

LAUREL HIGH SCHOOL

An Equal Rights and Opportunities School District



SCHEDULE PLANNING
and
COURSE SELECTION
for
GRADES 9 through 12

*In preparation for the
2021-2022 school year!*

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MISSION STATEMENT

Laurel, a community dedicated to excellence, is committed to challenging and equipping students to become knowledgeable, responsible, and engaged contributors to an ever-changing global society.

POLICY

The Laurel School District does not discriminate in its educational programs, activities, or employment practices based on race, color, national origin, sex, sexual orientation, disability, age, religion, ancestry, union membership, or any other legally protected category. This policy is in accordance with state law, including the Pennsylvania Human Relations Act, and with federal law, including Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967 and the Americans with Disabilities Act of 1990. Laurel School District employees and participants who have an inquiry or complaint of harassment or discrimination, or who need information about accommodations for persons with disabilities, should contact *Mr. Leonard A. Rich*, Superintendent, at the Laurel District Office, 2497 Harlansburg Road, New Castle, Pennsylvania 16101 or by calling (724) 658-8940.

SPECIAL EDUCATION

Students in need of special education services receive an evaluation by a multi-disciplinary team. Evaluation will be provided on a non-discriminatory basis. The results of the evaluation will be utilized to plan for appropriate instructional methods and materials for the student. Each student receiving special education services has an Individualized Education Plan (I.E.P.) developed on an annual basis, and a re-evaluation conducted according to regulations. Eligible students shall be provided an education which approximates as nearly as possible the curriculum of the school district. All eligible students have an Individual Transition Plan and a Graduation Plan as a part of their Individualized Education Plan. Gifted students will be provided an education that enables them to participate in acceleration and enrichment. All eligible special education and gifted students' programs shall be in accordance with their IEP or GIEP. Parents of handicapped and gifted students are urged to contact Laurel High School if there are questions concerning assessment and special services. Please contact the Laurel School District Director of Pupil Services, *Ms. Nicole Bell*, at (724) 658-2673 ext. 2940.

All students, age 14 or above, participate and provide information regarding their post-school goals, preferences and interests including professional, vocational, occupational outcomes, training needs and independent living skills. It is strongly recommended that students consider the variety of vocational opportunities available and connect those goals with their current educational participation and progress. All students unique strengths, needs and challenges are identified in an Evaluation Report and integrated with their overall educational program as delineated in a Transition Individualized Education Plan. All teachers and staff responsible for implementing students' educational plans are informed on an ongoing basis and participate in the shared responsibility to ensure academic progress and success. The students' IEPs will reflect annual goals and adaptations and accommodations necessary for student success in their respective educational programs.

CAREER/TECHNICAL/VOCATIONAL EDUCATION

All students in Grade 9 tour the Lawrence County Career and Technical Center for possible enrollment in one of their vocational education programs. Each eligible and/or disadvantaged student who enrolls in a vocational education program will be given the opportunity to participate in a Vocational Assessment Program. All students also have the opportunity to participate in Laurel's Vocational Agricultural Program. No student will be excluded from participating in vocational programs or denied the benefit of vocational programs based on discriminating practices.

The programs offered at the Lawrence County Career and Technical Center for 2021-2022 are:

Auto Technology
Collision Repair
Computer and Office Technology
Commercial Art
Construction Trades
Cosmetology
Electrical Occupations
Health Assistant
Machine Tool Technology
Oil and Gas Well Drilling
Restaurant Trades
Veterinarian Technology Assistant
Welding

LAUREL VOCATIONAL AGRICULTURE EDUCATION PROGRAM

Admissions Policy: The Pennsylvania Department of Education Career and Technical Education (CTE) Program has an unlimited enrollment and allows all students to participate in classes that are detailed in the scope and sequence in the Career and Technical Education Information System (CATS). The school district adds additional sections if warranted by student course selection.

Recruitment Program: Laurel High School's Vocational Agriculture CTE Program informally recruits students and provides equal access beginning with the Ag Encounter program at the elementary grades. The informal recruitment process continues at the middle and high school levels via recommendations from the Tech. Ed. Teacher, and from community outreach and conversations at public FFA, 4-H, and Conservation Club events.

Selection and Placement Procedure: All students wishing to enter the PDE approved program are welcomed and counseled on the courses they should select each year to complete the Agriculture Education Program at Laurel High School. Students who complete 50% of the scope and sequence must take the end of program assessment through the National Occupational Competency Testing Institute (NOCTI).

Laurel School District does not discriminate on the basis of race color, national origin, sex, disability or age in its programs or activities. The following person has been designated to handle inquiries regarding the nondiscrimination policies:

Mr. Leonard A. Rich
Superintendent Laurel School District
2497 Harlansburg Road
New Castle, Pennsylvania 16101
(724) 658-8940 ext 3919
lrich@laurel.k12.pa.us

ALTERNATIVE EDUCATION

Students whose behavior is disruptive and cannot be remediated through traditional resources may be assigned to CRAY Challenges. Challenges is a highly structured and PDE approved Alternative Education Program for students grades 7 through 12. The aim of Challenges is to provide an intensive treatment and educational program which will assist students in learning skills enabling them to be reintegrated into the traditional school setting. In addition to an approved educational curriculum, therapeutic activities address issues such as social skills, anger management, and conflict resolution. A placement into Challenges is made by the School Administration or by judicial order. Students may be placed into this program for a minimum of 45 days, pending review.

COLLEGE WITHIN THE HIGH SCHOOL

The College within the High School program offers college credit for students enrolled in selected high school courses. In partnership with Seton Hill University and the University of Pittsburgh, students can choose to enroll in courses and earn up to three credits per course for a cost close to 75% less than tuition at the university. The following courses are currently offered:

Seton Hill University (\$225 per class)

1. *Accounting II*
2. *Advanced Placement Calculus AB with Lab*
3. *Advanced Placement Literature and Composition*
4. *Advanced Placement United States History*
5. *French IV*
6. *Honors Physics II with Lab*
7. *Introductory Sociology*
8. *Spanish IV*

University of Pittsburgh (\$225 per class)

1. *American Politics*
2. *Argument and Debate*
3. *Introductory Film*
4. *Introductory Psychology*
5. *Python Programming*
6. *Right Start to College*
7. *Web Site Design and Development*

In addition to the in-house options listed, California University of Pennsylvania, Grove City College, and Clarion University have full online options to accrue college credits while in high school at varying costs of approximately \$250 per three credit course. Lastly, Westminster College, Slippery Rock University, and Butler County Community College all have dual enrollment options, as well. Tuition assistance is available for those that qualify. For additional information, please contact Laurel School Counselor *Mr. Matthew Pertile* at (724) 658-9056.

CYBER ACADEMY

The Laurel Cyber Academy (LCA) is a full online curriculum run on the Edgenuity platform and used for a variety of reasons to meet student needs in the Laurel School District. These courses can be utilized for credit recovery, modification of scheduling, enrichment, and acceleration. Edgenuity provides numerous opportunities for expanding the course catalogue and the curriculum and student progress is monitored by Laurel teachers. For additional information, please contact *Mr. Matthew Pertile* at (724) 658-9056.

LAUREL HIGH SCHOOL COURSE AND GRADUATION REQUIREMENTS

A minimum of twenty-four credits is required for a student to graduate.

Each student will carry and pass the following subjects in the designated grades that make up the twenty-four credits:

ENGLISH

Four credits of specified ENGLISH during Grades 9-12.

MATHEMATICS

Four credits of MATHEMATICS.

SCIENCE

Three credits of SCIENCE during Grades 9-12.
This includes Biology, which is initially scheduled in Grade 9.

SOCIAL STUDIES

Four credits of specified SOCIAL STUDIES during Grades 9-12.

ARTS AND HUMANITIES

Two credits of ARTS AND/OR HUMANITIES during Grades 9-12. When possible these courses are initially scheduled in Grades 9 & 10. Examples of Arts and Humanities courses include: Art, Band, Choir, Foreign Languages, Family and Consumer Science, Vocational Agriculture, and Technology Education.

PHYSICAL EDUCATION

One and a half credits of Physical Education during Grades 9-12.

HEALTH EDUCATION

One half of a credit preferably in Grade 9 or 10.

COMPUTER TECHNOLOGY

.5 credit of Computer Applications and
.5 credit of computer elective taken in Grades 9-12.

SOPHOMORE ROTATION

Scheduled during sophomore year, this rotation consists of Career Etiquette, Career Exploration, Driver Theory, and Financial Literacy. These classes are 45 days (**one quarter**) for .25 credit each.

ELECTIVES

Three credits or more scheduled in Grades 9-12.
Any courses taken by a student once all of the above credits are earned will count as elective credit.

KEYSTONE EXAMS

Students must prove proficiency in Algebra I, Biology, and Literature by passing Keystone Exams or completion of an approved project in each area.

If a required course is failed, the failed course may be repeated in the regular classroom or earned through credit recovery during the next school year.

HIGH SCHOOL CREDIT RECOMMENDATIONS

In order for a student to maintain a steady momentum of credit accumulation toward graduation, the following guideline is listed as a minimum amount of credits needed each year:

Grade 9 – minimum of 6.0 credits

Grade 10 – minimum of 6.0 credits (12 total accumulated)

Grade 11 – minimum of 6.0 credits (18 total accumulated)

Grade 12 – minimum of 6.0 credits (24 total accumulated)

COURSE SELECTION

A counselor will meet with students during the second semester to help determine which courses should be selected in light of previous achievement, individual abilities, and ambitions. However, beyond satisfying the requirements previously listed, the student and the student's parents are responsible for subjects chosen.

WITHDRAWAL FROM COURSES

Students are required to have a full course schedule with no more than one 6-day study hall and one 3-day study hall. Students may withdraw from a course within the first 12 days of the course with no penalty, provided they still maintain the minimum course load described above. After 12 days, students wanting to withdraw from a course must withdraw with either a pass or fail as determined by that quarter's grade.

Second semester schedule changes will be considered the last 5 days of the first semester. If a student has not been withdrawn from a scheduled class through the guidance office, the student's absence from the class without an excuse becomes a discipline matter.

POST SECONDARY RECOMMENDATIONS

Because entrance requirements vary considerably, students should study web sites and post secondary catalogues and literature. With some exceptions, local colleges and nursing schools generally require one year of a laboratory science, two years of academic mathematics, and two years of one foreign language, along with proof of high school graduation. Most trade/technical schools require one year of Algebra for admission. Others, along with many business schools, require only proof of graduation from high school.

CALCULATOR USE

Calculator use is determined by the course. Instructors will provide students with information as needed. Students will have access to calculators when needed.

Any questions regarding the use of calculators may be directed to the Math Department Chairperson *Ms. Deana Buckner* at (724) 658-9056.

ATHLETES PARTICIPATING IN INTERSCHOLASTIC SPORTS

Be familiar with these basic eligibility rules for interscholastic participation in the Laurel School District as set forth by the PIAA:

1. A student must maintain passing grades (65% or higher) in a minimum of four (4) full credit subjects
2. The first measure of curricular eligibility occurs weekly.
 - A. On Friday of each week during the season, the student must have a cumulative grade of 65% or higher from the beginning of the grade period in a minimum of four (4) full credit subjects or the equivalent.
 - B. After reviewing weekly grade checks, student athletes failing one or more subjects or earning two or more D's will be assigned Mandatory Study Period (MSP).
 - C. If the student does not meet the above standard, he/she will be declared ineligible for the following week - Sunday through Saturday.
3. A second measure of curricular eligibility occurs at the end of each grading period.
 - A. If the student has not passed at least four (4) full credit subjects or the equivalent at the end of the nine-week report period, he/she will be declared ineligible for interscholastic competition for a period of fifteen (15) school days from the time the report cards are issued.
4. At the end of the final grading period, a student's final average grades for the year will determine their eligibility for the first fifteen days of the upcoming school year.

NCAA ELIGIBILITY CENTER

Student athletes and their parents should be aware there are specific academic requirements to be eligible for financial aid and to participate on an intercollegiate team at the Division I & II levels. The NCAA has established specific guidelines a graduating high school senior must achieve. If students/athletes are to meet these guidelines, they must plan and prepare early for a strong academic curriculum in high school. The requirements can not be realistically attained in only their junior and senior years.

Students/athletes wishing to further their athletic careers at the collegiate level must meet eligibility requirements specified at the following website: www.eligibilitycenter.org (go to general information). If students and/or parents have any questions regarding eligibility standards, please contact Mr. Matt Pertile, Laurel School District's NCAA coordinator, at (724) 658-9056.

NCAA APPROVED CORE COURSES

NCAA legislation permits a student to receive credit for a core course only one time. As a result, if a student repeats a core course, the student will only receive credit once for the core course, and the highest grade earned in the course will be included in the calculation of the student's core course grade point average. Likewise, if a student completes a course that is duplicative in content with another core course, the student will only receive credit for one of the duplicative courses, and the course with the highest grade earned will be included in the calculation of the student's core course grade point average.

ENGLISH COURSES:	English 9 Honors English 9 English 10 Honors English 10 English 11 Honors English 11 English 12 <u>Advanced Placement Literature and Composition 12</u> Argument and Debate <i>Integrated I, II, III</i>
MATHEMATICS COURSES:	Algebra I Algebra II Geometry Precalculus with Trigonometry Calculus <u>Advanced Placement Calculus AB with Lab</u>
SOCIAL STUDIES:	Civics and Economics 9 Honors Civics and Economics 9 United States History 10 Honors United States History 10 United States History 11 <u>Advanced Placement United States History 11</u> American Government 12 American Politics 12 Introductory Psychology Introductory Sociology
SCIENCE COURSES:	Biology I Honors Biology II with Lab Physics with Lab Chemistry with Lab Honors Physics I with Lab Honors Physics II with Lab <u>Advanced Placement Chemistry with Lab</u>
ADDITIONAL CORE COURSES:	Spanish I Spanish II Spanish III Spanish IV <i>French I</i> <i>French II</i> <i>French III</i> <i>French IV</i>

COURSE SELECTIONS

BUSINESS		
Course	Prerequisite-Description-Text	Credit
ACCOUNTING I	(Elective Grades 10-12)	1.0
<p>If a student is thinking of pursuing any type of business related career, then he/she should consider taking this course. This course provides an overview of accounting as a career, accounting for a service business organized as a proprietorship, accounting for a merchandising business organized as a partnership and as a corporation. Accounting procedures are described, drilled, practiced, and reinforced. The student will learn how to interpret the results of accounting operations. Accounting business simulations are completed to acquaint the student with accounting procedures in the world of work.</p> <p>TEXT: <i>Century 21 Accounting</i>, Ninth Edition; Gilbertson, Lehman; South-Western Cengage Learning</p>		
ACCOUNTING II	(Elective Grades 11-12)	1.0
<p>Prerequisite: Successful performance in Accounting I</p> <p>College credit from Seton Hill University is available with this course.</p> <p>Students who take this course will be eligible for College in the Classroom credits through Seton Hill University. (<i>Contact Laurel School Counselor</i>) The course provides an overview of accounting framework and concepts, departmentalized accounting, accounting control systems, general accounting adjustments, and corporation accounting. The course will broaden the students' knowledge of the use of accounting records and the various methods of applying the principles learned in Accounting I. Problems are technical in nature and require a serious minded individual to solve them. Automated accounting will be integrated and computer application exercises will be completed. Business simulations are completed using automated accounting to acquaint students with accounting procedures in the world of work.</p> <p>TEXT: <i>Century 21 Accounting</i>. Ninth Edition (Advanced Course) Gilbertson, Lehman, Passalacqua; South-Western Cengage Learning</p> <p>SOFTWARE: <i>Advanced Automated Accounting 8.2</i>, South-Western Cengage Learning</p>		
ENTREPRENEURSHIP	Semester Course (Elective Grades 10-12)	0.5
<p>This course will explore how a modified free enterprise system works and examine different forms of business structures found within the system. Students will complete The Teen Entrepreneur simulation (project) developed to provide the teenage-level entrepreneur and business students with in-depth real-world experience in starting a real teen-based business. The students will be guided through the process of creating a real business plan to start and operate a chosen business. Students will use a variety of software solutions to manage, promote and market their project. Students will also work hands on in the Fabrication Lab with various forms of technology to design and/or create items for the school store.</p>		

CAREER

<i>Course</i>	<i>Prerequisite-Description-Text</i>	<i>Credit</i>
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CAREER ETIQUETTE 10	Quarter Course (Rotation Grade 10)	0.25
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This course is designed to take during sophomore year and will focus on topics that will assist students in transitioning into the professional world. Topics such as proper use of email and phone calls, interviewing skills, public speaking, career attire, keeping a portfolio, time management, and other expectations of professional social behavior will be addressed.

CAREER EXPLORATION 10	Quarter Course (Rotation Grade 10)	0.25
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In order to fulfill parts of the Academic Standards for Career Education and Work, this course will guide students through career awareness, preparation, acquisition, retention and advancement. The course will focus on familiarizing the students with the many tools and resources that can be used to gather educational and occupational information to make career decisions, create career plans and evaluate/re-evaluate their career plans throughout their lives.

FINANCIAL LITERACY 10	Quarter Course (Rotation Grade 10)	0.25
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This course is an introduction to basic personal financial principles and concepts. The purpose of this course is to help students develop the skills necessary to manage their own finances. Students will learn about the following topics: the economic way of thinking, free enterprise, how to make wise financial decisions, entrepreneurship, earning income and income taxation, money management, banking basics, insurance, spending and using credit, interest rates and finance charges, purchasing a home and car, cost of spending and saving, and investments. After completing this course, students should have financial fitness for life.

SENIOR PRIVILEGE	(Grade 12 only)	N/A
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Senior Privilege is offered to seniors who are in good standing in terms of graduation requirements, current grades, attendance and behavior. Proof of employment, college course enrollment and other documentation may be required and must be pre-approved by the School Counselor. Senior Privilege will only be added to a student's schedule at the beginning of semester one and at the beginning of semester two. Senior students will be removed from Senior Privilege at any time if good standing is not maintained.

SERVICE LEARNING	Semester/Year Course (Elective Grades 9-12)	0.5/1.0
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Independent activity of community service must be approved by the building principal. Service Learning activities could include, but are not restricted to:

- peer tutoring in the high school
- peer tutoring in the elementary school
- food/clothing/money drives
- working as a lab assistant/technician in the biology lab
- assisting a teacher in the classroom with projects and major assignments
- working with Project Hope

Students must submit a proposal and timeline to their school counselor for pre-approval. Upon completion of the project, students must submit a log sheet, reflection and evidence of completion. Once these documents are approved by the principal, credit will be assigned. Students may also earn this elective credit by assisting a teacher in the classroom with projects and major assignments.

DRIVER EDUCATION

Course

Prerequisite-Description-Text

Credits

DRIVER THEORY

Quarter Course (Required for Graduation: Grades 10-12) **0.25**

This is a nine-week course. Driver Theory aims through the theoretical and practical approach to teach pupils to drive safely on today's highways. Automobile operation, techniques of driving, knowledge of traffic laws, regulations, safety rules, plus the psychology of driving are considered. Pennsylvania State Law also requires that each student be present for a minimum of 30 hours of classroom instruction.

(If a student is not present for more than 30 hours an Incomplete will be issued for the course.) If the course is failed, a student is required to retake the course until it is satisfactorily completed.

TEXT: *Drive Right*, Scott-Foresman
Pennsylvania Driver's Manual

DRIVER TRAINING

N/A

The "car phase" of actual driving experience is an elective to students 16 years of age and older. Driver Theory must precede the Driver Training course. Driver Training is scheduled after school, Saturday, and during the summer with first preference given to seniors, juniors, etc., with a license or a permit. Certificate of course completion is awarded.

ADVANCED PLACEMENT LITERATURE AND COMPOSITION 12 <NCAA> 1.0
(1.5 value for Classes of 2020-2024. 1.25 value for Classes of 2025+)

Prerequisite: Successful completion of English 11 and teacher recommendation.

College credit from Seton Hill University is available with this course.

Students should have a genuine interest and aptitude for literature and writing and are **required to do summer reading**. This course will require students to read and critically respond to literature from all genres, regions, and time periods. The course will emphasize the development of skills necessary to interpret, analyze, and critique works of literature. Students should be prepared to commit themselves to a demanding workload which includes the completion of assigned summer reading prior to the beginning of the class. Additionally, students will be provided with information regarding the Advanced Placement Test in Literature and Composition which they will be encouraged to take in May.

The following is a list of literature possible for this course.

Titles and assignments are subject to change.

Animal Farm, George Orwell
1984, George Orwell
Brave New World, Aldous Huxley
The Color Purple, Alice Walker
The Bell Jar, by Sylvia Plath
Jane Eyre, Charlotte Bronte
The Kite Runner, Khaled Hosseini
A Thousand Splendid Suns, Khaled Hosseini
Macbeth, William Shakespeare
The Handmaid's Tale, Margaret Atwood
Atonement, Ian McEwan
Cry, The Beloved Country, Alan Paton
Death of a Salesman, Arthur Miller
Jane Eyre, Charlotte Bronte

ENGLISH 12 <NCAA> 1.0

This course includes a survey of some of the major works from British literature as well as the historical events that influenced and shaped that literature. English 12 will also cover important authors and literature from other parts of the world, both classic and contemporary. The class will study literary devices and terms necessary for the interpretation and appreciation of literature. Genres covered in English 12 include drama, novels, poetry, novellas, and short stories. Students will be introduced to college level composition, emphasizing essay and research writing. English 12 also emphasizes the study of college preparatory vocabulary.

The following is a list of literature possible for this course.

Elements of Literature
Beowulf
Grendel John Gardner
Macbeth, William Shakespeare
The Once and Future King, T.H. White
The Book of Virtues, William J. Bennett
The Moral Compass, William J. Bennett
The Canterbury Tales, Geoffrey Chaucer

ARGUMENT and DEBATE <NCAA> (*Elective Grades 11-12; option for English 12 credit*) 1.0

Refer to Page 15 for details.

HONORS ENGLISH 11 <NCAA>**1.0****(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)**

Students who elect to take Honors English 11 should have excellent grades in previous English classes, an interest in literature and writing, and the motivation and time to devote to a rigorous and challenging English course. Honors English 11 students will be required to read more, write more, and do more literary analysis than those students in English 11. While the focus of the class is on the reading, interpretation, and analysis of major works of American literature, the course also covers research, vocabulary, grammar, usage, and speaking and listening skills. Students will also improve upon and add to the skills necessary to write, edit, and publish informative, persuasive, and literary essays. The course is aligned to the Keystone standards for literature; furthermore, students will be assigned reading to complete and essays to write over the summer.

The following is a list of literature possible for this course.

Titles and assignments are subject to change.

Elements of Literature, Fifth Course, Holt, Rinehart, and Winston

The Great Gatsby, Fitzgerald

Death of a Salesman, Miller

The Glass Menagerie, Williams

Crucible, Miller

Of Mice and Men, Steinbeck

Night, Wiesel

Catcher in the Rye, J.D. Salinger

The Road, McCarthy

The Bell Jar, Plath

Brave New World, Huxley

Night, Elie Wiesel

The Glass Menagerie, Tennessee Williams

ENGLISH 11 <NCAA>**1.0**

The focus of English 11 is on the reading, interpretation, and analysis of major works of American literature. The course also covers research, vocabulary, grammar, usage, and speaking and listening skills. In addition, students will improve upon and add to the skills necessary for writing, editing, and publishing informative and persuasive essays. The curriculum is aligned to the Keystone standards for literature.

The following is a list of literature possible for this course.

Elements of Literature, Fifth Course, Holt, Rinehart, and Winston

The Great Gatsby, Fitzgerald

The Crucible, Miller

Of Mice and Men, Steinbeck

Night, Weisel

The Road, McCarthy

Catcher in the Rye, J.D. Salinger

The Collector, John Fowles

No Country for Old Men, Cormac McCarthy

HONORS ENGLISH 10 <NCAA>**1.0****(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)**

This course is designed to develop in the student those higher level thinking skills, such as synthesis, analysis, and evaluation. The student will apply these thinking skills through a variety of writings, including persuasive, expository, creative, and three research papers. In literature, the student will read several novels, plays, and poetry. The literature will focus on higher level thinking skills through written and oral evaluations. There will be weekly review of grammar and punctuation and weekly review of concepts related to the Keystone Literature Exam. The curriculum will be aligned for the Keystone Exam in Literature which the students will take at the end of this course. Students must read and write as a part of the summer work related to this course. The following is a list of literature possible for this course.

The Book Thief, Markus Zusak
Lord of the Flies, William Golding
Speak, Laurie Halse Anderson
Uglies, Scott Westerville
One of Us is Lying, Karen McManus
 Various Poems and Short Stories

SUMMER READING:

Non Fiction New York Times Articles
I will Save You, Matt de la Peña
Killing Mr. Griffin, Lois Duncan
Miss Peregrine's Home for Peculiar Children, Ransom Riggs
The Chocolate War, Robert Cormier
The Adventures of Huck Finn, Mark Twain

ENGLISH 10 <NCAA>**1.0**

This course is designed to develop in the student those skills necessary to improve composition, increase vocabulary, understand literature, and develop oral communication skills. This course will require the writing of two research papers and writing expository and persuasive essays. In literature, the student will read novels, plays, and poetry. There will be weekly exercises in grammar, punctuation, and review and emphasis on preparation for the Keystone Literature Exam. The curriculum will be aligned for the Keystone Exam in Literature which the students will take at the end of this course.

The following is a list of literature possible for this course:

The Giver, Lois Lowery
Hamlet, William Shakespeare
Speak, Laurie Halse Anderson
 Various Poems and Short Stories
Killing Mr. Griffin, Lois Duncan
I will Save You, Matt de la Peña
Miss Peregrine's Home for Peculiar Children, Ransom Riggs
The Graveyard Book, Neil Gaiman
The Chocolate War, Robert Cormier
Tuesdays with Morrie, Mitch Albom

HONORS ENGLISH 9 <NCAA>**1.0****(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)**

Prerequisite: Based on successful completion of English 8.

Students who elect Honors English should have an interest in the study of literature, a desire to improve their written communication skills, and a willingness to carry an increased workload. Honors English 9 incorporates enrichment activities in the areas of literature and writing into the English 9 curriculum. Students are expected to analyze as well as interpret literature. Furthermore, summer reading is required of three literary works and essays are assigned to be handed in the first day of school. The curriculum is aligned to the Keystone Standards for Literature. The following is a list of literature possible for this course.

Elements of Literature, Third Course, Holt, Rinehart, Winston

Shurley English

The Pearl, Steinbeck

"Contents of the Dead Man's Pocket", Jack Finney

"Lamb to the Slaughter", Roald Dahl

"The Black Cat"

"The Tell-Tale Heart", Edgar Allan Poe

Fahrenheit 451, Ray Bradbury

As I Lay Dying, William Faulkner

A MidSummer Night's Dream, William Shakespeare

The Glass Castle, Jeanette Walls

Bless the Beasts and Children, Glendon Swarthout

A Separate Peace, Knowles

Romeo and Juliet, William Shakespeare

Assorted Poems

SUMMER READING:

And Then There Were None, Christie

Anthem, Ayn Rand

ENGLISH 9 <NCAA>**1.0**

English 9 introduces students to the basic elements of the four genres of fiction literature: novels, short stories, dramas, and poetry. Students will also be introduced to the types of writing used in nonfiction literature and their purposes. Furthermore, the writing process will be employed to produce narrative, descriptive, expository, and persuasive essays and works of short fiction. Reinforcement of grammar, usage, punctuation, capitalization, spelling, and vocabulary will be integrated with literature and writing units. The curriculum is aligned to the Keystone Standards for Literature.

The following is a list of literature possible for this course.

Elements of Literature, Third Course, Holt, Rinehart, Winston

"Lamb to the Slaughter", Roald Dahl

Anthem, Ayn Rand

"Contents of the Dead Man's Pocket", Jack Finney

"The Landlady", Roald Dahl

Fahrenheit 451, Ray Bradbury

A Separate Peace, Knowles

That was Then This is Now, S.E.Hinton

The Glass Castle, Jeanette Walls

"The Black Cat"

Romeo and Juliet, William Shakespeare

Assorted Poems

APPLIED JOURNALISM **Semester Course** (*Elective Grades 9-12*) **0.5**

Applied Journalism is a class designed for students in grades 9-12 who are interested in learning more about and/or participating in projects that cover the First Amendment, digital citizenship, propoganda, rhetoric, current events, research, article writing, newscasts, journalism related movies, field trips, documentaries, independent study projects, VLOGs, PSAs, and podcasts. This course can be taken multiple times creating higher level projects.

ARGUMENT and DEBATE <NCAA> (*Elective Grades 11-12; option for English 12 credit*) **1.0**

College credit from the University of Pittsburgh is available with this course.

This course teaches students to recognize, explain, research, construct, present and critique arguments. Assignments invite students to create their own researched-based arguments, express them capably to peers and instructors, eloquently refute competing arguments, and judge the soundness of arguments made by others. A survey of key concepts in argumentation theory will provide background for students to develop their argument skills in a variety of both oral and written activities that feature lively intellectual interchange. In order for students to hone argument skills, classroom activities may include the teacher's choice of SPAR debates, policy debates, parliamentary debates, mock trial, and role-play simulations. At least one classroom debate must use the common CHS Argument Forum question. The top performing students in this classroom debate will be chosen to participate in a second round of debating conducted for a wider public audience, which must be at least twice the size of the original Argument class. In organizing such public debates, faculty members should bear in mind the following: 1) The public debate is a required component of the Argument class; 2) The exact wording of the common CHS Argument Forum question should be used; 3) The public debate must be video recorded, and a copy of the recording must be forwarded to the CHA offices by the date set by the CHS Faculty Liaison. Schools may then choose to participate in the final tier of debating at the annual Argument Forum.

TEXT: Teacher will couple their own readings with selections from a clearinghouse of optional, open-access teaching materials approved by the University of Pittsburgh at <https://pitt.box.com/Argument>

INTRODUCTORY FILM **(Elective Grades 10-12)** **1.0**

College credit from the University of Pittsburgh is available with this course.

Intro to Film is a basic course on the visual arts that offers students a broad introduction to the medium of film while inviting conversations about new media, television, and the film's connection to other arts, including photography, painting, theater, and web video. The course teaches students with no background in media studies how to analyze media in terms of art, industry, and culture. The class will consider such issues as: the process of contemporary film production and distribution; the nature of basic film forms; selected approaches to film criticism; comparisons between film and the other media; genre; marketing; diversity of representation. Introduction to Film concentrates less on form and more on the cultural elements of film.

KEYSTONE LITERATURE REMEDIATION*(Elective Grade 11)***0.5**

This course is designed to assist students in obtaining proficiency on the Keystone Literature Exam. Students will be required to take this course based on Keystone Exam scores and/or Classroom Diagnostic Tool performance and teacher recommendation. This course is designed to offer instruction and practice based on the Keystone Literature assessment anchors and eligible content.

VIDEO PRODUCTIONS**Semester Course** *(Elective Grade 12)***0.5**

This course exposes the students to both the technical and artistic aspects of cinema (the process and content of film). Film is the major form of Visual Arts that our students are familiar with and this course gives students an opportunity to trace the development of the film industry, identify and understand the responsibilities of all the members in a film production company, and appreciate the films and performances that reflect the best of the medium. The emphasis is on American cinema. Students who take this course will also produce the morning and afternoon school announcements as well as contributions to the senior movie. Lastly, a list of materials is needed for the course and must be supplied by the student.

List of materials:

1. Thumb drive (minimum of 16GB)
2. SDcard (minimum of 18GB)

Written consent (signed permission form) for each film will be required before viewing.

FINE ART

Course	Prerequisite-Description-Text	Credit
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ART and STEAM	Semester Course <i>(Elective Grades 10-12)</i>	0.5
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Art making is problem solving and high level thinking. The Creative process connects all five STEAM subjects:

- **Science** – provides evidence-based explanation of natural phenomena
- **Technology** – enables the progress of Science, Engineering, Mathematics and the Arts
- **Engineering** – identifies needs and develops technology to assist Science, Mathematics, and the Arts
- **Arts:**
 - **Express** personal experiences, perceptions and understandings
 - **Challenge** conventional wisdom and generates questions
 - **Reveal** new possibilities for Science, Technology, Engineering and Mathematics
- **Mathematics** – is the language of Science, Technology and Engineering

This semester course is an opportunity for the non-traditional art student to explore the creative process through STEM. For the traditional art student, this course will give them opportunities to discover their art within the STEM disciplines. Students will construct and demonstrate understanding of STEM through art projects.

INTRODUCTORY ART	Semester Course <i>(Strongly recommended for freshmen)</i>	0.5
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This course is designed to continue to build artistic skills and techniques through the completion of projects in all studio areas (drawing, painting, sculpture, printmaking, and mixed media). This will give the student exposure to the art studio electives available at the high school level.

BAND	Semester Course <i>(Elective Grades 9-12)</i>	1.0
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Director's approval is required for admission in advance of the school year.
 Prerequisite: Students need to be able to play standard high school band literature.
 This is a full year course. In order to participate in concert band, students must participate in marching band unless they are active in a fall sport or fall cheerleading. Fall sports participation does not exclude a student from participation in marching band. This course will deal with the following using standard high school band literature: tone, intonation, technique, blend, balance, stage presence, and performance etiquette. Students are required to perform at scheduled concerts as part of their grade.

BAND LESSONS	Semester Course <i>(Elective Grades 9-12)</i>	0.25
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These lessons count as a .25 credit. They are similar to Middle School Band Lessons. The student would be pulled from a particular class or study hall once out of a 6 day rotation.

CHAMBER ENSEMBLE	Semester Course <i>(Elective Grades 9-12)</i>	0.5
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This class is designed to build instrumental performance and knowledge through the practice and performance of chamber music. Students have various performances throughout the year giving them real life experiences while also providing community support as some of these performances will be at nursing homes, parks, etc.

CONCERT CHOIR (Elective Grades 11-12 or auditioned 10) 1.0

This course is an intense look at advanced vocal literature with emphasis on performance and advancing vocal technique. Attendance is required at concerts and any announced rehearsals during the year. Emphasis is also placed on music theory, sight-reading, and advancing solo and choral techniques. Instructor's approval is necessary for all auditioning sophomores or first year members in advance of the school year.

DRAWING Semester Course (Elective Grades 9-12) 0.5

This course advances drawing skills using different mediums such as charcoal, graphite, and pastels. Portrait and figure drawing and 1 pt. and 2 pt. perspective along with still life drawing will be covered. This course can be taken multiple times creating higher level projects.

EXPLORING MUSIC Semester Course (Elective Grades 9-12) 0.5

This class is designed to help students learn a new instrument. This is open to any student in grades 9-12. Students will learn a variety of musical skills such as tone, articulation, rhythm, dynamics, etc. through the performance on various instruments.

MIXED CHORUS (Elective Grades 9-10 or first year choral member) 1.0

A look at various vocal literature with emphasis on performing and developing vocal technique. Attendance is required at concerts and any announced rehearsals during the year. Emphasis is also placed on music theory and basic choral singing technique.

MIXED MEDIA Second Semester Course (Elective Grades 9-12) 0.5

Prerequisite: Printmaking is suggested first semester.

This course combines painting, collage, journaling, drawing, assemblage, and encaustic art by experimenting and combining various materials to create original mixed media art.

PAINTING Semester Course (Elective Grades 10-12) 0.5

Students are encouraged to take Drawing I.

This course is a further study of art based in part on experiences in drawing. Work will be done in three basic painting mediums of watercolor, acrylic and oil. Along with individual work, the student is encouraged to create in collage, mixed media and mural painting. Techniques and styles along with art history will be reviewed. This course can be taken multiple times creating higher level projects.

FOREIGN LANGUAGE

<i>Course</i>	<i>Prerequisite-Description-Text</i>	<i>Credit</i>
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<p>SPANISH I <NCAA></p> <p>Prerequisite: Successful completion of English.</p> <p>The course is designed to introduce learners to the Spanish language and culture. Conversational skills are developed through practical application and the learning of vocabulary and grammatical structures. The students will begin to develop speaking, reading, writing and listening skills through input in the target language and cultural exploration.</p> <p>TEXT: <i>Realidades I Part I</i> Prentice Hall, Pearson Education <i>Bart quiere un gato</i>, Señor Jason & Michael Coxon</p>	<p>(Elective Grades 9-12)</p>	<p>1.0</p>
<p>SPANISH II <NCAA></p> <p>Prerequisite: Successful completion of Spanish I.</p> <p>The course is designed to expand knowledge of the vocabulary and grammatical forms learned in Spanish I. Students will become more familiar with the language and culture of Spanish speakers through practical applications. Students will continue to develop and practice their speaking, reading, writing and listening skills through input of target language and cultural exploration.</p> <p>TEXT: <i>Realidades I Part II</i> Prentice Hall, Pearson Education <i>Esperanza</i>, Carol Gaab</p>	<p>(Elective Grades 9-12)</p>	<p>1.0</p>
<p>SPANISH III <NCAA></p> <p>(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)</p> <p>Prerequisite: Successful completion of Spanish II.</p> <p>Students will continue their language study and be able to communicate in the target language at a higher level. Students will begin to refine their speaking, reading, writing and listening skills with focus on oral expression and listening comprehension. Course content also includes the study of various literary works and cultural aspects of the language.</p> <p>TEXT: <i>Realidades II Part I</i> Prentice Hall, Pearson Education <i>El Escape Cubano</i>, Mira Canion</p>	<p>(Elective Grades 9-12)</p>	<p>1.0</p>
<p>SPANISH IV <NCAA></p> <p>(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)</p> <p>Prerequisite: Successful completion of Spanish III.</p> <p>College credit from Seton Hill University is available with this course.</p> <p>The course is designed to provide the learner with opportunities to communicate in Spanish with little use of English. Students should express a desire to use the language for personal enjoyment and enrichment. Grammatical and vocabulary content is learned in context. Learners will continue to refine their speaking, reading, writing, and listening skills through practical applications in the target language and cultural exploration. The ultimate goal is total comprehension and ease in conversation. Learners will explore various literary works and will focus on the history and art of the Hispanic world.</p> <p>TEXT: <i>Realidades III</i> Prentice Hall, Pearson Education <i>Agentes secretos y el mural de Picasso</i>, Mira Canion</p>	<p>(Elective Grades 11-12)</p>	<p>1.0</p>

INFORMATIONAL TECHNOLOGY

<i>Course</i>	<i>Prerequisite-Description-Text</i>	<i>Credit</i>
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ADVANCED MICROSOFT OFFICE Semester Course (Elective Grades 9-12) 0.5

Course Duration: 1 semester Business/Computer Elective

Prerequisite: Successful completion of Computer Applications.

In today's computerized world, software skills are required for personal, college and career needs. Take your Microsoft Office productivity skills to a professional level in this one-semester course.

Access: Plan and design effective databases, perform database operations and create professional reports. Use structured Query Language (SQL) to write queries and retrieve database information.

Excel: Design and format spreadsheets and charts and master skills advanced functions, conditional logic, and what-if analysis.

Word: Design and format professional documents using advanced graphics features, tables, references, macros and mail merges.

Coursework is designed to prepare students for MOS certification exams.

SOFTWARE: *Microsoft Office 2016***COMPUTER AIDED DRAFTING Semester Course (Elective Grades 9-12) 0.5**

Students will learn how to draw basic multi-view, sectional, and isometric drawings on Auto CAD. Auto CAD is a drafting program used in industries around the world.

Basic laser engraving, 3D printing, CNC routing and plasma cutting will be incorporated in this S.T.E.A.M based class. This class will help students develop the basic skills that a draftsman, engineer, CNC operator, machinist or interior designer needs. This course can be used as the other .5 credit of the Computer Technology Graduation requirement.

COMPUTER APPLICATIONS Semester Course (Required for Graduation) 0.5

Software skills are vital when competing in today's college and work environments.

Build on your basic keyboarding and computer skills and develop proficiency in the use of Microsoft Office applications, Format documents in *Word*, prepare spreadsheets in *Excel*, design and create databases in *Access*, create multimedia presentations in *PowerPoint*, and create publications in *Publisher*. A variety of hands-on activities and projects will be completed.

SOFTWARE: Microsoft Office 2016

GRAPHIC DESIGN Semester Course (Elective Grades 10-12) 0.5

Course Duration: 1 semester Business/Computer Elective

Society communicates graphically through a variety of publications: brochures, advertisements, flyers, programs, newsletters and product packaging. Learn to use *Adobe InDesign* and *Adobe Photoshop*, industry's most powerful layout and image editing programs, for professional graphic designers. Topics include typography, drawing tools, layout, image editing, design, and other strategies that will guarantee professional publications. We will create a variety of publications that will be used in Laurel productions and events.

SOFTWARE: Adobe InDesign and Adobe Photoshop

INTRODUCTORY COMPUTER GAMING**Semester Course** (*Elective Grades 9-12*) **0.5**

Course Duration: 1 semester Business/Computer Elective

Do you like to play computer games? Does programming your own games sound like fun? Your imagination is the limit as you use *GameMaker* to create maze, strategy, and other types of games. You'll learn about creating sprites, objects, events and actions. Design a room, make it look the way you want, add objects and play your game. As you learn how to display health, lives, score, splash screens and high score tables, you'll also be developing problem-solving and logic skills. Interactive and user-friendly, *GameMaker* software is designed for non-programmers. Before you know it, you'll be creating exciting, professional-looking games you can play with your friends.

SOFTWARE: *GameMaker***PYTHON PROGRAMMING** **Semester Course** (*Elective Grades 11-12*) **0.5**

Course Duration: 1 semester Business/Computer Elective

College credit from the University of Pittsburgh is available with this course.

This is a first course in computer science programming. The focus is on problem analysis and the development of algorithms and computer programs in a modern high-level language.

Major topics: Introduction to Python, writing a first program, coding control statements, defining and using functions and modules, testing and debugging, working with lists and tuples, working with the file input/output, handling exceptions, other concepts and skills, object-oriented programming, database and GUI programming.

SOFTWARE: Python 3.2

WEB SITE DESIGN and DEVELOPMENT **Semester Course** (*Elective Grades 11-12*) **0.5**

Course Duration: 1 semester Business/Computer Elective

College credit from the University of Pittsburgh is available with this course.

This course introduces students to skills, methods and techniques related to basic web site design, including HTML5 and CSS3 coding, image and animation optimization and plug-ins. In this fast-paced class, be prepared to participate in discussion, learn new concepts via in-class practice, complete independent lab projects, collaborate for group assignments and design and develop complete web sites.

Major topics: Principles of effective web design, intro to HTML5, test, debug and validate, hyperlinks, images and animations, tables and lists, format page elements with CSS3, responsive web design, working with forms, audio and video, enhance web pages with JavaScript and JQuery plugins, interactive development environments.

SOFTWARE: *Adobe Dreamweaver*

INFORMATIONAL TECHNOLOGY SEQUENCE of COURSES

**Graduation Requirement:
One computer credit
(including .5 Computer Applications)
must be fulfilled.**

Required For Graduation	Computer Applications
	.5 credit One semester

Grades 9-12	Advanced Microsoft Office	Introductory Computer Gaming	Computer Aided Drafting
	Computer Applications prerequisite		
	.5 credit One semester	.5 credit One semester	.5 credit One semester

Grades 10-12	Graphic Design
	.5 credit One semester

Grades 11-12	Web Site Design and Development	Python Programming
	University of Pittsburgh credit available	University of Pittsburgh credit available
	.5 credit One semester	.5 credit One semester

MATHEMATICS

<i>Course</i>	<i>Prerequisite-Description-Text</i>	<i>Credits</i>
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ADVANCED PLACEMENT CALCULUS AB with LAB <NCAA> *(Elective Grades 11-12)* **1.0**
(1.5 value for Classes of 2020-2024. 1.25 value for Classes of 2025+)

College credit from Seton Hill University is available with this course.

This course is primarily concerned with developing the student's understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to calculus with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. This course is demanding and challenging. Students should be prepared to commit themselves to a demanding workload which includes completion of a summer assignment prior to the beginning of the class.

The calculus concepts covered include functions, graphs and limits, derivatives and their applications, and integrals and their applications. A graphing calculator will be provided for student use for this course. Students will be expected to do a great deal of work inside and outside of the classroom. A calculus lab time is scheduled opposite physics/chemistry lab time.

TEXT: *Calculus for AP*, Cengage Learning

ALGEBRA I <NCAA> *(Grades 9-10)* **1.0**

This course is required for all students in the academic curriculum and for those students who plan to enter college. Students will be proficient in the following concepts: solving equations and inequalities, graphing linear equations and inequalities, factoring polynomials, solving quadratic equations by factoring, function notation, writing equations for parallel and perpendicular lines using slope, solving systems of linear equations by graphing, substitution and elimination, and radicals. Students will also learn to use a scientific calculator. The curriculum will be aligned for the Keystone Exam in Algebra I which students will take at the end of this course.

TEXT: Prentice Hall, Algebra I 2011

ALGEBRA II <NCAA> *(Elective Grades 9-12)* **1.0**

Prerequisite: Successful completion of Algebra I.

This course is designed to expand the topics presented in Algebra I. Students should show proficiency in the following topics: system of equations (substitution and elimination), introduction to graphic calculators, polynomials, complex fractions, negative exponents, rational exponents, imaginary numbers, rationalization, quadratic formula, logarithms/exponentials, quadratics, inverses, radical equations, and system of inequalities. A graphing calculator is provided for the student use for this course. Students will be expected to do a great deal of work inside and outside of the classroom.

TEXT: Prentice Hall, Algebra 2

CALCULUS <NCAA> *(Elective Grades 11-12)* **1.0**
(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)

This course is an introduction to fundamental calculus. The course will emphasize a multi-representational approach to calculus with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. Students will be expected to do a great deal of work inside and outside the classroom. The course will cover limits of functions, differentiation, application of differentiation, and an introduction to integration. A graphing calculator will be provided for student use for this course.

TEXT: *Calculus for AP*, Cengage Learning

GEOMETRY <NCAA>	<i>(Elective Grades 9-12)</i>	1.0
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This course is designed to further prepare students for collegiate mathematics. Students should be able to demonstrate proficiency in the following areas: language of geometry, inductive and deductive reasoning, similar figures, parallel and perpendicular lines, congruent triangles, polygons, introduction to trigonometry, area, surface area, volume, and circles. A scientific calculator will be provided when necessary for several topics in this course. Students will be expected to do a great deal of work inside and outside of the classroom.

TEXT: Geometry, Pearson

KEYSTONE ALGEBRA REMEDIATION	<i>(Elective Grades 9-11)</i>	0.5
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This course is designed to teach students calculator skills and test-taking strategies, as well as the necessary mathematical concepts in order to prepare them for success on standardized tests. Students will be required to take this class based on Keystone Exam scores and/or Classroom Diagnostic Tool performance and teacher recommendation. This course is designed to offer instruction and practice in mathematical problem solving skills and preparation for the state assessment test by reviewing mathematical concepts in the topic areas of: numbers & operations, measurement, algebraic concepts, & data analysis and probability. Students will receive one-half elective credit for passing the course.

PERSONAL FINANCE	<i>(Elective Grade 12)</i>	1.0
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This course is designed for seniors as a general math course with an emphasis on a practical application of mathematics in today's consumer oriented world and mathematics needed in business and career situations. Students will apply mathematics fundamental to realistic business situations as they pertain to eleven different departments of a large business. Representative business departments covered include: personnel, production, purchasing, sales, marketing, warehousing and distribution, services, accounting, accounting records, financial management, and corporate planning. Basic geometric principles will also be taught using business-oriented problems involving area, surface area, and volume. Consumer topics discussed include: owning and operating a car, charge accounts and installment buying, federal and state taxes, life, health, and disability insurance, banking services, loans, retirement income, and cost of housing.

TEXT: Business Math, 17th Ed by Mary Hansen

PRECALCULUS with TRIGONOMETRY <NCAA> (1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)	<i>(Elective Grades 10-12)</i>	1.0
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This course should be elected by students who plan to enter the scientific field of study in college or by those students who are entering a field which requires a great deal of math. Precalculus is designed to cover all elementary functions necessary for the study of calculus. The first semester focuses on the following trigonometry topics: radians, triangle trigonometry, trigonometric functions, graphs of trigonometric functions, trigonometric inverses, and trigonometric equations. The second semester focuses on the following functions topics: graphing functions, families of graphs, polynomials, introduction to critical points, remainder theorem, factor theorem, end behavior, and rational functions. Students must show proficiency in the topics listed above in order to advance to the next course of study. Students will be expected to do a great deal of work inside and outside of the classroom. A graphing calculator will be provided for student use in this course.

TEXT: *Precalculus: Graphical, Numerical, Algebraic*, Pearson

PRINCIPLES of ALGEBRA 9 (Elective w/teacher recommendation Grade 9) 1.0

This course is designed for students who have completed 8th grade mathematics but need more time to develop key base Algebra skills before advancing to the Algebra I course. This course will revisit necessary 8th grade concepts as well as introduce new concepts, all of which will help students build a solid foundation to succeed in subsequent courses. At the end of the course, students will understand and demonstrate key concepts including solving and graphing linear equation/inequalities, solving and graphing systems of linear equation/inequalities, simplifying polynomials, simplifying radicals, and working with quadratic functions. No state test is required at the end of this course. Previous course grades and teacher recommendation are necessary for placement into this course.

TEXT: *Principles of Algebra*, Prentice Hall 2011

PRINCIPLES of GEOMETRY (Elective w/teacher recommendation Grades 10-11) 1.0

This geometry course will emphasize a hands-on approach to concepts using models, activities, and dynamic geometric software. Students will have an opportunity to practice arithmetic and algebra skills, while exploring real life applications of geometric concepts. Students will understand and demonstrate the following concepts: the language of geometry, perpendicular and parallel lines, congruent and similar figures, right triangles, circles and arcs, area, surface area, and volume. Previous course grades and teacher recommendation are necessary for placement in this course.

PROBABILITY and STATISTICS (Elective Grades 11-12) 1.0

This course teaches methods of descriptive and inferential statistics. Topics include data collection and description, hypothesis testing, correlation and regression, the analysis of variance, and contingency tables (chi square). Students will learn how to use a statistical computer package, MINITAB.

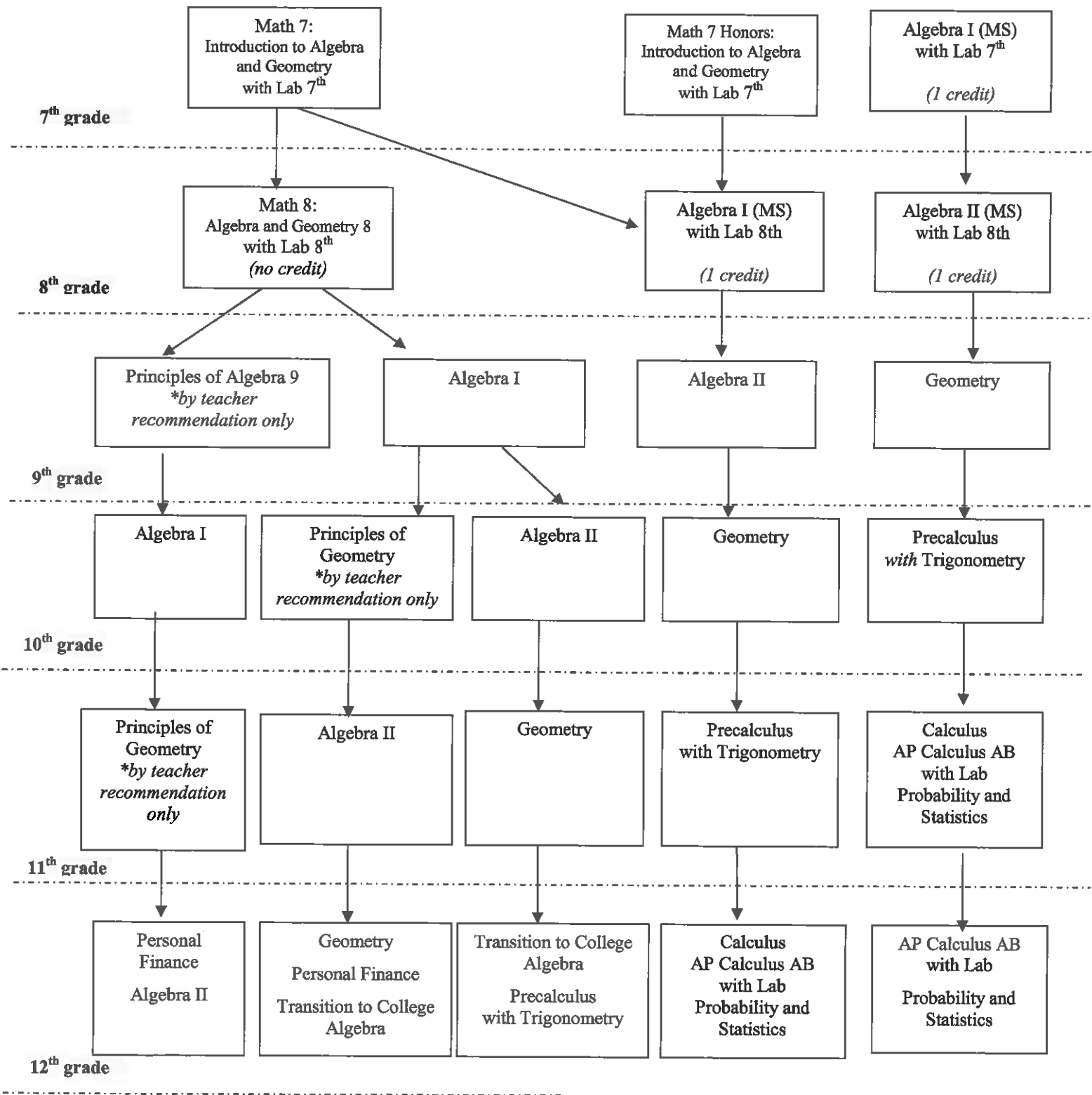
TEXT: *Elementary Statistics Picturing the World*, Pearson

TRANSITION to COLLEGE ALGEBRA 12 (Elective Grade 12) 1.0

Prerequisite: This course is designed for students who have completed Algebra I and Algebra II and plan on attending a post-secondary institution. This course is a review and extension of the topics covered in Algebra I and Algebra II. The content and pace of this course will be similar to a collegiate elementary Algebra course. Students taking this course must show proficiency in the following topics by the end of the course: solving and graphing equations and inequalities, polynomial operations, system of equations, exponents and logarithms, rational expressions, complex fractions, radicals, conics, quadratic formula, and introduction to sequences and series. A graphing calculator will be provided for student use in this course. Students will be expected to do a great deal of work inside the classroom. Students who have completed Precalculus are not eligible to register for this course.

TEXT: *Intermediate Algebra*, Pearson

MATHEMATICS SEQUENCE of COURSES



ALL Final course selection should coincide with teacher recommendation and post-graduation plans.

SCIENCE*Course**Prerequisite-Description-Text**Credit***ADVANCED PLACEMENT CHEMISTRY with LAB <NCAA>** (Elective Grades 10-12) **1.0**
(1.5 value for Classes of 2020-2024. 1.25 value for Classes of 2025+)

Prerequisite: Successful completion in Chemistry with lab.

This is an intensive chemistry course designed to be the equivalent, in content and rigor, of a general chemistry course usually taken during the first year of college. The curriculum has been set and approved by the College Board who administers the AP exams. Students must declare their intent to take the AP Exam in the fall. This test is not required but is recommended as an assessment at the end of the course. Students will be required to keep a lab notebook which can be requested by colleges before they will give credit for any AP Chemistry score. Students will learn about the structure of matter, states of matter, reactions, descriptive chemistry, and laboratory skills. It is highly recommended for those students who are planning to major in science, engineering, or nursing.

TEXT: *Chemistry: The Central Science 2009*; Brown LeMay, Bursten & Murphy**AGRICULTURAL SCIENCE** (Elective Grades 9-10) **1.0**

Prerequisite for all semester courses offered in the Ag Science curriculum.

This course introduces students to the sciences, skills, and technology associated with modern agriculture. Topics to be covered will be plant science, animal and poultry science, crop production, forestry, wildlife, and biotechnology. All students taking the course are required to be a member of the National FFA Organization.

ANIMAL SCIENCE I Semester Course (Elective Grades 10-12) **0.5**

Prerequisite: Agricultural Science

The course introduces students to livestock and poultry production. Emphasis will be on feeding and nutrition, genetics of animal breeding, breeds of livestock, diseases and parasites of livestock and poultry, housing, and marketing. All students taking the course are required to be a member of the National FFA Organization.

ANIMAL SCIENCE II Semester Course (Elective Grades 10-12) **0.5**

Prerequisite: Successful completion of Animal Science I

This course requires self-monitored learning by the student with the oversight of the instructor on specific projects and research based topics. The course introduces students to animal rights and animal welfare, animal cloning, biotechnology in animal reproduction, producing genetically modified organisms and ethical issues in biotechnology. All students taking the course are required to be a member of the National FFA Organization.

<p>BIOLOGY I <NCAA></p> <p>This is a required course for freshmen. Topics covered in this class include: basic biological principles, the chemical basis of life, bioenergetics, homeostasis/transport, cell growth/reproduction, genetics, evolution, and ecology. The curriculum will be aligned for the Keystone Exam in Biology which the students will take at the end of this course.</p> <p>TEXT: Biology – Miller/Levine, Pearson Education, @2010</p>	<p><i>(Required Grade 9)</i></p>	<p>1.0</p>
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<p>CHEMISTRY with LAB <NCAA></p> <p>Prerequisite: Successful completion in Algebra I and Biology 9.</p> <p>This is an introductory Chemistry course desired to prepare students for future scientific studies &/or a future in some science related field such as engineering & nursing. Students will learn about the structure of matter, states of matter, reactions, descriptive chemistry and laboratory skills.</p> <p>TEXT: Prentice Hall Chemistry 2008 Wilbraham, Staley, Matta, & Waterman</p>	<p><i>(Elective Grades 9-12)</i></p>	<p>1.0</p>
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<p>HONORS BIOLOGY II with LAB <NCAA></p> <p>(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)</p> <p>Prerequisites: Successful completion of Biology 9.</p> <p>Students electing to take this course should have a genuine passion for biology and the sciences. This course is an elective designed to prepare students for post secondary work in biology or the human sciences. Although the class is geared toward continued work in the sciences, it serves as a college preparatory class that will benefit all students planning on continuing their education after graduation. Instructional content will be college level information centered in the areas of bio chemistry and human anatomy and physiology. Students should be prepared for an intensive seven-month review of both the human skeleton and cat anatomy in the laboratory. Assessment will include a wide variety of activities and exams designed at the higher levels of Blooms Taxonomy including individual and group projects, essays, exams, practical laboratory exams, and professional lab reports. Students will be expected to be able to make connections between pieces of information, and use current knowledge to solve new problems when presented. Students taking this class should be prepared for a very demanding work load inside and outside the classroom. Both the assignments and student expectations will be that of a post secondary institution.</p> <p>TEXT: <i>Biology – Campbell/Reece</i> <i>Principles of Human Anatomy – Tortora</i></p>	<p><i>(Elective Grades 10-12)</i></p>	<p>1.0</p>
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HONORS PHYSICS I with LAB <NCAA> *(Elective Grades 10-12)* **1.0**
(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)

Prerequisites: Successful completion in Algebra II and Geometry (or scheduled).
 Physics is the study of the world around us and relates physical observations to overall trends and mathematical interpretations. This course is recommended for students preparing for college studies in science or looking for a rigorous course to prepare students for college. Honors physics is a mathematically strenuous class; therefore, students weak in algebra are not recommended to take this course. Students will work with motion, waves, light, sound, magnetism, electricity, space, the engineering design process, and prototype design. Specific emphasis will be placed upon mathematical problem solving as well as on conceptual problem solving.

TEXT: *Physics*, Wilson, Buffa, Lou

HONORS PHYSICS II with LAB <NCAA> *(Elective Grades 10-12)* **1.0**
(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)

Prerequisites: Successful completion in Honors Physics with Lab (minimum grade requirement – 90%) or Physics with Lab (minimum grade requirement – 95%) as well as instructor referral. Above-average performance in Pre-Calculus is also required.
College credit from Seton Hill University is available with this course.
 Honors Physics II will build upon the basic understanding from the prerequisite courses and utilize calculus methods to help prepare students for college studies in STEM related fields. Specific emphasis will be placed on engineering practices, design, and analysis.

This course is very rigorous in both mathematical computation and scientific concept. This course is given credit through Seton Hill University as a science lab course for students scoring appropriate grades in the course.

TEXT: *Fundamentals of Physics*, Halliday, Resnick, Walker

KEYSTONE BIOLOGY REMEDIATION *(Elective Grades 10-11)* **0.5**

This course is designed to assist students in obtaining proficiency on the Keystone Biology Exam. Students will be required to take this course based on Keystone Exam scores and/or Classroom Diagnostic Tool performance and teacher recommendation. This course is designed to offer instruction and practice based on the Keystone Biology assessment anchors and eligible content.

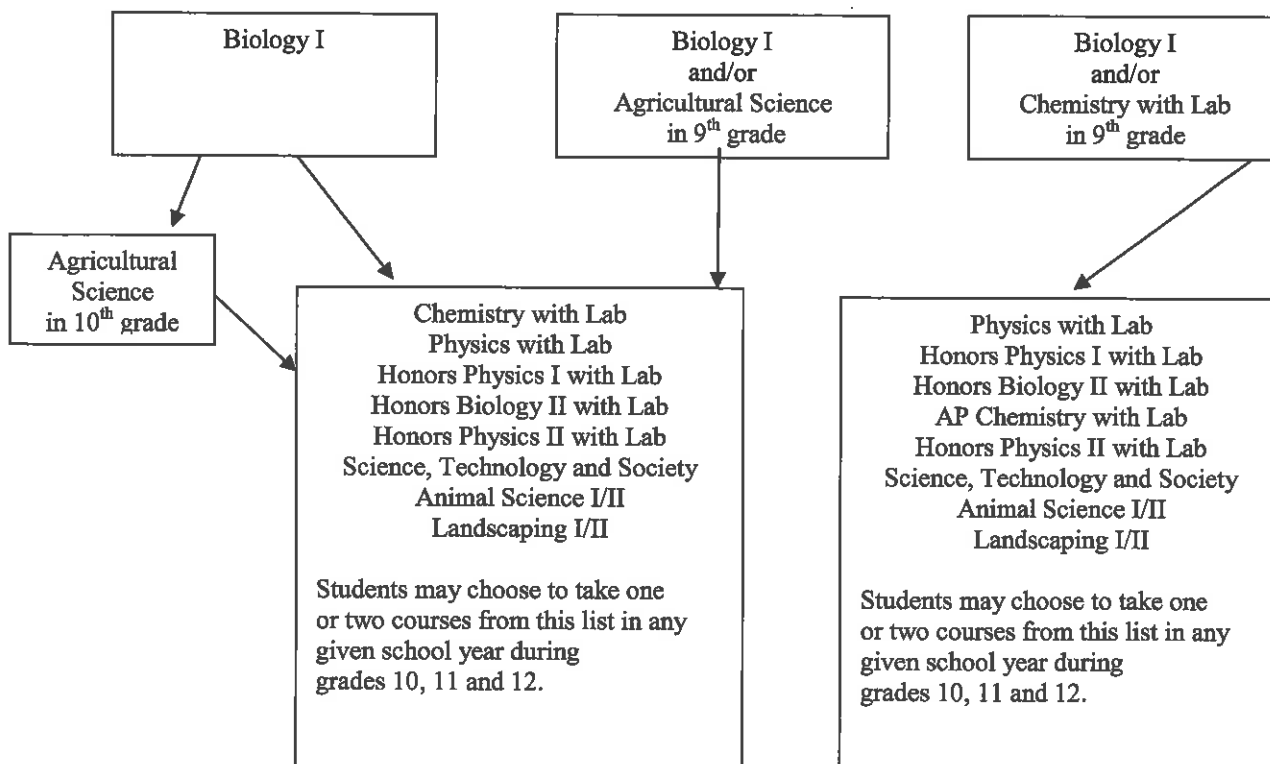
<p>LANDSCAPING I Prerequisite: Agricultural Science This course is designed to introduce students to the basic principles of landscaping. Students will learn to use drawing instruments, analyze the landscape site, and choose proper plant selection. All students taking the course are required to be a member of the National FFA Organization.</p>	<p>Semester Course (<i>Elective Grades 10-12</i>)</p>	<p>0.5</p>
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<p>LANDSCAPING II Prerequisite: Landscaping I This is a course designed to give students an understanding of the installation of plant materials, construction and maintenance of the lawn, and the basics of landscape contracting. All students taking the course are required to be a member of the National FFA Organization.</p>	<p>Semester Course (<i>Elective Grades 10-12</i>)</p>	<p>0.5</p>
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<p>PHYSICS with LAB <NCAA> Prerequisite: Successful completion in Algebra I and Algebra II. Physics is the study of the world around us and relates physical observations to overall trends and mathematical interpretations. This course is recommended for students preparing for college studies outside of the science fields, for trade schools, or for people who are curious about the world around them. Students will work with motion, waves, light, sound, electricity, space, and prototype design. Emphasis will be placed upon conceptual problem solving and overall problem solving techniques. TEXT: <i>Conceptual Physics</i>, Hewitt</p>	<p>(<i>Elective Grade 10-12</i>)</p>	<p>1.0</p>
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<p>SCIENCE, TECHNOLOGY and SOCIETY This course is available to sophomores, juniors and seniors. This multidisciplinary semester course will revolve around current issues involving Science, Technology and Society. It will focus on laboratory studies to collect and evaluate data while exploring real-world problems. Students will have the opportunity to communicate their findings in written, spoken, and project based assessments.</p>	<p>Semester Course (<i>Elective Grades 10-12</i>)</p>	<p>0.5</p>
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SCIENCE SEQUENCE of COURSES



Students entering post-secondary science-related fields are encouraged to schedule more than one science class per year (as their schedules may permit).

This promotes experiences in various branches of upper level sciences before graduation. Doing so will also free student schedules during the senior year for college course enrollment.

Agriculture Science courses can be taken concurrently with any course in this sequence.

SOCIAL STUDIES*Course**Prerequisite-Description-Text**Credit***AMERICAN GOVERNMENT 12 <NCAA>****1.0**

This course is an introduction to the basic concepts of American government, the American political process, and the rights and responsibilities of citizenship. This course will focus on the principles and beliefs upon which the United States was founded and on the structure, functions, and powers of government on the national, state, and local levels. A significant focus of this course is on the United States Constitution, its underlying principles and the form of government it created. Based on the premise that analyzing current information is essential to an effective citizenry, this course asks students to research, compare, contrast, and think critically about government-related issues. Students will learn the ideals behind the American system of government, the mechanics of its operation, and will be encouraged to take their places as active, well informed, and independently thinking citizens in our country.

TEXT: *American Government*, Pearson

AMERICAN POLITICS 12 <NCAA>**1.0**

College credit from the University of Pittsburgh is available for this course.

This is an introductory course in American politics that is suitable for beginning political science or students who wish to complete the course as part of a "general education" requirement. The purpose of the course is to teach students about both the American political system and about broad concepts social scientists use to study politics. Topics include but are not limited to historical context, the Constitution, civil rights, civil liberties, Congress, the Presidency, the Judiciary, public opinion, voting, and elections.

ADVANCED PLACEMENT UNITED STATES HISTORY 11 <NCAA>**1.0**

(1.5 value for Classes of 2020-2024. 1.25 value for Classes of 2025+)

College credit from Seton Hill University is available with this course.

Based upon successful completion of Honors United States History 10 (recommended) or United States History 10 and teacher recommendation, students may elect this course instead of the regular required course. This course will cover Pre-Columbian to present day American history. A strong emphasis will be placed on reading, writing, and higher level thinking skills in preparation for the Advanced Placement United States History Exam. Juniors with a strong academic work ethic and an interest in American history are encouraged to enroll in the class.

TEXT: *Out of Many: A History of the American People* (8th Ed.) Prentice Hall

UNITED STATES HISTORY 11 <NCAA>**1.0**

United States History 11 covers events that occurred from the Industrial Revolution to the contemporary period. Topics include and are not limited to: the Progressive Era, World War I, the Twenties, the Great Depression, World War II, the Cold War, and Civil Rights Era. We will analyze and debate competing interpretations of events, individuals, and ideas of the past using historical evidence. The goal of this course is for students to build confidence as critical thinkers by considering multiple perspectives, weighing evidence and making sound judgments about the contemporary world.

Information will be presented from supplemental and primary sources.

HONORS UNITED STATES HISTORY 10 <NCAA> 1.0
(1.25 value for Classes of 2020-2024. 1.1 value for Classes of 2025+)

Based upon successful completion of Honors Civics and Economics 9 with a culminating average of at least an 88%, students may elect this course instead of the regular required course. Honors United States History 10 is for students seeking a greater academic challenge in social studies, and it will serve as a preview and skill builder for Advanced Placement United States History 11. This course is designed to give a comprehensive view of United States History from early European colonization to the late 1800's. Students will be introduced to new historical skills that will be on the Advanced Placement United States History Exam and will be challenged by various reading and writing assignments. Honors United States History 10 will not be required for a student wishing to take Advanced Placement United States History 11, but it is strongly recommended.

TEXT: *Under Review, currently Faragher, out of Many 6th Ed for AP*

UNITED STATES HISTORY 10 <NCAA> 1.0

United States History 10 covers events that occurred from European colonization to the Industrial Revolution. Topics include and are not limited to: Colonial America and the events leading to the American Revolution, westward expansion, the Civil War, and Reconstruction. We will analyze and debate competing interpretations of events, individuals, and ideas of the past using historical evidence. The goal of the course is for students to consider multiple perspectives, weigh evidence, and make sound judgments about the contemporary world.

Information will be presented from supplemental and primary sources.

HONORS CIVICS and ECONOMICS 9 <NCAA> 1.0

Based on grades from 8th Grade Social Studies and teacher recommendation, students may elect this course instead of the regular Civics & Economics course. Students will learn the basic principles of national, state, and local governments as well as explore the founding American documents, current events, and citizenship. The economic portion of the class is designed to teach students the basic concepts of our economic system. Students will also learn the role that they play as consumers in our economic system. Students will be required to analyze primary & secondary sources, research current events in depth, and complete assignments/projects of an advanced level.

TEXT: *Civics: Government and Economics in Action, Prentice Hall*

CIVICS and ECONOMICS 9 <NCAA> 1.0

Civics will introduce students to the core principles of American civics and economics in order to prepare them to become active citizens and community members. Students will learn the basic principles of national, state, and local government as well as explore the founding American documents, current events, and citizenship. The economic portion of the class is designed to teach students the basic concepts of our economic system. Students will also learn the role that they play as consumers in our economic system.

TEXT: *Civics: Government and Economics in Action, Prentice Hall*

INTRODUCTORY PSYCHOLOGY <NCAA> (Elective Grades 11-12) **1.0**

College credit from the University of Pittsburgh is available for this course.

This course will be taught as Advanced Placement Psychology, and students can choose to enroll in the class as a three-credit University of Pittsburgh class. The objective of this course is to provide students with an overview of the diverse field of psychology and an appreciation of the way that behavior and mental processes can be studied scientifically. Introductory Psychology is reading intensive and will contain the level of rigor necessary for a college course.

TEXT: Myers, *Psychology for AP* 2nd Edition

INTRODUCTORY SOCIOLOGY <NCAA> (Elective Grades 11-12) **1.0**

College credit from the Seton Hill University is available for this course.

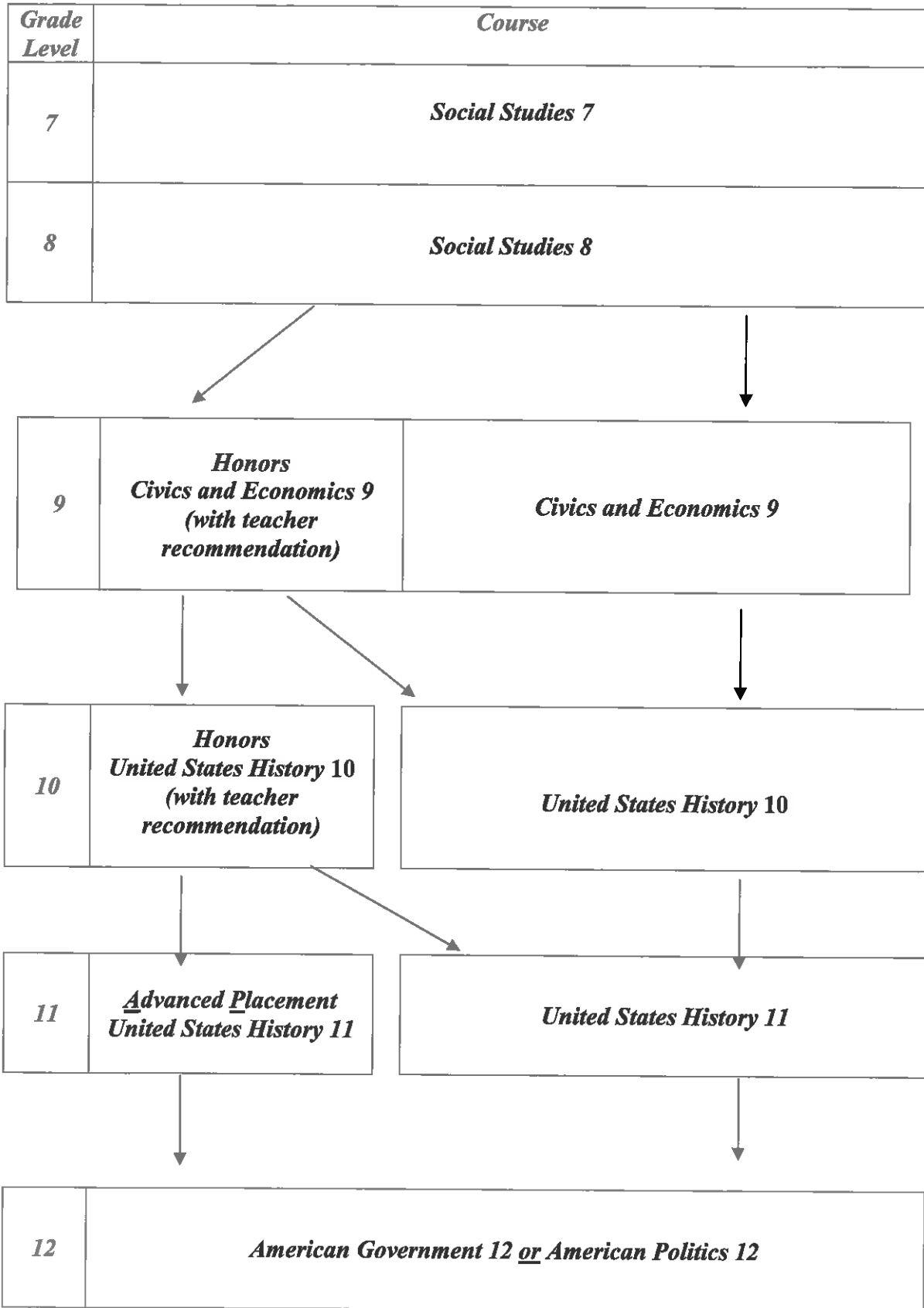
This course examines the social and cultural forces that shape the lives of individuals and groups and the socialization of the human person throughout the stages of life. Students will also study the multiple functions of social groups, institutions, and culture along with receiving an introduction to sociology theories.

RIGHT START to COLLEGE Semester Course (Elective Grades 11-12) **0.5**

College credit from the University of Pittsburgh is available for this course.

Most beneficial when taken in conjunction with other college courses, this semester class provides students with the opportunity to apply college preparatory skills over a variety of topics including metacognition, academic success, and strategic approaches to learning.

SOCIAL STUDIES SEQUENCE of COURSES



VOCATIONAL**Course****Prerequisite-Description-Text****Credit**

NOTE: Class sizes will be limited for safety concerns.

Technology Education based classes prepare students for successful careers in STEAM (science, technology, engineering, arts, and mathematics) related fields, industrial jobs and manufacturing, Computer Numerical Control, and everyday life.

CHILD DEVELOPMENT and PARENTING**Semester Course (Elective Grades 9-12) 0.5**

This elective will deal mainly with topics involving parenting skills and all areas of child development. Some of the units covered will include positive parenting, pregnancy, labor and delivery, infant care, toddler and preschool development, literacy, learning through play, and childcare basics. Students will work with elementary students throughout the semester. Students will be required to complete a parenting simulation utilizing "Real Love Baby" Infant Simulator for one weekend.

COMPUTER AIDED DRAFTING Semester Course (Elective Grades 9-12) 0.5

Students will learn how to draw basic multi-view, sectional, and isometric drawings on Auto CAD. Auto CAD is a drafting program used in industries around the world. Basic laser engraving, 3D printing, CNC routing and plasma cutting will be incorporated in this STEAM based class. This class will help students develop the basic skills that a draftsman, engineer, CNC operator, machinist, or interior designer needs. This course can be used as the other .5 credit of the Computer Technology Graduation requirement.

COMPUTER AIDED DRAFTING-ADVANCED**Semester Course (Elective Grades 9-12) 0.5**

Students will learn how to draw advanced multi-view, sectional, isometric, solid renderings, assembly and working drawings on Auto CAD. Students will also be introduced to various new programs like Architectural CAD, 3DS Max, and Inventor. Advanced techniques will be taught so that students can program the CNC router, CNC plasma cutter, laser and 3d printer. Problem solving activities will be used in this STEAM based class. This course can be taken multiple times creating higher level projects.

CONSUMER ISSUES Semester Course (Elective Grades 9-12) 0.5

This semester elective explores current consumer topics. Topics covered will include consumer awareness, smart shopping, advertising, product comparisons, product labeling, government regulations, personal finance/budgeting, and cash versus credit. A trip to a local grocery or department store will be scheduled if time permits. This hands-on course will include web site evaluations.

ENGINEERING and PROTOTYPING Semester Course (Elective Grades 9-12) 0.5

This is a STEAM based semester course that introduces students to technology education. In this class students will solve problems using the four systems of technology (Transportation, Communication, Production and Construction). Projects may include electronics, robotics, lasers, CNC machinery, architecture, and alternative energy. This course is recommended for students interested in careers in STEAM related fields such as engineering, construction and industrial technology.

FAMILY and CONSUMER SCIENCE

Semester Course *(Elective Grades 11-12)* **0.5**

This course is a semester elective that will touch on all areas of Family and Consumer Science. The focus is on service learning. Course work will be determined by the ability level of the individual students. Students must volunteer to assist with projects in both the elementary and high school buildings.

FAMILY LIVING

Semester Course *(Elective Grades 9-12)* **0.5**

Family Living will help prepare the students for life after high school. This course will look at the importance of the family structure in our society. Topics will include, but are not limited to, strengthening the family, personal relationships, engagement and marriage, communication, housing options, laundry and cleaning, eating right, money management, cars and insurance and many more. This course will be beneficial to those going to college or entering the job market.

FOODS and NUTRITION

Semester Course *(Elective Grades 9-12)* **0.5**

This is a course designed to explore basic nutrition and food preparation skills that will aid the student in independent living. Emphasis will be placed on nutrition facts, diet analysis, basic food preparation skills, and menu planning. The use of household electrical appliances and safety will be stressed. Students will be required to complete a cooking demonstration as their final project.

HOME and FAMILY 9

Semester Course *(Elective Grade 9)* **0.5**

This semester course elective is an introduction to all areas of the Family and Consumer Science curriculum. It will include 6 weeks each of the following four areas: food and nutrition; sewing and clothing care; family, parenting and child care; and housing and personal finance. This hands-on course will involve individual and group projects.

INTRODUCTORY FABRICATION

Semester Course *(Elective Grades 9-12)* **0.5**

This is a STEAM based course with hands-on exploration into design and fabrication with an emphasis on technology. Students will express their creativity and utilize problem-solving research to design and fabricate products. Students will gain an understanding of fabrication by utilizing six different pieces of hi-tech equipment. Projects will be created using the Epilog laser, Roland vinyl cutter and heat press, Workhorse screen printing (how t-shirts are made), Markerbot 3D printing, Torchmate CNC router, and Torchmate CNC plasma cutter.

ROBOTIC SOLUTIONS	Semester Course (Elective Grades 9-12)	0.5
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(a partnership with Trac Fabrication Inc.)

Trac Fabrication Inc. manufactures tracked motorized wheelchairs. They also fabricate custom robotics chassis. Companies have approached Trac Fabrication Inc. to build platforms that can be customized to their individual needs and/or problems. This part of the business is new, and Trac Fabrication Inc. is open to new ideas, innovative designs, and prototypes that meet their clients' needs and/or solve their problems. Teamed with Laurel School District, Trac Fabrication Inc. hopes to inspire a new generation of engineers, programmers, and fabricators to solve real-world problems. Students who participate in Robotic Solutions will discover the future of robotics related to technologies. Students will be presented with one (1) build challenge per semester. Students will research, design, build, and test prototypes using the Scientific Method. A record of their work will be documented in an engineering notebook. They will then present working prototypes to Trac Fabrication Inc. for feedback and evaluation. In the end, students who elect to take Robotic Solutions will be a part of the growing trend to integrate robotics into our daily lives.

SEWING and DESIGN I	Semester Course (Elective Grades 9-12)	0.5
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This course is designed to explore basic sewing and clothing construction skills. Students will be required to complete projects pertaining to clothing choices, clothing care, and clothing construction. The students may also choose craft projects to complete as well as projects pertaining to recycled clothing and household items. Students will use two types of sewing machines and a serger machine.

SEWING and DESIGN II	Semester Course (Elective Grades 9-12)	0.5
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Prerequisite: Sewing and Design I.

This course will allow the students to complete more complicated sewing projects. The students may design and create their own clothing projects. Students will be involved with the design and construction of costumes for the school musical. Students will learn how to use a computerized embroidery machine allowing them to utilize their skills for school or personal projects. Students will be required to shop and pay for fabric and notions needed for their personal projects.

TOOLS, MATERIALS and PROCESSES

Semester Course *(Elective Grades 9-12)* **0.5**

Students will be introduced to basic hand tools and machine work involving plastic and wood materials. Students will design an individual woodworking project with emphasis on safety. The project will be created using a variety of traditional woodworking tools coupled with CNC routers, CNC plasma cutters, and lasers. This course is recommended for students interested in careers in STEAM related fields such as engineering, construction, and industrial technology.

TOOLS, MATERIALS and PROCESSES-ADVANCED

Semester Course *(Elective Grades 9-12)* **0.5**

Prerequisite: Tools, Materials and Processes.

Students will be introduced to the fundamentals of the manufacturing process, types of materials, product design, quality control, and safety. Students will use a variety of computer software during the manufacturing process, as well as traditional woodworking equipment, hand tools, lasers, and CNC machinery. Students will have the opportunity to build a project of their choice, with instructor approval. This class will focus on safety as well as machine use and maintenance. Students will have to purchase material for projects. This course is recommended for students interested in careers in STEAM related fields such as engineering, construction and industrial technology.

VOCATIONAL AGRICULTURE EDUCATION*Course**Prerequisite-Description-Text**Credits*

Agriculture Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems.

Note: class sizes will be limited for safety concerns.

Program CIP code of Agriculture, General 01.0000.

ADVANCED AGRICULTURE 12 Semester Course (Elective Grade 12) 0.5

Prerequisite: Senior student and a "Completer" of the Ag Ed program.

This course is designed to give students an advanced understanding of the broad field of Agriculture. Students will learn and review principles of business management, soil science, crop science, animal science, horticulture, natural resource management, common agricultural calculations, and safety in Ag mechanics. All students taking the course are required to be a member of the National FFA Organization.

ADVANCED WELDING Semester Course (Elective Grades 11-12) 0.5

Prerequisite: Welding II

Students who complete Welding I, Welding II and Advanced Welding are eligible for credit at the New Castle School of Trades.

This course is designed to give students an advanced understanding of all welding safety and processes. Students will learn to read and write welding blueprints, design and build metal projects, and disassemble, reassemble, and fix welding equipment. All students completing this course along with Welding I & II will be awarded ¼ of the necessary hours and tuition for the Welding Program at the New Castle School of Trades. All students taking the course are required to be a member of the National FFA Organization.

AGRICULTURE MECHANICS Semester Course (Elective Grades 9-12) 0.5

Prerequisite for all mechanic classes offered in Ag Ed curriculum.

This course is designed to explore the major areas of agriculture mechanics.

Emphasis will be on woodworking, oxyacetylene welding, arc welding, electricity, plumbing, concrete and masonry, and agricultural structures. All students taking the course are required to be a member of the National FFA Organization.

AGRICULTURE SAE Semester Course (Elective Grades 9-12) 0.5

Agriculture SAE, or Supervised Agriculture Experience, will be available for students in grades 9, 10, 11, and 12. It must be approved by the department. Students will be exposed to a variety of record keeping systems and their analysis to allow them to more accurately evaluate their potential both on a personal and business level. In a global agricultural experience, students will have to be able to identify those key components regardless of where they may be found and interact with that information in such a way as to be able to identify problems, provide solutions, and maintain a stable economic position. The objective of this course is to provide students with higher learning skills in that they will be required to identify, analyze, and modify the enterprise based on that analysis. Computers will be used; calculators are needed.

AGRICULTURAL SCIENCE (Elective Grades 9-10) **1.0**

Prerequisite for all semester courses offered in the Ag Science curriculum.

This course introduces students to the sciences, skills, and technology associated with modern agriculture. Topics to be covered will be plant science, animal and poultry science, crop production, forestry, wildlife, and biotechnology. All students taking the course are required to be a member of the National FFA Organization.

ANIMAL SCIENCE I Semester Course (Elective Grades 10-12) **0.5**

Prerequisite: Agricultural Science

This course also counts towards science credit for graduation.

The course introduces students to livestock and poultry production. Emphasis will be on feeding and nutrition, genetics of animal breeding, breeds of livestock, diseases and parasites of livestock and poultry, housing, and marketing. All students taking the course are required to be a member of the National FFA Organization.

ANIMAL SCIENCE II Semester Course (Elective Grades 10-12) **0.5**

Prerequisite: Successful completion of Animal Science I

This course also counts towards science credit for graduation.

This course requires self-monitored learning by the student with the oversight of the instructor on specific projects and research based topics. The course introduces students to animal rights and animal welfare, animal cloning, biotechnology in animal reproduction, producing genetically modified organisms and ethical issues in biotechnology. All students taking the course are required to be a member of the National FFA Organization.

ENVIRONMENTAL RESOURCE MANAGEMENT

Semester Course (Grades 9-12) **0.5**

Prerequisite: Agricultural Science

This course is designed to give students hands-on experience in the field of environmental science, ecology, and conservation through the use of the Ag Ed shop and outdoor lab facilities. The basic principles of ecology, forestry, wildlife management, soils, and water management will be covered through hands on experiences. All students taking the course are required to be a member of the National FFA Organization.

GREENHOUSE PRODUCTION Semester Course (Elective Grades 9-12) **0.5**

Prerequisite: Agricultural Science

This course introduces students to principles of greenhouse crop production.

Emphasis will be on greenhouse structures, effects of environmental factors on plant growth, plant nutrition, plant propagation, container-grown crops, and insect and disease control. All students taking the course are required to be a member of the National FFA Organization.

INTRODUCTORY HORTICULTURE

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Agricultural Science

This course introduces students to the field of horticulture. Emphasis is placed on plant science, plant propagation, greenhouse management and crops, pest management, lawn and turf grass maintenance, small fruits, vegetables, and floriculture. All students taking the course are required to be a member of the National FFA Organization.

LANDSCAPING I

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Agricultural Science

This course also counts towards science credit for graduation.

This course is designed to introduce students to the basic principles of landscaping. Students will learn to use drawing instruments, analyze the landscape site, and choose proper plant selection. All students taking the course are required to be a member of the National FFA Organization.

LANDSCAPING II

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Landscaping I

This course also counts towards science credit for graduation.

This is a course designed to give students an understanding of the installation of plant materials, construction and maintenance of the lawn, and the basics of landscape contracting. All students taking the course are required to be a member of the National FFA Organization.

SMALL GASOLINE ENGINES I

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Agriculture Mechanics

This course introduces students to safety in the small gas engine shop, small gas engine tools and measuring instruments, engine construction, and principles of operation. All students taking the course are required to be a member of the National FFA Organization.

SMALL GASOLINE ENGINES II

Semester Course *(Elective Grades 11-12)* **0.5**

Prerequisite: Small Gas Engines I

This course covers two-cycle and four-cycle engines, measuring engine performance and preventive maintenance and troubleshooting. All students taking the course are required to be a member of the National FFA Organization.

WELDING I

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Agriculture Mechanics

This course is designed to give students a basic understanding of electric arc, welding and oxyacetylene welding. Students will learn and demonstrate basic welding safety skills, oxyfuel cutting and welding skills, and electric arc welding processes and principles. All students taking the course are required to be a member of the National FFA Organization.

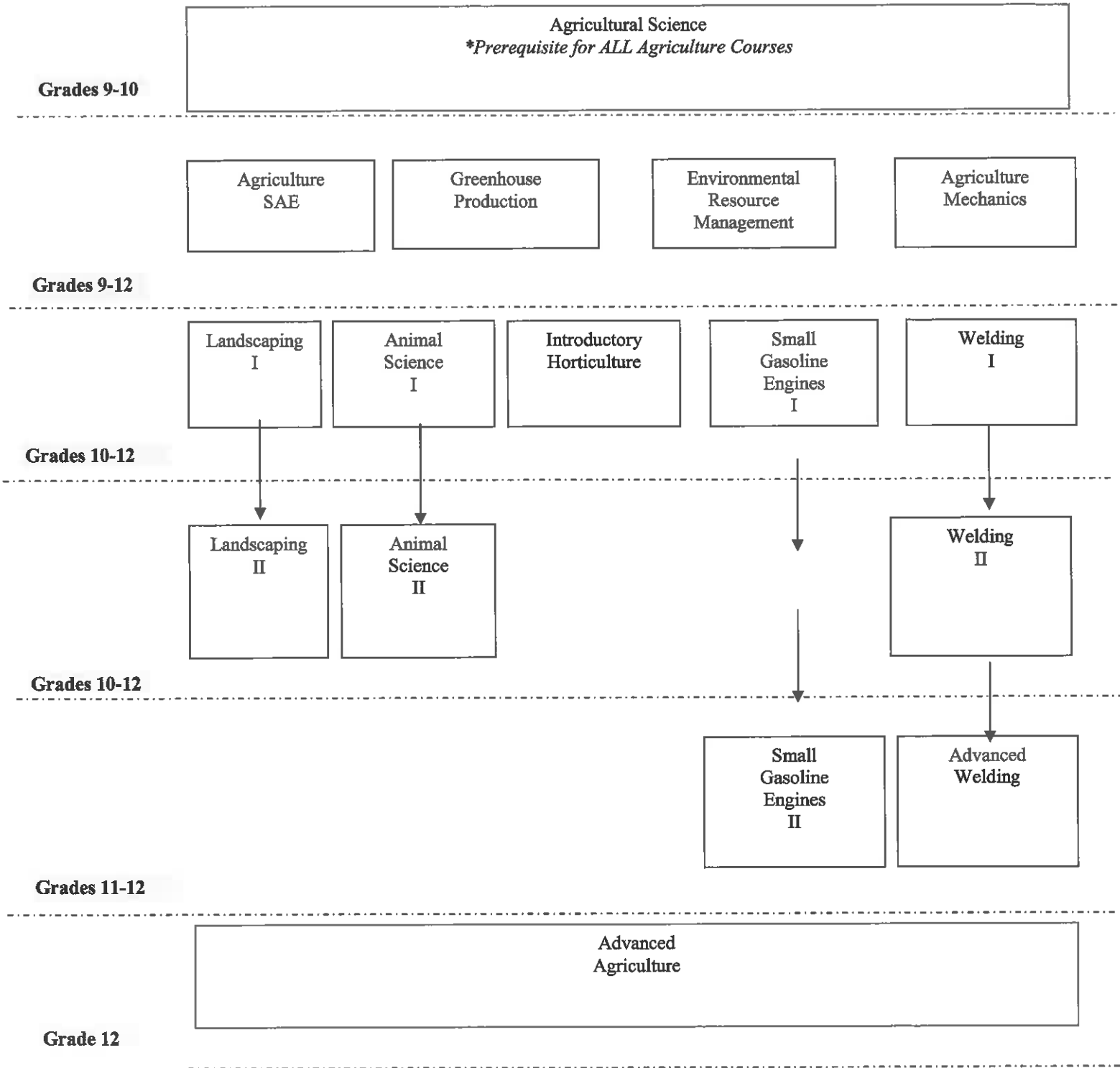
WELDING II

Semester Course *(Elective Grades 10-12)* **0.5**

Prerequisite: Welding I

This course is designed to give students a basic understanding of MIG and TIG welding processes as well as brazing and oxyfuel welding skills. Students will learn and demonstrate welding safety skills, MIG, TIG, and oxyfuel, welding skills. All students taking the course are required to be a member of the National FFA Organization.

VOCATIONAL AGRICULTURE SEQUENCE of COURSES



Students are encouraged to schedule more than one agriculture class per year (as their schedules may permit).

