



PROGRAM OF STUDIES 2016-2017

Owen J. Roberts High School
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A copy of this booklet will be available on the Owen J. Roberts High School website.

Students and their parents are encouraged to become familiar with the information it contains regarding our academic program. Please be advised that some of the material is subject to change during the school year. Students and parents will be informed of such changes through other school communication formats including the school website and Skyward Family Access.



OWEN J. ROBERTS HIGH SCHOOL PROGRAM OF STUDIES 2016-2017

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PROGRAM OF STUDIES

Selecting courses for the upcoming school year is an important decision-making process for students and families. This Program of Studies has been produced to aid students and parents in making the best possible course selections. Please review the course offerings and scheduling information in this booklet carefully. Be sure to select the courses which fulfill Owen J. Roberts High School graduation requirements and which create the foundation of knowledge for future academic and career goals.

It is the objective of the Owen J. Roberts High School counselors and administrators to develop a schedule for each student that meets his/her educational needs and interests. Students and parents are urged to work with school personnel in this planning activity. Students who need individual help are encouraged to make an appointment with their school counselor. The teachers and administrators will also gladly assist students and parents who need additional information.

■ GUIDANCE DEPARTMENT

The school counseling staff is available to assist students and parents in the course selection process. We encourage you to contact us if you have any questions about this process. The Guidance Office is open from 7:00 A.M. to 3:00 P.M.

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■ COURSE AND CREDIT REQUIREMENTS FOR GRADUATION

Owen J. Roberts High School's requirements for graduation are based on criteria as determined by the Owen J. Roberts School Board and the Pennsylvania school code. To be graduated from OJRHS, students must complete the following requirements:

24 total credits required:

- **Four years (4.0 credits) of English**
- **Four years (4.0 credits) of mathematics**
- **Three years (3.0 credits) of science from 3 of 4 areas (earth/space, biology, chemistry, physics)**
- **Three years (3.0 credits) of social studies**
- **Four years (1.6 credits minimum) of physical education. Physical education must be taken every semester.**
- **Two health classes (0.8 credits)**
- **A minimum of 7.6 elective credits**

Keystone Exams:

Beginning with the Class of 2017, all students must pass the Algebra, Biology, and Literature (10th grade English) Keystone Examinations to graduate. Students will take these end-of-course exams in May. All students will be offered multiple opportunities to take the Keystone Exams in order to demonstrate proficiency.

Students will receive remediation opportunities as needed prior to retakes. If proficiency has not been reached students will be provided a mandatory project/class in 12th grade. Remediation may require students to drop electives, postpone Health 2 until 12th grade, or take Online Health 2.

College Entrance Requirements:

- It should be understood that the requirements for graduation and those for college entrance may be quite different. Students planning to attend college should consult their school counselor for the scheduling of appropriate courses.

NCAA Eligibility Center Academic Requirements:

- Please see NCAA Eligibility Center section on page 5 for more information.

■ PROMOTION REQUIREMENTS

Students must earn credit in each grade in order to make progress toward graduation from high school in four years. Credit for a subject is awarded at the conclusion of a course after the student has satisfactorily completed all the requirements of that subject and has satisfied all instructional obligations with a passing final grade. Therefore, the credit a student earns determines if the student meets the requirements to be promoted each year to the next grade level.

Minimum credits:	5.0 credits (earned in 9th grade)	Promotion to:	Grade 10
	11.0 credits (earned in 9th & 10th grade)		Grade 11
	17.5 credits (earned in 9th, 10th, & 11th grade)		Grade 12

Notes:

- **All students must also pass English and math every year in order to be promoted.**
- Being promoted to the next grade level does not guarantee a student has the necessary number of credits to be on track to graduate. Students should carefully check their credit status with their school counselor when scheduling classes.
- 4th year juniors who can schedule enough classes/credits to graduate in June, may be promoted to 12th grade with administrative approval.

■ GRADING SYSTEM AND REPORTING

Marking period and current course grades are always available on Skyward. These grades reflect all aspects of academic achievement and are a composite of many factors including: test results, classroom participation, academic effort, homework and study assignments, and any other educationally sound criteria used as a basis for grading. The final grade is the average of four nine-week period grades and the final exam, where applicable. The following are general guidelines with respect to grading:

A= 92%-100%-Excellent	WP-Withdraw Passing
B= 83%-91%-Good	WF- Withdraw Failure
C= 74%-82%-Fair	S- Satisfactory
D= 65%-73%-Passing	U- Unsatisfactory
F= 0-64%-Failed to do satisfactory work	M- Medical
	NG- No Grade

Honor Roll: Distinguished.....	All grades are 92%-100% and S Grades
Honor.....	All grades are 83%-100% and S Grades

In order to receive a grade of **Medical** a student must provide a statement from a physician; otherwise a regular grade will be recorded. The statement must include the reason for the medical excuse, the duration and the limitations. The medical grade will be replaced by a regular grade upon satisfactory completion of course requirements. No credit will be awarded for a medical grade.

■ NCAA ELIGIBILITY CENTER ACADEMIC REQUIREMENTS

Any student who is interested in competing in Division I or II athletics at the college level should schedule a conference with his/her school counselor to ensure that course selections are in compliance with NCAA regulations. It is strongly suggested that, if possible, a student schedule this conference upon entering the ninth grade. NCAA qualifying courses can be found at www.eligibilitycenter.org/. Enter the school CEEB code of 394085 for a complete list of currently approved courses. These courses are subject to change at any time by the NCAA. For more information, please refer to the Guidance Department's Eligibility Center information page (www.ojrsd.com - High School/Services/Guidance/NCAA Eligibility Center).

■ DUAL ENROLLMENT

Dual Enrollment courses enable students to earn college credit for specific classes at Owen J. Roberts. Certain courses within the high school have been approved for college credit. Students must fill out paperwork and pay a fee to earn college credit for a course. Dual Enrollment courses are noted as such within the course description. The procedure for registering for Dual Enrollment credit will be discussed at the beginning of the school year in each class.

■ HYBRID COURSES

The term "hybrid course" (a term that is used interchangeably with the term "blended learning") describes a course design that combines traditional, face-to-face class time with online and out-of-class course work. For instance, a course that traditionally meets five times a week face-to-face may meet twice a week face-to-face, with the rest of the course activities online. There is a growing body of research which shows that hybrid learning can enhance student learning beyond traditional face-to-face courses and in wholly online courses. One of the studies performed by the U.S. Department of Education showed a significant improvement of learning in hybrid courses as compared to only face-to-face or only online. This course format not only provides greater flexibility in learning for faculty and students, but can also increase rigor and engagement.

■ OWEN J. ROBERTS VIRTUAL ACADEMY

With administrative approval students may enroll in the Owen J. Roberts Virtual Academy (OJRVA). OJRVA students are considered members of our high school learning community. As such, they may participate in extracurricular activities and earn an Owen J. Roberts High School diploma. Students interested in this option should contact their school counselor. Advanced Placement courses receive AP weight in GPA calculations. Similar to other Intermediate Unit programs, all other OJRVA courses receive Standard weight in GPA calculations. Students must earn a minimum of 50% of their credits through OJR courses to be considered for Valedictory/Salutatory status.

■ OWEN J. ROBERTS ORIGINAL CREDIT SUMMER COURSES

Students can take these courses for original credit for the purpose of advancing to the next level. For credit to be awarded, students are expected to work at an accelerated pace and pass the final exam. Courses offered typically include: **Algebra 1B, Geometry, Algebra 2, Precalculus, and Health 2 (online and traditional options available)**. Courses are graded on a pass/fail basis. As such, they do not count towards a student's grade point average. However, these courses are listed on the student transcript. Pursuant to Board Regulation 213A, courses taken by rising 9th graders do not count for high school credit. However, they may count for academic placement. The NCAA Eligibility Center calculates a passing grade (S) as a D for grade point average. Consequently, potential Division I/II athletes should discuss possible enrollment with their counselor.

■ SPECIAL EDUCATION SERVICES

The Special Education Department provides services to students with Individualized Education Plans. The department is comprised of certified learning support teachers, speech and language therapists, and instructional support staff. Additionally, vision, hearing, occupational, and/or physical therapists are available for students requiring those services. Our goal is to meet the unique educational needs of our students. The department offers a continuum of services including itinerant learning support, direct instruction classes, emotional support, autistic support, and life skills support. Learning Support teachers will assist identified students with course selection.

■ COMPUTATION OF GRADE POINT AVERAGE

At the end of each school year, final grades will be recorded on the report card and student transcript on the 100 point scale, previously outlined. Grade point average (GPA) will be computed on a weighted 4.0 scale at the conclusion of the school year by converting the final grade in a course to a point value, outlined in the chart on the following page, and multiplied by the credit received for the course. The sum of the point values is divided by the credit total to yield the GPA.

All OJRHS courses are included in GPA with the exception of Learning Support, School/Community Service, World Language Grammar, Academic Reading & Vocabulary, Algebra Study Skills, Biology Study Skills, and original credit summer courses. The weighting for all courses is indicated within the course description. The designation of class valedictory and salutatory status will be determined in the spring of each year based on student achievement and GPA. More than one student may qualify for each category.

Courses taken outside of Owen J. Roberts High School:

- Students transferring into Owen J. Roberts: Courses taken at another high school or any middle school will not be counted towards GPA. Transfer students must enter Owen J. Roberts High School by the beginning of the second semester of the sophomore year to be considered for the valedictory or salutatory level.
- Original credit courses: College courses, courses offered by online providers, and any other external course must be pre-approved. Courses taken by rising 9th graders before the first day of the school year do not count for high school credit. However, they may count for academic placement. See Board Regulation 213A or your school counselor for more information. These courses do not count towards GPA.

** ANY FINAL GRADE BELOW 65 (INCLUDING WF) IS CALCULATED AS ZERO POINT VALUE TOWARDS GPA.*

WEIGHTING SCALE FOR COMPUTATION OF GRADE POINT AVERAGE

Grade	Standard	College Prep	Honors	AP
100	4.0	4.50	5.0	5.3
99	4.0	4.50	5.0	5.3
98	4.0	4.50	5.0	5.3
97	4.0	4.50	5.0	5.3
96	3.9	4.40	4.9	5.2
95	3.8	4.30	4.8	5.1
94	3.7	4.20	4.7	5.0
93	3.6	4.10	4.6	4.9
92	3.5	4.00	4.5	4.8
91	3.4	3.90	4.4	4.7
90	3.3	3.80	4.3	4.6
89	3.2	3.70	4.2	4.5
88	3.1	3.60	4.1	4.4
87	3.0	3.50	4.0	4.3
86	2.9	3.40	3.9	4.2
85	2.8	3.30	3.8	4.1
84	2.7	3.20	3.7	4.0
83	2.6	3.10	3.6	3.9
82	2.5	3.00	3.5	3.8
81	2.4	2.90	3.4	3.7
80	2.3	2.80	3.3	3.6
79	2.2	2.70	3.2	3.5
78	2.1	2.60	3.1	3.4
77	2.0	2.50	3.0	3.3
76	1.9	2.40	2.9	3.2
75	1.8	2.30	2.8	3.1
74	1.7	2.20	2.7	3.0
73	1.6	2.10	2.6	2.9
72	1.5	2.00	2.5	2.8
71	1.4	1.90	2.4	2.7
70	1.3	1.80	2.3	2.6
69	1.2	1.70	2.2	2.5
68	1.1	1.60	2.1	2.4
67	1.0	1.50	2.0	2.3
66	.9	1.40	1.9	2.2
65	.8	1.30	1.8	2.1

■ COURSE SCHEDULING PROCESS

General information and instructions regarding the course scheduling process is provided to all students and is available at www.tinyurl.com/OJRHSCourseSelection. An evening session is held for parents to learn about the process and changes each year. During these meetings, school counselors discuss the course selection process and provide students/parents with relevant materials.

When selecting courses, students and parents should keep in mind that many courses are organized to feed into a sequence of learning experiences and therefore have prerequisites that provide foundational skills and concepts.

Each high school day is divided into a seven period format which includes a lunch period. All students are recommended to carry at least 6 credits per year.

Students are given a deadline to complete their elective requests. During this registration period, students are encouraged to carefully select those elective subjects that will complete their schedule for the next school year. Students are also advised to seek assistance and advice from teachers, school counselors, and parents.

NOTE: Late completion of course request items can cause delays in the scheduling process and many unnecessary schedule changes that affect class size and staffing. Parents and students should take this process seriously, request all courses carefully, and complete by stated deadlines.

2015-2016 SCHEDULING TIMELINE

- December 3- December 21 All major subject, world language, and special education teachers will recommend courses and levels for all students.
- January 7 Elective Area Presentations for 8th graders.
- January 11 High school counselors present overview of scheduling process to 8th grade students.
- January 12 **Parent Scheduling Information Meeting, 7 P.M.** School counselors present an overview of the scheduling process to parents in all grade levels. Teachers from core subject areas will be available to explain courses/levels and answer questions. Snow date is January 13th.
- January 26, 27, 28 High school counselors present overview of scheduling process to high school students.
- February 5 **Deadline for students to complete elective requests.**
- March-May OJRH Master Schedule of courses and student schedules are developed.
- May-June Teachers final review and adjustment of course recommendations.
- June Student schedules activated on Skyward Family Access.
- August 1 **Priority Deadline for schedule changes.**
- Late August 8th grade and new student orientations.
- 5th day of school Last day to submit requests for schedule drops/adds and waivers for yearlong/1st semester courses.
- 5th day/2nd semester Last day to submit requests for schedule drops/adds for 2nd semester courses.

Updates and specific dates will be posted at www.tinyurl.com/OJRHSCourseSelection on the High School website at and on Skyward Family Access.

■ GUIDELINES FOR SCHEDULING COURSES

The master schedule for the next school year is built on the course requests of almost 1600 students. Every effort will be made to provide students with the courses for which they have been recommended or that they have requested. However, the availability of courses depends upon many factors, including the number of students requesting a course, staff availability, classroom availability, the number of sections of a course, and the placement of courses in a weekly schedule. Consequently, some students may be enrolled in alternate elective courses because of scheduling conflicts, or the cancellation of courses due to insufficient enrollment. Students cannot retake a course unless it is designated as repeatable. To maximize their chances of getting the elective courses they want, students should use the following guidelines:

- **Course Request Period (January):**
 - Before requesting courses for next year, check all prerequisites and academic instructional levels.
 - Select alternative elective courses that may be substituted for course requests that cannot be scheduled. Pick a variety of full-year and half-year courses.
 - Complete elective requests by the established deadline. (January 29)
- Contact your school counselor if you have special concerns or need to clarify course needs or priorities.
- **Tentative schedules live on Skyward (June):**
 - Contact the Guidance Office as soon as possible with any errors/concerns.

■ CHANGING SCHEDULED COURSES

In the process of developing schedules for almost 1600 students, it is inevitable that there will be some errors and scheduling conflicts. As the school year approaches it becomes more difficult to accommodate requested schedule changes. Therefore, students/parents are encouraged to submit requests for changes as soon as possible. Tentative schedules will go live on Skyward in June.

- **Deadlines:**
 - **August 1, 2016**
 - **Priority deadline to request changes to first semester and yearlong courses. Requests submitted by this date will have the best chance of being made.**
 - **5th day of school**
 - **Last day to request such changes to first semester/yearlong courses.**
 - **Full year courses will not be moved to accommodate second semester elective changes.**
 - **5th day of 2nd semester**
 - **Deadline to request changes to second semester courses**
- **Schedule Change Request Form:** All schedule change requests must be submitted on the schedule change request form, which will be available in the Guidance Office and at www.ojrsd.com. Avoiding a particular teacher or requesting a different lunch period will not be considered acceptable reasons for a schedule change.
- **During the Summer:**
 - Students/parents with scheduling concerns should contact the Guidance Office secretary, Laura Gunson at 610-469-5162 or lgunson@ojrsd.com
 - Schedule change requests will be made in the order they are received. Every effort will be made to address concerns expeditiously.

■ CHANGING INSTRUCTIONAL LEVELS

Prerequisite: A prerequisite is a minimum standard set forth by each academic department. There are two forms of prerequisites: course prerequisites and grade prerequisite. A course prerequisite means a student must have successfully completed one or more courses to be eligible to take the listed course. A grade prerequisite is the minimum grade required to be eligible for the next course. Students seeking to appeal prerequisites for a class should first discuss with the recommending teacher, then the appropriate department chair, then the principal. The principal may waive prerequisites based on the student's PSAT College Readiness Score (if available) and/or student academic history.

Waiver of Course Recommendation: Once students have been recommended for a course by his/her teacher, parents have the opportunity to sign a Waiver of Course Recommendation form. This form allows students who **have met the grade and/or course prerequisite** but do not have the teacher's recommendation to change to a higher instructional level. If a parent signs a Waiver of Course Recommendation form and the student changes into a class other than the one originally recommended, the student will remain in that class for the remainder of the year without exception.

Changes into a class are always dependent on the current enrollment in the desired class, and other limitations posed by the required schedule change. **The deadline to submit a waiver is the fifth day of the school year. WAIVERS MAY NOT BE USED TO OVERRIDE PREREQUISITE(S).**

- **Instructional level changes will be made if:** There is an error in the schedule or The change is recommended by a teacher and is deemed academically appropriate by both the teacher and school counselor or The change is approved by an administrator
- Students with concerns regarding their course level should request an appointment with his/her school counselor.
- No changes will be finalized without school counselor agreement, parental consent, and teacher or administrator approval.
- During the time a student's schedule is being reviewed for a change, the student will remain in the originally scheduled course until the change process has been completed.
- **When a level change is made, grades from the original course will transfer into the new course.**

■ WITHDRAWAL FROM COURSES

A completed schedule change request form (including parent/guardian signature) is required when seeking to withdraw from a course. Careful consideration is advised, as a dropped course may jeopardize promotion to the next grade or graduation. Consequently, there is a significant chance that the requested withdrawal will not be possible.

Criteria:

- Students will remain in their originally scheduled courses until the withdraw process has been completed.
- Students may drop a full year (1.0 credit) course and add a second semester (0.5 credit) course within the same period. Courses scheduled in other periods will not be moved to accommodate such a change.
- Students who attend TCHS may not drop the program after the 30th school day. Students who wish to return to Owen J. Roberts after the 30th school day may do so at the conclusion of the first semester.
- Seniors only: Colleges will receive updated transcripts (including WF/WP for dropped course) when a student withdraws from a course after initial transcripts have been sent.

Grades for Dropped Courses:

- During the first 5 school days of the term, a student may withdraw from a semester or yearlong course and receive no grade, no credit, and no penalty.
- Withdrawal after the 5th school day and prior to the 30th day of the semester (semester courses)/60th school day (yearlong) will result in the recording of a “withdraw passing” (WP) or a “withdraw failing” (WF) grade, whichever is applicable. The teacher will determine a cumulative grade average at the date of withdrawal.
- Withdrawal after the 30th day of the semester (semester course) or 60th school day (yearlong) will result in the recording of a “withdraw failing” (WF) grade.
- **Grades for Course Withdrawals:**
 - ***WF GRADES: CALCULATED AS ZERO POINT VALUE TOWARDS GRADE POINT AVERAGE.***
 - ***WP GRADES: NOT CALCULATED IN GRADE POINT AVERAGE.***
- Deadline to withdraw from courses:
 - Semester course: end of the first marking period or the course.
 - Yearlong- end of the second marking period.
- Elective change requests for the spring semester must be submitted to the Guidance Office prior to the first day of the spring semester. Elective change requests may only occur with the period of the currently scheduled course. Other courses will not be moved to accommodate a request for a different elective course.

■ ACADEMIC PLACEMENT AND INSTRUCTIONAL LEVELS

Current academic teachers will recommend the following year’s placement in each subject. While we believe it is important to challenge students academically, we are also equally cautious to recommend placements that will afford students the greatest opportunity for success. All recommendations are made with careful consideration of a student’s 1) demonstrated abilities and performance in the classroom; 2) his/her academic goals; 3) the required knowledge and skill for the level of the course requested.

Placement Process: The placement process helps to reduce the number of inappropriate course selections and the number of eventual schedule changes. In December, all core subject, world language, and special education teachers will make their initial recommendation for students’ placements. Teachers will inform students in their classes of their recommendations. Students will then have an opportunity to request elective courses in January.

The core subject recommendations and requested elective courses **are not guaranteed to be on the final student schedule**. They are the basis upon which the school’s master schedule for the next year will be built in the spring. Parents and students should note that some alternate elective choices may be substituted for courses that cannot fit into students’ schedules.

In May and June, teachers will review the student course placements for a final time. If necessary, students’ schedules will be adjusted to reflect these changes. Tentative student schedules will be made available on Skyward Family Access in June.

Instructional Levels: Each course description in this booklet indicates the academic instructional level at which the course is taught. These academic instructional levels are: Standard (ST), College Preparatory (CP), Honors (H), and Advanced Placement (AP). Each level denotes the degree of academic difficulty, the depth of the course content, and the nature of assignments and assessments required. These levels are defined as follows:

- **Standard:** designed for those students who demonstrate an average command of language and other academic skills, and who advance at a moderate rate.
- **College Preparatory:** designed to challenge students who demonstrate an above average command of academic skills, learn rapidly, and plan to attend a post-secondary school.
- **Honors:** designed for those students who are academically accelerated and college-bound. These courses have substantial academic criteria and prerequisites that must be attained before enrollment. Students must be disciplined, motivated, and have strong reading, writing, and analytical skills. Assessments most often come in the form of essays and short research papers. These courses often require summer reading and writing assignments. Students are advised to carefully consider the amount of work required and the amount of discretionary time they have before electing more than two honors level courses per year.
- **Advanced Placement:** designed for academically accelerated students who meet the criteria of the program and plan to attend a four year college. Advanced Placement (AP) courses follow a prescribed syllabus prepared by The College Board. Students will be prepared to take AP exams in the spring of each year. Students are responsible for AP test fees. Students may be awarded college credit or advanced standing based on their test scores and the policies of the college they ultimately attend.

Parents who have questions concerning instructional levels or the placement level of their child should contact the teacher making the recommendation or their child’s school counselor.

■ SEQUENCE CHARTS

The typical sequence of courses that Owen J. Roberts High School students select is presented in the charts below. The four major subject areas are divided into instructional levels. This chart is intended to give an overview of the required courses from which students can choose. It is only a guide to assist students and parents in the registration process. A student’s course selections are not limited to the sequences shown. Each student should consult his/her teachers, school counselor, and parents to determine the appropriate courses and sequence that best supports his/her academic and career goals. The academic levels – Advanced Placement (AP), Honors (H), College Prep (CP) and Standard (ST) - indicate the general level of instruction of the courses.

^ Hybrid course only. See page 5 for more information.

Offered as Hybrid and Traditional course.

English: 4.0 credits required				
Levels	9	10	11	12
H/AP	H English 9	H English 10	AP Language & Composition	AP Literature & Composition
			H English 11, ^H Literature of Change	H English 12, ^ H Literature of Success
CP	CP English 9	CP English 10	CP English 11 ^CP Literature of Change	CP English 12 ^ CP Lit. of Success
ST				ST English 12

Math: 4.0 credits required				
Levels	9	10	11	12
H/AP	# H Algebra 2	# H Precalculus	AP Calculus AB	AP Calculus BC
	H Geometry	# H Algebra 2	# H Precalculus	AP Calculus AB
	AP Comp. Sci. Principles	AP Comp. Sci. Principles AP Computer Science A	Other choices: H Calculus, AP Statistics, AP Computer Science A AP Comp. Science Principles	Other choices: H/CP Calculus, AP Statistics, AP Computer Science A, AP Comp. Science Principles
CP	CP Algebra 1B	CP Geometry	CP Algebra 2	# CP Precalculus
				CP Algebra 3 Colleges Transitional Math
				Other choices: AP Statistics, # CP Statistics AP Computer Science A, AP Computer Science Principles
ST	Applied Algebra Part 1	Applied Algebra Part 2	Applied Geometry	Applied Algebra 2
				Applied Math Topics

Social Studies: 3.0 credits required				
Levels	9	10	11	12
H/AP	H Western Civilization	AP US History	AP Government (American or Comparative) # H American Government/Econ AP Economics, AP Psychology AP European History	AP Government (American or Comparative) AP Economics, AP Psychology AP European History
		H 20th Century American History		
CP	CP Western Civilization	CP 20th Century American History	CP US Government/ Economics	Modern World
ST	ST Western Civilization	ST 20th Century American History	ST US Government/ Economics	Crime & Justice, Psychology Social Problems, African American History 1/2

Science: 3.0 credits required				
Levels	9	10	11	12
H/AP	H Biology	H Chemistry	Physics & AP Science Courses	Physics & AP Science Courses
	H Earth Science	H Biology	H Chemistry	
CP	CP Earth Science	CP Biology	CP Chemistry	CP Physics, H Physics, Anatomy/Physiology
			CP Physical Science	CP Chemistry/CP Physics
ST	Applied Science 1	Agri-Biology	Applied Science 2	Physics & Robotics, CP Physical Science
				Astronomy, Oceanography

Physical Education: 1.6 credits required				
Levels	9	10	11	12
CP	Weight Training 3 or 5 days/week	Weight Training 3 or 5 days/week	Weight Training 3 or 5 days/week	Weight Training 3 or 5 days/week
	ROTC	ROTC	ROTC	ROTC
ST	PE 9/10	PE 9/10	# PE 11/12	#PE 11/12

Health: 0.8 credits required				
ST	Health 1	Health 1 and/or Health 2 (online/traditional)	Health 1 and/or Health 2 (online/traditional)	Health 1 and/or Health 2 (online/traditional)

Four Year Academic Planner				
	Grade 9	Grade 10	Grade 11	Grade 12
English: 4.0 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>Students must pass English every year in order to be promoted</i>				
Math: 4.0 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>Students must pass math every year in order to be promoted</i>				
Science: 3.0 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>Colleges may require more than 3 credits of Social Studies for admission.</i>				
Social Studies: 3.0 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>Colleges may require more than 3 credits of Science for admission.</i>				
Health: 0.8 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>Health 1 (0.2 credits) and Health 2 (0.6 credits) are the two required courses. Health 1 is available to 9-12th graders, Health 2 is available to 10-12th graders</i>				
Phys. Ed.: 1.6 credits required	Course: _____	Course: _____	Course: _____	Course: _____
<i>A Physical Education course must be scheduled every semester. See Course Sequence Chart on page 12 for options.</i>				
Electives: 7.6 credits required	Course(s): _____	Course(s): _____	Course(s): _____	Course(s): _____
<i>Although not an OJR graduation requirement, most 4 year colleges require at least 2 years of the same World Language at the high school level.</i>				
Total Credits:	5 credits required for promotion	11 credits required for promotion	17.5 credits required for promotion	24 credits required for graduation
<i>All students must also pass Keystone Exams in Algebra, Biology, and Literature (10th grade English) in order to graduate. See page 3 for more information.</i>				

AGRI-SCIENCE

ANIMAL STUDIES

Grade(s): 9-12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisites: If repeating, must have 74 in previous Agri-Science class.
Traditional: 07115 Periods/week: 5

- **Dual Enrollment:** 3 credits via Delaware Valley College pending instructor approval.

The Animal Studies program provides students with a comprehensive education in numerous aspects of the agriculture, alternative agriculture, and animal science industries. Students electing to take this course will experience a balanced approach to learning about the animal industry, as the academic portion of the class will be spent in the animal lab. The course provides hands-on experience with small pet-type animals as well as traditional agricultural animals and aquaculture. It also incorporates the major areas of agriculture science and natural resources which are essential for a complete agricultural education.

In this program, students learn the skills and information necessary to graduate with a solid, basic knowledge of any number of animal science and agricultural topics.

Students can repeat this course and continue to learn new and interesting information because of the unique structure of the curriculum. Students will learn four different academic topics each year of the four year cycle:

- Cycle 2 (2016-2017) Canines, Felines, Small Ruminants, Aquaculture
- Cycle 3 (2017-2018) Birds, Poultry Science, Swine Science, Equine Science
- Cycle 4 (2018-2019) Reptiles, Amphibians, Entomology, Zoo Science
- Cycle 1 (2019-2020) Biotechnology, Dairy Science, Beef Science, Wildlife

HORTICULTURE

Grade(s): 9-12 Credit(s): 1.0 or 2.0 Weight: CP
Term: Year
Traditional: 07215 Periods/week: 5 or 10

- **Dual Enrollment:** 3 credits via Delaware Valley College pending instructor approval.

Horticulture is an introductory course which offers a broad overview of the knowledge, skills, and professional techniques required in the plant science industry. The instruction is presented with a “hands on” approach, balancing theory with practical application, concentrating on the cross-curricular subjects of science, art, business, and mathematics. In this program, students learn the skills and information necessary to graduate with a solid, basic knowledge of horticultural topics. Major content areas include landscaping, floriculture, and greenhouse management. Related business practices and technology, plant materials, and lab safety and mechanics are emphasized each year.

Each of the following topics is discussed annually and in-depth study is provided in four year cycles to include:

- Cycle 2 (2016-2017) Turfgrass management, plant science, greenhouse management, landscape construction.
- Cycle 3 (2017-2018) Interior plantscaping, plant production, landscape design, related careers
- Cycle 4 (2018-2019) Soils, entomology/IPM, landscape installation, floriculture
- Cycle 1 (2019-2020) Landscape maintenance, floral design, nursery management, biotechnology

Course requirements may be fulfilled in the classroom, lab facility, greenhouse, school grounds, and in the community. This course can be repeated each year because of the unique structure of the curriculum.

NOTE: Students who have developed extraordinary interests or skills can schedule this course for two periods for two credits. **Teacher approval is required** and it is only available to students in grades 10-12 who have previously studied Horticulture and achieved a “B” or better average. **These students should register for courses numbered (07215) and (07225).**

ART EDUCATION

The Art Program provides courses for students interested in learning a variety of art skills or for the artistically talented student who is seriously considering an art career or profession. The art courses are divided into three categories: Fine Arts, Commercial Arts, and Crafts.

**EXPLORATIONS
IN ART** Grade(s): 10-12 Credit(s): 1.0 Weight: ST
Term: Year
Traditional: 08115 Periods/week: 5

Students in this course will explore a broad spectrum of the art world through the use of varied materials and techniques, including painting, sculpting, drawing, ceramics, and printmaking. Projects will be based on life experiences, observations, and art history. Students will work in unison with students with special needs. This unique format will enable students to have an appreciation for all areas of art. In addition, they will be encouraged to utilize a different approach to understanding art and incorporating the concept of diversity within the classroom. (Fine Arts)

CERAMICS I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
Term: Semester
Traditional: 08215 Periods/week: 5

Students in this course will design and create clay projects using introductory clay techniques including hand building, wheel throwing, decorating, and finishing techniques. Projects will include wheel thrown mugs, bowls, plates, vases, and hand built boxes and vases. (Crafts)

CERAMICS II Grade(s): 9-12 Credit(s): 0.5 Weight: ST
Term: Semester
Prerequisite: Ceramics I
Traditional: 08225 Periods/week: 5

Students will continue to develop their clay skills by investigating new clay and glaze techniques. Projects include original designs in teapots, lids, pedestals, and large-scale works. (Crafts)

CERAMICS III Grade(s): 10-12 Credit(s): 0.5 Weight: ST
Term: Semester
Prerequisite: Ceramics II
Traditional: 08235 Periods/week: 5

In Ceramics III, equipment is available for wheel-work, mold making, and slip casting projects, as well as large kilns for hand building and sculpture. Students are encouraged to investigate processes that range in diversity from wood firing, raku, and salt glazing to stoneware and porcelain. (Crafts)

CERAMICS IV Grade(s): 10-12 Credit(s): 0.5 Weight: ST
Term: Semester
Prerequisite: Ceramics III
Traditional: 08245 Periods/week: 5

Students develop themes from other cultures and diverse historical periods. Students will record their ideas, research glaze formulas, and document their pieces in a sketchbook. Students are encouraged to investigate processes that range in diversity from wood firing, raku and salt glazing to stoneware and porcelain. Students will investigate, interpret, and redefine an idea by attempting multiple solutions to art problems. Attempting to express such ideas in multiple ways guides students in thematic development. Equipment is available for wheel-work, mold making, and slip casting projects, as well as large kilns for hand building and sculpture. (Crafts)

DRAWING I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Traditional: 08315 *Periods/week: 5*

Drawing I introduces students to a wide variety of drawing techniques and materials. Students will create portraits, landscapes, figures, still life art, perspective drawings, and surreal art. Emphasis is placed on developing strong drawing skills. (Fine Arts)

DRAWING II Grade(s): 9-12 Credit(s): 0.5 Weight: CP
 Term: Semester
 Prerequisite: Drawing I
 Traditional: 08325 *Periods/week: 5*

- **Dual Enrollment:** 3 credits via Montgomery County Community College pending instructor approval.

Drawing II students will build on Drawing I fundamentals using a variety of black, white, and color materials. The course emphasizes developing personal style, creative thinking, and advanced drawing techniques. (Fine Arts)

PAINTING I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Traditional: 08415 *Periods/week: 5*

Painting I students will learn techniques using watercolor, acrylic, and oil paints. Observation, imagination, and art history will inspire a wide range of projects. (Fine Arts)

PAINTING II Grade(s): 9-12 Credit(s): 0.5 Weight: CP
 Term: Semester
 Prerequisite: Painting I
 Traditional: 08425 *Periods/week: 5*

- **Dual Enrollment:** 3 credits via Montgomery County Community College pending instructor approval.

Building upon the skills acquired in Painting I, students investigate the concept of color theory, expand their painting techniques, and apply this information to a variety of subject matter. Students learn to construct a frame, stretch canvas, and build a painting surface. The content includes portraiture, landscapes, still life, and abstract art. (Fine Arts)

SCULPTURE I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Traditional: 08515 *Periods/week: 5*

This course provides students with an opportunity to create three-dimensional works of art using a variety of materials including clay, wood, stone, wire, and plaster. Observation, real life, art history, and imagination inspire subjects for sculpture. (Fine Arts)

STUDIO ART Grade(s): 11-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: Drawing I, Painting I, and one other Fine Arts course or teacher approval.
 Traditional: 08615 *Periods/week: 5*

- ***Summer assignment required***

EXPLORE YOUR ARTISTIC STYLE! Studio Art emphasizes art created for portfolio presentation and/or employment. A serious approach is taken to develop personal style, refine drawing and painting techniques, and explore new art media. This course is not limited to students planning to attend art school after graduation. (Fine Arts)

AP STUDIO ART (2-D DESIGN/3-D DESIGN/DRAWING) Grade(s): 11-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: 3 Fine Arts courses: Drawing I, Painting I, and either Drawing II or Painting II.

Traditional: 08620 Periods/week: 5

- *Summer assignment required*

This course is designed for students who may plan to major or minor in an art-related area. It enables students to develop a portfolio that meets college level art requirements. Students interested in college credit for this course must submit an AP Studio Art portfolio in May for evaluation by The College Board. Guided by the AP Studio Art teacher, students develop independent art goals. Research is required. (Fine Arts)

DIGITAL ART & DESIGN I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester

Traditional: 08715 Periods/week: 5

Adobe **PHOTOSHOP** will be used to alter photos and develop basic graphic design and image manipulation skills. Projects may include restoring old photographs; combining two or more images (ex. Animal Hybrid); digital painting; and creating posters and ads for print and web. (Commercial Arts)

DIGITAL ART & DESIGN II Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Prerequisite: Digital Art & Design I

Traditional: 08725 Periods/week: 5

Adobe **PHOTOSHOP & ILLUSTRATOR** will be used to further develop students' skills in graphic design. Students will create illustrations and designs to produce projects such as page layouts, menus, scientific illustration, posters, t-shirts, corporate identity packages, logos, and package designs. (Commercial Arts)

DIGITAL ART & DESIGN III Grade(s): 10-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Prerequisite: Digital Art & Design I and II

Traditional: 08735 Periods/week: 5

Designed for students seeking to major in graphic design, this course provides students the opportunity to compile a professional, interactive CD portfolio of their work. Students will focus on layout, corporate identity and marketing through the design of a variety of pieces of their own creation such as comic book characters, interactive designs, yearbook or magazine layouts, and promotional items. They will enhance their application of the software Adobe **PHOTOSHOP**, Adobe **ILLUSTRATOR** and Adobe **INDESIGN**. (Commercial Arts)

ANIMATION Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Prerequisite: Digital Art & Design I

Traditional: 08815 Periods/week: 5

This course is an introduction to computer animation. Students will use programs such as Adobe **FLASH**, Adobe **PHOTOSHOP**, and Adobe **ILLUSTRATOR** to aid in their designs, as well as online software. Students will design characters, storyboards, character animation, and web animation. Students will have the opportunity to use photographs and sound clips in their animations. (Commercial Arts)

WEB DESIGN	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	Prerequisite: Digital Art & Design I		
	<i>Traditional: 08915</i>	<i>Periods/week: 5</i>	

This course will focus on the visual aspects of designing websites. Students will also develop a basic understanding of website functionality. Images, animations, movies, and sounds will be added to the websites the students design. Students will learn how to use **HTML**, **CSS**, Adobe **DREAMWEAVER**, and online resources to create web pages, websites, and web banners. (Commercial Arts)

DIGITAL IMAGING	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	Prerequisite: Digital Art & Design I		
	<i>Traditional: 08745</i>	<i>Periods/week: 5</i>	

This course further explores the use of digital graphic techniques to create and manipulate photography and other raster graphics. This course will focus on photo corrections, image manipulation, and creating original artwork. Students will explore digital imaging techniques through the use of the photo manipulation software Adobe **PHOTOSHOP**. More complex topics like retouching, channels, color correction, and advanced techniques for creating selections and layer masks will be explored. Projects might include photo restoration/enhancement, digital painting, and poster design. (Commercial Arts)

YEARBOOK DESIGN	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	Prerequisite: Digital Art & Design I and/or instructor approval		
	<i>Traditional: 08925</i>	<i>Periods/week: 5</i>	

Students learn aspects of yearbook design and production. These aspects include, but are not limited: to publication design, photojournalistic writing, organization skills, and teamwork. Students in this class are responsible for the creation and production of a certain number of assigned page layouts. Page layout assignments include: collecting and taking photographs, conducting interviews, writing captions and stories, organizing the information in to well-designed page layouts, meeting deadlines, and editing the pages for spelling errors and misinformation. The overall class goal is to yield high-quality yearbook pages. Students learn skills that range from using computer software programs such as Adobe **INDESIGN** and Adobe **PHOTOSHOP** to using digital cameras. Leadership opportunities are available. It is recommended that editors of the Yearbook take this course. Class work time may be required outside of the regular class period. Students in this course are required to be part of the Yearbook Club and will be required to attend after school meetings as much as possible. ***Teacher consent, through interview, is required to take this class. This class may be repeated for credit.*** (Commercial Arts)

BUSINESS EDUCATION

Business courses provide a solid educational foundation for students who want to successfully complete college programs in various business disciplines. As the nature of work continues to change, business education becomes increasingly important to all students. The business education program prepares students to become responsible citizens, capable of making the astute economic decisions that will benefit their personal and professional lives. Students will be introduced to the basics of finance, the decision making techniques needed to be wise consumers, the economic principles of an increasingly international marketplace, and the processes by which businesses operate.

ACCOUNTING I	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	<i>Traditional: 06112</i>	<i>Periods/week: 5</i>	

Accounting is the language of business and this introductory course is a valuable first step for students planning a business career, such as accounting, management, finance, and marketing. Students develop an understanding of the accounting cycle with a focus on analyzing and interpreting financial statements and how corporate financial decisions are made through the use of accounting information. Technology skills are enhanced through the use of computer software, simulated activities, and case studies.

ACCOUNTING II Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Prerequisite: Accounting I
Traditional: 06122 Periods/week: 5

Accounting II expands the students' understanding of accounting subsystems and internal control procedures. The students gain experience with plant assets, depreciation, inventory, notes, and accruals; and they apply these skills to the day-to-day financial reporting and decision making of a corporation. Technology skills are enhanced through the use of computer software, simulated activities, and case studies.

ADVERTISING Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 06215 Periods/week: 5

This one semester course will introduce students to the concepts and theories of advertising while exposing them to career opportunities available in the field. Advertising terminology and concepts used in the various advertising media and advertising provide a basis for a hands-on approach for students to produce a variety of advertising projects, including web page design.

BUSINESS DYNAMICS Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
Traditional: 06315 Periods/week: 5

Business Dynamics is designed for students who wish to follow a business career. This introductory course in business familiarizes students with all avenues of the business world. Students study the interaction of consumers, business and government, and the economy, consumerism, money management, and risk management. In addition, students learn about the exciting world of small business management and participate in discussions and projects relating to current events in the business world and business careers.

BUSINESS LAW Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 06325 Periods/week: 5

Business Law addresses statutes and regulations affecting businesses, families, and individuals in their related roles. Students will learn a basic knowledge of the legal system and how business law impacts commerce in their own country and abroad. Technology and computer laws emerging importance in the workplace will be discussed. Case problems and activities will help students learn about rights, privileges, and responsibilities of consumers, workers, and citizens. This course is recommended for students interested in majoring in business in college.

BUSINESS MANAGEMENT Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: Any one business course
Traditional: 06332 Periods/week: 5

Business Management helps students understand various management theories, basic management functions and their interrelationships, as well as the organization and competitive niche of a business. This course provides a solid framework for helping students build a strong knowledge base and develop effective management skills. Mastery of these standards will help students lay the groundwork for managerial competence in the global marketplace.

MULTIMEDIA DESIGN Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 06415 Periods/week: 5
Hybrid: 06415H Periods/week: 2

The software programs taught in this class include Microsoft Word, Publisher, and PowerPoint. This course will give students the essential tools and practice needed for success in creating documents for coursework, professional purposes, and personal use. In addition, proper keyboarding skills will be reinforced to build basic skills and to improve speed and accuracy.

**MULTIMEDIA
APPLICATIONS**Grade(s): 9-12
Term: Semester

Credit(s): 0.5

Weight: ST

*Traditional: 06425**Periods/week: 5**Hybrid: 06425H**Periods/week: 2*

The software programs taught in this class include Microsoft Excel and FrontPage, and also the Internet. This course will give students the essential tools and practice needed for success in creating spreadsheets and planning/creating Web sites that can be used for coursework, professional purposes, and personal use. In addition, proper keyboarding skills will be reinforced to build basic skills and to improve speed and accuracy.

**SPORTS
MARKETING**Grade(s): 9-12
Term: Year

Credit(s): 1.0

Weight: ST

*Traditional: 06515**Periods/week: 5*

Sports Marketing is the business side of sports. This course encompasses planning, implementing and controlling marketing activities as they relate to athletic teams, sports venues and related products and services. Students who take this course will have working understanding of marketing's role in sports and sports-related organizations and will help students develop skills in applying fundamental marketing concepts. In addition, the Sports Marketing course introduces strategic marketing concepts, value-added marketing and promotional strategies while developing strong communication and analytical skills. As part of the curriculum, students will be involved in academic preparation for competitive events in DECA and will learn introductory and intermediate level presentation software procedures to create presentations for coursework and professional purposes.

 **ENGLISH**

The Owen J. Roberts English Department believes its primary purpose is to teach students to write and to develop logical, well-organized thought processes. Our goal is that students will develop a lifelong, self-directed appreciation of literature and will learn to use precise language through the development of listening, reading, writing, and speaking skills. During the first year of high school, the students will study selections from all genres of literature. The next three years will be devoted to studying literature from a wide variety of cultures and time periods. Our goal is to broaden and multiply the number of books and texts a student will encounter.

Writing Portfolio: In each student's high school English classes, a progression of writing skills will be developed from creating basic sentence patterns to writing a research paper. Every student will be required to complete between 10 and 12 essays each year. All of those essays will be included in the student's writing portfolio each year. This portfolio should contain a minimum of 44 total essays by the end of the student's senior year.

In grade 12, students will be assigned to Standard English purely on the basis of their reading levels as shown by standardized test scores and teacher and school counselor recommendations. No student may choose Standard 12.

ENGLISH 9Grade(s): 9
Term: Year

Credit(s): 1.0

Weight: CP, H

Prerequisite: Honors English 9 requires an 85 in Honors Language Arts 8 **or** a 92 in Language Arts 8.*Traditional**Periods/week: 5*

- **Course numbers:** College Prep (01002), Honors (01001)
- **Summer assignment required**

This course introduces students to the fundamentals of literature, emphasizes writing and speaking skills, and reinforces the basics of grammar.

ENGLISH 10 Grade(s): 10 Credit(s): 1.0 Weight: CP, H
Term: Year
Prerequisite: Honors English 10 requires an 85 in Honors English 9 **or** a 92 in College Prep English 9.

Traditional *Periods/week: 5*

- **Course numbers:** College Prep (01012), Honors (01011)
- ***Summer assignment required***

The students in this course study all genres of literature and refine their writing and speaking skills. The students taking Honors will study American Literature from the Colonial through Contemporary eras. Both levels are required to write a research paper.

ENGLISH 11 Grade(s): 11 Credit(s): 1.0 Weight: CP, H
Term: Year
Prerequisite: Honors English 11 requires an 85 in Honors English 10 **or** a 92 in College Prep English 10.

Traditional *Periods/week: 5*

- **Course numbers:** College Prep (01102), Honors (01101)
- ***Summer assignment required***

Students taking College Prep study a variety of works of literature from ancient civilizations to the present. They will write 12 critical essays and a research paper based on their reading. Students taking Honors will study a variety of works of contemporary and classic literature. The Honors class will move at an accelerated pace and will include additional readings and essays.

LITERATURE FOR CHANGE Grade(s): 11 Credit(s): 1.0 Weight: CP, H
Term: Year
Prerequisite: Honors requires an 85 in Honors English 10 **or** a 92 in College Prep English 10.

Hybrid *Periods/week: 2*

- **Course numbers:** College Prep (01112H), Honors (01123H)
- ***Summer assignment required***

Students taking this course will explore how the individual functions as an architect of change not only in his own life but also as an agent of change in the construction of the world around him. The course is organized around global issues, self-agency, and effecting change, and has an increased focus on fiction and nonfiction that highlights innovation, problem-solving, and action planning. Students will examine literature of great minds by studying how one can improve ourselves and change the world for the better, reading a variety of literature in “changing the world” genre.

AP ENGLISH LANGUAGE AND COMPOSITION Grade(s): 11 Credit(s): 1.0 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: An 85 in H English 10

Traditional: 01100 *Periods/week: 5*

- ***Lengthy summer readings and essays are required.***

This is a college-level course that follows the AP English Language and Composition curriculum examining rhetoric as “the art of finding and analyzing all the choices involving language that a writer, speaker, reader, or listener might make in a situation so that the text becomes meaningful and purposeful” (David Jolliffe, former AP exam creator). Students will develop a personal writing style through the development and revision of evidence-based analytic and argumentative writing and the rhetorical analysis of nonfiction texts, including graphic images as forms of text from many disciplines and historical periods. Students are prepared for and encouraged to take the AP English Language and Composition Exam.

ENGLISH 12 Grade(s): 12 Credit(s): 1.0 Weight: ST, CP, H
 Term: Year
 Prerequisite: Honors English 12 requires an 85 in Honors English 11 **or** a 92 in College Prep English 11.
Traditional *Periods/week: 5*

- ***Course numbers:*** Standard (01203), College Prep (01202), Honors (01201)
- ***Summer assignment required***

Students taking Standard or College Prep study a variety of works of literature that range from Shakespeare to modern novels. Those in College Prep will write 12 critical essays and a research paper based upon their reading. Students taking Honors study a variety of works of literature that range from Shakespeare to modern novels. The Honors class will move at an accelerated pace and will include additional readings and essays.

LITERATURE OF SUCCESS Grade(s): 12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite: Honors English 12 requires an 85 in Honors English 11 **or** a 92 in College Prep English 11.
Hybrid *Periods/week: 2*

- ***Course numbers:*** College Prep (01212H), Honors (01213H)
- ***Summer assignment required***

Students taking this course explore the history, literature, ethics, and philosophy of two age-old questions: what does it mean to be “successful” and how does one achieve this elusive goal? Students will examine the critical and cultural perspectives of success, reading a variety of literature in “success” genre.

AP ENGLISH LITERATURE AND COMPOSITION Grade(s): 12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: An 85 in AP English 11 **or** a 92 in H English 11
Traditional: 01200 *Periods/week: 5*

- ***Lengthy summer readings and essays are required.***

This college-level course follows the Advanced Placement Literature and Composition curriculum. This course is representative of an introductory college literature course. It will intensively study literature of the world from Shakespeare to the present. In addition, students will be prepared to respond to written English in a variety of contexts and to further refine their skills in writing expository prose. They will be prepared for and are encouraged to take the Literature and Composition AP Examination.

■ ENGLISH ELECTIVES

English electives may not be selected in place of the required courses in the sequence of the English curriculum.

DRAMA AND THEATER Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 01415 *Periods/week: 5*

This course is designed as an introduction to the basics of theater and drama. Students will engage in sensory exercises, non-verbal and verbal skills, monologues, multiple character scenes, and participate in a class project.

DEBATE Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 01515 Periods/week: 5

Debate is a communication class designed to strengthen students’ skills in the art of argumentation. Students will research national debate topics, prepare cases, and debate using cross-examination and Lincoln-Douglas formats.

HISTORY OF FILM Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 01815 Periods/week: 5

History of Film will cover the era of the silent films of the 1920s through films of the 1950s. The chosen films will be a reflection of the culture during that time frame. Included will be Academy Award winning films in a variety of genres. The films will be approached through literary analysis. Students will write persuasive and informational essays.

PUBLIC SPEAKING Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 01525 Periods/week: 5

This course provides an opportunity for students to refine their speaking and listening abilities. Students will prepare and deliver a variety of speeches and critique each other’s performances.

JOURNALISM Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 01615 Periods/week: 5

This course provides students with an understanding of news reporting for the print and electronic media and an opportunity to learn basic editorial and writing skills. Selected writings will be presented in a class newspaper. This course may be repeated by those students interested in the school newspaper.

SAT ENGLISH/MATHEMATICS PREPARATION Grade(s): 10-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 17112 Periods/week: 5

This course provides an opportunity for students planning to take the SAT to refine their test-taking skills, focus on sample questions, and practice in the areas of critical reading, mathematics, and writing.

FAMILY AND CONSUMER SCIENCES ---

The Family and Consumer Sciences program is designed to provide all students with the knowledge and skills necessary for rewarding personal, family and professional life in an ever changing global society. Courses are planned in the areas of food and nutrition, human development, relationships, parenting and child care, housing and home furnishings, and consumer resource management to provide a solid foundation for personal use, job skills and higher education. Decision making, career choices and employment skills are emphasized in each course. Students may choose to specialize in one or two areas or complete the entire program.

CHILD DEVELOPMENT I Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 09115 Periods/week: 5

This course will acquaint students with the growth and developmental patterns of infants and toddlers as well as pre-pregnancy considerations. It will enable students to explore the manner in which children learn to relate to their environment. Methods of stimulating and teaching infants and toddlers will be studied. A computerized infant simulator helps students become more aware of the responsibilities of parenthood. This course is highly recommended for those interested in broadening their knowledge of young children.

CHILD DEVELOPMENT II	Grade(s): 9-12 Term: Semester <i>Traditional: 09125</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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- *Child Development I is not a prerequisite for this course.*

Child Development II focuses on the growth, development and unique needs of children ages two through five. Emphasis is placed on developing qualities of a positive role model for children. A study of child development theories becomes the basis for the course. Other topics studied include the role of media on children, health and safety, child-rearing, play and literacy. This course is highly recommended for those interested in broadening their knowledge of young children.
Note: The infant simulator is NOT required in this course.

PRESCHOOL LAB 1	Grade(s): 9-12 Term: Semester Prerequisite: Child Development I <u>and/or</u> II <i>Traditional: 09135</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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In this course, students will put their knowledge into action, provided with a “hands on” experience working with preschool age children. A laboratory preschool is conducted within the second month of the course. Students will be responsible for the development of the preschool, its daily maintenance, and planning activities. Not only will students be further investigating the development of young children, but, while acting as a preschool teacher, will also be emphasizing the creation of stimulating lessons and activities for young children. This course is recommended for students who are considering a career in education/childcare or who would like to receive first-hand experience with young children.

PRESCHOOL LAB 2	Grade(s): 9-12 Term: Semester Prerequisite: Preschool Lab 1 <i>Traditional: 09145</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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In this course, students will continue to put knowledge about children into action in working with preschool age children. A laboratory preschool is conducted within the second month of the course. Students will further build on their experiences from Preschool Lab 1. The knowledge and skills required by professionals working with children are key components. Students will be expected to perform at a “college-level” by demonstrating a rigorous effort and establishing a meaningful repertoire with children. This course is recommended for students who are strongly considering a career in education or a career field involving children.

CULINARY ARTS I	Grade(s): 9-12 Term: Semester <i>Traditional: 09215</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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The goal of this course is to prepare students to function independently in the kitchen to meet personal nutritional needs or to prepare for higher education. Students will apply knife skills, measuring, sanitation and safety practices, culinary terminology, food science principles, and basic cooking methods in preparation of foods while in the lab. Emphasis is placed on putting learned theory of food selection, preparation and storage into practice. Students will complete several in-class discussions and projects involving current nutrition and food trends. This course is also highly recommended for students interested in the hospitality/food service industry.

CULINARY ARTS II	Grades 9-12 Term: Semester Prerequisite: Culinary Arts I <i>Traditional: 09225</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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This course will continue to develop food science principles and safe food handling practices while expanding into other types of food preparation such as eggs, soups, salads, sandwiches, and casseroles. Laboratories will continue to be important in application of theory and practice. Evaluation of current fad diets, nutritive value, and convenience will be included as well as menu planning and use of seasonings.

**GLOBAL &
GOURMET
FOODS**Grade(s): 9-12
Term: Semester

Credit(s): 0.5

Weight: ST

*Traditional: 09315**Periods/week: 5*

This course is for students who have an adventurous palette or want to refine their culinary skills. Students will study and explore the diverse eating habits and customs throughout various countries both national and worldwide. Classic cuisine from various regions and specific countries will be prepared. Throughout the semester, food seasonings and flavorings, which add embellishment and intrigue to a meal will be explored. In addition, gourmet foods and proper plate presentation are discussed as a way to enhance an eating experience.

**BAKING &
PASTRY ARTS**Grade(s): 9-12
Term: Semester

Credit(s): 0.5

Weight: ST

*Traditional: 09713**Periods/week: 5*

In this course, students will be introduced to the principles of baking and to the skills needed for production of baked goods and pastries. Topics include baking chemistry and reactions, ingredients, measuring, mixing, baking, assembling and decorating; all of which will be applied in lab practice such as quick breads, cookies, cakes, pies, and yeast breads. In addition, students will receive a chance to design and market their own bakery at the end of the semester.

**INTERIOR
DESIGN**Grade(s): 9-12
Term: Semester

Credit(s): 0.5

Weight: ST

*Traditional: 09515**Periods/week: 5*

Students will experience an overview of Interior Design including an introduction to design, selection, and application of components in the interior environment. Effective design problem-solving skills will be implemented. Developing and sketching floor plans and renderings will be included. This course is highly recommended for the student interested in pursuing a career in interior design, fashion design, decoration, or display.

 HEALTH AND PHYSICAL EDUCATION

The Health and Physical Education program is designed to provide students the knowledge and skills that will enable them to practice, achieve, and maintain physically active and healthful lives. A variety of fitness, recreational, sport, and lifetime activities are used to help students favorably impact their lives and those around them. Physical Education or equivalent (Weight Training or ROTC) is required every semester of every year for all students. For graduation, a student needs 0.8 credits in Health and 1.6 credits in Physical Education.

HEALTH 1Grade(s): 9-12
Term: Semester

Credit(s): 0.2

Weight: ST

*Traditional: 12115**Periods/week: 2*

- This course will be automatically scheduled for all 10th graders, but is offered to students in grades 9-12.

This course is designed to promote wellness and to instruct students in skills that will be necessary to make constructive health choices for themselves as well as maintaining the health of others. Emphasis is placed on first aid, community CPR, nutrition, exercise, and drug and alcohol awareness. American Red Cross certification for first aid and CPR are available. Students who enroll after the second week will not be able to receive CPR certification. These practical health skills build cohesiveness among people and aid in the development of responsible health consumers.

HEALTH 2Grade(s): 10-12
Term: Year

Credit(s): 0.6

Weight: ST

*Traditional: 12125**Periods/week: 3**Online: 12135**Periods/week: 0*

- **Health 1 is not a prerequisite for this class.**

This course is designed to guide students in making important life decisions in the psychological, physiological, social, emotional, and mental aspects of their lives. Students acquire a deeper understanding of themselves and the world around them and are encouraged to develop a personal philosophy of life through investigation of social health issues that affect all people today. The biological study of the male and female is the foundation for information on healthy relationships, marriage, family, and the loss of life.

SUMMER HEALTH 2	Grade(s): 10-12 Term: Summer <i>Traditional: 12145</i> <i>Online: 12145</i>	Credit(s): 0.6 Fee: Summer school tuition <i>Periods/week: 4</i> <i>Periods/week: 0</i>	Weight: No weight (pass/fail)
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- ***In order to complete enrollment, students must register/pay for class via summer school registration procedure.***
- ***Health 1 is not a prerequisite for this class.***

This course is designed to guide students in making important life decisions in the psychological, physiological, social, emotional, and mental aspects of their lives. Students acquire a deeper understanding of themselves and the world around them and are encouraged to develop a personal philosophy of life through investigation of social health issues that affect all people today. The biological study of the male and female is the foundation for information on healthy relationships, marriage, family, and the loss of life.

PHYSICAL EDUCATION 9/10	Grade(s): 9-10 Term: Semester <i>Traditional</i>	Credit(s): 0.2 <i>Periods/week: 2</i>	Weight: ST
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- **Course numbers:** Fall semester (13115F), Spring semester (13115S)

This physical education course for all 9th and 10th grade students provides basic instruction and activities in physical development, weight training, team and individual sports. The department prescribes the activities. All students are screened twice a year in five areas of physical fitness measuring muscular strength and endurance, cardio-respiratory endurance, speed, agility and flexibility.

PHYSICAL EDUCATION 11/12	Grade(s): 11-12 Term: Semester <i>Traditional</i>	Credit(s): 0.2 <i>Periods/week: 2</i>	Weight: ST
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- **Course numbers:** Fall semester (13125F), Spring semester (13125S)

This course for all 11th and 12th grade students allows students a choice of individual or team sports as well as physical development activities. All students are screened twice a year in five areas of physical fitness measuring muscular strength and endurance, cardio-respiratory endurance, speed, agility and flexibility.

PHYSICAL EDUCATION 11/12	Grade(s): 11-12 Term: Year <i>Hybrid: 13125H</i>	Credit(s): 0.4 <i>Periods/week: 1</i>	Weight: ST
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This course allows students a choice of individual or team sports as well as physical development activities. All students are screened twice a year in five areas of physical fitness measuring muscular strength and endurance, cardio-respiratory endurance, speed, agility and flexibility.

ADAPTIVE PHYSICAL EDUCATION	Grade(s): 9-12 Term: Semester <i>Traditional</i>	Credit(s): 0.2 <i>Periods/week: 1</i>	Weight: ST
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- **Course numbers:** Fall semester (13216), Spring semester (13217)

The adaptive program is designed for the student who is unable to participate in a regular physical education program due to illness, injury or disability. A program will be developed to meet individual needs from the combined input of the physician, parent, and physical education instructor.

ELECTIVE PHYSICAL EDUCATION	Grade(s): 9-12 Term: Semester <i>Traditional</i>	Credit(s): 0.1 <i>Periods/week: 1</i>	Weight: ST
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- **Course numbers:** Fall semester (13998), Spring semester (13999)

This elective class allows students an additional opportunity to be physically active during the week. A wide variety of activities are available. Students can add this course to their schedule no later than the middle of the first marking period of the course.

ATHLETIC TRAINING	Grade(s): 9-12 Term: Year <i>Traditional: 13315</i>	Credit(s): 1.0 <i>Periods/week:5</i>	Weight: ST
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The purpose of this course is to prepare and train students to assist in preventing and treating first aid issues. Students will also learn to tape, wrap, and care for athletes. Record keeping procedures, as well as the organization and administration of a high school athletic training program will also be a part of the curriculum. Practical experience with sports teams is also part of the curriculum.

SPORTS OFFICIATING	Grade(s): 11-12 Term: Year <i>Traditional: 13415</i>	Credit(s): 0.4 <i>Periods/week: 2</i>	Weight: ST
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This physically and mentally challenging course is open to junior or senior students in lieu of a regular physical education class. The course is designed to develop the knowledge and mechanics of the rules which govern various sports. The three sports covered will be: soccer, basketball and baseball/softball. Students will be able to officiate high school interscholastic sports upon completion of course requirements and testing through the Pennsylvania Interscholastic Athletic Association.

WEIGHT TRAINING & CONDITIONING	Grade(s): 9-12 Term: Semester <i>Traditional</i>	Credit(s): 0.3 or 0.5 <i>Periods/week: 3 or 5</i>	Weight: CP
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- **Course numbers:** 3 days/week, fall semester (13517)/spring semester (13522), 5 days/week, fall semester (13519)/spring semester (13524)
- **Dual Enrollment:** 2 credits per semester via Montgomery County Community College pending instructor approval.

This course allows students the opportunity to learn the benefits of strength training. It would also allow for speed and agility development. The course teaches students weight room safety and how to lift properly without injuring themselves.

MATHEMATICS

The Mathematics Department offerings afford students the opportunity to interact with mathematics at the level most commensurate with their abilities.

APPLIED ALGEBRA PART 1	Grade(s): 9-11 Term: Year Prerequisite: None <i>Traditional: 02123</i>	Credit(s): 1.0 <i>Periods/week: 5</i>	Weight: ST
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This course develops algebraic concepts. Emphasis is placed on the use of calculators and stresses Keystone Algebra topics. The selection of Applied Algebra Parts 1 and 2 will place the student in a two year course that will cover topics of a first year algebra course. This course is not open to students who have successfully completed Algebra 1 or above. A graphing calculator is recommended.

ALGEBRA 1 PART B	Grade(s): 9 Term: Year Prerequisite: Algebra 1A or Applied Algebra Part 1 <i>Traditional: 02113</i>	Credit(s): 1.0 <i>Periods/week: 5</i>	Weight: CP
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This course is the second half of Algebra 1 and focuses on preparing students for Algebra 2. Students will study systems of linear equations, exponential functions, polynomials and factoring. Quadratic, rational and radical functions will be explored and studied. Graphing calculators will be used to look at functions in depth. A graphing calculator is recommended.

APPLIED GEOMETRY	Grade(s): 9-12 Term: Year Prerequisite: Applied Algebra Part 2 or CP Algebra 1B <i>Traditional: 02233</i>	Credit(s): 1.0 <i>Periods/week: 5</i>	Weight: ST
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This course introduces topics of Euclidean Geometry. Main emphasis is on application of geometry and use of algebra skills in geometry while minimizing geometric proofs. A scientific calculator is recommended.

**COLLEGE PREP
GEOMETRY** Grade(s): 9-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: 74 in Algebra 1B **or** 92 in Applied Algebra Part 2
Traditional: 02222 Periods/week: 5

This course introduces topics of Euclidean geometry. Mathematical proof is introduced, but the main emphasis is placed on applications of geometry and of algebra skills in geometry. College bound students should take this course before taking college entrance exams. A graphing calculator is recommended.

**HONORS
GEOMETRY** Grade(s): 9-11 Credit(s): 1.0 Weight: H
 Term: Year
 Prerequisite: 92 in Algebra 1B **or** 85 in Algebra 1 Honors (8th grade)
Traditional: 02211 Periods/week: 5

This course is an accelerated version of Geometry for students who demonstrate advanced mathematics ability. More emphasis is placed on the deductive proof than in College Prep Geometry. A graphing calculator is required.

**APPLIED
ALGEBRA PART 2** Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: Applied Algebra Part 1 **or** Algebra 1 Part A (8th grade)
Traditional: 02133 Periods/week: 5

This course is a continuation of Applied Algebra Part 1, and must be completed to fulfill an Algebra 1 requirement. The course stresses Keystone Algebra topics. A graphing calculator is recommended.

**APPLIED
ALGEBRA 2** Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: Algebra 1 **and** Geometry
Traditional: 02333 Periods/week: 5

This course continues to develop concepts of Algebra 1 and Geometry through practice, applications and reinforcement of algebra skills and foundations. It expands topics introduced in Algebra 1 and introduces more advanced algebra topics. A graphing calculator is recommended.

**COLLEGE PREP
ALGEBRA 2** Grade(s): 9-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: 74 in Algebra 1/1B **or** Geometry
Traditional: 02312 Periods/week: 5

This course continues to develop concepts of Algebra 1 and Geometry. It expands topics introduced in Algebra 1 and introduces more advanced algebra topics. A graphing calculator is recommended.

**HONORS
ALGEBRA 2** Grade(s): 9-12 Credit(s): 1.0 Weight: H
 Term: Year
 Prerequisite: 88 in Algebra 1/Algebra 1 Part B **or** 85 in Honors Geometry
Traditional: 02311 Periods/week: 5
Hybrid: 02311H Periods/week: 2

This course is an accelerated version of Algebra 2 for students who demonstrate exceptional ability in mathematics. It includes advanced topics in algebra. A graphing calculator is required.

APPLIED MATH TOPICS	Grade(s): 11-12	Credit(s): 1.0	Weight: ST
	Term: Year		
	Prerequisite: None		
	<i>Traditional: 02413</i>	<i>Periods/week: 5</i>	

This course focuses upon every day consumer problems where mathematics skills must be applied. The primary objective is to develop competency in solving consumer problems through exploration, discussion, application, the use of algebra, and special projects. A secondary objective is to use modern technology to solve real world problems.

COLLEGE TRANSITIONAL MATH	Grade(s): 12	Credit(s): 1.0	Weight: CP
	Term: Year		
	Prerequisite: CP Algebra 2		
	<i>Traditional: 02422</i>	<i>Periods/week: 5</i>	

This course is designed for students who plan to attend a post-secondary school, but do not wish to take Precalculus or Calculus. It will review algebraic topics and introduce additional topics not included in previous courses. Emphasis will be placed on college placement exams. A graphing calculator is recommended.

COLLEGE PREP ALGEBRA 3/ TRIGONOMETRY	Grade(s): 11-12	Credit(s): 1.0	Weight: CP
	Term: Year		
	Prerequisite: CP Algebra 2		
	<i>Traditional: 02432</i>	<i>Periods/week: 5</i>	

- **Dual Enrollment:** 3 credits via Montgomery County Community College pending instructor approval.

This course takes the student through a thorough examination of fundamental algebraic operations, factoring, graphing, exponents, linear equation, linear inequalities and quadratic functions. Topics in trigonometry include applications of right triangle, the unit circle, identities and solving equations.

COLLEGE PREP PRECALCULUS	Grade(s): 10-12	Credit(s): 1.0	Weight: CP
	Term: Year		
	Prerequisite: 74 in CP Algebra 2 <u>or</u> 83 in CP Algebra 3		
	<i>Traditional: 02552</i>	<i>Periods/week: 5</i>	
	<i>Hybrid: 02552H</i>	<i>Periods/week: 2</i>	

This course reviews and expands upon topics from Algebra 2 and introduces and develops concepts of trigonometry. In addition, elementary topics of calculus are introduced. A graphing calculator is recommended.

HONORS PRECALCULUS	Grade(s): 10-12	Credit(s): 1.0	Weight: H
	Term: Year		
	Prerequisite: 83 in H Algebra 2 <u>or</u> a 90 in CP Algebra 2 <u>or</u> 90 in CP Algebra 3		
	<i>Traditional: 02541</i>	<i>Periods/week: 5</i>	
	<i>Hybrid: 02541H</i>	<i>Periods/week: 2</i>	

- ***Summer assignment required***

This course is an accelerated version of Precalculus for students who demonstrate exceptional ability in mathematics and who plan to take AP Calculus. More emphasis is placed on elementary concepts of calculus. A graphing calculator is required.

COLLEGE PREP CALCULUS	Grade(s): 11-12	Credit(s): 1.0	Weight: CP
	Term: Year		
	Prerequisite: Precalculus		
	<i>Traditional: 02532</i>	<i>Periods/week: 5</i>	

This course introduces elementary topics of calculus including limits, continuity, curve sketching, differentiation, and integration. It is recommended for students who will need to take calculus in college. A graphing calculator is recommended.

**HONORS
CALCULUS** Grade(s): 11-12 Credit(s): 1.0 Weight: H
 Term: Year
 Prerequisite: 82 in H Precalculus or 90 in CP Precalculus
Traditional: 02521 Periods/week: 5

- ***Summer assignment required***

This course introduces elementary topics of calculus including limits, continuity, curve sketching, differentiation, and integration. It is recommended for students who will need to take calculus in college. A graphing calculator is required.

**AP CALCULUS
AB** Grade(s): 11-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: 85 in H Precalculus/H Calculus or 92 in CP Precalculus
Traditional: 02510 Periods/week: 5

- ***Summer assignment required***
- **Dual Enrollment**: 3 credits via Montgomery County Community College pending instructor approval.

Advanced Placement Calculus (AB) is a college level course designed for students with exceptional talent in mathematics. This course covers one semester of college calculus. Students in this course are expected to take the AB level AP Calculus examination. A graphing calculator is required.

**AP CALCULUS
BC** Grade(s): 11-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: 85 in AP Calculus AB or a score of 4 or 5 on the AP Calculus AB exam or 92 in Honors Calculus and 4/5 on AP Calculus AB exam.
Traditional: 02520 Periods/week: 5

Advanced Placement Calculus (BC) is a college level calculus course for exceptional students who have completed the AB level course successfully. Topics cover two semesters of college calculus. Students in this course are expected to take the BC level AP Calculus examination. A graphing calculator is required.

**COLLEGE PREP
STATISTICS** Grade(s): 11-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: 78 in CP Algebra 2, CP Algebra 3 or CP Precalculus
Traditional: 02632 Periods/week: 5
Hybrid: 02632H Periods/week: 2

- **Dual Enrollment**: 3 credits via Montgomery County Community College pending instructor approval.

This course introduces and develops elementary topics in statistics and probability. A graphing calculator is required.

AP STATISTICS Grade(s): 11-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite:
 o 85 in H Precalculus **or** H Algebra 2
 or
 o 90 in CP Algebra 2 **or** CP Precalculus
Traditional: 02610 Periods/week: 5

- **Summer assignment required**
- **Dual Enrollment:** 3 credits via Montgomery County Community College pending instructor approval.

This is a college level course intended for the student who shows exceptional aptitude and interest in statistics. Topics will cover a semester of college statistics. Students in this course are expected to take the AP Statistics exam. A graphing calculator is required.

AP COMPUTER SCIENCE A Grade(s): 10-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: 90 in Algebra 1 and Geometry
 or
 85 in Honors Algebra 2 or Honors Precalculus
 and
 an 83 in any one science course
Traditional: 02730 Periods/week: 5

The AP Computer Science A course is an introductory course in computer science. The course emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development, and is meant to be the equivalent of a first-semester college-level course in computer science. Because the design and implementation of computer programs to solve problems involve skills that are fundamental to the study of computer science, a large part of the course is built around the development of computer programs, using the Java programming language, that correctly solve a given problem. There are no computing prerequisites for this AP course.

- **This course complements AP Computer Science Principles; students can take these courses in either order.**

AP COMPUTER SCIENCE PRINCIPLES Grade(s): 9-12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: 88 in Algebra 1/1B/Geometry or 83 in Honors Algebra 2/Honors Precalculus and an 83 in one science class.
Traditional: 02740 Periods/week: 5

The AP Computer Science Principles course is an introductory course in computer science. The course is built around fundamentals of computing including problem solving, working with data, understanding the internet, cybersecurity and programming. The AP assessment consists of two components: a written exam of multiple choice questions and two performance tasks. Students complete the performance tasks during the course to demonstrate the skills they have developed. These tasks are administered by the AP Computer Science Principles teacher. When compete, students submit digital artifacts. There are no computing prerequisites for this AP course.

- **This course complements AP Computer Science Principles; students can take these courses in either order.**

■ MATHEMATICS ELECTIVES

**SAT ENGLISH/
MATHEMATICS
PREPARATION** Grade(s): 10-12 Credit(s): 0.5 Weight: ST
Term: Semester

Traditional: 17112 Periods/week: 5

This course provides an opportunity for students planning to take the SAT to refine their test-taking skills, focus on sample questions, and practice in the areas of critical reading, mathematics, and writing.

**SAT MATH
PREPARATION** Grade(s): 10-12 Credit(s): 0.5 Weight: ST
Term: Semester

Online: 028130 Periods/week: 0

This course provides an opportunity for students planning to take the SAT to refine their test-taking skills, focus on sample questions, and practice in the area of mathematics only.

📦 MUSIC EDUCATION

The main goal of the music department is to offer a variety of performing opportunities to all students who sing and/or play an instrument. Courses are set up so that any student can be a member of one or more ensembles. All students are encouraged to participate regardless of their musical background. All courses except Music Theory, AP Music Theory, and Freshman Choir may be repeated.

MUSIC THEORY Grade(s): 9-12 Credit(s): 0.5 Weight: ST
Term: Semester

Traditional: 11115 Periods/week: 5

Music Theory offers an introduction to the basic elements of music through the study of part writing/harmony, key signatures, chord progression, and ear training. The course is designed for those students who have at least some background or prior training on voice or instrument and who can already read basic musical notation.

AP MUSIC THEORY Grade(s): 11-12 Credit(s): 1.0 Weight: AP
Term: Year Fee: AP Exam fee

Traditional: 11125 Periods/week: 5

The AP Music Theory is an advanced course of music theory intended for students who wish to study music formally at the collegiate level. Students who enter this course must be pre-approved by the instructor. In order to be pre-approved, students MUST demonstrate ability to read music in both the treble and bass clefs, as well as demonstrate basic familiarity with the piano keyboard. The course outline will adhere to the strict tenants of the AP Course Guidelines. Students who complete this course are encouraged to take the AP exam.

MUSIC HISTORY Grade(s): 9-12 Credit(s): 0.5 Weight: ST
Term: Semester

Traditional: 11135 Periods/week: 5

A survey of music covering all of the following musical periods: Medieval, Renaissance, Baroque, Classical, Romantic, and 20th Century (Modern). This course will enable students to appreciate, identify, and distinguish music from each of the various periods in music history. This course is open to any high school student who would like to learn more about the history of music and how music evolved into the various styles of music we listen to today.

CONCERT AND MARCHING BAND	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11215</i>	<i>Periods/week: 5</i>	

The band is the major performing group in the department of instrumental music. It is open to all students with a sufficient degree of proficiency on a band instrument. A thorough variety of performances and training will be offered to those students who demonstrate adequate ability. Attention will be paid to the development of a sense of musicality as well as the evaluation of performance. Major activities include marching band from September through November and concert band from November through June. ***This course is repeatable for credit.***

ORCHESTRA	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11315</i>	<i>Periods/week: 5</i>	

This course is open to all students with a sufficient ability to play the violin, viola, cello, or bass. Musicality and self-evaluation of performance are highly stressed. A wide variety of performing opportunities is offered at several concerts during the school year. ***This course is repeatable for credit.***

FRESHMAN CHOIR	Grade(s): 9 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11415</i>	<i>Periods/week: 5</i>	

Freshmen Choir is offered for all 9th grade vocal students. The Freshmen Choir will sing in 3-part harmony (either SSA or SAB depending upon enrollment). The Freshman Choir student will study a basic program of musical study, laying the foundation for more advanced musical study in the upper-class years.

MIXED CHOIR	Grade(s): 10-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11425</i>	<i>Periods/week: 5</i>	

Mixed Choir is open to students in grades 10-12 who enjoy singing and want to learn more about music. Mixed Choir sings in 3-part harmony (either SSA or SAB depending upon enrollment). The Mixed Choir student will be exposed to a broad range of musical styles, and will learn the basics of music theory and harmonization. Students enrolling in Mixed Choir who did not participate in Freshmen Choir during their ninth grade year must have teacher approval. Auditions will be administered in January of each year or by appointment. ***This course is repeatable for credit.***

CONCERT CHOIR	Grade(s): 10-12 Term: Year Prerequisite: Teacher recommendation	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11435</i>	<i>Periods/week: 5</i>	

Concert Choir is open to students in grades 10-12 who successfully audition. Concert Choir sings in 4-part harmony (SATB). The Concert Choir student is expected to be more musically advanced, and this student will study a more difficult range of choral literature, as well as a more advanced program of musical study in theory and harmonization. All students must re-audition to enroll in Concert Choir in successive years. Auditions will be administered in January of each year or by appointment. ***This course is repeatable for credit.***

MUSIC CONTRACT	Grade(s): 9-12 Term: Year Prerequisite: Teacher recommendation	Credit(s): Varies	Weight: ST
	<i>Traditional: 11915</i>	<i>Periods/week: varies</i>	

Music Contract gives instrumentalists and vocalists an opportunity to develop and enhance their musical skills and interests in a small group setting. Members of OJRHS performing, instrumental or vocal ensembles are encouraged to elect this class. ***This course is repeatable for credit.*** It offers the student the opportunity to explore subjects that fall into two categories:

- **Instrumental Music Contract:** This option is recommended for all instrumental ensemble members. It is designed for students who wish to improve their technical and musical skills. This will be accomplished through sectional or small group work.
- **Vocal Music Contract:** This option is recommended for all choral ensemble members. It is designed for students who wish to improve or learn proper vocal technique and musical skills. This will be accomplished through small group instruction.

■ COMBINED MUSIC COURSES

Students may elect to combine other music courses. Available options are listed below. Students alternate between these performing ensembles. See course description for individual courses listed above.

CONCERT CHOIR/ CONCERT BAND	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11515</i>	<i>Periods/week: 5</i>	
CONCERT CHOIR/ ORCHESTRA	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11525</i>	<i>Periods/week: 5</i>	
CONCERT CHOIR/ CONCERT BAND/ ORCHESTRA	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: ST
	<i>Traditional: 11535</i>	<i>Periods/week: 5</i>	
CONCERT BAND/ ORCHESTRA	Grade(s): 9-12 Term: Year	Credit(s): 1.0	Weight: Standard
	<i>Traditional: 11545</i>	<i>Periods/week: 5</i>	

📖 NAVAL SCIENCE (Naval Junior ROTC)

The NJROTC program provides students with the opportunity to learn about government, national security, and good citizenship. It promotes habits of orderliness, self-discipline, and personal responsibility; and develops a high degree of personal honor, self-reliance, teamwork and leadership. Although students taking NJROTC incur absolutely no obligation for any military service, participation in NJROTC enhances their chances to earn ROTC scholarships and appointments to the Military Academies, and provides for enlistment in a higher pay grade for those interested in military service. A student need only sign up for one year.

NJROTC Adaptive Curriculum On a case by case basis, students may take an Naval Science 1 or Naval Science 2 adapted curriculum for 1, 2, or 3 days per week if their schedule will not allow the full 5 day curriculum. Credit will be granted commensurate with the number of coursework days, i.e. 1 day course receives 0.2 credit, 2 day course receives 0.4 credit and 3 day course receives 0.6 credit. For example, if a student has study hall 2 periods a week, they could take the NJROTC 2 day curriculum instead.

NOTE: Students who take Naval Science a minimum of 2 days per week will receive credit for Physical Education.

NAVAL SCIENCE 1 Grade(s): 9-12 Credit(s): 1.0 Weight: CP
Term: Year
Traditional: 16115 Periods/week: 5

- **Dual Enrollment:** 5 credits via Adams State University pending instructor approval.

Naval Science 1 introduces students to the meaning of citizenship, the elements of leadership, the value of scholarship in attaining life goals, and engenders a sound appreciation for the heritage and traditions of America. It includes an introduction to leadership; naval customs and traditions; naval ships; their missions and organizations. Students will take field trips, learn to drill, be involved in community activities and have the opportunity to participate in a variety of extracurricular activities.

NAVAL SCIENCE 2 Grade(s): 10-12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisite: Naval Science 1
Traditional: 16125 Periods/week: 5

- **Dual Enrollment:** 4 credits via Adams State University pending instructor approval.
- **This course will not be offered in 2016-17. This course will be offered every other school year.**

Naval Science 2 challenges students to continue to develop their traits of citizenship, leadership, responsibility, self-discipline and appreciation for the heritage and traditions of America. It includes leadership; naval history through World War II; naval ships and ship board evolution; naval weaponry; meteorology; navigation fundamentals; small boat seamanship; and survival training.

NAVAL SCIENCE 3 Grade(s): 10-12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisite: Naval Science 1
Traditional: 16135 Periods/week: 5

- **Dual Enrollment:** 1 credit via Adams State University pending instructor approval. Students may earn credit for this course in either Naval Science 3 or 4.
- **This course will be offered in 2016-17. This course will be offered every other school year.**

Naval Science 3 continues to develop the trait of leadership in students and introduces them to military justice and international law, while continuing the instruction of naval science curriculum including astronomy; navigation and naval history including the interrelationship of sea power; and national security

NAVAL SCIENCE 4 Grade(s): 12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisite: Naval Science 2 **and** 3
Traditional: 16145 Periods/week: 5

- **Dual Enrollment:** 2 credits via Adams State University pending instructor approval. Students completing all four Naval Science courses are eligible to earn an additional 3 credits.

Naval Science 4 continues to develop students' leadership traits with a more in-depth study of leadership traits, principles and practices including the study of human motivation, group dynamics, effective communication, and the authority and moral responsibility of Navy leaders. The course is oriented toward individual study with the students gaining leadership experience by assuming leadership positions in the other three Naval Science courses. Naval Science Instructor may waive the completion of Naval Science 2 and 3 in unusual circumstances.

SCIENCE

The science department provides all students with a background in the earth, biological and physical sciences. Students interested in pursuing a career in the field of science will be given the opportunity to explore in greater depth scientific concepts in specialized areas. 3.0 credits of science are required for graduation. It is recommended that college bound students take four years of science.

APPLIED SCIENCE 1	Grade(s): 9 Term: Year Prerequisite: None	Credit(s): 1.0	Weight: ST
	<i>Traditional: 04113</i>	<i>Periods/week: 5</i>	

This course provides students with hands-on experience in solving problems related to earth, biological, and physical sciences. In addition to the topics covered in Earth Science, Applied Science students work in teams to design and construct models to either represent or test scientific concepts. Students apply the concepts they learn to real-life situations and solve problems. Finally, students will be introduced to several biology topics, including ecology and the environment in preparation for the Biology Keystone Exam.

COLLEGE PREP EARTH SCIENCE	Grade(s): 9 Term: Year Prerequisite: None	Credit(s): 1.0	Weight: CP
	<i>Traditional: 04222</i>	<i>Periods/week: 5</i>	

The Earth Science course is designed to give students an opportunity to acquire knowledge, appreciation and understanding of the earth, its atmosphere, and the natural universe. Earth Science is an interdisciplinary course with content that focuses on: the nature of science, astronomy, meteorology, and geology, including plate tectonics. Emphasis is placed on using problem solving techniques to explore our relationship with the earth and the environment in which we live through observation, experimentation, performance, and study. This course is the first step in preparing students for the Biology Keystone Exam through the chemistry and ecology unit.

HONORS EARTH SCIENCE	Grade(s): 9 Term: Year Prerequisite: A 78 in 8 th grade Honors Physical Science or an 85 in 8 th grade Physical Science	Credit(s): 1.0	Weight: H
	<i>Traditional: 04211</i>	<i>Periods/week: 5</i>	

This is an honors level course designed to be a rigorous form of the college prep course. It is geared for students interested in an intellectual challenge and who possess a willingness to perform quality work. The earth science topics are studied in greater depth. This class would be useful for those interested in pursuing a science career. This course is the first step in preparing students for the Biology Keystone Exam through chemistry and ecology units.

AGRI-BIOLOGY	Grade(s): 10-12 Term: Year Prerequisite: 9 th grade science	Credit(s): 1.0	Weight: ST
	<i>Traditional: 04343</i>	<i>Periods/week: 5</i>	

This biology course focuses on building a foundational understanding of biological concepts and examines practical implications in agricultural sciences. Major areas of study include the cell and cellular activity, basic and organic chemistry, bioenergetics, genetics, molecular biology, adaptation and change and agricultural sciences. A “hands-on” approach with integrated technology and laboratory activities serve to reinforce learning experiences.

**COLLEGE PREP
BIOLOGY**

Grade(s): 9-12

Credit(s): 1.0

Weight: CP

Term: Year

Prerequisite: **Current 9th graders:** 92 in Applied Science 1 and teacher recommendation **or** a 74 in CP Earth Science **or** Honors Earth Science.

Current 8th graders: Concurrent enrollment in Earth Science **or** an 88 in summer course, “Topics in Earth Science” **or** an 88 in a pre-approved online course in Earth Science **or** a passing grade in Geometry, test average of 92 in 8th grade science, with either Science teacher recommendation and/or Advanced Performance on Grade 8 Science PSSA.

Traditional: 04332

Periods/week: 5

This biology course places emphasis on laboratory-oriented work and note-taking skills to emphasize general biological concepts. The lab work pertains to specific observations and experiments about living organisms. Major fields of study include the cell and cellular activities, organic chemistry, bioenergetics, adaptation and change, genetics and molecular biology.

**HONORS
BIOLOGY**

Grade(s): 9-12

Credit(s): 1.0

Weight: H

Term: Year

Prerequisite: **Current 9th graders:** 80 in Honors Earth Science **or** 92 in College Prep Earth Science.

Current 8th graders: Concurrent enrollment in Earth Science **or** an 88 in summer course, “Topics in Earth Science” **or** an 88 in a pre-approved online course in Earth Science **or** a passing grade in Geometry, test average of 92 in 8th grade science, with either Science teacher recommendation and/or Advanced Performance on Grade 8 Science PSSA.

Traditional: 04321

Periods/week: 5

This course is designed for students who plan to pursue a science career. Activities are of a more demanding nature than those of College Prep Biology. General biological principles are addressed with the expectation of independent study on topics covered in class. Fields of study include cell biology, cell chemistry, bioenergetics, molecular biology, adaptation and change, and genetics.

AP BIOLOGY

Grade(s): 11-12

Credit(s): 1.2

Weight: AP

Term: Year

Fee: AP Exam fee

Prerequisite: A 78 in Honors Biology and Honors Chemistry **or** an 85 in both College Prep Chemistry **and** College Prep Biology.

Traditional: 04310

Periods/week: 6

This Advanced Placement course is designed for college bound students. It will represent a college freshman course, emphasizing laboratory and study skills required in college. Topics of study will include anatomy, botany, cell biology, ecology, evolution and development, DNA, genetics and physiology. Students in this course are expected to take the AP Biology exam.

**HUMAN
ANATOMY &
PHYSIOLOGY**

Grade(s): 12

Credit(s): 1.2

Weight: CP

Term: Year

Prerequisite: H Chemistry **or** CP Chemistry

Traditional: 04832

Periods/week: 6

This rigorous course is designed for college preparatory students interested in pursuing a career in the field of biology, nursing, physical therapy, medicine, med-tech and other related fields. The course takes an in-depth look at the structure and function of the human body. Labs will be conducted to complement the areas covered in class. Dissection of the rats is conducted to compare its structures and functions with those of the human anatomy.

**COLLEGE PREP
CHEMISTRY**

Grade(s): 10-12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisite: Completion or concurrent enrollment in Precalculus
Traditional: 04442 Periods/week: 5

This course is primarily intended for students who are college bound and are willing to make a daily commitment of intense study outside of class. This course **will not** adequately prepare students for college freshman Chemistry that would be required of engineering and pre-med students. Those students contemplating a career in science or medicine should consider taking Honors Chemistry instead. A laboratory approach is used to study elements, compounds, and basic concepts of chemistry. This course may utilize computerized assessments.

**HONORS
CHEMISTRY**

Grade(s): 10-12 Credit(s): 1.0 Weight: H
Term: Year
Prerequisite: A 90 in H Biology **or** 95 in CP Biology **and** an 78 or higher in H Algebra 2.
Traditional: 04431 Periods/week: 5

This course is designed for the college bound student who currently has an interest in pursuing a science career. The course is rigorous, dealing with an in-depth, theoretical approach to the field of chemistry. The course is designed to prepare students for the Advanced Placement Chemistry. The course requires a minimum of one half hour or more of study per day outside of class. Complex problem solving is an integral part of the course. ***This course includes the use of online assessments throughout the year.***

AP CHEMISTRY

Grade(s): 11-12 Credit(s): 1.2 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: A 78 in H Chemistry **or** an 85 in CP Chemistry **and** completion/concurrent enrollment in Precalculus.
Traditional: 04410 Periods/week: 6

This is a rigorous Advanced Placement course designed to represent a freshman college chemistry course that would be taken by science, premedicine or engineering majors. The student is expected to spend several hours each week outside of class studying chemistry. Topics covered include quantitative analysis, complex stoichiometry, atomic and molecular structure, chemical reactions, aqueous equilibria, kinetics, thermodynamics, electrochemistry, and solutions. Students in this course are expected to take the AP Chemistry exam.

**APPLIED
SCIENCE 2**

Grade(s): 11-12 Credit(s): 1.0 Weight: ST
Term: Year
Prerequisite: None
Traditional: 04513 Periods/week: 5

This course is designed to meet the needs of those students who will be entering the work force immediately upon graduation. Its ecological approach will be taught as an interdisciplinary study between biology, chemistry, and physics. The curriculum is taught through a thematic approach to science, technology, and society.

**COLLEGE PREP
PHYSICAL
SCIENCE**

Grade(s): 11-12 Credit(s): 1.0 Weight: CP
Term: Year
Prerequisite: Algebra 1 **and** completion/concurrent enrollment in Algebra 2 **or** concurrent enrollment in Geometry **and** an 85 in Algebra 1.
Traditional: 04612 Periods/week: 5

This course is designed for college prep students who wish to prepare for study in chemistry or physics during their senior year, or desiring a less theoretical science class than chemistry. The first semester students will focus on introductory chemistry which will include the study of elements, compounds and their interactions. In the second semester students will study introductory physics which will include mechanics, light, and electricity. It is not available to students who have successfully completed Chemistry.

**COLLEGE PREP
PHYSICS**

Grade(s): 11-12 Credit(s): 1.2 Weight: CP
Term: Year
Prerequisite: Precalculus or concurrent enrollment in Calculus
Traditional: 04732 Periods/week: 6

This course is designed for college bound students. The course stresses the use of mathematics in physical situations presented in the fields of mechanics, magnetism, light, sound, electricity, and atomic and nuclear physics. A laboratory session is used to enrich the topics covered in class. This course may use computerized assessments.

**HONORS
PHYSICS**

Grade(s): 11-12 Credit(s): 1.2 Weight: H
Term: Year
Prerequisite: 75 in Honors Chemistry or 85 in College Prep Chemistry **and** Precalculus
Traditional: 04741 Periods/week: 6

This is a fast-paced course designed to introduce students to algebra based, college level physics. This course will also prepare students to take the SAT II Physics Subject test in June. Topics of study include mechanics, electricity & magnetism, thermodynamics, waves and nuclear physics. A laboratory component will complement the course for students to develop their conceptual and analytical thinking skills.

AP PHYSICS 1

Grade(s): 11-12 Credit(s): 1.2 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: Precalculus **and** a 78 in H Chemistry **or** 85 in CP Chemistry.
Traditional: 04730 Periods/week: 6

This is a rigorous, in-depth Advanced Placement course that is designed to represent one semester of algebra-based college level physics. A laboratory session will bring hands-on activities to a number of subjects covered. Topics of study include kinematics (motion), dynamics (forces), circular motion, simple harmonic motion, momentum, work/energy, rotational motion, electrostatics, DC circuits, mechanical waves and sound. This course may use computerized assessments.

AP PHYSICS 2

Grade(s): 11-12 Credit(s): 1.2 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: Precalculus **and** a 80 in CP or H Physics or a 75 in AP Physics 1
Traditional: 04740 Periods/week: 6

This is a rigorous, in-depth Advanced Placement course that is designed to represent one semester of algebra-based college level physics. A laboratory session will bring hands-on activities to a number of subjects covered. Topics of study include thermodynamics, fluids, electrostatics, DC and RC circuits, magnetism, electromagnetic induction, optics, quantum, atomic and nuclear physics. This course may use computerized assessments.

AP PHYSICS C

Grade(s): 12 Credit(s): 1.2 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: Concurrent enrollment in AP or Honors Calculus **and** a 78 in H Chemistry **or** an 85 in CP Chemistry.
Traditional: 04710 Periods/week: 6

This is a rigorous and demanding Advanced Placement class, with a large amount of individual work. It is intended for seniors who have taken AP Physics (formerly AP Physics B), or are excelling in calculus and have done extremely well in AP Calculus AB during their junior year. Topics of study are mechanics, electricity and magnetism. The topics will be studied in detail using Calculus. Students who are interested in the class should contact the teacher prior to registration. Students in this course are expected to take the AP Physics C exam. This course may use computerized assessments.

AP ENVIRONMENTAL SCIENCE Grade(s): 11-12 Credit(s): 1.2 Weight: AP
 Term: Year Fee: AP Exam Fee
 Prerequisite: H Chemistry or an 80 in CP Chemistry or CP/H Earth Science and CP/H Biology
Traditional: 04850 Periods/week: 6

- **Summer assignment required**

The AP Environmental Science Course is the equivalent of a 3-credit college course in environmental science. This course will provide students with the scientific concepts and principles to understand the relationships between the natural and human made world, to identify and analyze environmental problems, to understand and analyze risks associated with these problems and to examine and develop solutions to these problems. Topics of AP Environmental Science include: earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution and global environmental issues. Upon completion of the AP Environmental Science course, a student should be prepared to do well on the AP Environmental Science exam potentially earning college credits.

■ SCIENCE ELECTIVES

Science electives may be taken concurrently with another science but may not be substituted for one of the three science credits which are required for graduation.

BIOTECHNOLOGY Grade(s): 10-12 Credit(s): 1.0 Weight: CP/H
 Term: Year
 Prerequisite: Completion/concurrent enrollment in Agri-Biology, CP or H Biology
Traditional Periods/week: 5

- **Course numbers:** College Prep (04352), Honors (04351)

Biotechnology is a course designed to provide students with a basic understanding of knowledge, concepts, and scientific techniques associated with development and improvement of using living organisms and their by-products for commercial development. In one semester students will study agricultural applications of biotechnology linked to plants, animals and food production. Topics in this semester will include genetically modified crops, integrated pest management, selective breeding and production, plant and livestock breeding techniques, and food safety, processing and regulations. In the other semester students will study medical and research applications of biotechnology. Topics in this semester will include recombinant DNA technology and genomics, forensic biology, biomedical engineering, antibiotics, natural products chemistry and environmental applications.

ECOLOGY: TEMPERATE & TROPICAL SYSTEMS Grade(s): 11 Credit(s): 1.0 Weight: CP/H
 Term: Year
 Prerequisite: 90 in CP Biology or 85 in Honors Biology and Department Chair recommendation
Hybrid Periods/week: 1

- **Course numbers:** College Prep (04362), Honors (04361)

This course aims to provide students with an opportunity to examine and compare temperate and tropical ecosystems gaining an appreciation for the ecology in their own backyard as well as tropical environments throughout the world. The content will be delivered through a unique hybrid design allowing for asynchronous online content as well as the opportunity to travel to several locations, such as Hawk Mountain Sanctuary, Stroud Water Research Center, Welkinweir and the Wetland’s Institute. Some of these trips may occur on a Saturday. Students will also be given the opportunity to spend nine days travelling in Costa Rica in June and take part in various research projects.

PHYSICS & ROBOTICS Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
Traditional: 04753 Periods/week: 5

In this course, students take on the roles of mechanical engineers, computer scientists and electrical engineers. Students research dynamics, kinematics and sensors. Subjects such as motion planning and obstacle avoidance, velocity and acceleration, serial chain mechanisms, pneumatic actuators, and drive circuits are covered. Students put their knowledge of physics into practice through lab settings where robots are created with teams. ***This course is repeatable for credit.***

ASTRONOMY Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 04812 Periods/week: 5

Astronomy is a one semester course designed to provide students with knowledge about the universe and our place in it. Topics to be covered include our solar system including the earth-moon system, the sun and planets, galaxies, neutron stars, black holes and theories on the formation of the planet and the universe.

OCEANOGRAPHY Grade(s): 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
Traditional: 04842 Periods/week: 5

Because 71% of earth's surface is beneath the oceans, this course examines the Earth's dynamic oceans and the interactions that occur at various depths. A few topics that students will explore are biodiversity, geology of the ocean floor, and environmental interactions between humans and the oceans.

SOCIAL STUDIES

The course offerings in Social Studies reflect a range of human history, society and development. For graduation, students must successfully complete 1.0 credit in Western Civilization, 1.0 credit in American History, and 1.0 credit in United States Government.

HISTORY OF WESTERN CIVILIZATION Grade(s): 9 Credit(s): 1.0 Weight: ST, CP, H
 Term: Year
 Prerequisite: Honors level requires an 86 in 8th grade Accelerated Social Studies **or** a 92 in 8th grade Social Studies
Traditional Periods/week: 5

- **Course numbers:** Standard (03133), College Prep (03122), Honors (03111)

History of Western Civilization is an overview of the development of our civilization from the Medieval world and the Renaissance to the European theater of World War II. This course equips students to understand the major political, religious, artistic, and philosophical ideas that predominate in today's world. The focus is on major turning points and breakthrough ideas; the course moves swiftly from the Middle Ages and Renaissance and then on to the modern world. Students are encouraged to wrestle with some of the still-unresolved problems in Western Civilization as they prepare to move into the adult world.

20TH CENTURY AMERICAN HISTORY Grade(s): 10 Credit(s): 1.0 Weight: ST, CP, H
 Term: Year
 Prerequisite: Honors level requires a 78 in H Western Civilizations **or** an 85 in CP Western Civilization.
Traditional Periods/week: 5

- **Course numbers:** Standard (03233), College Prep (03222), Honors (03211)

20th Century American History will examine the major themes in American history from the Industrial Revolution to the modern day. Areas of emphasis will be economic policy, cultural changes, and domestic and foreign issues. Highlights will include the Progressive Movement, the World Wars, the Cold War, the Civil Rights movement, and other significant events into the twenty-first century.

AP UNITED STATES HISTORY

Grade(s): 10-12 Credit(s): 1.0 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: 78 in AP Social Studies or 86 in H Social Studies or a 92 in CP Social Studies
Traditional: 03200 Periods/week: 5

- **Summer assignment required**

This Advanced Placement course is a college level introduction to United States history from the pre-Columbian world of 1491 to the present day. This course is demanding in the areas of discussion, writing, critical thinking, and academic independence considerably beyond honors level courses. Students in this course are expected to take the Advanced Placement examination in May.

U.S. GOVERNMENT/ECONOMICS

Grade(s): 11 Credit(s): 1.0 Weight: ST, CP, H
Term: Year
Prerequisite: Honors level requires a 78 in either H 20th Century American History or AP US History or an 85 in CP 20th Century American History.
Traditional Periods/week: 5
Hybrid: Honors only Periods/week: 2

- **Course numbers:** Standard (03333), College Prep (03322), Honors (03311), Hybrid Honors (03311H)

This course is divided into two major areas of focus. The first semester will focus on American government with an emphasis in understanding origins and principles of government, the Constitution, the power and levels of government, judicial issues, and the role of the citizen. The second semester will focus on economics, the role of the consumer, the role of business and the role of government. This course will also focus on uncovering the basic principles of the United States' government and economic systems. Emphasis is placed on understanding the impact the government and economics has on student lives today. Students are asked to identify, research, interpret, and analyze key events and principles while making comparisons and applications to their own personal experiences.

AP GOVERNMENT & POLITICS: UNITED STATES

Grade(s): 11 Credit(s): 1.0 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: 78 in AP Social Studies or 86 in H Social Studies or a 92 in CP Social Studies
Traditional: 03410 Periods/week: 5

- **Summer assignment required**

This Advanced Placement course explores the American political system in its entirety. Students in this class will examine and analyze all of the complexities and features of the American federal system from the broad ideas of the Constitution and the Bill of Rights to focused, intense study on specific policy initiatives and bureaucratic theory. The class will also explore the American public and how we, as Americans, develop our political values and are affected by the media and political policies. This course is extremely demanding in the areas of discussion, writing, critical thinking and academic independence and requires extensive reading. Its scope is considerably beyond honors level coursework. Students in this course are expected to take the Advanced Placement examination in May.

AP GOVERNMENT & POLITICS: COMPARATIVE

Grade(s): 11-12 Credit(s): 1.0 Weight: AP
Term: Year Fee: AP Exam fee
Prerequisite: 78 in AP Social Studies or 86 in H Social Studies or a 92 in CP Social Studies
Traditional: 03430 Periods/week: 5

- **Summer assignment required**

This Advanced Placement course explores the governments of the United States, Britain, Russia, China, Mexico, Iran and Nigeria during the course of the year. Not only will these government systems be analyzed individually, but the class will also cover the issues of globalization and democratization as points of comparison between the various nations. Social, political, military, economic and historical issues will all be studied and analyzed along with pertinent current events. This course is demanding in the areas of discussion, writing, critical thinking, and academic independence considerably beyond honors level courses. Extensive reading and writing are required to be successful in this course. Students in this course are expected to take the Advanced Placement examination in May.

■ SOCIAL STUDIES ELECTIVES

Social Studies electives may not be substituted for Social Studies credits required for graduation.

AP MICRO AND MACRO ECONOMICS	Grade(s): 11-12 Term: Year Prerequisite: 78 in AP Social Studies or 86 in H Social Studies or a 92 in CP Social Studies <i>Traditional: 03530</i>	Credit(s): 1.0 Fee: AP Exam fee <i>Periods/week: 5</i>	Weight: AP
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- **Summer assignment required**

This Advanced Placement course gives students a thorough understanding of economic principles that apply to the economic system as a whole. It emphasizes the study of national income and price determination and develops familiarity with performance measures, growth and international economics. At the microeconomic level it explores the economic principles that apply to the industry level. Concepts covered include; basic economic concepts, supply and demand in relation to product markets, factor markets and income determination and the government's role in the economy. Students in this course are expected to take the Advanced Placement examination in May.

AP EUROPEAN HISTORY	Grade(s): 11-12 Term: Year Prerequisite: 78 in AP Social Studies or 86 in H Social Studies or a 92 in CP Social Studies <i>Traditional: 03600</i>	Credit(s): 1.0 Fee: AP Exam fee <i>Periods/week: 5</i>	Weight: AP
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- **Summer assignment required**

In addition to providing a basic narrative of events, movements, and cause and effect relationships, this course will develop an understanding of some of the principal themes in European history. Students will be expected to analyze historical evidence and express historical understanding through writing. Themes include intellectual, cultural, political, diplomatic, social and economic history. This course requires extensive reading. Students in this course are expected to take the Advanced Placement examination in May.

AP PSYCHOLOGY	Grade(s): 11-12 Term: Year Prerequisite: A grade of 78 in H Biology or 85 in CP Biology and a grade of 83 in Honors Social Studies or 92 in CP Social Studies. Completion of Psychology elective (course 03645) is STRONGLY recommended. <i>Traditional: 03610</i>	Credit(s): 1.0 Fee: AP Exam fee <i>Periods/week: 5</i>	Weight: AP
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- **Summer assignment required**

This course is designed to provide students with a comprehensive overview of psychology. Students will explore the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students will evaluate the psychological facts, principles and phenomena associated with each of the major subfields within psychology. Students in this course are expected to take the Advanced Placement examination in May.

AFRICAN AMERICAN STUDIES 1	Grade(s): 10-12 Term: Semester <i>Traditional: 03243</i>	Credit(s): 0.5 <i>Periods/week: 5</i>	Weight: ST
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This course is designed to examine the role of African Americans in shaping American Society from pre-written history Africa through Reconstruction. Students will discover the impact of the slave trade and how the forced migration of Africans to the Americas created what is now referred to as African American culture. The course explores a broad timeline with subjects including: early African kingdoms, the impact of the Trans-Atlantic slave trade, the contributions of African Americans in building the economy of the southern United States, the Abolitionist Movement, and the effect of Reconstruction on African Americans. Students will get to see the development of America from the African American perspective and gain understanding of how events shaped the lives of African Americans.

**AFRICAN AMERICAN
STUDIES 2**

Grade(s): 10-12

Credit(s): 0.5

Weight: ST

Term: Semester

Prerequisite: African American Studies 2

Traditional: 03253

Periods/week: 5

This course begins with the Jim Crow era in the South and finishes with a present day focus on problems that plague the African American community. The course explores how the many accomplishments of African Americans during the Reconstruction era were wiped away and the lasting impact discrimination and segregation have had on African Americans. In addition, the course will cover topics including: segregation, the contributions of great African Americans in the 20th century, the Civil Rights Movement of the 1950s and 1960s, and current struggles afflicting the African American community (i.e. violence, educational and income gaps, negative media image, etc.). This course depicts the most significant events of American History told from the vantage point of African Americans, showcasing the many accomplishments and challenges facing the culture.

**SOCIAL
PROBLEMS**

Grade(s): 11-12

Credit(s): 0.5

Weight: ST

Term: Semester

Traditional: 03604

Periods/week: 5

Social Problems involves the study of current issues in American society. Topics include the media, teen issues, justice, and changes in the family. Issues are studied through class discussions, videos and magazine articles. This course focuses on looking at both sides of the issues and their causes and effects. It relies heavily on the exchange of ideas, both through the spoken and written word, and is recommended only for students who are eager to discuss and debate. ***Due to the subject matter this elective is limited to 11th and 12th grade students.***

**CRIME
AND JUSTICE**

Grade(s): 9-12

Credit(s): 0.5

Weight: ST

Term: Semester

Traditional: 03625

Periods/week: 5

Crime and Justice will investigate the nature of crime and justice in the United States. The course is separated into two portions. The first segment deals with crime and the criminal process. The second deals with justice and rehabilitation versus punishment in current society. Highlights of the course include the role of the media and Constitutional rights. ***The mature subject matter in this course, including violence and crime, necessitates maturity on behalf of enrolled students.***

PSYCHOLOGY

Grade(s): 10-12

Credit(s): 0.5

Weight: ST

Term: Semester

Traditional: 03645

Periods/week: 5

Students enrolled in this course will study behaviors exhibited by individuals and groups. They will review the historical roots of psychology and explore the biological and social foundations of human behavior. Students enrolled in this course will be expected to complete projects and evaluate psychological theory and participate in class discussions. ***The mature subject matter in this course, including descriptions of psychological disorders, necessitates maturity on behalf of the enrolled students.***

**THE MODERN
WORLD – 1815
TO TODAY**

Grade(s): 12
Term: Year

Credit(s): 1.0

Weight: CP

Traditional: 03655

Periods/week: 5

Dual Enrollment: 3 credits via Montgomery County Community College pending instructor approval.

The Modern World course, which follows the development of the non-Western world from the Age of Imperialism to modern times, will dovetail with the required 9th grade course that traced the rise of Western Civilization from the ancient Greek and Romans to the modern era. Unlike the 9th grade class, this course will take a global look at the maturation of the modern world. Expanding students' views past those of the United States and Europe, this course will look at the impact of Western Civilization upon the cultures and societies of Asia, Africa, South America, and the Middle East, all the while tracing the path of history up to the modern day.

Through this course, students will focus on many of the major issues and conflicts that will confront our world and its youth today, as well as in the future. Students will learn that the problems that weigh heavily on society today have their roots in past events. Terrorism, for example, will be examined by investigating its cultural, religious, militaristic and political roots. Students will trace the history of European colonialism across the globe and draw connections between it and modern crises that have emerged in Africa, Asia and the Middle East. Major historical events, such as World War I and II, will be analyzed from non-Western perspectives, and comparisons will be drawn between the different views.

TECHNICAL COLLEGE HIGH SCHOOL

Career and Technical Education Pathways

Chester County Technical College High School (TCHS) Pickering Campus is a public high school specializing in Career and Technical Education (CTE). Students in grades 10-12 attend on a part-time basis. In certain situations, students may attend TCHS on a full-time basis and take all four core academic subjects, as well as Health and Physical Education, in addition to their CTE program. CTE programs prepare students for success in college, the workplace and life. All CTE programs at TCHS are aligned with the Pennsylvania State Academic Standards and national industry certifications.



CTE programs lead seamlessly to postsecondary education through the Pennsylvania Department of Education's (PDE) SOAR Programs of Study. The mission of SOAR is to prepare Students (who are) **O**ccupationally and **A**cademically **R**eady for college and careers in an increasingly diverse, high performing workforce. Graduates of TCHS Pickering's approved SOAR programs who meet challenging academic and technical criteria qualify for several free credits at over twenty-five participating colleges across Pennsylvania. These include the Pennsylvania College of Technology, Delaware County Community College, Montgomery County Community College, Clarion University, Thaddeus Stevens College of Technology and Harcum College. For more information about SOAR and the complete list of participating colleges and postsecondary programs visit:

http://www.education.state.pa.us/portal/server.pt/community/programs_of_study/7686/articulations/679190

“Get the credits you’ve already earned!” in the following SOAR programs at TCHS:

Automotive Collision Technology, Automotive Service Technology, Carpentry, Commercial and Graphic Arts, Criminal Justice, Culinary Arts, Early Childhood Care and Education, Electronics & Robotics, Engine Technology, Health Occupations, and Sustainable Energy Engineering.

PDE-approved Tech Prep Programs at TCHS are college pathways that connect to many colleges and technical schools that offer credits for competencies achieved at TCHS. PDE- approved Tech Prep Programs are: Cosmetology and Animal Science Technology.

Seniors-only college preparatory programs include Teacher Academy and Allied Health Science and Technology (see page 61 for more information.).

For more information about all of TCHS Pickering's rigorous Career and Technical Education programs and the online application process, please visit: <http://www.tchspickering.org> or contact the Admissions Specialist at 484-237-5325.

Chester County Technical College High School - Pickering Campus is operated by the Chester County Intermediate Unit on behalf of Chester County's 12 public school districts. The campus is located at 1580 Charlestown Road, Phoenixville, PA 19475.

TECHNICAL COLLEGE HIGH SCHOOL PICKERING CAMPUS Grade(s): 10-12 Credit(s): 3.0 Weight: ST
Term: Year
Prerequisite: Parent permission and application approval by TCHS.
Traditional *Periods/day: 4*

- **Course numbers:** TCHS full-time (19100), TCHS part-time (1911P)

The Chester County Intermediate Unit operates occupational and technical educational programs for secondary students at the Technical College High School (TCHS) Pickering Campus. The programs offered at TCHS provide marketable job skills that will allow students a strong foundation to enter the workforce or continue with higher education. All programs provide students with an opportunity to earn college credit or advanced placement at selected post-secondary schools in their career field. For more details about earning college credit for TCHS High School course work, please see our website: www.tchspickering.org and select the College/Workforce tab, or the individual Career & Technical Education program descriptions. Students may attend TCHS Pickering every year starting in grade 10.

- **IMPORTANT NOTE:** Students who require a period during the day in a learning support classroom will not have room in their schedule for this class if they attend TCHS Pickering on a part time basis in 10th grade. Students are only at Owen J. Roberts long enough to complete their major subjects. It is recommended that students who require learning support class in their schedules consider attending TCHS Pickering full time in 10th grade in order to receive the support necessary to be academically successful. Please consult your special education teacher or school counselor if you have additional questions.

Full-time students receive an OJRHS diploma upon completion of all high school requirements. Career & Technical Education programs offered at TCHS Pickering include:

- **Animal Science Technology:** This program prepares students to provide for the welfare of animals in the pet, production and biomedical fields. Graduates are groomed for post-secondary education and entry-level employment. Rewarding career opportunities exist in a field that offers the opportunity to combine a love for animals with an interest in the life sciences. Traditional classroom theory instruction complements hands-on activities involving the rabbits, cats, dogs and other animals who have made their home in the classroom. Students study animal anatomy and physiology, genetics and reproduction, nutrition and surgical assisting.
- **Automotive Collision Technology:** This program is designed for students with a keen interest in motor vehicles and an eye for color, shape and design. It takes a skilled auto body technician to make damaged vehicles look new again, and that is exactly what students learn to do. They straighten bent frames, repair dents, replace body panels and put on the finishing touches with custom paint designs. Put a dent in these areas of auto collision, repair and restoration: detailing and estimating, glass and hardware repair and replacement, metal finishing and body fillings, non-structural damage repair, outer body panel repair, painting and refinishing and welding and cutting.
- **Automotive Service Technology:** This program provides a hands-on approach to developing skills, allowing students to practice team concepts and appropriate interaction with peers which will help them in the workplace. The program also emphasizes customer relations and instructs students in the use of proper etiquette in a service economy. Students learn the latest advances in the automotive service industry: hybrid vehicle design and maintenance, automotive electrical and electronics systems, brake repair and installation, drive train and engine performance, heating and cooling systems and suspension and steering systems. Entry-level service technicians often perform tasks, such as: safety inspections, basic maintenance (lubrication and filter changes) and preparing new and pre-owned vehicles for the consumer market. With advanced education and experience, career opportunities can also include parts manager, small business owner, master technician, service advisor or service manager.
- **Carpentry:** This program prepares students for careers in the residential, commercial and home improvement construction industry. It is the first step in their blueprint for building a career in the field. Students learn safety practices, job estimating and materials selection practices. In addition, they master the basics of rough carpentry, including the layout of walls, rafters, stairs and floors.

- **Commercial and Graphic Arts:** This program is based on industry standards that prepare students for admission to post-secondary art schools and entry-level employment in the graphic communications industry. Students learn the basics of design, color theory, page layout, lettering and the production skills needed for the printing press. Advanced study focuses on the use of computer graphic design skills and introduces students to software, including Adobe Creative Suite (CS) Photoshop, InDesign, Illustrator, Flash, Bridge, Dreamweaver and Acrobat Pro. Upon completion of the program, students have a portfolio of their work to present to prospective employers and college admissions officers.
- **Cosmetology:** Students learn the tools for success in the beauty industry. With appropriate scheduling and good attendance, they can earn the required hours for state licensing as a cosmetologist, nail technician, esthetician or natural hair braider. Students learn the latest techniques in the field, including facials; hair styling, cutting, coloring, permanent waving, relaxing and straightening; manicures and pedicures; personal hygiene; and sterilization. Many cosmetologists begin their careers prior to licensing by working as spa and salon receptionists and shampoo assistants.
- **Criminal Justice:** This program prepares students for both post-secondary education and entry-level employment in the protective services field. Students with good judgment and the desire to protect and serve should write themselves a ticket for success and explore this program. Program highlights include basic fire science, crime scene and criminal investigation, criminal law, civil law and court procedures, electronic security systems, forensic science, investigative photography, police and security tactics and self-defense.
- **Culinary Arts:** Employment in the food service/hospitality industry has been growing at the highest rate of any industry in the country. The expansion of restaurants, hotels, and cruise ships, along with the rapid growth of convenience foods and prepared foods, has resulted in most Americans eating at least one daily meal away from home. Get in on the action by joining the culinary arts program. Program highlights include meat, fish, seafood and poultry preparation, vegetable and starch preparation, breakfast food preparation, knife skills, basic and advanced baking, sauce and soup preparation, beverage preparation and service, fine dining, buffet catering and cafeteria service, low-fat ingredients and substitutions and food service management and cashiering.
- **Early Childhood Care & Education:** The demand for early childcare professionals with high-level degrees and industry-recognized credentials is growing rapidly. Being good with children can turn into a career in this program, which prepares students to earn their Child Development Associate (CDA) national certification. To become CDA Ready, students complete 480 hours of experience working with children in a preschool environment and 120 hours of formal trainings through active accredited trainings, project-based learning, web-based distance education and research and field observations.
- **Electronics & Robotics:** Computers, televisions, radios and games are all examples of how electronic equipment has become part of our everyday lives. Over 90 percent of manufacturing is automated by the use of electronic devices. That is why skilled technicians to operate, maintain and repair electronics are in high demand. Students combine their love for technology with an interest in figuring out how it all works. They learn to build and test electronic circuits, master the basics of computer servicing/maintenance and networking, and compete in nationally recognized robotics competitions.
- **Engine Technology:** Students interested in four-wheelers and motorcycles can turn their hobby into a career in this program. It teaches the skills to troubleshoot and repair residential, commercial and recreational outdoor power equipment and small engines such as four wheelers, motorcycles, snowmobiles, tractors, and more. Students rev up their future by exploring fuel, electronic, lubrication, cooling and braking systems, mastering maintenance procedures that relate to welding, fabrication and machining and using computer technology in a customer service- and teamwork-based learning environment.
- **Health Occupations:** Acquire the skills to be a valuable member of any health care team in this program. According to the Bureau of Labor Statistics, more workers are hired in the health care industry than in any other industry, and the trend is expected to continue. Students gain a healthy understanding of basic patient bedside care, body mechanics, CPR and First Aid, infection control, medical abbreviations, physiology and anatomy, medical terminology, office and medical records management, patient rights – HIPAA, and vital signs.
- **Sustainable Energy Engineering:** This program combines environmental science and electrical engineering, which means students are wired for one of the nation’s fastest growing job segments. The program provides state-of-the-art education in the fields of solar energy, power generation and energy utilization. Green jobs are those that employ men and women in producing or offering products or services that clean the environment, contribute to the sustainable use of resources, prevent pollution, promote energy efficiency and promote the reduction of harmful emissions. Students master basic electrical engineering design and installation for residential and commercial structures, environmental monitoring and solar photovoltaic (PV) design and installation.

TECHNOLOGY EDUCATION

The Technology Education program provides students with the opportunity to explore courses that expose them to a variety of current technologies they can apply to personal endeavors, career preparation or college.

COMPUTER AIDED DRAFTING AND DESIGN (CADD)	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	<i>Traditional: 10115</i>	<i>Periods/week: 5</i>	

- **Formerly CADD 1**

Computer Aided Drafting and Design is an introductory course designed to teach students the fundamentals of how to use and implement drafting and design software. The students apply the knowledge learned to a variety of drafting and design problems. Students will learn to read and draw several types of technical drawings using AutoCAD Lt. The information will then be applied in the design process as students work on various engineering and architectural problems.

ARCHITECTURAL ENGINEERING & DESIGN	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	Prerequisite: Introduction to Engineering or Principles of Engineering or CADD and teacher recommendation		
	<i>Traditional: 10125</i>	<i>Periods/week: 5</i>	

- **Formerly CADD 2**

Architectural Engineering and Design (AED) is a course that will continue to develop the STEAM (Science, Technology, Engineering, the Arts, and Math) topics covered in Introduction to Engineering course (ITE), Principles of Engineering (POE) and Computer Aided Drafting and Design (CADD). Students will utilize the skills obtained in the introductory courses to further develop their professional portfolio of work. Students will be immersed in design opportunities created to investigate topics that may include, but not limited to; historical trends in architectural design, common constructional practices, environmental considerations, and aesthetic design.

MECHANICAL ENGINEERING AND DESIGN	Grade(s): 9-12	Credit(s): 0.5	Weight: ST
	Term: Semester		
	Prerequisite: Introduction to Engineering or Principles of Engineering or CADD and teacher recommendation		
	<i>Traditional: 10135</i>	<i>Periods/week: 5</i>	

- **Formerly CADD 3**

Mechanical Engineering and Design (MED) is a course that will continue to develop the STEAM (Science, Technology, Engineering, the Arts, and Math) topics covered in Introduction to Engineering course (ITE), Principles of Engineering (POE) and Computer Aided Drafting and Design (CADD). Students will utilize the skills obtained in the introductory courses to further develop their professional portfolio of work. Students will be immersed in design opportunities created to investigate topics that may include, but not limited to; isometric and orthographic drawings, materials properties, structural components, measurement systems, manufacturing and fabrication practices, ergonomics, problem solving, and aesthetic design.

PRODUCT ENGINEERING & DESIGN	Grade(s): 10-12 Term: Semester Prerequisite: Introduction to Engineering <u>or</u> Principles of Engineering <u>or</u> CADD and teacher recommendation	Credit(s): 0.5	Weight: ST
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Traditional: 10145 Periods/week: 5

- **Formerly CADD 4**

Product Engineering and Design (PED) is a course that will continue to develop the STEAM (Science, Technology, Engineering, the Arts, and Math) topics covered in Introduction to Engineering course (ITE), Principles of Engineering (POE) and Computer Aided Drafting and Design (CADD). Students will utilize the skills obtained in the introductory courses to further develop their professional portfolio of work. Students will be immersed in design opportunities created to investigate topics that may include, but not limited to; ergonomics, material properties and applications, manufacturing, prototyping, packaging, problem solving, environmental considerations, and aesthetic design.

INTRODUCTION TO PHOTOGRAPHY	Grade(s): 9-12 Term: Semester	Credit(s): 0.5	Weight: ST
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Traditional: 10215 Periods/week: 5

- **Formerly Photography 1**

Introduction to Photography is a course that will introduce the students to the fundamentals of photography. Through a variety of projects and hands-on experiences, students will learn the basic functions of a camera and composition skills that will enhance their pictures. The course will begin with black and white film photography, developing and darkroom techniques and transcend to the digital age to give the students the full scope and evolution of the world of photography. A 35mm camera is required for the course. School equipment is available but is limited.

DIGITAL PHOTOGRAPHY	Grade(s): 9-12 Term: Semester Prerequisite: A 74 in Introduction to Photography	Credit(s): 0.5	Weight: ST
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Traditional: 10225 Periods/week: 5

- **Formerly Photography 2**

Digital Photography is a course designed to provide students interested in photography the opportunity to expand and develop their skills beyond the first level course. The students will be exposed to the world of digital photography through a variety of topics which include how a digital camera works (function and operation), memory cards, file formats, exposure, white balance, photographic composition, lighting, creativity, image editing software and a variety of projects. A digital camera is required for the course. School equipment is available but is limited.

VIDEO PRODUCTION	Grade(s): 9-12 Term: Semester	Credit(s): 0.5	Weight: ST
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Traditional: 10315 Periods/week: 5

- **Formerly Video Production 1**

Video Production is an introductory course that will introduce the students to the fundamentals of digital video production. Through a variety of projects and hands-on production experiences, students will learn the three phases of the production process (script writing, effective camera shooting, lighting and video editing techniques) as well as how to add music, titles and narration to video projects. School equipment is available or students can use their own equipment.

FILM PRODUCTION Grade(s) 9-12 Credit(s): 0.5 Weight: ST
 Term: Semester
 Prerequisite: 74 in Video Production ***or*** teacher recommendation
Traditional: 10355 Periods/week: 5

- ***Formerly Video Production 2***

Film Production is a course that will continue to develop and further the students understanding of video production with an emphasis on filmmaking. Through a variety of projects and hands-on production experiences, students will immerse themselves in the art of filmmaking by exploring various genres of film. Students will expand and refine production and postproduction filmmaking skills and techniques as they develop their own short film. Students will have the opportunity to enter their films in film festivals and competitions including the annual Owen J. Roberts High School Student Film Festival. School equipment is available or students can use their own equipment.

TELEVISION PRODUCTION Grade(s): 10-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: 74 in Video Production ***or*** teacher recommendation
Traditional: 10335 Periods/week: 5

- ***Formerly Video Production 3***

Television Production introduces the students to the fundamentals of working in the high school television studio. Students will learn the aspects of electronic news gathering, writing for broadcast, and producing feature news stories and public service announcements to produce the school news show, The Paw Report. In the studio, students will learn the proper production procedures as well as the use and application of television production equipment. Students will also have the opportunity to produce live school events for broadcast on the school’s television channel or posting to the high school web page. Students can repeat the course as Wildcat TV Internship (10345).

ADVANCED FILM PRODUCTION Grade(s): 10-12 Credit(s): 1.0 Weight: ST
 Term: Year
 Prerequisite: 83 in Film Production ***or*** teacher recommendation
Traditional: 10365 Periods/week: 5

Advanced Film Production is a course that will continue to develop and further the students’ understanding of filmmaking. The purpose of this course is to broaden the students’ skills, knowledge and understanding of filmmaking through a more in-depth immersion into the art of filmmaking. To accomplish this objective areas of emphasis will include but are not limited to, writing, casting, location scouting, acting, filming style and techniques, lighting methods, audio recording techniques, production design/set dressing, set etiquette, video editing and much more. Students will have the opportunity to enter their films in film festivals and competitions including the annual Owen J. Roberts High School Student Film Festival. School equipment is available or students can use their own equipment. The course is team taught through the English department and Technology Education department for more in-depth coverage of content.

INTRODUCTION TO ENGINEERING Grade(s): 9-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite: None
Traditional Periods/week: 5

- Course numbers: College Prep (10512), Honors (10511)

The Introduction to Engineering course will introduce STEM topics to students by utilizing the basics of design, and how teamwork, effective communication, research and analysis drives the engineering and design process. Additionally, the impact of design on humans and the environment will be studied. Students will use engineering standards and technical documentation to create a professional portfolio of their work products. Students will be immersed in design opportunities to investigate topics such as sustainability, mechatronics, forces, structures, architecture, aerodynamics, agriculture, design, manufacturing and the environment.

PRINCIPLES OF ENGINEERING

Grade(s): 10-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite: Introduction to Engineering and teacher recommendation
Traditional *Periods/week: 5*

- Course numbers: College Prep (10522), Honors (10521)

Principles of Engineering is a course that will continue to develop the STEAM (Science, Technology, Engineering, the Arts, and Math) topics covered in Introduction to Engineering. Students will utilize the skills obtained in the introductory course to further develop their professional portfolio of design and engineering work. Students will be immersed in design opportunities created to investigate topics that may include, but are not limited to: mechatronics, statics, hydraulics and pneumatics, Work/Force/Power and mechanical advantage, prototyping, energy and sustainable design. Engineering Case Studies will be used to demonstrate applied engineering concepts and students will be engaged using math and science to design and engineer solutions to real-world engineering problems.

WORLD LANGUAGES

The World Language Department offers a diverse selection of courses for students. These courses expose students to a variety of cultures and prepare them for work in an expanding global economy. The range of courses includes basic, intermediate, advanced and AP courses as well as honors courses in levels 2, 3, and 4.

WORLD LANGUAGE GRAMMAR

Grade(s): 9-12 Credit(s): 0.5 Weight: No weight (pass/fail)
 Term: Year
 Prerequisite: None

Online: 056130 *Periods/week: 0*

Students will receive instruction in advanced English grammar structures to facilitate their mastery of advanced grammar in their world language course(s). Course content will include the use of cases, complex sentence structures, compound tenses, and the various moods of language. Although developed to address the needs of advanced world language students, this course will benefit any student in any grade who wishes to obtain a better understanding of the structure of the English language.

FRENCH 1

Grade(s): 9-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: None

Traditional: 05112 *Periods/week: 5*

Students learn to communicate about themselves, their families, and everyday life experiences. Themes are introduced through oral as well as written activities. Audio exercises are used to enhance listening and speaking skills, and videos provide a view of life and culture in French-speaking countries.

FRENCH 2

Grade(s): 9-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 o College Prep requires a 74 in French 1 **and** a 74 on French 1 final exam.
 o Honors level requires an 85 in French 1 **and** a 74 on French 1 final exam.

Traditional *Periods/week: 5*
Hybrid: Honors Only *Periods/week: 2*

- **Course numbers:** College Prep (05122), Honors (05121), Hybrid Honors (05121H)

Students further develop their oral and written communication skills through the discussions of themes including leisure activities, school life, and gastronomy. Students improve their listening and verbal skills through class discussion and use audio exercises as reinforcement. Through a variety of listening, speaking, reading, and writing activities, students expand their vocabulary and grammar skills.

FRENCH 3 Grade(s): 10-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 o College Prep requires a 74 in French 2.
 o Honors level requires **either** a 74 in Honors French 2 **or** an 85 in CP French 2.
Traditional *Periods/week: 5*

- **Course numbers:** College Prep (05132), Honors (05131)

Students improve their listening, speaking, reading, and writing skills through an expansion of vocabulary and the introduction of some advanced grammatical structures. Themes include careers, relationships, and storytelling. Students continue to study the culture and customs of French-speaking countries and will read a major work of French literature.

FRENCH 4 Grade(s): 11-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 o College Prep requires a 74 in French 3.
 o Honors level requires **either** a 74 in Honors French 3 **or** an 85 in CP French 3.
Traditional *Periods/week: 5*

- **Course numbers:** College Prep (05142), Honors (05141)
- **Dual Enrollment:** 6 credits (Honors)/3 credits (College Prep) via Montgomery County Community College pending instructor approval.

Students continue to improve their listening, speaking, reading, and writing skills through the introduction of abstract vocabulary topics and advanced grammatical structures. Students will read and discuss excerpts from authentic Francophone literature and will view and analyze short films.

FRENCH 5 Grade(s): 12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: A 74 in CP French 4 **or** a passing grade in H French 4.
 Traditional: 05151 Periods/week: 5

- **Dual Enrollment:** 3 credits via Montgomery County Community College pending instructor approval.

This course provides continuing proficiency and transition for further college studies. Contemporary and classical literature is read and discussed in French with emphasis on the ability to communicate in French. Compositions will reflect literary, contemporary and cultural themes. ***In the event of insufficient enrollment in either College Prep French 4 or French 5 these courses may be combined.***

AP FRENCH LANGUAGE & CULTURE Grade(s): 12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: A 74 in H French 4 **or** an 85 in CP French 4.
Traditional: 05160 *Periods/week: 5*

- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval.
- **Summer assignment required**

This college level course will prepare students to express themselves coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken French. Extensive training in presentational skills and the organization and writing of compositions is emphasized. Students are expected to think critically about contemporary issues in Francophone cultures. Students will be prepared to take the AP exam in May.

GERMAN 1	Grade(s): 9-12 Term: Year Prerequisite: None	Credit(s): 1.0	Weight: CP
	<i>Traditional: 02125</i>	<i>Periods/week: 5</i>	

Students enrolled in German 1 will begin with basic chapters including family, food, weather, holidays, traveling and school. Students will begin learning how to speak and write during the duration of German 1. German 1 will prepare students for German 2.

GERMAN 2	Grade(s): 9-12 Term: Year Prerequisite:	Credit(s): 1.0	Weight: CP, H
	<ul style="list-style-type: none"> ○ College Prep requires a 74 in German 1 and a 74 on German 1 final exam. ○ Honors level requires an 85 in German 1 and a 74 on German 1 final exam. 		
	<i>Traditional</i>	<i>Periods/week: 5</i>	

- **Course numbers:** College Prep (05222), Honors (05221)

German 2 will begin with a review of German 1. The emphasis in German 2 is mastering the grammar and structure of the language as well as speaking the language. This course will prepare students for upper levels of writing, speaking, and thinking in German.

HONORS GERMAN 1-2	Grade(s): 9-12 Term: Year Prerequisite: 9 th graders must have current language teacher recommendation.	Credit(s): 1.0	Weight: H
	<i>Hybrid: 05271H</i>	<i>Periods/week: 2</i>	

Students enrolled in German 1-2 will begin with German 1 topics including vocabulary and conversational structure related to family, weather, holidays, and traveling. Students will spend first semester learning how to speak and write in German. In the second semester students will cover German 2, mastering the grammar structure as well as advanced speaking and listening for understanding.

GERMAN 3	Grade(s): 10-12 Term: Year Prerequisite:	Credit(s): 1.0	Weight: CP, H
	<ul style="list-style-type: none"> ○ CP requires a 74 in German 2. ○ Honors level requires either a 74 in H German 2 or an 85 in CP German 2. 		
	<i>Traditional</i>	<i>Periods/week: 5</i>	

- **Course numbers:** College Prep (05232), Honors (05231)

German 3 is primarily the reinforcement of previously developed oral, reading, listening and writing skills. The more difficult points of grammar are reinforced with additional oral and written exercises. The stress in reading is on meaningful content rather than speech patterns. The readings serve as a springboard for discussion and creative writing thereby developing speaking skills. German cultural contributions, including history and famous artists, are further developed.

GERMAN 4Grade(s): 11-12
Term: Year

Credit(s): 1.0

Weight: CP, H

Prerequisite:

- College Prep requires a 74 in German 3.
- Honors level requires **either** a 74 in H German 3 **or** an 85 in CP German 3.

*Traditional**Periods/week: 5*

- **Course numbers:** College Prep (05242), Honors (05241)
- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval (Honors only).

German 4 concentrates on the reinforcement of the four language skills. Grammar is covered primarily in the form of review, with refinement of more difficult points. Some modern and classical literature is read and discussed in German. Creative writing is also stressed. Contemporary culture involving youth is closely examined. Speaking skills are refined and practiced.

GERMAN 5Grade(s): 12
Periods/week: 5Credit(s): 1.0
Term: Year

Weight: CP

Prerequisite: A 74 in CP German 4 **or** a passing grade in H German 4.*Traditional: 05251**Periods/week: 5*

German 5 provides advanced work in conversational German. Listening comprehension and oral fluency are emphasized. Modern and classical literature, as well as cultural contributions and contemporary issues are also discussed. Emphasis on contemporary youth literature develops reading, writing, and vocabulary skills.

**AP GERMAN
LANGUAGE &
CULTURE**Grade(s): 12
Term: YearCredit(s): 1.0
Fee: AP Exam fee

Weight: AP

Prerequisite: A 74 in H German 4 **or** an 85 in CP German 4.*Traditional: 05260**Periods/week: 5*

This college level course will prepare students to express themselves coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken German. Extensive training in the organization and writing of compositions is emphasized. Contemporary and classic literature is read and discussed. Students will be expected to take the Advanced Placement German Language Exam in May. ***In the event of insufficient enrollment, students who take AP German will be combined with students in German 5 and will be given additional independent work.***

LATIN 1Grade(s): 9-12
Term: Year
Prerequisite: None

Credit(s): 1.0

Weight: CP

*Traditional: 05312**Periods/week: 5*

Latin I introduces basic vocabulary to students and provides the opportunity to learn about noun declensions, the present tense of verbs, adjectives, adverbs, and basic pronouns. While reading Latin stories, students will experience Ancient Rome through the eyes of a young Roman boy named Quintus Horatius Flaccus as he and his family take us through their daily lives. This serialized story will provide students with invaluable cultural comparisons of education, history, geography, and of course mythology. Students will also experience a deeper look at linguistics through word derivation as they begin to make connections between Latin and that of their own native tongue. This course supplements learning elements and topics from many of the core subjects such as Language Arts, History, Social Studies, Literature, Philosophy and modern world Languages.

**STEAM
LATIN 1**

Grade(s): 9-12
Term: Year
Prerequisite: None

Credit(s): 1.0

Weight: CP

Hybrid: 05312H

Periods/week: 2

This Latin course is designed for students who are interested in curricula connected to a STEAM Program (Science, Technology, Engineering, Arts, and Math). The foundation of the course will be a traditional Latin 1 course with a solid grounding in the Latin language including noun declensions, verbs, pronouns, adverbs, et cetera. Cultural connections will be made to the technological and scientific achievements of the ancient world and also how the ancient languages of Latin and Greek continue to influence scientific and medical terminology. The student's learning of the Latin language will be augmented with some basic cultural and historical knowledge of the Romans as well.

LATIN 2

Grade(s): 9-12
Term: Year
Prerequisite:

Credit(s): 1.0

Weight: CP, H

- College Prep requires a 74 in Latin 1 **and** a 74 on Latin 1 final exam.
- Honors level requires an 85 in Latin 1 **and** a 74 on Latin 1 final exam.

Traditional

Periods/week: 5

- **Course numbers:** College Prep (05322), Honors (05321)

Students will continue their journey with Quintus Horatius Flaccus as he continues his education in Rome and eventually in Greece. The history, culture and grammar build on last year's concepts as the course expands its vocabulary and grammatical structures to envelop more advanced topics such as verb tense and mood. The student continues to make connections lexically and culturally as they begin to analyze passages about elections, political alliances and a more detailed look at Rome's influential history. The history and culture are taught side by side with the grammar and vocabulary lessons, which provide the student with an educational experience rich in interdisciplinary study.

LATIN 3

Grade(s): 10-12
Term: Year
Prerequisite:

Credit(s): 1.0

Weight: CP, H

- College Prep requires a 74 in Latin 2.
- Honors level requires **either** a 74 in H Latin 2 **or** an 85 in CP Latin 2.

Traditional

Periods/week: 5

- **Course numbers:** College Prep (05332), Honors (05331)

Students will continue their journey with Quintus Horatius Flaccus as he completes his education and becomes embroiled in the Roman civil war which ushers in the end of the Republic and the beginning of the Roman Empire. The associated readings develop to include advanced verb forms of the subjunctive mood and a wide variety of clauses, participles, gerunds, and other verbal constructs. These advanced topics and expanded vocabulary complete the Latin student's introduction to the language and leave them on firm footing for their exploration of Latin Literature in Fourth Year.

LATIN 4

Grade(s): 11-12
Term: Year
Prerequisite:

Credit(s): 1.0

Weight: CP, H

- College Prep requires a 74 in Latin 3.
- Honors level requires **either** a 74 in H Latin 3 **or** an 85 in CP Latin 3.

Traditional

Periods/week: 5

- **Course numbers:** College Prep (05342), Honors (05341)

Students will now be using the grammar, vocabulary, history, and cultural knowledge that they gained in the first three years of study to explore texts from six "Golden Age" Latin authors. They will study the letters and speeches of Cicero, the war commentaries of Julius Caesar, the love poems of Catullus and Ovid, the history of Livy, and the epic poetry of Vergil. These authors have had a far-ranging impact on the literature of the world in the two millennia since the height of the Roman Empire, and students will have an opportunity to read these selections in the original. Through this year, students will become familiar with the stylistic and rhetorical devices that authors use to make their readings more attractive, interesting, and profound. Students will also be introduced to the basic meters of Roman poetry.

LATIN 5 Grade(s): 12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: A 74 in CP Latin 4 **or** a passing grade in H Latin 4.
Traditional: 05351) Periods/week: 5

- **Summer assignment required**

Fifth year Latin is an intense course geared to the translation of Vergil's *Aeneid* and Julius Caesar's *De Bello Gallico*. Emphasis of the course is directed toward translation and understanding as well as figures of speech and poetic meter.

AP LATIN Grade(s): 12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: A 74 in H Latin 4 **or** an 85 in CP Latin 4
Traditional: 05360 Periods/week: 5

- **Summer assignment required**

Advanced Placement Latin is an intensive study of Latin literature. The prescribed, college-level syllabus will focus on Vergil's *Aeneid* and Julius Caesar's *De Bello Gallico*. The length of the translations is considerable. This AP course will also require practice writing literary essays and in sight translation. Attention is given to figures of speech and stylistic devices, advanced grammar and vocabulary, poetic meter, as well as the cultural, social, and political context of the poem. **NOTE:** In the event of insufficient enrollment, students who take AP Latin will be combined with students in Latin 5 (05351) and will be given additional independent work.

SPANISH 1 Grade(s): 9-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: None
Traditional: 05412 Periods/week: 5

Students in Spanish 1 learn to communicate about themselves, their families and everyday life experiences. Students receive basic instruction in speaking, listening, reading and writing. Grammar is introduced through oral and written exercises. Students will be introduced to Spanish-speaking cultures and customs. This course provides the foundation for further studies in Spanish.

SPANISH 1-B Grade(s): 9-12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: Passing grade in Spanish 1 or Spanish Part 1 in the Middle School
Traditional: 05402 Periods/week: 5

Spanish 1B is a course designed for students who need extra reinforcement of Spanish 1 topics before taking Spanish 2. Students who have a final average of a 65-73 in Spanish 1 or have only completed Spanish Part 1 in the Middle School and/or teacher recommendation are eligible to enroll in this course. Any student who failed Spanish 1 **may not** take this course.

CONVERSATIONAL SPANISH Grade(s): 9-12 Credit(s): 1.0 Weight: ST
 Term: Year
Hybrid: 05405H Periods/week:2

The focus of this course is on the spoken language. Students will learn to communicate orally in Spanish using practical commands, directions, numbers and other useful vocabulary. The course will provide an exposure to different cultures and teach students how to interact with non-English speakers. Students will be able to apply what they learn directly to many jobs where they may encounter Spanish speaking colleagues.

SPANISH 2 Grade(s): 9-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 ○ College Prep requires a 74 in Spanish 1/1B **and** a 74 on Spanish 1/1B final.
 ○ Honors level requires a 92 in Spanish 1/1B **and** a 74 on Spanish 1/1B final.

Traditional *Periods/week: 5*

Course numbers: College Prep (05422), Honors (05421)

In Spanish 2, students build upon beginner level listening, speaking, reading and writing skills. Students learn to describe familiar, uncomplicated situations. Students will continue to learn about the cultures and customs from the Spanish-speaking world.

HONORS SPANISH 1-2 Grade(s): 9-12 Credit(s): 1.0 Weight: H
 Term: Year
 Prerequisite: 9th graders must have current language teacher recommendation.

Hybrid: 05421H *Periods/week: 2*

Students enrolled in Spanish 1-2 will begin with Spanish 1 topics including vocabulary and conversational structure related to themselves, their families, and everyday life experiences. Students will spend first semester learning how to speak and write in Spanish. In the second semester students will cover Spanish 2, using practical commands, directions, numbers, and other useful vocabulary. The course will provide an exposure to different cultures of the Spanish-speaking world. Freshmen may take this class with current language teacher pre-approval.

SPANISH 3 Grade(s): 10-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 ○ College Prep requires a 74 in Spanish 2 **or** a passing grade in Honors Spanish 2.
 ○ Honors level requires **either** a 74 in Honors Spanish 2 **or** a 92 in CP Spanish 2.

Traditional *Periods/week: 5*

- **Course numbers:** College Prep (05432), Honors (05431)
- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval (Honors only).

The Spanish 3 course focuses on practical travel situations as well as everyday life experiences. All four aspects of the language (listening, speaking, reading and writing) are incorporated. Students master basic grammar and are introduced to advanced grammatical structures.

SPANISH 4 Grade(s): 11-12 Credit(s): 1.0 Weight: CP, H
 Term: Year
 Prerequisite:
 ○ College Prep requires a 74 in Spanish 3.
 ○ Honors level requires **either** a 74 in Honors Spanish 3 **or** a 92 in CP Spanish 3.

Traditional *Periods/week: 5*

- **Course numbers:** College Prep (05442), Honors (05441)
- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval.

In Spanish 4, students build upon advanced level listening, speaking, reading, and writing skills. Their writing will improve from the sentence level to the paragraph level. Students learn to initiate and sustain conversation on an intermediate to high level.

SPANISH 5 Grade(s): 12 Credit(s): 1.0 Weight: CP
 Term: Year
 Prerequisite: A 74 in CP Spanish 4 **or** a passing grade in H Spanish 4
Traditional: 05451 Periods/week:

- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval.

This course provides continuing proficiency and transition for further college studies. Class discussions and compositions incorporate advanced grammatical structures with current world issues. Students will study the culture, geography and history of Spanish speaking countries.

AP SPANISH LANGUAGE & CULTURE Grade(s): 12 Credit(s): 1.0 Weight: AP
 Term: Year Fee: AP Exam fee
 Prerequisite: A 74 in H Spanish 4 **or** a 92 in CP Spanish 4
Traditional: 05460 Periods/week: 5

- **Dual Enrollment:** 6 credits via Montgomery County Community College pending instructor approval.
- **Summer assignment required**

This course focuses on advanced work in conversational Spanish, listening comprehension, reading and writing. Class discussions and compositions will incorporate advanced grammatical structures with current world issues. Modern and classical literature is read and discussed in the target language. Students will practice listening skills with authentic materials from news broadcasts and other internet resources. The fifth year course is geared towards preparing to take the Advanced Placement Exam and provides a basis for further studies on the college level. The course is conducted entirely in the target language. Students will be expected to take the Advanced Placement Spanish Language Exam in May. **NOTE:** In the event of insufficient enrollment in either Spanish 5 or AP Spanish the two courses will be combined and taught at the level of the majority of the students enrolled.

SUPPLEMENTAL COURSES

GIFTED ENRICHMENT Grade(s): 9-12 Credit(s): 0.1-1.0 Weight: H
 Term: Semester
 Prerequisite: Current Gifted Individualized Education Plan
Traditional Periods/week: 1, 3, or 5

- **Course numbers:** 1 day/week, fall semester (40911)/spring semester (40912), 3 days/week, fall semester (40921)/spring semester (40931), 5 days/week, fall semester (40941)/spring semester (40951)
- **Formerly Gifted Seminar**

Gifted Enrichment provides a unique opportunity for students to participate in a wide variety of structured and academic supported enrichment activities. These activities are facilitated in small-group and independent study formats. Gifted Enrichment is offered to all gifted education students in grades 9-12.

ACADEMIC READING & VOCABULARY Grade(s): 9-12 Credit(s): 0.2-1.0 Weight: No weight (pass/fail)
 Term: Year
Traditional: 20208 Periods/week: 1-5

Students are assigned to Academic Reading & Vocabulary for varying numbers of periods per week, depending on their language arts placement, level of proficiency on the previous year's PSSA, Keystone exam scores, individual reading assessments, or recommendation from a teacher or parent. The goal of the course is to develop students' ability to understand, analyze, and synthesize the academic reading and vocabulary across contents and texts. The class will provide individualized and small group instruction in reading. Diagnostic tests will be administered throughout the year to assess proficiency levels and areas of need.

**ALGEBRA
STUDY SKILLS**

Grade(s): 9-12
Term: Year

Credit(s): 0.2-1.0

Weight: No weight (pass/fail)

Traditional: 20202

Periods/week: 1-5

Students are either assigned to Algebra Study Skills, or, have the option to enroll themselves for Keystone preparation for varying numbers of periods per week depending on their level of proficiency on the Pennsylvania Keystone Algebra 1 Assessment, other math assessments, or recommendation from a teacher or parent. The goal of the course is to develop their ability to comprehend, analyze, and synthesize eligible mathematical concepts. The class will provide both individualized and small group instruction in eligible Algebra 1 content. Algebra diagnostics including Study Island and classroom diagnostic tools will be taken throughout the year to assess proficiency levels and areas of need.

**BIOLOGY
STUDY SKILLS**

Grade(s): 9-12
Term: Year

Credit(s): 0.2-1.0

Weight: No weight (pass/fail)

Traditional: 20203

Periods/week: 1-5

Students are assigned to Biology Study Skills for varying numbers of periods per week depending on their proficiency on the previous year's Pennsylvania Biology Keystone Biology Assessment, or diagnostic assessments given in biology class, or recommendations from teacher and or parent. The goal of the course is to develop their ability to understand, analyze and synthesize biological concepts. The class will provide individualized and small group instruction in biology. Biology diagnostics such as department Keystone quizzes and the Biology CDT will be taken throughout the year to assess proficiency levels.

INDEPENDENT STUDY

Grade(s): 10-12
Term: Semester/Year

Credit(s): 0.5 /1.0

Weight: Varies based on
administrative approval

Prerequisite: School counselor recommendation of student; curriculum must be approved by faculty mentor, department chairperson, administration, and School Board.

Traditional: 15511

Periods/week: 5

The student works with a faculty member on an approved project, program, or course of study for a predetermined period of time and academic credit. An Independent Study program can be taken concurrently with a maximum of five major courses. It cannot be used as a substitute for a required course in the curriculum, nor can a course listed in the curriculum be taken as an independent study. The OJR School Board must approve all independent study programs before credit will be granted. Interested students should contact their counselor for details.

**DRIVER
EDUCATION**

Grade(s): 9-12
Term: Semester

Credit(s): 0.2

Weight: ST

Traditional
Online

Periods/week: 2
Periods/week: 0

- **Course numbers:** Fall Online (14375O), Fall Traditional (14375), Spring Online (14475O), Spring Traditional (14475)

Driver Education is a 30-hour course. Students in grades 9-12 may request this course. The course is designed to help students become safe and responsible drivers. The classroom phase consists of learning the driving skills necessary to operate a vehicle safely, studying the Pennsylvania Motor Vehicle Code, and preparing students for obtaining their driver's license. This course is not a graduation requirement.

DRIVER EDUCATION-BEHIND THE WHEEL (14275) Grade(s): 9-12 Credit(s): 0 Weight: No weight
 Term: 6 hours Fee: \$325
 Prerequisite: PA learner's permit or driver's license, 30 hours of classroom instruction

The driver education teacher will individually schedule students for their driving lessons. Lessons will be after school, evenings, Saturdays and during the summer. Any student who wants Behind the Wheel must have a PA learner's permit or PA driver's license and complete/pass the Classroom Phase of Driver Education. The cost of the program covers 6 hours of behind-the-wheel training. The school can now administer the road test to a student during their last half hour of instruction. In order to do so, the student must have completed the classroom instruction; have their permit for 6 months; and complete at least 65 hours of supervised practical driving. Following the training, students will be issued a letter of completion for submission to insurance carrier. The program is very popular. The waiting list has increased since the school started administering the road test. Please be patient! For questions or additional information, contact Mr. David Rhen (drhen@ojrsd.com) at 610-469-5393 or the high school main office (610-469-5101).

The CCIU also offers a Behind the Wheel Driver Education program. Call 484-237-5189 for more information.

COOPERATIVE EDUCATION/INTERNSHIP Grade(s): 12 Credit(s): 0.5 /1.0 Weight: ST
 Term: Semester/Year
 Prerequisite: Application approval
Traditional *Periods/week: 5*

- **Course numbers:** fall (18215), spring (18225), year (18235)

The **Cooperative Education Program** provides on-the-job training for students through a cooperative agreement among the school, the employer, and the student. This program is designed to give students the opportunity to learn through supervised work experiences that integrate students' educational activities with on-the-job learning opportunities while earning a wage. This program serves students from all subjects offered at OJR. Students must be a senior and have working papers. Prospective students must be able to provide their own transportation to and from work. To secure a recommendation for placement, students must complete a pre-evaluation form.

Internships are available to students who want to investigate career options. These are non-paid, short term positions. Internships are an essential way for students to experience the value of work, develop pride in work, and mature personally. Internships allow students to observe and participate in daily operations, develop direct contact with job personnel, ask questions about particular careers, and perform certain job tasks. This activity is exploratory and allows the student to get hands-on experience in a number of related activities.

SCHOOL SERVICE/ COMMUNITY SERVICE Grade(s): 9-12 Credit(s): 0.2-1.0 Weight: No weight (pass/fail)
 Term: Semester/Year
 Prerequisite: Completed application, including parent, teacher/mentor and school counselor approval.
Traditional *Periods/week: 1-5*

Students will have the opportunity to expand their real life experiences and benefit from an alternative learning atmosphere by volunteering in approved service agencies (**Community Service**) or within the school district (**School Service**). Examples of possible service include tutoring elementary students, student assistant at the high school, working for Habitat for Humanity, and volunteering at a nursing home.

Notes:

- School Service:
 - Only seniors can schedule School Service.
 - One student may work for each teacher.
- Students in grades 9-12 may earn credit for Community Service.
- Students can earn a maximum of 1.0 credit through this course.
- Students must procure School and/or Community Service placements.

**ALLIED HEALTH
SCIENCE**

Grade(s): 12 Credit(s): 2.0 Weight: CP
Term: Year
Prerequisite: Completion and approval through an application process
Traditional: 19200 Periods/day: 2

This full year program offered by the Chester County Intermediate Unit (CCIU) provides high school seniors with clinical training and on-the-job-experience in a variety of occupations in the medical field. Students spend three 1.5 hour days at Phoenixville Hospital observing and participating in the different job functions of its various departments. Students will rotate among departments including: critical care units, radiology, respiratory care, pharmacy, physical therapy, clinical laboratories, emergency rooms, medical and surgical nursing, and general medicine. Students also spend two 1.5 hour days in the classroom for theory (basic anatomy and physiology, including disease processes and medical terminology). Students must provide their own transportation to and from the educational and clinical site. An AM or PM option is available.

**TEACHER
ACADEMY**

Grade(s): 12 Credit(s): 2.0 Weight: CP
Term: Year
Prerequisite: Completion and approval through an application process
Traditional: 19210 Periods/day: 2

- **Dual Enrollment:** 9 credits via Delaware County Community College pending instructor approval.

The Teacher Academy, offered by the Chester County Intermediate Unit, is a two-credit college preparatory program for high school seniors interested in pursuing a career in the field of education. In addition to earning two high school credits for the program, students have the option to enroll in a dual enrollment program with Delaware County Community College (DCCC). This dual enrollment program consists of **9 college credits**, awarded for the completion of the following courses: EDU 110 Introduction to Teaching; EDU 215 Theory and Field; and ENG 100 English Composition. Students may not substitute ENG 100 for their senior English course at the high school. The Academy provides an introduction to the knowledge and skills required to work in the teaching profession in the 21st Century.

The course consists of 7.5 hours/week (90 minutes/day, either morning or afternoon) divided between classroom instruction and internships with certified, tenured teachers at all grade levels, resulting in approximately 180 hours of instruction and 90 hours of internship experience. In addition, guest speakers from the educational field will present throughout the year; students will also participate in relevant field trips. As a culminating project, students complete a portfolio.

To apply online, or for more information, please go to: <http://www.cciu.org/page/956>, or call (610) 933-8877.

**SENIOR
PRIVILEGE**

Grade(s): 12 Credit(s): 0 Weight: n/a (not graded)
Term: Semester/Year
Prerequisite: Parental approval

Senior students earn this privilege by demonstrating a mature attitude and responsible behavior in school. Those who do so may arrive to school at the start of 2nd period or leave school after 6th period. This privilege is granted or may be revoked at any time by the school administration and/or a parent.

In general, to be eligible for senior privilege a student must meet minimum disciplinary standards. Senior Privilege status may be revoked at the discretion of the administration or a parent at any time for any actions or accumulation of actions that are deemed sufficiently inappropriate.

- **Course numbers:**

	<i>Period 1</i>	<i>Period 7</i>
<i>3 days/week (full year)</i>	18455	18135
<i>5 days/week (full year)</i>	18555	18125
<i>5 days/week (fall semester)</i>	1813F	1812F
<i>5 days/week (spring semester)</i>	1813S	1812S

**SENIOR
EXPERIENCE**

Grade(s): 12
Term: Semester/Year
Traditional

Credit(s): 0

Weight: n/a (not graded)

Periods/week: varies

- **Course numbers:** fall semester (1811F), spring semester (1811S), or the year (18115)

Senior Experience provides an opportunity for seniors to either enter the world of work or to begin their collegiate program while still meeting graduation requirements. Students normally attend required classes during the morning hours and report to their place of employment or college class(es) in the afternoon; however, other times can often be arranged to accommodate work and college schedules. Release time in the program varies depending upon the status of the student relative to graduation requirements.

Students interested in this program should contact their school counselor during January of their junior year to make preliminary arrangements for their senior schedule.

Requirements:

- Students must interview with his/her school counselor prior to entering the program to ensure that they have enough credits to graduate.
- An agreement signed by employer or college, parent, and student must be submitted to the Guidance Office and verified by the Co-Op Coordinator before students may begin working during the school day.
- Students leaving for employment must submit continued proof of employment no less than every two weeks by showing a copy of their pay stub to the Guidance Office to verify work hours.
- Student academic status will be reviewed after each report period. Students who are failing a course required for graduation will be removed from one period of senior experience per failed course until they are passing the course.
- Students leaving to take college courses must submit a copy of their transcript to the Guidance Office at the conclusion of the course to verify their successful completion of the course.