatomy & Physiology	1.04	11-12	Credit earned and successful completion of Biology with at 80% or better	1
NEW! Laboratory Biotech	1.0	10-12	Successful completion of Earth & Environment Successful completion of Biology or concurrently taking Biology	1

EARTH AND THE ENVIRONMENT 1.0 Credit

This course is designed to give students a sound foundation in Earth systems and environmental science. Students will use a variety of resources including lab investigations, computer models, computer applications, research projects, and field studies to enhance their environmental awareness and scientific understanding of the Earth and environment. Topics to be investigated include ecology, evolution, the natural forces that affect the earth, hydrology ecosystems, population dynamics, sustainability, and alternative energy resources.

HONORS EARTH AND THE ENVIRONMENT 1.0 Credit

In this class, introductory principles of Earth systems and environmental science, including plate tectonics, energy, biogeochemical cycles, the atmosphere, weather, climate, evolution, ecology and Pennsylvania topography. Students enrolled in this course analyze and describe Earth's interconnected systems and how they are changing due to natural processes and human influence. Students will evaluate evidence from experiments and technology used by scientists to understand the nature of the Earth and the human impact on the environment. Students will also explore and evaluate sustainability concerns, including alternatives to the existing environmental conditions in terms of scientific or technological feasibility, cost, the effect on the economy, and the quality of life in the community.

Course Recommendations:

- A benchmark of 90% or better in ALL middle school science classes
- Proficient or better on past PSSAs

BIOLOGY 1.0 Credit

Biology is designed to teach students the unifying principles that consume the study of life. The subject matter focuses on common life processes. The course traces biological organization from the cellular level to the entire organism. The course gives students a solid understanding of the common themes associated with the many fields within the biological sciences. Students will use a variety of resources including laboratory investigations, computer applications, and research projects to enhance their understanding of biology. All nine benchmark topics will be covered and reviewed in preparation for the Biology Keystone, which will occur at the end of the semester.

Course Requirement: Credit earned in Earth & Environment or Honors Earth & Environment

HONORS BIOLOGY 1.0 Credit

Honors Biology is designed to teach students the unifying principles that consume the study of life **at a deeper level and faster pace than Biology.** The subject matter focuses on common life processes. The course traces biological organization from the cellular level to the entire organism. **Students will be asked to analyze and synthesize with critical thinking skills**. All nine benchmark topics will be covered and reviewed in preparation for the Biology Keystone, which will occur at the end of the semester. **Laboratory investigations will include formal lab reports in addition to the core labs that will be run throughout the semester.**

Course Requirement: Credit earned in Earth & Environment or Honors Earth & Environment
Course Recommendation: A benchmark of 90% in Earth and Environment or a benchmark of 85% in Honors Earth and the Environment

AP BIOLOGY 1.0 Credit

AP Biology is a course that should be taken by students who are considering or plan to major in a field related to the sciences. This course is designed to be equivalent to a freshman biology class at the collegiate level. AP Biology at Loyalsock is an elective and eligible for students to take as a junior or senior. This course is offered every other year, based on student interest and schedule availability. AP Biology will follow the College Board's Advanced Placement guidelines and prepare students for the Advanced Placement exam given annually in May. The AP Biology curriculum will be focused on: molecules, cells, genetics, evolution, organisms (plants and vertebrates) and populations (principles of ecology and animal behavior). In addition to the course content, there are several mandatory laboratory investigations that must be completed per the College Board guidelines. Good problem solving and critical thinking skills are necessary in order to be successful in the laboratory section of this course.

Time Allocations: At least five hours a week in unsupervised individual study in addition to regular class assignments.

Course Recommendation:

- A benchmark of 90% in Honors Earth and the Environment and Honors Biology to achieve success in this course
- Advanced on Keystone Biology and Keystone Algebra I exams recommended.

INTEGRATED PHYSICAL SCIENCE 1.0 Credit

This course is intended for those students pursuing a technical/vocational pathway.

Physical Science is a course that explores the relationship between matter, energy, and motion. The student will investigate the following: force and motion, structure and properties of matter, interactions of matter and energy. It is the expectation that students will experience the content of Physical Science through inquiry learning. Hands-on laboratory investigations, individual studies, and group activities will be emphasized throughout the learning experience. Using available technology, students will investigate forces and motion, the chemical and physical properties of matter, the ways in which matter and energy interact within the natural world and the forms and properties of energy. Conservation of matter and energy is an underlying theme throughout the entire course. Physical Science will provide the knowledge, prerequisite skills, and habits of mind needed for problem solving and ethical decision-making about matters of scientific and technological concern. Students planning collegiate studies after graduation should plan to enroll in Chemistry/Physics or Honors Chemistry/Honors Physics.

CHEMISTRY 1.0 Credit

This course is intended for those students NOT planning to continue their education in a science-related field.

Chemistry is often referred to as the 'central science', because to understand the living and material world a person must have a basic understanding of chemical principles. This course will expose all students to the basics of measurement, composition and structure of matter, as well as the changes that matter undergoes. Through the study of how and why these changes occur, students will be able to describe a predicted outcome and understand the application of this knowledge to the real world. Hands-on laboratory activities will be performed to reinforce the content being presented in the course. Safety, ability to follow directions and work independently, as well as proper recording of data will be stressed. Students will be exposed to basic problem solving and math skills that are required for the handling, application, and display of data. Students should successfully complete a first-year algebra course prior to taking any Chemistry course.

Recommendations:
- Proficient or better on the Biology and Algebra I Keystone Exams to achieve success in this course
- Recommended that students have completed Algebra 1

HONORS CHEMISTRY 1.0 Credit

This course is intended for students who are college bound with plans to major in a science related field and/or prepare for the AP Chemistry course.
Chemistry is often referred to as the 'central science', because to understand the living and material world a person must have a basic understanding of chemical principles. This course will expose students to the basics of measurement, composition and structure of matter, as well as the changes that matter undergoes. Through the study of how and why these changes occur, Students will be able to qualitatively and quantitatively predict outcomes and understand the application of this knowledge to the real world. Laboratory activities will be done to reinforce understanding and to test predictions. There will be an emphasis on the collection and recording of data, mathematical manipulation of data to evaluate the results of experiments, and the reporting of these results in a scientific context. Experimental design, multi-step problem solving, and the use of mathematical models in understanding and predicting observed results will be stressed throughout the semester.

Requirement:
- Successful completion of CC Algebra II or taking CC Algebra II concurrently

Recommendations:
- A benchmark of 90% or better in Biology or 85% or better in Honors Biology is strongly recommended for students interested in taking this course.
- Proficient or better on the Biology and Algebra I Keystone Exams to achieve success in this course

AP CHEMISTRY *(also a Keystone College Dual Enrollment course*) 1.0 Credit

The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first college year. For some students, this course enables them to undertake, as freshmen, second-year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. For other students, the AP Chemistry course fulfills the laboratory science requirement and frees time for other courses. AP Chemistry should meet the objectives of a good general chemistry course. Students in such a course should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course should contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic.

Time Allocations: At least five hours a week in unsupervised individual study.

Course Requirement:
- Successful completion of Honors Chemistry with a grade of 90% or better
- Successful completion of CC Algebra II or higher

Course Recommendations:
- A benchmark of 90% or better in honors math and science courses is strongly recommended for students interested in taking this course.
- Advanced on the Biology and Algebra I Keystone Exams to achieve success in this course

PHYSICS 1.0 Credit

<u>This course is intended for those students NOT planning to continue their education in a science-related field.</u>

Physics is the study of the physical phenomena that we encounter in our daily lives. It will attempt to explain the puzzling nature of such things as automobile crashes, projectiles moving through the air, sound waves, motion of orbiting objects, image creation by mirrors, and the selection of appropriate eyeglass lenses by your optometrist. Students work with the instructor to learn Physics through a method of engagement, exploration, and explanation. The course is intended to fulfill a physical science prerequisite for those students preparing for a technical school education or for those students who wish an elementary knowledge of physics. Mathematics will be limited to the use of arithmetic, algebra, and a lot of graphs. Emphasis will be placed on verbal and written explanations of physical events. Laboratory activities will be prevalent. Students wishing for a more in-depth study of mechanics and other physical principles in preparation for future scientific study (including any medical, dental, engineering, chemical, biological, environmental, or physiological field) should choose HONORS PHYSICS.

<u>Course Recommendations</u>:
- Strongly recommended that students have completed or are concurrently enrolled in College Prep Math or higher.
- Proficient or better on the Biology and Algebra I Keystone Exams

HONORS PHYSICS 1.0 Credit

<u>This course is intended for academic students who are college-bound with interest or plans to major in a science related field and/or prepare for the AP Physics course.</u>
Honors Physics is the study of the physical phenomena that we encounter in our daily lives. Honors Physics is a "mathematical science" that gives students an opportunity to use many of the mathematical concepts that they have acquired over your years of education. Physics is a fascinating study of the characteristics of matter and energy and their relationship to each other. It emphasizes the application of mathematics as a tool to describe the physical universe that surrounds us. The course will focus on Mechanics (as opposed to Electricity and Magnetism) and includes the traditional study of Newtonian mechanics, linear and multi-dimensional kinematics, circular motion, oscillations, sound, and basic optics. The concepts are presented at a level that requires an understanding of algebra, plane geometry, graphing techniques and basic right-triangle trigonometry. Students work in teams and with the instructor to learn physics through a method of engagement and exploration. This course is intended for students interested in math or science or planning to pursue any science or math related field at the collegiate level.

<u>Course Requirement</u>:
- Successful completion of CC Algebra II
- Strongly recommended that students are concurrently enrolled in Trigonometry or higher.

<u>Course Recommendations</u>:
- A benchmark of 90% or better in Chemistry or 80% or better in Honors Chemistry is ***strongly recommended*** for students interested in taking this course.
- Proficient or better on the Biology and Algebra I Keystone Exams

AP PHYSICS *(also a Keystone College Dual Enrollment course)* 1.0 Credit

The AP Physics course is designed to be the equivalent of the Mechanical Physics course usually taken during the first college year.

AP Physics is intended for those students with interest in high level scientific study, or who plan to major in the physical sciences, mathematics, engineering, or medical field and who plan on taking the AP Physics C – Mechanics Exam. AP Physics is a continuation of the Honors Physics course with specific emphasis on integration of the calculus underpinnings of the field. This class is intended to be representative of a common college or university level Physics class including mechanics and dynamics (as opposed to electricity and magnetism). The main emphasis of AP Physics at Loyalsock Township High School is to develop the students' abilities to read, understand, and interpret physical information in a verbal, mathematical, and graphical context. Additionally, students will be expected to describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem. Students will need to use significant mathematical reasoning including arithmetic, algebraic, geometric, trigonometric, and calculus principles. Students will be prepared for the Advanced Placement Level C-Mechanics Examination.

Course Requirement:

- Successful completion of Honors Physics
- Successful completion of Trigonometry
- Taking Honors Calculus and AP Calculus concurrently

Course Recommendations:

- A benchmark of 90% or better in honors math and honors physics courses are *strongly recommended* for students interested in taking this course.

HONORS HUMAN ANATOMY & PHYSIOLOGY 1.0 Credit

Honors Human Anatomy and Physiology is an elective course in science that studies body structures, functions, pathologies, and homeostasis. Knowledge from such a study makes it possible to predict how a cell, organ, or organ system will respond to various stimuli, and how this response affects the whole person. These studies are essential for anyone who plans to pursue a career in the health sciences, psychology, or physical education. In addition, the student's ability to evaluate her/his own physiological activities, understand recommended treatments, critically evaluate advertisements and reports in popular literature, and interact with health professionals is improved with this background. The student can expect to study the major body systems with emphasis on cytology, system dissections, nutrition, and genetics. **Dissection** will be a **mandatory** part of this course.

Course Requirement:

- Credit earned and successful completion of Biology with at 80% or better final average.

NEW COURSE! LABORATORY BIOTECH 1.0 credit

This is a rigorous course that provides an introduction to a variety of practical lab experiences in the field of biology. Through a hands-on lab intensive approach, students will investigate concepts of biology, biotechnology, medicine, forensics and microbiology. Some examples of the lab investigations may include: gram staining bacteria, gel electrophoresis, forensics techniques, EKG, blood pressure, heart dissection, calorimetry and blood typing. Students interested in careers that include significant laboratory or clinical skills should consider this course.

Prerequisite: Successful completion of Earth and the Environment OR Biology or concurrently taking Biology

Social Studies

Course title	Weight	Grades	Prerequisites	Credit
U.S. History	1.0	9-10	None	1
World History	1.0	9-10	None	1
AP World History	1.08	10	90% in previous history class	1
Civics	1.0	11-12	U.S. History, World History or AP World History	1
Modern History	1.0	11-12	U.S. History	1
AP Psychology	1.08	11-12	90% in History coursework, Successful completion of Biology	1
Sociology	1.0	9-12	None	1
Military History	1.0	11-12	U.S. History and World History	1

U.S. HISTORY 1.0 Credit

Twentieth Century American History will trace the history of America from the turn of the Twentieth century up to and including World War II. The content will be examined using a variety of learning opportunities, and assessments. Students will have the opportunity to explore history using technology, literature, and media.

WORLD HISTORY 1.0 Credit

This course is based upon different theories of interpretation and comparison in religion, culture, and conflict. Students will gain a cross cultural understanding and personal comprehension of global disagreement by examining practical information and developing critical thinking skills pertaining to historical analysis and writing. In each unit, students will examine both the history and current issues surrounding international turmoil. Students will develop content knowledge of ancient, medieval, and early modern civilizations up into 20th century.

A.P. WORLD HISTORY 1.0 Credit

The AP World History course analyzes the changes and evolution of civilization that have occurred throughout time. Students will evaluate common themes in humanity (i.e.: trade, religion, politics, technology, and customs) and examine how these subjects have affected the development of the World and its varying cultures. This course is designed so that students will not only understand and apply historical facts to World events, they will also have the opportunity to make connections between historical knowledge and their own lives. Knowing how one's life is situated in a specific world context will only enhance a student's appreciation for an expanded World-view as they realize how numerous and diverse personal perspectives support a global historical perspective. The AP World History course is treated as an equivalent of a college-level survey course in world history. Students will be expected to maintain the highest standards of academic excellence throughout the course. It is the expectation that students in this course will take the AP World History examination.

CIVICS 1.0 Credit

This class will address the foundations, philosophies, structure, and interplay between and amongst levels of government of the United States. To parallel this introduction, students will also become

acquainted with the Economic system operating in the United States. The specifics of the government portion may include a familiarization with Legislative, Executive, and Judiciary

processes, and how governments serve their constituents, state and local concepts, and a consideration of the complexities of municipal governments and their immediate problems may be addressed. The specifics of the economic portion may include basic economic principles, the free market system, labor and management, contracts, division of labor, international trade, Federal Reserve policy, international finance, and the roles of government financing and spending. Open to 11th and 12th grade students only. ***All students must demonstrate proficiency on a state-mandated Civics examination at the conclusion of the course.***

MODERN HISTORY 1.0 Credit

This course entails the study of *U.S. international relations, domestic policy, and history*. The course primarily addresses *events* from World War II to the present. Students will analyze historical events, global trade, global cooperation, environmental issues, human rights, and other world-wide events. Students will deal with problem solving skills and address issues that their generation may face in future years. Open to 11th and 12th grade students only.

AP PSYCHOLOGY *(also a Keystone College Dual Enrollment course* - Psyc 1110: General Psychology - 3 credits) 1.0 Credit

AP Psychology is a college level social studies course designed to introduce students to the methodical study of human behavior and mental processes. Throughout the course, students are exposed to the psychological facts, principles, and issues associated with the major fields of psychology, which include psychological disorders and treatment, memory, learning, motivation, human development, and social psychology. The scientific and practical use of ethics and research methods are also a major component of the course. Students will take part in a great deal of reading and experimentation throughout the course.

MILITARY HISTORY 1.0 Credit

Military History examines the study of the nine forms of offensive engagement within a modern military. Course topics include study of various wars, leaders within wars, Sun Zi's "Art of War," and various analysis of tactical analysis of battle fields.

SOCIOLOGY 1.0 Credit

This class is designed to introduce students to the study of human society and its relationships, recognize forces of change in society, develop a working vocabulary of Sociology and to recognize the various approaches to the study of this topic.

Technology Education

Course title	Weight	Open to Grades	Prerequisites	Credit
Pre Engineering & CAD	1.0	9-12	None	1
Graphic Design	1.0	9-12	None	1
Multimedia I	1.0	9-12	None	1
Multimedia II	1.0	10-12	Grade of 80% or better in Multimedia I	1
Honors CAD	1.04	9-12	Pre Engineering & CAD	1
Honors Engineering	1.04	9-12	Pre Engineering & CAD	1
Manufacturing/Woodworking	1.0	9-12	None	1

GRAPHIC DESIGN 1.0 Credit

This course centers on computer generated graphics and gives the student the opportunity to learn industry-standard software programs. Design, problem solving, and creativity are concepts that students will learn through instruction and hands-on design problems. Students planning careers in desktop publishing, web design, advertising art, and graphic design should take this course.

MULTIMEDIA I 1.0 Credit

Students will be introduced to professional production techniques and equipment used within the communications industry. Students learn how to utilize HD video cameras, professional editing software, and hardware. Another large part of this class focus will be film analysis. Students will learn the industry techniques used to create multimedia video. Students will have the opportunity to create commercials, documentaries, short films, and other projects related to the Communications industry. Students looking to seek careers in Business Marketing, Film, Communications, Journalism, or any related career would greatly benefit from this class.

MULTIMEDIA II 1.0 Credit

This semester course will have students continue to independently study the electronic media of television communication concentrating on producing shows. Students will be introduced to the use of audio and video mixers and other equipment used in the studio and control room. Students will complete a variety of video assignments including assisting in documentaries for the Loyalsock Township School District. Each student will be expected to produce a one half hour show that could be featured on an internet show and/or a local cable network. Students will also be encouraged to produce segments for entry in various contests for scholarship opportunities. Each student will be expected to produce a minimum of six final edited projects that total a minimum of 45 minutes. The final project assignment will be to produce a custom DVD Portfolio which includes a compilation of all work throughout the year. Students will be utilizing professional software such as Adobe After Effects and Adobe Premiere Pro. Students will learn advanced editing techniques such as: Cropping, Motion tweens, Chroma Key, lighting techniques, Computer Animation, and Key framing.

Prerequisite: Completion of Multi Production I with a 80% or better grade in Multimedia I.

PRE-ENGINEERING & CAD 1.0 Credit

Pre-Engineering & CAD is designed to introduce and learn the basic concepts of Mechanical Sketching & CAD. Throughout the course students will learn a variety of concepts related to Engineering. Topics included in the course will be geometric constructions, dimensioning, orthographic projections, and sectioning. Students will gain insight into related Engineering career opportunities as well as grasp a concept of industry language. Computer Aided Drafting (CAD) will be used throughout the course. This course will be beneficial to anyone considering a career in any form of industry including: Engineering, Design, Technical Drawing, Surveying, Fashion Design, Architecture, Interior Design, and Electronics.

HONORS CAD 1.0 Credit

Advanced CAD is a continuation of the study of Pre-Engineering and CAD. The course will be divided up into three sections. The first section will be further developing and reinforcing the student's skills using the CAD program, beginning with a review from Pre-Engineering and CAD while creating a set of working drawings and parametric models. The study of Architecture in residential and commercial design will be the main focus of study in the 2nd section of the course. Students will create designs and build models to test designs. Finally, the students will be spending a good deal of time designing and building a scale model of their own residential building. Students will create floor plans, kitchen and bath layouts, elevation views, site plans, and renderings from drawings. Career opportunities in the Architectural and Civil Engineering fields will be the major themes in this course.

Prerequisite: Pre-Engineering & CAD

HONORS ENGINEERING 1.0 Credit

This course is designed to give students the opportunity to explore engineering as it relates to industrial processes and products in the areas of manufacturing, transportation, control

technology, and communication. An overview of the fields of mechanical, electrical, architectural, industrial, civil, and fluid engineering will be covered. Simple machines, measuring, CAD, design, quality control, computer control, safety and testing will be included. The students will gain an understanding of the applicable laws of physics, including Ohm's Law, Pascal's Law, Boyle's Law, and Newton's Laws. The students will have the opportunity to create projects and/or products in the field for which they have an interest. Special emphasis will be placed on educational requirements and career opportunities for the various fields of Engineering.

Prerequisite: Pre-Engineering & CAD

MANUFACTURING/WOODWORKING 1.0 Credit

Woodworking is a project-oriented course in which students will be exposed to all phases of basic and advanced woodworking techniques. The knowledge of the tools, machinery, and operations used in the course are transferable to most any career in industry today. Students do not need experience with wood or woodworking machines but will need to bring self-motivation and desire to class with them. Student students will work individually (with instructor assistance) on a project made of wood which is chosen to match their interests and needs. Each student will have the opportunity to utilize the computer controlled (CNC) router to engrave clip art, words or other designs into their projects. Students will be expected to bear the cost of their chosen materials.

World Language

All World Language courses are sequential and elective in nature. Upon completion of Spanish I, the student should consult with the instructor in order to determine proper placement for the higher-level courses.

Course title	Weight	Open to Grades	Prerequisites	Credit
Spanish I	1.0	9-12	None	1
Spanish II	1.0	9-12	Successful completion of Spanish I with a recommended 80% or higher	1
Honors Spanish III	1.04	10-12	Successful completion of Spanish II with a recommended 90% or higher	1
Honors Spanish IV	1.04	10-12	Successful completion of Spanish II and III with a recommended 90% or higher in Spanish III	1

SPANISH I 1.0 Credit

First year Spanish students learn high-frequency vocabulary and sentence structures through a blend of TPRS (Teaching Proficiency through Reading & Storytelling), CI (Comprehensible Input) methods, and thematic units. The focus is narration in the present tense. Students will begin to read, write, understand, and speak Spanish, while engaging in Hispanic cultural lessons. Content is taught through listening to and reading stories, songs, short biographies, etc. Cultural components are embedded into instruction. Students are expected to read a short, leveled book. Students will exit this course able to have simple conversations about likes/dislikes, personality, hobbies/activities, school, professions, family, and food as novice-high language learners, based off of ACTFL Proficiency Guidelines.

SPANISH II 1.0 Credit

Spanish 2 is a continuation of Spanish 1. Students continue to learn high-frequency vocabulary through the TPRS, CI methods, and thematic units. The focus of instruction is on narration in the present and past tenses communicating on topics regarding daily routine, restaurant etiquette, fashion, music, and travel abroad. Cultural components are embedded into instruction. Speaking, listening, reading and writing remain the focus. Students are expected to read two leveled books, give simple presentations, act out skits, and work with authentic materials in Spanish. Students will exit this course as intermediate language learners, based off of ACTFL Proficiency Guidelines.

Prerequisite: Successful completion of Spanish I (recommended 80% or higher in Spanish I)

HONORS SPANISH III 1.0 Credit

In Spanish 3 the vocabulary and grammar are more advanced so students are able to produce more spontaneous conversations and communicate in real life situations. Themes could include: preparing food, discussing contemporary life (culture), volunteering in the community, and expressing future goals in Spanish. By the end of this course, students will acquire a strong base of grammatical concepts. Speaking, listening, reading, and writing will remain the focus, as the course

will be taught 90% in Spanish. Students will exit this course as intermediate-low language learners, based off of ACTFL Proficiency Guidelines.

Prerequisite: Successful completion of Spanish II (recommended 85% or higher in Spanish II)

HONORS SPANISH IV 1.0 Credit

Students will reinforce grammatical concepts as they focus on miscellaneous contemporary topics of interest. Vocabulary is considerably expanded and grammatical concepts are explored in depth. Many topics strengthen and will deepen deeper level thinking skills in Spanish. The class will focus on: immigration, health, environment, Hispanic art and architecture, plus social customs and values. Students will be daily encouraged and challenged to articulate their opinions and ideas accurately in Spanish. A highlight of this course is the inclusion of a College readiness project which all class students will complete by the end of the semester. All communicative skills, listening, reading, writing and speaking, are further developed so that students can exit as an advanced-low language learner, based on ACTFL Proficiency Guidelines. This course is equivalent to a second level college course and will be taught entirely in Spanish. Students will exit this course as intermediate-mid language learners, based off of ACTFL Proficiency Guidelines.

Prerequisite: Successful completion of Spanish II and III (recommended 85% or higher in Spanish III)