

School District of Haverford Township

Haverford High School

Course Selection Guide

2022-2023



*The mission of the School District of Haverford
Township is to educate and to inspire a
community of lifelong learners.*

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School District of Haverford Township Havertown, PA

PLEASE NOTE: The courses listed in this Course Selection Guide are tentative and subject to sufficient enrollment and the availability of classroom space. Students and parents should not consider the provisions of this guide as an irrevocable contract between the student and the school. Thank you.

Statement of Non-Discrimination

It is the policy of the School District of Haverford Township not to discriminate on the basis of sex, handicap, race, color, age, or national origin in its educational and vocational programs, activities or employment as required by:

Title IX, which prohibits sexual discrimination; Section 504, which prohibits discrimination because of handicapped condition; and Title VI, which prohibits racial discrimination; and the Americans with Disabilities Act of 1990.

The School District of Haverford Township will take steps to assure that the lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs.

For information about this policy, please contact Dr. Maureen Reusche, Superintendent of the School District of Haverford Township, Title IX Coordinator, or the Director of Pupil Services and Special Education, Section 504 Coordinator, at 50 Eagle Road, Havertown, PA 19083 or telephone 610-853-5900.

Table of Contents

Statement of Non-Discrimination	3
Mission Statement	5
Course Selection Process	6
Work Study	6
Delaware County Technical Schools	6
Haverford Online Courses	9
Pathways to Graduation	10
Graduation Requirements	10
Grade Level Classification	11
Suggestions for Course Selection	12
Grading System	14
Summer School	15
Additional Guidelines	15
Key Terms in Course Selection	16
Dual Enrollment Agreement with DCCC	17
Schedule Changes	19
New Courses	20
Business Education Department	22
English Department	26
Family and Consumer Science Department	36
Fine Arts Department	40
Mathematics Department	45
Music Department	54
Physical Education/Health Department	63
Science Department	66
Social Studies Department	78
Special Education Department	92
Technology Education Department	95
World Language Department	100
INDEX OF COURSES	111

Mission Statement

The **mission** of the School District of Haverford Township is to educate and to inspire a community of lifelong learners who become well-rounded global citizens.

The **pillars** of our educational system are:

- Our school environment is safe and nurturing.
- Excellence in education is a shared responsibility in partnership with all district and community members.
- Supports and conditions exist whereby all students have opportunities to grow and excel in the areas of academic, technical and career, and social-emotional learning.
- Our decision-making process is student-centered and student voice is valued.
- Whole child development is vital to our educational system.

2020-2025 District Goals

Social/Emotional Wellness

Produce a community of empathetic and resilient learners with skills to socially and emotionally flourish

Prepare Contemporary Citizens

Modernize and expand learning experiences to prepare students as critical thinkers, problem-solvers, innovators, and designers within a complex, global society.

Diversity and Inclusion

Establish a culturally diverse and inclusive educational experience that develops socio-cultural proficiency.

As a result of a consensus-building process involving professional staff, the School Board, the community, parents/guardians, business, and industry representatives, the Strategic Planning Committee drafted the district mission statement, pillars, and goals during the 2019-2020 school year.

Course Selection Process

Students, their parents, counselors, and teachers should all be involved in the course selection process. Ultimately it is the students' responsibility to choose those courses which will best meet their own needs and interests. The choice should be a well-informed one, based on knowledge of the requirements for entrance into various occupations, colleges or technical schools. An ideal schedule should challenge but not overwhelm students leading them toward some occupational or educational goal. A careful reading of this guide is a good starting point. Further research and consultation with counselors, teachers, and other knowledgeable people may be necessary before students and their parents can make wise decisions. To choose a program which will interest you and fulfill your personal and academic needs, follow these steps:

- Become familiar with the requirements of the occupation, technical school, or college in which you are interested
- Become familiar with requirements for graduation from Haverford High School
- Listen and ask questions as your teachers discuss course selection in class
- See your school counselor if you need help. The choice of a proper schedule of studies lies with you and your parents

Curriculum

The Haverford curriculum is designed to accommodate a wide variety of students' needs. Certain graduation requirements (listed on page 7) must be met by all students. Every year, students have the opportunity to choose courses which best fit their needs. It's possible for Haverford students to select a very demanding college-preparatory curriculum giving them credit and/or advanced placement when they reach college. A student may also choose to attend Delaware County Technical School, graduate early, receive credit for independent study, or participate in our work study program. Many options, and combinations of options, are available for students.

Special Programs

Work Study Program

The Work Study Program gives students the opportunity to earn elective credits toward graduation by working at a part-time job. The student can receive a maximum of four (4) credits per year, with one credit earned for every 200 hours of work. The program is open to sophomores, juniors, and seniors who express an interest and need for this type of program. See your counselor for more details and an application to enter this course.

Delaware County Technical School

The Delaware County Technical School (DCTS) programs provide students with the opportunity to choose from over 19 different courses within the clusters of Engineering and Computer Science; Health and Biosciences; Hospitality, Tourism, and Human Services; Construction Technology; and Logistics, Distribution, and Transportation. DCTS campuses are located in Aston, and Folcroft. DCTS students attend their technical programs for blocks one and two, and Haverford High School blocks three and four. Transportation is provided by the school district. Here is a link for the website: <https://www.dciu.org/Page/3343>.

Students from Haverford High School typically enter this program in the 11th grade. They receive four elective credits for their work at the technical school each year. Physical education and health are also offered at DCTS.

The DCTS programs give students an opportunity to gain knowledge and skills through career and technical training. This training can lead to employment or post-secondary education after graduation. Many technical students go on to further their education in college, technical schools or trade schools. This year there will be honors credit awarded to both the Engineering and Robotics and Logistics and Inventory Management courses through DCTS.

The Medical Careers program is an honors level, Delaware County Technical School program that is available for students in their senior year. It is geared toward students who might be interested in pursuing medical careers in college. In this program, the hospital becomes the classroom and students travel to local hospitals and rotate through various departments. The curriculum includes anatomy, physiology, medical terminology, safety, infection control and legal/ ethical issues. Students spend two class periods per week in clinical rotations shadowing and observing patient care and three days in classes.

The Medical Careers students leave Haverford High School at 6:30 every morning and travel to their assigned hospital. These students will not be scheduled for a first block class at HHS and will return to HHS during homeroom, at approximately 9:00 am. Students interested in participating in this program should contact their school counselor or speak with Mrs. Jones in the counseling office for further information. Students can submit applications for this program in the spring term of their junior year.

Course Numbers:

11 th Grade	12 th Grade	Medical Careers
VT01100	VT01200	VT04001

DCTS PROGRAM OFFERINGS

Honors credit will be awarded for

1. *Logistics and Inventory Management (DCTS)*
2. *Biomedical Technology and Laboratory Science (DCTS)*
3. *Medical Careers (DCTS)*

ENGINEERING AND COMPUTER SCIENCE

A cluster of programs for students seeking challenging and fulfilling STEM careers in engineering, design, and computer network technologies.

Engineering and Robotics [CIP 15.9999]

Computer Networking & Digital Forensics [CIP 11.0901]

Advertising, Design, & Commercial Art [CIP 50.0402]

Management Information Systems [CIP 15.1201]

HEALTH AND BIOSCIENCES

A cluster of programs that prepares students for exciting career pathways in medicine, nursing, and allied health.

Health Sciences [CIP 51.9999]

Emergency & Protective Services [CIP 43.9999]

Medical Careers [CIP 51.9999]

Dental Technology [CIP 51.0601]

Exercise Therapy & Sports Science [CIP 51.2604]

Biomedical Technology and Laboratory Science [CIP 51.9999]

HOSPITALITY, TOURISM & HUMAN SERVICES

A cluster of programs for students pursuing a variety of career pathways in the service industry where workers place people and their needs first.

Culinary Arts & Hospitality [CIP 12.0508]

Cosmetology [CIP 12.0401]

Early Childhood Education [CIP 19.0708]

CONSTRUCTION TECHNOLOGY

A cluster of construction trade programs offering career opportunities in designing, planning, managing, building, and maintaining the built environment.

Building Trades [CIP 46.0401]

Carpentry [CIP 46.0201]

Electrical Construction Technology [CIP 46.0399]

Heating, Ventilation, and Air Conditioning/Plumbing [CIP 47.0201]

Welding Technology/Welder [CIP 48.0508]

LOGISTICS, DISTRIBUTION & TRANSPORTATION

A cluster of programs that prepares students for career opportunities to manage, service, maintain, and ensure that people, materials, and goods arrive where they need to be safely and on time.

Automotive Technology [CIP 47.0604]

Collision Repair Technology [CIP 47.0603]

Logistics & Inventory Management [CIP 52.0203]

Contact Mrs. Jones for more information (610) 853-5900, extension 2576.

Haverford Online Courses

Haverford now offers courses that students can take online through Pearson. Students can see their counselors for more information on how to sign up and visit the Haverford High School website for offering options.

ELD (English Language Development)

ELD offers direct language instruction as well as individual support for students whose first language is not English. Classes focus on all four modalities: listening, speaking, reading and writing. Enrollment in the ELD program is based on an evaluation process that includes placement testing and an interview. ELD course numbers:

QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
EN06110	EN06120	EN06130	EN06140

Foreign Exchange Program

Students interested in a foreign exchange experience should contact the department chairperson of the World Language Department and their school counselor.

Service Learning

Service learning is an independent study, open to students in ALL levels, up to .2 credits, with a Pass/Fail grading system. Students learn by doing; hands-on experience can be the most powerful teaching tool in a school's arsenal. The purpose of this voluntary service learning program is to provide an opportunity for students to participate in a supervised service activity of their own choosing. Service Learning provides students with the opportunity to become responsible citizens by serving the needs of the community. It strengthens college, scholarship and job applications. Students can take Service Learning as many times as they would like during their school career.

Course outcomes and expectations are:

- Identify a community need and provide a service
- Perform a minimum of 30 hours of documented service at a time convenient to the student
- Maintain a journal including a log of hours
- Have periodic meetings with your counselor to reflect and report on experiences
- Complete a final report ~ a short written summary of volunteer experiences

In addition to the credit, students will also receive a letter from the district verifying the service, which may be included in college, scholarship, and job applications. Please see the high school principal for information and the appropriate forms.

Graduation Requirements

Twenty-six and a half (26.5) credits are required for graduation.

SUBJECT	CREDIT
English	4.0
Mathematics	4.0
Social Studies	4.0
Science	4.0
Arts and Humanities	2.0
Physical Education and Health	1.5
Electives	7.0
TOTAL	26.5

Graduation Pathway Requirements

Haverford H.S. Keystone Exams Pathways to Graduation



Pathway #1

The student scores proficient or advanced on each of the three (3) Keystone exams (Algebra I, Biology, Literature) (+)

Pathway #2

The student earns a satisfactory composite score (4452) on the Algebra I, Biology, and Literature. Keystone Exams. (+)

Pathway #3

The student earn a locally established passing grade on the courses associated with each Keystone Exam (*), and satisfactorily complete any one (1) of the following:

1. An alternative assessment (SAT, PSAT, ACT, or ASVAB,) (+),
or
2. Advanced coursework (Advanced Placement (AP))
or
3. dual enrollment courses) (*),
or
3. Acceptance into a 4-year nonprofit institution of higher education for college-level coursework.

Pathway #4

The student earns a locally established passing grade on the courses associated with each Keystone Exam (*),
and
1. Pass the National Occupational Competency Testing Institute (NOCTI) (+)
or
2. The National Institute of Metalworking Skills (NIMS) assessment in an approved Career and Technical Education concentration. (+)

Pathway #5

The student earns a locally established passing grade on the courses associated with each Keystone Exam (*), and demonstrates readiness for postsecondary engagement through three (3) pieces of evidence (from the student's career portfolio).

Examples of evidence will include:

- SAT Subject tests,
- Advanced Placement (AP) level or dual enrollment coursework,
- higher education acceptance,
- alternative learning project, or
- full-time employment.

* = passing scores established by Haverford High School

+ = passing scores established by PA Department of Education

Required by the Pennsylvania Department of Education beginning with the Class of 2023

Grade Level Classification

Listed below are the minimum credits necessary to be promoted from one grade to the next. In each case, the minimum number of credits must include one credit of English per grade level. (Note: A student may take only one original core English course per year.)

<u>School Year</u>	<u>Credits needed</u>
Promotion from 9 to 10	6
Promotion from 10 to 11	12
Promotion from 11 to 12	18.5
Credits to Graduate	26.5

Suggestions for Course Selection

1. Students planning to further their education

Educational institutions differ considerably in their admission requirements and students should be familiar with these requirements. Post high school information is available in the Counseling Office.

2. General college preparatory requirements

Many colleges require a minimum of 16-18 academic credits in the following subject areas: English, mathematics, science, social studies, and world language from ninth through twelfth grades.

- a. English:* All students must complete four (4) credits in English to meet the graduation requirements. Students must complete English 9, 10, 11, and 12 in sequential order. We recommend students schedule an English course every year. These core courses are available at the AP, honors, and college prep levels.
- b. Mathematics:* All students must complete four (4) credits in mathematics. We recommend students schedule a math course every year. Because the SATs include concepts covered in Algebra 1, Geometry, and Algebra 2, it is highly recommended that students complete Algebra 2 by the end of their junior year. The content of these courses includes the minimum high school mathematics required by most colleges. Students who plan to major in math, engineering, science, architecture, or possibly business administration or plan to apply to competitive colleges, should schedule advanced math courses.
- c. Science:* All students must complete four (4) credits in science. To meet the minimum graduation requirements, these courses must be completed: Engineering to Learn, Biology, and Chemistry. Students interested in engineering, physical or biological sciences, or medicine should seriously consider taking one or more advanced courses after they have successfully completed their four required science credits.
- d. Social Studies:* All students must complete four (4) credits in social studies. We recommend students complete the following core courses: United States History, World History, United States Civics and Government. These core courses are available at the AP, honors, and college prep levels.
- e. World Languages:* Colleges usually require at least two years of the same world language, or consider it an asset on a transcript. We recommend that students meet this requirement and even exceed it with a third and fourth year if they plan to apply to competitive colleges or wish to acquire a usable skill in the language.

3. The School Day

Haverford High School operates on a two-semester, four-block day. All students will be encouraged to carry a minimum of 2, major, one credit subjects per semester with a total of at least 6.5 credits for the year. Ninth and tenth grade students are not eligible for late arrival or early dismissal privileges.

4. Early Graduation

To graduate early, a student must see his or her counselor and the building principal no later than **one year prior to their scheduled graduation date**. For instance, arrangements for a January, 2022 graduation must be completed by June of 2021. Permission by the building principal is necessary. Diplomas are awarded only in June.

(NOTE: Your counselor is a valuable resource and is available to help explain these various options.)

Grading System

The giving of a "grade" or "mark" is the traditional method of evaluating a student's achievement. A mark is the teacher's best estimate of a pupil's accomplishment for a given period of time. No matter how objective or how scientific the methods may be, the teacher's judgment is always a factor in this task. We encourage students to constantly evaluate their own work. In Haverford, the marking system is as follows:

Grade	Scale	Unweighted Value	Weighted Value
98-100	A +	4.300	5.375
93-97	A	4.000	5.000
90-92	A -	3.700	4.625
88-89	B +	3.300	4.125
83-87	B	3.000	3.750
80-82	B -	2.700	3.375
78-79	C +	2.300	2.875
73-77	C	2.000	2.500
70-72	C -	1.700	2.125
68-69	D +	1.300	1.625
63-67	D	1.000	1.250
60-62	D -	0.700	0.875
50-59	F	0.000	0.000

I = Incomplete (No Credit)

P = Pass (60-100)

WF = Withdrew Failing (Course Failure)

WP = Withdrew Passing (No Credit)

X = Medical Exclusion (Credit Earned)

Z = Audit (No Credit)

Weighted GPA Policy

1. Haverford High School will assign a weighting factor of 1.25, for weighted GPA purposes, to all approved AP and Honors courses.
2. Only courses of a half-credit or more will be counted to a maximum of eight credits.
3. Quality Points are determined by first multiplying the value of the letter grade by the course credit and then by its weighted value of 1.25.
4. The HHS Class Profile displays the lowest to highest cumulative weighted GPA attained by the senior class. It utilizes the cumulated weighted GPA calculated at the end of students' eleventh grade year and includes six semesters.

Please note: In the Index of Courses at the end of this guide, weighted courses are indicated by an asterisk (*)

Pass/Fail Grading System

Students may take courses under a pass/fail grading system. Only students with more than six (6) major subjects are eligible to take a major course on a P/F basis and only one (1) course may be selected. All students may take one (1) minor course on a P/F basis. P/F grades will not be included in the determination of GPA, class rank or Honor Roll. In addition, students must identify that they are taking a subject Pass/ Fail no later than 3 weeks into the course. AP courses cannot be taken P/F. Courses that are part of a sequence, meaning they require a B or higher to go on to the next course, cannot be taken P/F if the expectation is to continue in the sequence.

Requests will be granted on an individual basis and will require the approval of the student's counselor, grade level principal and instructor.

Independent Study

Independent Study is a privilege which is granted to students on an individual basis to fill a study hall. Students' requests require the written approval of the instructor, the counselor, the department supervisor and the building principal. Independent Study courses are always graded Pass/Fail, will appear on the student's transcript, but will not be counted in the student's GPA.

Summer School

A student who fails a course may satisfy the requirement by repeating the course in Haverford's summer school or an accredited summer school that has been approved, **in advance**, by the principal. Failing grades are not removed from a student's record. The summer school grade is recorded and included with the other grades. The number and variety of courses offered during Haverford High School's Summer School are subject to student demand. Therefore, the likelihood of a particular course being offered in any given year is unpredictable.

Additional Guidelines

Courses may be scheduled more than one time for the purpose of improving the final grade. The new grade would count along with the old grade, but **no additional credit** will be awarded for re-taking a course.

The following courses are exceptions to the rule and may be taken more than one time for credit:

Advanced Computer Aided Drafting & Design	TE01600
Advanced Studio Theater	EN05000
Architectural Computer Aided Drafting	TE01500
Contemporary Sewing & Crafts	FC03500
Creative Writing I	EN05200
Digital Recording II	MU07200
Fitness/Weight Training	PE02200
General Physical Education	PE02000
Guitar Lab	MU08400
Introduction to Cabinet & Furniture Making	TE01100
Introduction to Practical Woodworking	TE01000
Introduction to Programming for IOS	MA07000
Lifetime Fitness	PE02100
Physical Education Major	PE02300

None of these courses may be taken more than twice over your high school career for credit.

Key Terms in Course Selection

Year/Semester/Quarter ~ Course descriptions contain information regarding the length of classes. Classes can be a full year (two credits), one semester (one credit), or one quarter (.5 credit) in duration. As described in the following pages, some courses are only offered during certain terms in the academic year; all others may be held in any term depending on student requests and staffing needs.

Levels ~ In some courses, level designations are identified to assist students in selecting a program which will match their abilities. Levels help students determine the differences among courses in terms of time required, effort needed, and performance and skills expected. Generally, the last digit of the course number identifies the level of the course.

AP ~ The AP Program currently offers more than 30 courses across multiple subject areas. Each course is developed by a committee composed of college faculty and AP teachers, and covers the breadth of information, skills, and assignments found in the corresponding college course. AP course offerings at Haverford will include the name 'AP' in the course name. Similar to Honors courses, AP courses require the highest level of commitment, motivation and effort by the student. Students will sustain high levels of thinking and problem-solving skills, as well as writing and speaking in an insightful, mature, and competent manner. These courses require students to have the ability to absorb material quickly, be responsible for maintaining academic standing, and to work independently, as well as cooperatively. Course outcomes should be of superior quality. It is highly encouraged that all students enrolled in AP courses take the AP exam associated with the course, which may enable the student to earn college credit.

Honors (H)~ Designated in the course name with an (H), Honors courses require the highest level of commitment, motivation and effort by the student. Students will sustain high levels of thinking and problem-solving skills as well as writing and speaking in an insightful, mature, and competent manner. These courses require students to have the ability to absorb material quickly, be responsible for maintaining academic standing, and to work independently, as well as cooperatively. Course outcomes should be of superior quality. Course numbers ending in the number 1 are Honors courses.

College Prep (CP)~ Designated in the course name with a (CP), college preparatory courses demand that students read and write with relative ease and in a competent manner. These courses also require that students have effective study habits and the ability to conscientiously complete assignments. Course numbers ending in the number 2 are College Prep courses.

Career Track (CT)~ Career track courses effectively prepare students for employment, higher education and/or training after high school. These courses focus on providing the skills necessary for students to become well informed, productive and satisfied adults. These courses require the following: Completion of assignments and adherence to classroom procedures such as, practicing self-discipline and proper attendance. Course numbers ending in the number 3 are Career Track courses.

Unleveled ~ Unleveled courses are designed to offer educational opportunities to students of all abilities. Course numbers ending in the number 0 are unleveled courses.

Dual Enrollment Agreement with DCCC

HHS has entered into a Dual Enrollment agreement with Delaware County Community College for eligible students to earn college credits at a fraction of the cost of standard tuition rates, while still attending the high school. Please read carefully:

- Many Haverford juniors and seniors are on track to complete their required courses/graduation credits prior to their expected graduation date. Increasingly, high schools have been exploring Dual Enrollment agreements with local colleges that permit their students to both try out college courses to determine whether or not this is the right path for them, and/or earn college credits during their high school career.
- Dual Enrollment programs also encourage more students to continue education beyond high school, and improve student success in the transition from secondary to post-secondary education.
- The credits you earn through the Dual Enrollment program can be transferred directly into one of the College's associate degree programs. DCCC offers more than 60 degree programs and has transfer agreements with more than 40 colleges and universities.
- HHS students would be responsible for all transportation, tuition and fees. Students are responsible for purchasing their own books and supplies.
- All DCCC services would be available to students: Library, Career Counseling, Computer Labs, etc.
- Eligible students would be those who are on track to complete all core required classes for graduation, are students "in good standing," and have successfully completed all application steps for Delaware County Community College's Dual Enrollment program. After acceptance, students will need to take the DCCC's Accuplacer test or submit qualifying SAT or ACT test scores to waive the Accuplacer test.
- Participants are selected by DCCC on demonstrated academic ability and motivation. Accepted students in grades 9-12 can earn up to 21 transferable college credits at almost 70% off the regularly priced tuition.
- Please discuss your enrollment plans with your counselor, who can answer any questions you may have, as well as advise you on Haverford High School's internal Dual Enrollment procedure.
- For questions or further information please call 610-359-5031 to reach a Delaware County Community College Dual Enrollment advisor, or visit www.DCCC.edu/highschool.

As part of the College's pilot program, students will save significantly on tuition costs. Students from sponsoring school districts will pay just \$189 per three-credit course. This is almost a 70 percent discount on the College's standard tuition rate.

Enhance your college application.

Today, entrance into college is more competitive than ever. Earning college credit while you're still in high school will help make your application stand out. It not only shows that you are a dedicated, committed student, but it also proves that you are ready to succeed at the college level.

What is the process for enrolling?

Step 1: Gather and complete all necessary paperwork

- Signed Dual Enrollment Pilot program agreement form
(<http://www.dccc.edu/sites/default/files/marketing/Dual%20Enrollment%20Agreement%20Form.pdf>)
- Completed College application (<http://www.dccc.edu/sites/default/files/admissions-and-financial-aid/how-to-apply/Application2013.pdf>)
- Official high school transcripts

Step 2: Discuss course options and get approval from your high school

Step 3: Send all materials to:

Delaware County Community College
Attention: Admissions Office – Dual Enrollment Pilot
901 South Media Line Road
Media, PA 19063

Step 4: Await decision from Dual Enrollment Committee

Your application will be reviewed by the Dual Enrollment Admissions Committee. You will be notified by mail whether you're application was approved or not. If you are not approved, we encourage you to keep working hard in your high school courses and reapply for a future term.

Step 5: Schedule your placement test

Accepted students will receive instructions on scheduling their placement test. You must complete the College's entire placement test, covering reading comprehension, math and a writing sample. The "green ticket" (included with your acceptance letter) and a photo ID are required to take the test. Visit (www.collegeboard.com/student/testing/accuplacer/preparation-sample.html)

We hope you take advantage of this exciting program!

Schedule Changes

The master schedule and the assignment of faculty are based on students' course selections made each spring. Students are encouraged to make serious selections that are based on careful deliberation, which will help ensure achievement of their goals.

Schedule changes will only be made under the following conditions:

1. A student who attends summer school will be permitted to change courses related to those taken in summer school.
2. A student may change the level of a course with the recommendation of the current teacher, and the approval of each of the following: parent/guardian, school counselor, and grade level administrator. Changes must be completed by the end of the 4th week of a course.
3. A student may add a course during the first five days of the term for semester courses, or the first three days of the term for quarter courses. Any added course **must fit into an open or free period**. It is not possible to **DROP** a course and then **ADD** another course. Changes based on teacher preference, lunch period, and the like will not be entertained.

Other special circumstances:

- A change may be made if, due to an error, a student is scheduled for a course that was not requested, or for which the student did not take or pass the prerequisite.
- A change may be made by teacher recommendation, and after parent consultation, based on student performance in the class during the first grading period. Administrative approval is needed.

Our staffing is based on student selection. The district attempts to give students every reasonable assurance that the courses they choose will run. Therefore, schedules will not be adjusted except for extraordinary reasons once the school year begins. This includes the dropping of scheduled classes for seniors after college acceptance.

New Courses

Introduction to Data Science – MA06001 (H) or MA06002 (U) – 1 credit, one semester course, **honors level or unleveled**. Open to students in grades 10, 11, and 12. Prerequisite: Geometry. This course will introduce students to the main ideas in data science. Students will learn to be data explorers as they develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, and the power of data in society. ****There will be an opportunity for students to earn honors level (H) credit for this course by completing additional coursework as assigned by the instructor.**

AP Computer Science Principles – MA06101 – 1 credit, one semester course, AP Level. Open to all grades. This course introduces students to programming and coding along with various computer science applications including a multi-disciplinary approach to teaching the underlying principles of computation. The course introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns and computing impacts. AP Computer Science Principles also gives students the opportunity to use current technologies to create computational artifacts for self-expression and problem solving.

Advanced Personal Fitness – PE02500 - .5 credit, 1 quarter course, **unleveled**. Students that have previously completed the “Fitness and Weight Training” or “Functional Fitness and Sport Performance”, courses will have the option to enroll in a more personalized fitness journey by selecting “Advanced Personal Fitness”. There are a wide variety of different types of strength and conditioning modalities and each individual should strive for their own personal experience in terms of short and long-term fitness goals. It is important to have the knowledge and ability to create one's own path towards wellness through movement. In this course, students will identify their personal fitness goals for the short term and long term, while understanding how to select an appropriate fitness modality that will help them reach their goals. Students will track their progress on a weekly basis by analyzing their physiological response to the fitness plan they have selected. One day a week the class will be held in the gym for a fitness game-based activity.

Fitness and Sport – PE02400 - .5 credit, 1 quarter course, **unleveled**. The goal Functional Fitness and Sport Performance is to expose students to the many benefits of the Crossfit training methodology, which can be summarized as *“constantly varied functional movements executed at high intensity”*. The course examines the various models of fitness and how those models can be applied to a fitness program and a healthy lifestyle. Students will develop the technique for performing the foundational functional movement series (deadlift, squat, press) and progress to more complex ground based, explosive movements such as the “clean and jerk” and “snatch”. Students will also challenge their endurance and strength in daily WODs (Workout of the Day) that provide measurable results and allow for friendly competition between classmates. Athletic performance development, plyometric training and cardiovascular endurance, as well as other components of fitness will be highlighted in this adaptable and scalable course that is intended for all students.

Italian Culture via Cinema – WL02701 – 1 credit, one semester course, **honors level**. Prerequisite of Italian IV Honors. This honors level course will focus on cultural appreciation and connections as well as communicative language learning by utilizing authentic materials from film, and music. Students will be exposed to Italian-speaking culture via project-based learning to help create awareness of our global society. Students will leave this course feeling better prepared and more proficient for communication in the real world, college and/or AP course. This course will be taught primarily in Italian and requires students to communicate in the target language.

Spanish Culture– WL04701- 1 credit, one semester course, **honors level**. Prerequisite of Spanish III Honors or Spanish IV. This honors level course will focus on cultural appreciation and connections as well as communicative language learning by utilizing authentic materials from literature, art, dance, film, and music. Students will be exposed to different Spanish-speaking cultures via project-based learning to help create awareness of our global society. Students will leave this course feeling better prepared and more proficient for communication in the real world, college and/or AP course. This course will be taught in Spanish and requires students to communicate in the target language.

Ukulele Lab – MU08700 - .5 credits (1 quarter course) – Unleveled, open to all grades. No prerequisite. This course is designed for the student with little or no experience playing the ukulele. The purpose of this course is to prepare students for a lifetime of ukulele playing and music appreciation. Students will learn to play melodies and chord progressions on the ukulele using strumming and fingerstyle techniques. Students will perform solo and ensemble literature in a variety of musical styles.

Course outcomes and expectations are:

- Develop an understanding of tablature and traditional music notation and learn to read basic notes and rhythm patterns.
- Develop an understanding of basic ukulele technique including left/right hand techniques.
- Perform several songs (melody and chord progression) in a variety of styles.
- Improvise basic accompaniment patterns.

Co-Op Education – BU05000 - 1 Credit - Semester Course (optional 2 credit, full year)

Class needs to be scheduled during 4th Block (allowing for employment and observations). Open to juniors and seniors seeking job placement and/or work experience. Students will meet with instructor daily in the first 2 weeks and one day bi-weekly thereafter for instruction. No cost associated with starting and maintaining the course. The Cooperative Education Course is designed to extend the training and learning experiences of qualified juniors and seniors by exposing each student to actual on-the-job work experience. This experience helps learners “bridge the gap” between school and work. The Co-Op Program encompasses several important elements – students, parents, school, and the employer – which makes it the transitional experience it is intended to be. In addition to on the job training, students will be provided in class instruction on job research skills, resume writing, interview skills and more. Students will also be provided supervision and one on one guidance from their instructor on how to handle many job scenarios. This structured support will offer students a well-rounded experience to ensure that they are college and career ready upon graduation.

Introduction to Sports Management – BU03600 - .5 credits, one quarter course - unleveled, open 9-12. No Prerequisite. In this course students will discover that management is the process of accomplishing the goals of an organization through the effective use of people and appropriate resources. The course is designed to offer a comprehensive view of the management procedures and operations in the Sports/Esports & Entertainment Industry, plus broader industries as well. Students will utilize the skills and processes that the 21st Century manager needs to become successful. Students will engage in case studies and problem-solving activities that will model decision making opportunities typically found by managers.

Interior Design – FC03600 - .5 credits, one quarter course, unleveled, open 9-12.

Explore the field of interior design with this hands-on, project-based course meant to inspire your creativity and problem-solving skills. Students will learn about color theory, principles of design, space planning and various design careers. Current housing and designing trends will also be explored. Projects will include a room makeover and designing a tiny house.

Business Education Department

The business department strives to prepare students for the variety of careers and opportunities in today's global economy. The course offerings are designed to meet the current needs of American business as outlined by the SCANS report. Reading, writing and math skills will be integrated and reinforced throughout all course offerings. Additionally, awareness will be raised in the following areas: soft skills, critical thinking, problem solving, team building, business ethics, decision making, and technology.

Students can earn membership in the *Haverford Chapter of the National Business Honor Society*. This is based upon your status as a Junior or Senior, having completed at least 3 business education courses, and earning a GPA average of at least 3.5 in the business electives and an overall GPA average of 3.0. The objectives of the National Business Honor Society include: promoting and recognizing academic achievement in business education, fostering and recognizing leadership skills and character development, and helping members grow ethically and socially by promoting and encouraging an interest in business. The four cornerstones of the National Honor Business Society are: ***Scholarship, Leadership, Service, and Character***.

If you are interested in pursuing a fascinating career in the dynamic world of business, listed below are the course options. Each course can be selected individually or you may follow one of these suggested business education career tracks.

- The 3 career track for students to focus on:
 - **Accounting/Finance:** *Computer Applications I, Accounting I, Accounting II (Honors), Personal Finance, Business Law*
 - **Marketing:** *Computer Applications I, Introduction to Marketing, Entrepreneurship, Advanced Marketing (Honors), Web Design, Computer Applications II*
 - **Business Management:** *Computer Applications I, Introduction to Marketing, Accounting I, Entrepreneurship, Business Law, Computer Applications II*

Business Students also have the option of joining our Haverford Chapters of "Future Business Leaders of America".

Accounting I – BU01100 – 1 credit, one semester course, **unleveled**. Open to all grades. **No prerequisite**.

This course is a must for any student who is interested in a business career. As future employees, managers, and entrepreneurs, students who understand basic accounting principles will be better able to manage their personal and companies' financial resources. This course will take students through a full accounting cycle by teaching them how to journalize business transactions and complete and analyze financial statements. Accounting I objectives also include an understanding of the industry, career options, accounting as a college major and general business success skills. An understanding of accounting will be invaluable, no matter what job you hold or in what organization you work.

Accounting II (H) – BU01201 – 1 credit, one semester course, **honors level**. Open to all grades.

Prerequisite: **Completion of Accounting I with a "C" or better**. This course integrates accounting practices with the Quickbooks automated accounting software. Business simulations and case studies are often used throughout the course to imitate real world experiences. Throughout this course, students will learn how to calculate asset depreciation, keep track of inventory in a merchandising business, and account for non-collectibles. Students will also learn about internal controls and ways to prevent fraud in the business world.

Business Law – BU01300 – 1 credit, one semester course, **unleveled**. Open to grades 10, 11 and 12. *No prerequisite*. Using a case-study approach, this course will introduce students to the basics of business law through a focus on contract law, consumer law, employment law, and business legal structures. Students will demonstrate an understanding of the nature of contractual relationships, legally binding contracts, consumer protection legislation, employer-employee relationships, and legal responsibilities associated with sole proprietorships, partnerships and corporations. This project-based course will include, but is not limited to, team-oriented debates, case studies, and real-life simulations that will culminate with full class participation in a role-assigned mock-trial. Knowledge of business law is useful for all students because they will eventually assume roles as citizens, workers, and consumers in their communities and society at large.

Computer Applications I – BU01400 – .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisite*. *See recommended business tracks*. In the modern workplace, computer skills are indispensable and this course introduces computer terminology, hardware, and software related to the business environment. The focus of this course, using the full capabilities of Microsoft Office and Google Suite of Apps, is on business productivity software applications and professional behavior in computing; including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.

Computer Applications II – BU01450 – .5 credits, one quarter course, **unleveled**. Open to all grades. *See recommended business tracks*. In an ever evolving landscape of computer software, students will be introduced to numerous software applications including digital imaging, podcast publishing, presentation graphics, video editing, and more. A project-based journey through the application of new skills culminate in a self-published portfolio of professional work.

Web Communications and Design – BU01500 – .5 credit, one semester course, **unleveled**. Open to all grades. *No prerequisite*. This course is designed for the introductory to intermediate level student. No prior web design experience is required. The course is project-based and will enable students to create high quality web sites using the industry leading WordPress and PhotoShop software. In addition to building websites, students will cover related topics such as using Social Media for Business (Facebook, Twitter, and YouTube), Search Engine Optimization, E-Mail Marketing, and managing Pay per Click campaigns on search engines.

Course expectations and outcomes are:

- Students will become proficient in WordPress for Web Design
- Students will become proficient in PhotoShop for site graphics.
- Students will build and publish their own websites using the same tools and methods used by industry professionals.
- Students will become proficient in planning and production, including design of graphics; site navigation; color schemes; functionality and user experience.
- Students will be introduced to online advertising campaigns using Facebook, Google and e-mail marketing.

Entrepreneurship – BU03000 – .5 credits, one quarter course, **unleveled**. Open to all grades. **No prerequisite.** Small businesses are the backbone of any economy. Whether you want to be the next Bill Gates, open a small local shop, or just understand how to plan, launch and run your own business, this course is for you. In this course you will learn what it takes to be an Entrepreneur, and you will create a standard business startup plan and marketing materials. This course will integrate business concepts, entrepreneurial activity, and computer technology. All students will learn how to recognize a business opportunity, and then develop a comprehensive business plan to learn how to operate and maintain the business. In the real world, new small businesses usually need startup capital. To get this money they must present their business plan to a bank. Our students will make their presentation to the class / teacher, including the financial section of the business plan, and a written submission. To perform these tasks students will utilize available technology such as the MS Office suite, Web 2.0 tools or a range of options from Google Drive.

Course Expectations and Outcomes:

- Students will create a business plan
- Students will present the plan to the class / teacher using MS PowerPoint®
- Students will understand financial statements such as Cash Flow Forecasts and Income Statements
- Students will create data based projections such as sales, cost of goods sold, projected profits
- Create business documents using Word, Excel, PowerPoint and Publisher

Marketing – BU03100 – .5 credits, one quarter course, **unleveled**. Open to all grades. **No prerequisite.** Do you wonder why Coke is more popular than Acme soda? Why Uggs and Northface Jackets have become such popular items for young adults? Marketing directly impacts our buying decisions. This course will give you a clear understanding of what marketing is, and how it influences you. You will learn about advertising, and appreciate the skill and planning that goes into the creation of an effective marketing campaign. We will look at major brands and study why they are so successful.

This course has been developed to help you learn about marketing and develop marketing skills.~ Marketing is one of the largest and most exciting career areas in business and there are many career opportunities in this field.~ An understanding of marketing is very useful, no matter what job you hold or in what organization you work. During the course students will select and use appropriate technology such as the MS Office suite, Web 2.0 tools, or a range of options from Google Drive.

Course Expectations and Outcomes are:

- Learn the processes involved in transferring business products or services to a consumer
- Analyze the impact of marketing activities on the individual, business, and society
- Analyze the characteristics, motivations, and behaviors of consumers
- Analyze the role of marketing research in decision making
- Describe the elements, design, and purposes of a marketing plan
- Create a marketing plan

Financial Literacy (Formerly Personal Finance) – BU03300 – .5 credits, one quarter course, **unleveled**. Open to all grades. **No prerequisites.** Would you like to become a millionaire? Reaching this accomplishment can only come through making well-informed personal financial decisions. This class is designed to be a practical guide for learning how to make those decisions correctly. Throughout this 9 week course, students will be taken through a financial lifecycle – teaching you the process of making smart financial decisions that everyone faces throughout their life. Topics covered will include: exploring college and career options,

understanding taxes and deductions from your paycheck, using practical banking and investment practices, establishing credit and managing debt, financing major purchases (car, house), budgeting, household insurance requirements and retirement planning. Throughout the course you will also learn how to utilize online financial calculators to help you with the cost analysis of the above concepts. Money management is an acquired skill. Don't let the opportunity to learn it pass you by! All students graduating from Haverford High School will be able to demonstrate financial literacy skills by setting goals and priorities in their personal lives. Financial Literacy was designed to help students meet these life-long goals. All students must take and pass a .5 credit financial literacy course during their high school career. Financial Literacy will be taken at any time from freshman through senior year.

Advanced Marketing- BU03401 -.5 credits, one quarter course, **honors level**. Open to all grades.

Prerequisite: Intro to Marketing. While the introductory course covered all the basics about defining markets, manipulating the 4 Ps to reach those markets, and making money, this course we will delve deeper into marketing concepts and product development. Students will utilize the lessons learned in *Introduction to Marketing* and apply them to real-world examples in various areas, including sports, entertainment, tourism, movies, and international marketing. All these sectors use basic marketing principles but they manipulate them in different ways. Studying the importance of social media and the Internet is crucial as all marketing today relies heavily on these tools. This course has been developed to help you learn more about marketing and further develop your marketing skills and instincts. Marketing is one of the largest and most exciting career areas in business and there are many career opportunities in this field. An understanding of marketing is very useful, no matter what job you hold or in what organization you work. During the course students will select and use appropriate technology such as the MS Office suite, Web 2.0 tools or a range of options from Google Drive.

Co-Op Education – BU05000 - 1 Credit - Semester Course (optional 2 credit, full year)

Class needs to be scheduled during 4th Block (allowing for employment and observations). Open to juniors and seniors seeking job placement and/or work experience. Students will meet with instructor daily in the first 2 weeks and one day bi-weekly thereafter for instruction. No cost associated with starting and maintaining the course The Cooperative Education Course is designed to extend the training and learning experiences of qualified juniors and seniors by exposing each student to actual on-the-job work experience. This experience helps learners “bridge the gap” between school and work. The Co-Op Program encompasses several important elements – students, parents, school, and the employer – which makes it the transitional experience it is intended to be. In addition to on the job training, students will be provided in class instruction on job research skills, resume writing, interview skills and more. Students will also be provided supervision and one on one guidance from their instructor on how to handle many job scenarios. This structured support will offer students a well-rounded experience to ensure that they are college and career ready upon graduation.

Introduction to Sports Management – BU03600 - .5 credits, one quarter course - unlevelled, open 9-12.

No Prerequisite. In this course students will discover that management is the process of accomplishing the goals of an organization through the effective use of people and appropriate resources. The course is designed to offer a comprehensive view of the management procedures and operations in the Sports/Esports & Entertainment Industry, plus broader industries as well. Students will utilize the skills and processes that the 21st Century manager needs to become successful. Students will engage in case studies and problem-solving activities that will model decision making opportunities typically found by managers.

English Department

A student must pass the required grade-level English course before moving on to the next required English course. Within one school year, a student may take only **one** required English course.

Grade 9 English Courses

English 9 (H) – EN01001 – 1 credit, one semester course, **honors level**. This course focuses on the thematic study of literature, the development of writing and speaking skills, and the strengthening of vocabulary. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF “B” OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes:

- Develop academic vocabulary to prepare students for college and career
- Read complex fiction and nonfiction texts for understanding and interpretation both independently and as a class.
- Critically analyze works of drama, fiction, non-fiction, and poetry
- Write a variety of essays in various modes (narrative, informative and persuasive)
- Write a thesis-based research project
- Apply correct sentence structure, mechanics and usage.

English 9 (CP) – EN01002 – 1 credit, one semester course, **college prep level**. This course focuses on the thematic study of literature, the development of writing and speaking skills, and the strengthening of vocabulary.

Course expectations and outcomes:

- Develop academic vocabulary to prepare students for college and career
- Read complex fiction and nonfiction texts for understanding and interpretation both independently and as a class.
- Critically analyze works of drama, fiction, non-fiction, and poetry
- Write a variety of essays in various modes (narrative, informative and persuasive)
- Write a thesis-based research project
- Apply correct sentence structure, mechanics and usage.

English 9 (CT) - EN01102 - 2 credits, full year course, **career track level**. Students are placed into this course based on a variety of assessment results. This course covers the expected content of the English 9 (CP) class including thematic study of literature, the development of writing and speaking skills, and the strengthening of vocabulary. Students will receive instruction related to reading strategies, test-taking and studying skills for success with high school expectations for applying complex literacy tasks.

Course expectations and outcomes:

- Develop academic vocabulary to prepare students for college and career
- Read complex fiction and nonfiction texts for understanding and interpretation both independently and as a class.
- Critically analyze works of drama, fiction, non-fiction, and poetry
- Write a variety of essays in various modes (narrative, informative and persuasive)
- Write a thesis-based research project
- Apply correct sentence structure, mechanics and usage.

10th Grade English Courses

English 10 (H) – EN02001 – 1 credit, one semester course, **honors level**. This course is designed to challenge the most capable language arts students and to develop critical and analytical readers, writers, thinkers, and speakers. The course emphasizes the individual as a proactive and responsible reader and thinker. The course includes an intensive study of grammar. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF “B” OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes:

- Thoughtful reading that reveals thematic understanding of select pieces of world literature written across the centuries
- Insightful discussion, thinking, speaking, and listening, that reveals the connections between literary works and writers' purposes in selected passages of literature
- Write compositions demonstrating an understanding of correct sentence structure, mechanics and usage. Several formal compositions will be required per semester
- Expository writing assignments, particularly persuasive essays and literary analyses, which demonstrate a student's ability to create, interpret, analyze, support, evaluate, and/or defend the universality of thematic ideas present in a literary work
- One library-based research report (in both oral and written forms) related directly to course topics or issues
- An individual and group presentation linking the literature of a specific time period to an awareness of the historical and cultural developments of the day
- Read for understanding and interpretation of works of drama, fiction and poetry
- Develop vocabulary skills in conjunction with reading and writing assignments

English 10 (CP) – EN02002 – 1 credit, one semester course, **college prep level**. This course provides thorough academic preparation through the thematic study of literature. This course emphasizes reading, writing, public speaking skills, vocabulary development, and grammar.

Course expectations and outcomes:

- Write compositions demonstrating an understanding of correct sentence structure, mechanics and usage. Several formal compositions will be required per semester
- Develop an ability to create expository writing assignments, particularly persuasive essays and literary analyses
- One library-based research report (in both oral and written forms) related directly to course topics or issues
- Individual and group presentations linking the literature of a specific time period to an awareness of the historical and cultural developments of the day
- Read for understanding and interpretation of works of drama, fiction and poetry
- Develop vocabulary skills in conjunction with reading and writing assignments
- Emphasis will be placed on Keystone skills and test-taking strategies

English 10 (CT) - EN02003 - 1 credit, one semester course, **career track level**. This course emphasizes the reading, writing, speaking, and listening skills essential for success in school and real-life situations. Students will read books and short stories of their own choosing in addition to the required course readings. Emphasis will be placed on Keystone skills and test taking strategies.

Course expectations and outcomes:

- Develop academic vocabulary to prepare students for college and career
- Read complex fiction and nonfiction texts for understanding and interpretation both independently and as a class.
- Critically analyze works of drama, fiction, non-fiction, and poetry
- Write a variety of essays in various modes (narrative, informative and persuasive)
- Write a thesis-based research project
- Apply correct sentence structure, mechanics and usage.

11th Grade English Courses

Advanced Placement English Language and Composition – EN03201 – 1 credit, semester course, **AP level**. This AP course is available to be taken to fulfill the 11th grade English requirement. This course prepares students for the Advanced Placement examination in English Language and Composition. The course stresses close reading strategies, concise academic writing, and student-initiated discussion. Students will closely consider how authors construct meaning through their syntactical choices and organizational decisions. Speeches, newspaper articles, memoirs, essays, and literary criticism make up the reading list. Students will also consider the media that surrounds them whether spoken or displayed. Underlying each unit is the attention to close reading, author's purpose, the needs of an audience, the demands of the subject, rhetorical strategies, and the resources of language: syntax, word choice, and tone. Writing assignments include essays that call for synthesis, analysis, and argument on specific topics. Assessments are consistent with methods used on the Advanced Placement exam, which is taken in the spring. As a college-level course, the performance expectation for written work and class participation is high and the workload is challenging. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF "B" OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes:

- Students will apply accepted critical strategies to complex, challenging texts
- Students will write clearly and logically as described in the Advanced Placement writing rubric
- Writing assignments include research and evidence-based arguments, rhetorical analyses, and persuasive essays
- Students will develop provocative and original readings of texts through close reading
- Students will become lifelong readers
- Students will participate in small group and independent projects

English 11 (H) – EN03001 – 1 credit, one semester course, **honors level**. English 11 (H) develops argumentation skills and critical thinking through nonfiction and fiction genres. Students will analyze a variety of nonfiction and fiction texts within historical and contemporary contexts. Texts will be analyzed for their rhetorical intention, argumentative structure, and literary merit. The course is designed to prepare students for college-level expectations. The development of critical thinking and writing skills will also be a major focus throughout the semester. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF "B" OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes:

- Read and interpret nonfiction and fiction texts
- Analysis and discussion that reveals the author's purpose within focus texts
- Write persuasively to create, interpret, analyze, support, evaluate, and/or defend analytical and argumentative positions

English 11(CP) – EN03002 – 1 credit, one semester course, **college prep level**. English 11 (CP) develops argumentation skills and critical thinking through nonfiction and fiction genres. Students will analyze a variety of nonfiction and fiction texts within historical and contemporary contexts. The course is designed to prepare students for college-level expectations. The development of critical thinking and writing skills will also be a major focus throughout the semester.

Course expectations and outcomes:

- Read and interpret nonfiction and fiction texts
- Analysis and discussion that reveals the author's purpose within focus texts
- Write persuasively to create, interpret, analyze, support, evaluate, and/or defend analytical and argumentative positions

English 11 (CT) – EN03000 – 1 credit, one semester course, **career track level**. This state-mandated course is for students who scored Basic or Below Basic on the Keystone Exam in Literature. The course emphasizes reading comprehension, analytical writing, vocabulary, and grammar. Students will retake the Keystone English Literature Exam at the completion of the course. **Enrollment in the course is mandatory for those students who were not proficient on the Keystone Literature Exam.**

12th Grade English Courses

Advanced Placement English Literature and Composition – EN04101 – 2 credit, year-long course, **AP level**. This 12th grade course fulfills the requirement for 12th grade English. This course prepares students for the Advanced Placement examinations in English Language and Composition and the rigors of college liberal arts courses. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF “B” OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes

- Students will prepare to take the Advanced Placement examination in English Literature and Composition.
- Students will apply critical strategies to complex, challenging texts.
- Students will write clearly and precisely as required by Advanced Placement writing rubrics.

English 12 (H) – EN04001 – 1 credit, one semester course, **honors level**. This course is designed for students who are preparing for the rigors of college reading and writing. Through the close reading of fiction and nonfiction, students deepen their understanding of the ways authors use language to create meaning. Students will also read a variety of other fiction and nonfiction titles. Students will develop critical thinking skills and analytical writing skills. **IT IS RECOMMENDED THAT A STUDENT MAINTAIN A GRADE OF “B” OR BETTER TO REMAIN IN AN HONORS COURSE.**

Course expectations and outcomes:

- Students will apply accepted critical and analytical strategies to complex, challenging texts.
- Students will write clearly and precisely.
- Students will develop provocative and original readings of complex texts.
- Students will write frequently in a variety of modes-- narrative, informational, and persuasive.
- Some writing assignments will require research.

English 12(CP) – EN04002 – 1 credit, one semester course, **college prep level**. This course includes a thematic study of literature and the development of college-ready writing and speaking skills.

Course expectations and outcomes:

- Students will apply accepted critical and analytical strategies to challenging texts.
- Students will write clearly and precisely.
- Students will write frequently in a variety of modes-- narrative, informational, and persuasive.
- Some writing assignments will require research.
- Review the grammatical and organizational skills necessary to write effectively and well

English 12 (CT) – EN04003 – 1 credit, one semester course, **career track level**. This course includes a thematic study of literature and the development of writing and speaking skills.

Course expectations and outcomes:

- Develop academic vocabulary to prepare students for college and career
- Read complex fiction and nonfiction texts for understanding and interpretation both independently and as a class.
- Critically analyze works of drama, fiction, non-fiction, and poetry
- Write a variety of essays in various modes (narrative, informative and persuasive)
- Write a thesis-based research project

- Apply correct sentence structure, mechanics and usage.

ELECTIVE ENGLISH COURSES

Studio Theater – EN05000 - .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisites*. Students study drama as an interpretive art form.

Course expectations and outcomes:

- Perform play improvisation and perform acting exercises to aid students in understanding the stagecraft techniques used by both playwrights and actors
- Analyze a variety of performance scenes in terms of theme, character, and performance
- Perform monologues and scenes throughout the class, demonstrating a knowledge of all aspects of dramatic production including acting, dialogue, staging, set design, and theme presentation

Advanced Studio Theater ~ Alternate Day – EN05050 – .5 credits, one semester, every other day, **unleveled**. Open to students in ALL levels. Open to all grades. Though no prerequisite is required, it is recommended that students have some theater experience (Studio Theater, Drama Club, or other performance experiences). In this course, students will work in collaborative groups to produce a variety of one-act plays for an audience. Students will be required to incorporate acting technique, stage design and management, and interpersonal communication and collaboration to complete the final class project.

Creative Writing – EN05200 – .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisites*. This course is designed to offer both accomplished and novice writers the chance to improve their creative writing skills. This course may be taken more than once for credit.

Course expectations and outcomes:

- Write in various genres and styles, including essays, short stories, poetry, and drama
- Critique and improve the student's writing and that of classmates in pairs and small groups
- Employ proofreading and editing skills to improve writing
- Work to achieve a personal voice in writing

[Creative Writing ~ Alternate Day – EN05250 – .5 credits, one semester, every other day, **unleveled**. Open to all grades. *No prerequisites*. This course is designed for music students but is an option for all students.]

Literature and Philosophy – EN05300 – .5 credits, one quarter course, **unleveled**. Open to students in grades 10, 11, and 12 only. This course explores how literature can help readers understand basic philosophical questions about knowledge, truth, reality, ethics, and aesthetics. Students will read accessible philosophical texts and apply the problems and ideas raised in those texts to works of literature. The course stresses student-initiated, intensive questioning and discussion, reading, and clear, concise writing.

Course expectations and outcomes:

- Students will develop an understanding of basic philosophical problems and how these problems are dramatized in literary texts
- Students will have a basic working vocabulary of philosophical concepts and branches including: epistemology, metaphysics, and ethics

Course requirements:

- At least one project based on a student-selected topic
- Student-lead symposium discussions
- At least one essay

Students electing this course should be aware that philosophical texts require intensive reading.

Research and Debate – EN05400 – .5 credits, one quarter course, **unleveled**. Open to grades 11 and 12 only. This course is an in-depth exploration of practical research skills, critical thinking and logic, theories of argumentation, and practical applications of argumentation. Different methods of research, methods of analysis (inductive and deductive), critical evaluation of reasoning and evidence, refutation, and debate will be discussed. Basic principles are applied in class discussions, informal debate situations, and formal debate situations.

Course expectations and outcomes:

- Understand theories of logic, argumentation and persuasion
- Develop critical thinking skills and the power of written and oral presentation through essays and debates
- Prepare for post high school education

Shakespeare – EN05600 – .5 credits, one quarter course, **unleveled**. Open to grades 9*, 10, 11, and 12. Ben Johnson (1573-1637) said that “[Shakespeare] was not of an age, but for all time!” Why has Shakespeare been admired by so many people and for so many years? If you’ve ever been curious about Shakespeare’s appeal, if you’re an aspiring actor, playwright, or just looking to broaden your view of how Shakespeare impacts our lives even today, this class is for you! This class addresses all levels of achievement and interest.

*Students should have read at least one play by Shakespeare in a previous course to enroll in this course.

Course expectations and outcomes are:

- Read, perform, and view on film or in a theater representative Shakespearean tragedies, comedies, histories, and poetry such as: *Othello*, *The Merchant of Venice*, *Richard III*, and Shakespeare’s sonnets
- Develop an understanding of the Elizabethan world through a study of Elizabethan theater, thought, and customs
- Analyze the historical background of Shakespeare’s works and his impact on modern literature and entertainment

Poetry for Everyone: Beats, Rhymes, Verse, Rhythm, and Life – EN05800 – .5 credits, one quarter course, **unleveled**. Open to students in all grades. **No prerequisite**. This course is for students who want to study, appreciate, and enjoy poetry in more depth than is possible in a regular English course. Students will learn how to analyze a poem’s structure, interpret its figurative language, evaluate its artistry, and reflect on its themes. Students will study Western and non-Western poetic movements. Students will perform dramatic interpretations of their own poetry and the poetry they have studied. The course is ideal for students who love poetry and like to read, write, discuss, and perform as well as students who wish to improve their skills in any or all of those areas.

Course expectations, outcomes, and statements from students who have taken the class:

- “The class provides students with the opportunity to discover and understand new perspectives and opinions through the analysis of poems and sharing personal work with other students.”
- The course “encourages students to look beyond their first impressions and delve deeper into the literary world.”
- “Be exposed to a wide berth of original, engaging works!”
- “This course helps you analyze poetry and helps you express what you really think.”
- “This class makes you think more in-depth about situations and groupings of words you would have never interpreted before.”

Media Studies I – EN05900 – 1 credit, one semester course, **unleveled**. Open to grades 10, 11 and 12. **No Prerequisite.** This class presents an overview of the field of journalism and mass communication and teaches students to be consumers of media and to understand news-gathering and production. It includes basic news writing, reporting, editing, and legal and ethical issues. This class is the pre-requisite for Media Studies II and III. After investigating journalism, video journalism, and photo journalism, students will choose to focus on written news production for *The Fordian*, Haverford’s online students news publication, photo journalism production for *The Fordian* or *Greystones* (the yearbook), or video journalism production and broadcasting for H-Vision, Haverford’s student news program. During their investigations, students will come to understand the responsibility of truth and objectivity in the development of a story across all media production formats. Grading will be based on an individual focus and differentiated on the format and news cycle involved.

Media Studies II – EN06000 – 1 credit, one semester course, **unleveled**. Open to grades 10, 11 and 12. **Prerequisite: Successful completion of Media Studies I (Previously Broadcast Journalism I).** In Media Studies II, students will build upon the skills they have learned in Media Studies I, and will assume a greater amount of responsibility and authority over the video production process. Students who have successfully completed the first course will begin to act as production managers for cohorts of other students taking Media Studies I. As production managers they will lead the team in developing the idea for the story, writing, and coordinating the different pieces involved (photographer, writer, camera...etc.) Media Studies II will meet concurrently with Media Studies I to facilitate the peer-to-peer interaction that fosters learning. Students in Media Studies II will be expected to narrow their focus from the beginning of the course (*Fordian*, *Greystones*, or H-Vision) and will be graded with a higher total point value than Media Studies I.

Media Studies III – EN06100 – 1 credit, one semester course, **unleveled**. Open to grades 10, 11 and 12. **Prerequisite: Successful completion of Media Studies I (Previously Broadcast Journalism II).** In Media Studies III, students will build upon the skills they have learned in Media Studies II, and will assume a greater amount of responsibility and authority over the production process. Students will be working independently on projects, as well as leading projects with students from Media Studies I and II. Media Studies III will meet concurrently with Media Studies I and II to facilitate the peer-to-peer interaction that fosters learning. Students in Media Studies III will complete a portfolio of segments, stories, or photographs in which they will have demonstrated responsibility. Students in Media Studies III will be encouraged to develop and complete more complex projects, such as short films and documentaries or longer and more in-depth journalistic endeavors with an increasing level of independence. They must act as editors or directors in their chosen track (journalism, video journalism, or photo journalism) and their grade will include this leadership component.

Dystopian Literature – EN06200 - .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisites.* Human beings have a natural tendency to desire a better future and to daydream about living in a more perfect society, but what happens when that perfect utopia becomes twisted and corrupt? Dystopian literature creates visionary, captivating, and often terrifying worlds that comment on issues in modern society. This course's themes will explore types of dystopian controls, art versus science, restriction versus freedom, and self-actualization versus society as a whole. Students will read dystopian novels and watch films. This course is ideal for students who love reading and who want to promote responsible global citizenship. Grading will be focused on group projects, independent written reflections, and critical and analytical discussions and writing.

Film Study – EN06300 - .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisites.* Students will study a variety of visual media - advertisements, short films, full-length films - in order to understand how visual media works as a communication tool. Students will learn film technique and visual rhetoric and will apply such knowledge to films intended for a variety of audiences and for a variety of purposes, with the goal of helping students become more conscious consumers. Grading will be focused on group discussions and independent responses to concepts presented in class.

Reading Enrichment – EN00600 – 1 credit, one semester course, **unleveled**. Open to students in grades 10-12. Students who score in the Basic and Below Basic ranges on the Keystone Literature test could be placed in the Reading Enrichment program. Reading Enrichment is a course designed to supplement the traditional English program taken by students at the secondary level with a strong focus on developing students' reading and writing skills. Students who are assigned to this class will benefit from small-group and individualized instruction on a variety of reading techniques and strategies. Students will also be working each day with an intensive reading intervention program that directly addresses individual needs through adaptive and instructional software, high-interest literature, and direct instruction in reading skills.

College Entrance Exam Prep – MI06100 – .5 credits, one quarter course, **unleveled**. Open to students in 10, 11, and 12 grades only. *Prerequisites: Successful completion of Algebra I, Geometry, Algebra II and English 9. A Texas Instruments TI-84 graphing calculator is required.* This course is designed for students who wish to develop their test-taking skills for the ACT, PSAT, SAT, and other standardized tests.

Course outcomes and expectations:

- Identify and apply the significant numeric/algebraic/geometric concepts, procedures and problem solving to simulate the PSAT, SAT and ACT
- Increase vocabulary, develop focused reading and writing strategies
- Identify specific test constructions and strategies that will be modeled in the PSAT, SAT and ACT
- Identify and discuss data that will help improve personal performances on simulated PSAT, SAT and ACT

Family and Consumer Science Department

If you love little children and want to learn more about them ... If you want to learn how to find a job ... or budget money ... or end your confusion about credit, bank and ATM cards ... If you want more information on consumer awareness, healthy living and personal relationships ... These family and consumer science courses can help you by providing knowledge and skills to help you improve your future.

Child Development

Enroll for only one child development course per year.

Child Development I – FC01100 – 1 credit, one semester course, **unleveled**. Open to all students in grades 10, 11, and 12. Students have the opportunity to better understand their own development as they observe 3 and 4-year-old children in a preschool situation within the high school. Students will participate in the preschool through the teaching of lessons, observations and written evaluations.

Course outcomes and expectations are:

- Identify the physical, intellectual, social, and emotional stages of a child (three-5 years)
- Prepare, execute and evaluate 12 developmentally appropriate lessons for preschool children
- Evaluate the negative and positive aspects of lessons performed by peer teachers
- Prepare a portfolio of anecdotal observations of preschoolers and written evaluations of peer teachers
- Organize lessons using Early Childhood standards and Theme-Based Instruction

Child Development II – FC01200 – 1 credit, one semester course, **unleveled**. Open to all students in grades 10, 11, and 12. **Prerequisite: Child Development I - (Grade of B or better)**. Students have the opportunity to participate in the preschool program by teaching, evaluating, and supervising young children. Students investigate career opportunities associated with children.

Course outcomes and expectations are:

- Assume leadership roles within the preschool class
- Prepare, execute and evaluate 14 developmentally appropriate lessons for preschool children
- Evaluate the negative and positive aspects of lessons performed by fellow classmates
- Investigate career opportunities involving children and generate a research paper on a child-related topic
- Generate a research paper on a child-related career and present it orally
- Assume leadership roles within the preschool class
- Organize lessons using Early Childhood standards and Theme-Based Instruction

Child Development III – FC01300 – 1 credit, one semester course, **unleveled**. Open to all students in grades 11 & 12. **Prerequisite: Child Development II - (Grade of A)**. This advanced child development course is designed for those students interested in working with young children both in the high school situation and as a career choice. The course provides the opportunity to observe, as well as participate in, the kindergarten and primary-grade programs in the local district schools.

Course outcomes and expectations are:

- Complete an internship in a district elementary classroom
- Observe the behavior patterns of elementary children
- Maintain a daily log of all elementary experiences including reactions to the internship
- Prepare a written and oral report on the value of an elementary internship

Preparing for Adult Life – FC03000 – .5 credits, one quarter course, **unleveled**. Open to all students in grades 11 and 12. **No prerequisite**. Ever wonder how you will make it on your own? This course is designed for any student who plans on either going to college or living on their own right after high school. Topics include: setting SMART goals, making wise decisions, exploring college and career options, creating and balancing budgets, evaluating housing options, and analyzing car buying will all be addressed. Through activities, discussion, and project based learning, students will explore the basic life skills needed to successfully live on their own and negotiate college. Key speakers are brought in to discuss relevant topics.

Course outcomes and expectations:

- Research career pathways based on interests and skills
- Complete an Employment Portfolio which includes a resume and cover letter
- Analyze proper attire for job interviews and learn skills to nail a job interview
- Investigate the benefits of using the Naviance website to complete career and college aptitude assessments
- Understand the college application process including the common app and the components of a financial aid package
- Discuss strategies to be successful in college, including campus resources, study and time management skills
- Identify the potential pitfalls of credit card use including identity theft
- Demonstrate abilities to balance a budget

Best of Baking – FC03100 – .5 credits, one quarter course, **unleveled**. Open to all students. **No prerequisite**. This course will provide students with an opportunity to develop food preparation skills in the planning, preparation, experimentation, and evaluation of pies, cakes, breads, cookies, yeast breads, and quick breads.

Course outcomes and expectations are:

- Prepare a wide variety of baked products while working cooperatively in small groups
- Explore the science of baking and analyze the various ingredients used in baked products and their function and contribution
- Practice of proper safety and sanitation methods.

Foods for Today – FC03200 – .5 credits, one quarter course, **unleveled**. Open to all students. **No prerequisite**. This course provides students with skills in meal planning, food preparation, nutrition, and current food trends. Modern appliances, the microwave, blender, electric mixer, and processor, will be used. This course will focus on fruits, vegetables, grains, and protein.

Course outcomes and expectations are:

- Read and follow recipes and use food preparation equipment effectively and efficiently producing quality products of nutritional value
- Read and summarize newspaper or magazine articles pertinent to each food unit
- Create a 'Nutrient' project with emphasis on the functions of the six nutrients and healthy examples of foods that provide each nutrient

Foods of the World – FC03300 – .5 credits, one quarter course, **unleveled**. Open to all students in grades 10, 11 and 12. ***Prerequisite: Successful completion of one high school foods course.*** This major international cuisine course demonstrates the effect of culture and geography on foods in various areas of the world. Interesting foods from Italy, France, Germany, Japan, China, the Middle East, Greece, Mexico, and Scandinavia will be prepared.

Course outcomes and expectations are:

- Read and follow recipes, and use food preparation equipment effectively and efficiently to produce quality products representative of these foreign cuisines
- Read and summarize articles pertinent to individual topics
- Research and prepare a written report on a culture not included in classroom study; plan and perform a group demonstration or a travel brochure of a unique recipe depicting this culture's cuisine

Preparing For Parenthood – FC03400 – .5 credits, one quarter course, **unleveled**. Open to all students. ***No prerequisite.*** Parenting is a complicated job filled with feelings, questions and uncertainties. This course discusses the decision-making processes in preparation for parenthood. Students use role-playing, discussion, videos, textbooks and other aids to explore the world of parenting.

Course outcomes and expectations are:

- Identify the growth and development patterns of children from conception to infancy and the role of the parent in maximizing this development
- Explore the contemporary challenges and concerns facing parents in raising a family
- Identify the parenting skills that are proven more effective in interacting with and guiding children
- Prepare an oral presentation on a contemporary parenting topic employing visual aids with written documentation

Contemporary Sewing and Crafts – FC03500 - .5 credits, one quarter course, **unleveled**. Open to all students. ***No prerequisite.*** (May be taken more than once for credit.) ***Students are required to buy and supply fabric and notions for four individual projects.*** This course gives students the opportunity to develop sewing skills by making their own clothing using a commercial pattern. Students may also make fashion accessories, stuffed animals, pillows and new craft items.

Course outcomes and expectations are:

- Demonstrate proficiency and practice safety when using the sewing machine and related equipment
- Demonstrate knowledge of construction techniques used in a commercial pattern
- Work cooperatively as a group to complete a quilt that will be donated to a local charity
- Complete four projects (in addition to the quilt – three of which should be garments) that will include the applications of darts, seams, gathers or tucks, zippers, waistband, collar or cuffs, hand and machine hem, buttonhole and buttons

Interior Design – FC03600 - .5 credits, one quarter course, unleveled, open 9-12.

Explore the field of interior design with this hands-on, project-based course meant to inspire your creativity and problem-solving skills. Students will learn about color theory, principles of design, space planning and various design careers. Current housing and designing trends will also be explored. Projects will include a room makeover and designing a tiny house.

DCTS FCS PROGRAM OFFERINGS

HOSPITALITY, TOURISM & HUMAN SERVICES

A cluster of programs for students pursuing a variety of career pathways in the service industry where workers place people and their needs first.

Culinary Arts & Hospitality [CIP 12.0508]

Cosmetology [CIP 12.0401]

Early Childhood Education [CIP 19.0708]

Culinary Arts & Food Service Management [CIP 12.0508]

Fine Arts Department

Mission Statement:

All people can make well-crafted art through practice, ingenuity, and persistence. As art teachers, we coach the mindful use of materials, and an awareness of the arts in society. We invite you to create in a playful, respectful, and rigorous environment.

PA graduation requirements specify 2.0 credits (36 weeks) in the arts and humanities. You can satisfy this requirement with four quarters of fine art classes, or in combination with other arts and humanities courses.

Careers and post-secondary programs in design and the creative arts will require portfolios of art work that show off your creativity and technical skills. Build a portfolio over 2-4 years by choosing a sequence of Fine Art and other elective courses that will give you a broad range of experiences. Traditional Arts, Computer Graphics, and 3-D courses (Ceramics, Sculpture, and Fashion) all can lead to Advanced Placement Studio Art for possible college credit.

Alternate Day Courses: Some of our quarter courses may be scheduled as alternate A/B day courses when there is sufficient demand. If you plan to take alternate day courses, like those in Music or Support, you can take Ceramics or Digital Photography & Photoshop or Animation your alternate days instead of a Study Hall.

The following art courses have no prerequisite, and are designed so that beginners and more experienced students alike will be both challenged and successful:

Art History
Art I
Ceramics I
Animation I
Graphic Design I

Digital Photography and Photoshop I
Fashion Design I
Sculpture I
World Crafts

Art I – AR01100 – 1 credit, one semester course, **unleveled**. Open to students of all skill levels. Open to all grades. **No prerequisite**. The Art 1, 2, and AP 2-D and/or Drawing Studio course progression is a sequence leading the student from basic art skills through advanced, with a primary focus on two-dimensional work. These courses are foundational for careers in all types of creative arts and design. Students will learn drawing, composition, color theory, art history and criticism, and be introduced to a wide variety of materials and techniques.

Art II – AR01200 – 1 credit, one semester course, **unleveled**. Open to all grades. **Prerequisite: Art I, Fashion Design I, or permission of the instructor**. Art 2 revisits many of the skills covered in Art 1, with more advanced, longer-term projects. Portfolio development for college and career planning begins with more extensive drawing, designs in black/white and color, a 3-D project incorporating personal narratives, and your own personal book.

Advanced Placement Studio Art: 2-D Design – AR01401 – 1 credit, one semester course, offered first semester only, **AP level**. Open to grades 11 and 12. **Prerequisites:** *completion of Art 1, Art 2, at least one other Art elective, and Art History, or permission of the instructor*. Students develop a portfolio that demonstrates mastery of 2-D design through any two-dimensional medium or process, including, but not limited to: graphic design, digital imaging, photography, collage, fabric design, weaving, fashion design, fashion illustration, painting and printmaking. Coursework includes: summer assignments, 20 variations of a design, finished drawings, a personal book, and presentations to colleges. The AP Exam (for possible college credit) is completed by submitting a portfolio and required essays in May. Recommended for students interested in careers in design, media, architecture, marketing, and fine art. **Portfolio Preparation AR04001** is required in the 3rd quarter for students submitting an AP Portfolio and participating in the AP Art Show.

Advanced Placement Studio Art: 3-D Design – AR01501 – 1 credit, one semester course, offered first semester only, **AP level**. Open to grades 11 and 12. **Prerequisites:** *completion of Art 1, Art 2, Sculpture 1 and/or Ceramics 1, and Art History, or permission of the instructor*. Students develop a portfolio that demonstrates mastery of 3-D design through any three-dimensional medium or process, including, but not limited to: ceramics, sculpture, crafts, and fashion design. Coursework includes: summer assignments, 20 variations of a 3-d design, finished 3-d objects, a personal sketch book, and presentations to colleges. The AP Exam (for possible college credit) is completed by submitting a portfolio and required essays in May. This course is recommended for students interested in careers in design, media, architecture, marketing, and fine art. **Portfolio Preparation AR04001** is required in the 3rd quarter for students submitting an AP Portfolio and participating in the AP Art Show.

Advanced Placement Studio Art: Studio Drawing – AR01601 – 1 credit, one semester course, offered first semester only, **AP level**. Open to grades 11 and 12. **Prerequisites:** *completion of Art 1, Art 2, at least one other Art elective, and Art History, or permission of the instructor*. Students develop a portfolio that demonstrates mastery of Studio Drawing through intensive drawing and painting, with a focus on observational work. Coursework includes: summer assignments, 20 variations of a design, finished drawings and paintings, a sketch personal book, and presentations to colleges. The AP Exam (for possible college credit) is completed by submitting a portfolio and required essays in May. This course is recommended for students interested in careers in design, media, architecture, marketing, and fine art. **Portfolio Preparation AR04001** is required in the 3rd quarter for students submitting an AP Portfolio and participating in the AP Art Show.

Art History – AR03000 – .5 credits, one quarter course, **unleveled**. Open to all grades. **No prerequisite**. This course is a survey of ancient to modern art, both Western and Non-Western. Learn about major art movements and the historical and cultural events that sparked them. This is not a studio class, but is recommended as a complement to studio art, World Language, and Social Studies courses. This course is a prerequisite (or co-requisite) for **AP Studio Design courses**.

Portfolio Preparation (H) – AR04001 – .5 credits, third quarter only course, **honors level**. Open to grades 11 and 12. **Prerequisite:** *AP Studio Art: 2-D Design or with permission of the instructor*. This course is required for students who are submitting an AP Studio Art Portfolio and/or are participating in the AP Art Show planning and presentation. Students preparing portfolios for art or design college majors or a creative arts career will learn finishing skills and add needed art pieces. Physical and digital/slide portfolios will be prepared. Serious students of Art or Design (such as Architecture, Fashion, Marketing, Digital, or Industrial/Manufacturing) who are not enrolled in AP Studio courses may be admitted with permission of the instructor.

Fashion Design I – AR04100 – 1 credit, one semester course, **unleveled**. Open to students of all skill levels. Open to all grades. **No prerequisite.** An introduction to the fundamentals of designing for the fashion industry, figure drawing, and basic fine arts techniques. Students will work through all of the stages of design, from inspiration research, rough sketches, finished fashion illustrations, clothing pattern development, and clothing flats. Fashion design covers men's and women's clothing, and is an excellent introduction to designing for commercial applications. Students are encouraged to take Fashion Design as a companion to Contemporary Sewing and Crafts.

Fashion Design II – AR04200 – 1 credit, one semester course, **unleveled**. Open to grades 10, 11 and 12. **Prerequisite: Fashion Design I.** Designing for the fashion industry, advanced figure and fabric rendering. Students will work through all of the stages of design, from inspiration research, rough sketches, finished fashion illustrations, clothing pattern development, and clothing flats. Students who are serious about a design career are encouraged to follow this course with AP Studio Art: 3-D. Students who have taken Contemporary Sewing and Crafts may begin making sewing patterns for prototype garments based on their designs.

Ceramics I - AR04400 – 0.5 credits, one quarter course, **unleveled**. Open to students of all skill levels. Open to all grades. **No prerequisite.** Ceramics 1 focuses on hand-building clay vessels and basic glazing techniques. The history and traditions of ceramics will be covered.

[**Ceramics I ~ Alternate Day – AR04450** – .5 credits, one semester, every other day, **unleveled**. Open to students in ALL levels. Open to all grades. **No prerequisites.** Same description as above.]

Ceramics II - AR04500 – 0.5 credits, one quarter course, **unleveled**. Open to all grades. **Prerequisite: Ceramics I with a “B+” or better.** Ceramics II teaches wheel pottery techniques, and more advanced hand-building, glazing, and finishing methods. Students who are serious about ceramics are encouraged to follow this course with AP Studio Art: 3-D.

Ceramics III - AR04600 – 0.5 credits, one quarter course, **unleveled**. Open to grades 10, 11, and 12. **Prerequisite: Ceramics II with an “A” average in Ceramics 1 and 2.** Ceramics III gives students a chance to explore individual interests, including larger wheel-thrown and hand built vessels. Students will be expected to reference historical and current ceramics in their own work. Students who are serious about ceramics are encouraged to follow this course with AP Studio Art: 3-D.

Animation I – AR04700 – .5 credits, one quarter course, **unleveled**. Open to students of all skill levels. Open to all grades. **No prerequisite.** This course introduces the rapidly growing field of animation and digital video editing. Students will learn basic principles of vector-based animation. Students will use various applications including the Adobe Creative Suite, iMovie, and iStopmotion combined with traditional animating techniques to create original short videos. This course is useful for college majors and careers in game design, digital media, animation, and communications.

[**Animation I ~ Alternate Day – AR04750** – .5 credits, one semester, every other day, **unleveled**. Open to students in ALL levels. Open to all grades. **No prerequisites.** Same description as above.]

Animation II – AR04800 – .5 credits, one quarter course, **unleveled**. Open to all grades. **Prerequisite: Animation I.** Students use various applications including the Adobe Creative Suite, iMovie, and iStopmotion, combined with traditional animating techniques to create original short videos. Students will write, draw, storyboard, and animate their films, building on the skills learned in Animation 1. This course is recommended for students interested in creating individual animation projects for web publication.

Graphic Design I – AR04900 – .5 credits, one quarter course, **unleveled**. Open to students of all abilities. Open to all grades. *No prerequisite*. This course introduces the world of graphic design as an opportunity to create commercial art on the computer. The Adobe Illustrator application is used to prepare advertising, package design, commercial layouts, and other publications. This course is useful for college majors and careers in design, media, and communications, and an excellent companion to Business Education courses.

Graphic Design II – AR05000 – .5 credits, one quarter course, **unleveled**. Open to all grades. *Prerequisite: Graphic Design I*. The Adobe Illustrator application is used to prepare advertising, package design, commercial layouts, and other publications.

Digital Photography I – AR05100 – .5 credits, one quarter course, **unleveled**. Open to students of all skill levels. Open to grades 10, 11, and 12. *No prerequisite*. Students use Adobe Photoshop to edit and modify digital photographs. Basics of composition, subject choice, criticism, and aesthetics will be explored as students create digital photographic projects. This course is useful for everyone interested in digital images, and essential for those considering careers in the creative arts.

[**Digital Photography I ~ Alternate Day – AR05150** – .5 credits, one semester, every other day, **unleveled**. Open to grades 10, 11, and 12. *No prerequisites*. Same description as above.]

Digital Photography II – AR05200 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. *Prerequisite: Digital Photography I*. Students use Adobe Photoshop to edit and modify digital photographs. More advanced composition, subject choice, criticism, and aesthetics will be explored as students create digital photographic projects.

Painting Studio I – AR05300 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. *Prerequisite: Art I, or permission of the instructor*. An intensive course in painting, drawing, and composing with color. Subjects will primarily be drawn from observation. This course will advance skills in rendering, color use, and composition, and is useful for those interested in fine arts, graphic, fashion, industrial, and architectural design.

Painting Studio II – AR05400 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. *Prerequisite: Painting I*. Students will continue exploring techniques covered in Painting I. Individual subject and style selection will be encouraged.

Sculpture I – AR05700 – .5 credits, one quarter course, **unleveled**. Open to students of all skill levels. Open to all grades. *No prerequisite*. Sculpture 1 introduces students to a variety of materials and techniques for 3-D composition. The history and cultural uses of sculpture will include an examination of its use in architecture, furnishings, and as a free-standing art form.

Sculpture II – AR05800 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11, and 12. *Prerequisite: Sculpture I or permission of the instructor*. Sculpture II continues the use of a variety of materials and techniques for 3-d composition. Sculpting from observation and with reference to historical and current art is expected. Students who are serious about sculpture are encouraged to follow this course with AP Studio Art: 3-D.

Sculpture III – AR05900 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11, and 12. *Prerequisite: Sculpture II*. Sculpture III allows the student to work on individual 3-D projects. Students who are serious about sculpture are encouraged to follow this course with AP Studio Art: 3-D.

World Crafts – AR06000 – .5 credits, one quarter course, **unleveled**. Open to students of all skill levels. Open to all grades. *No prerequisite*. World Crafts introduces the history and many techniques of world-wide handicrafts, including textiles, ceramics, and decorative arts. Students will learn to design, sketch and make beautiful objects.

Mathematics Department

Graduation Requirements

4 Credits

Courses provide opportunities for each student to become proficient in mathematics. Teaching and learning will focus on:

-Conceptual understanding -Procedural abilities -Problem-solving skills

Math courses require students to be responsible for and actively involved in their own learning. Our math program requires students to effectively demonstrate the outcomes found in **Pennsylvania State’s Academic Standards for Mathematics**, as well as the **Haverford Graduation Outcomes**.

Successful students are responsible for content-specific performance outcomes. Students will use:

New modes of communication and procedural skills

Technologies of graphing calculators, computers, or iPads to support their mathematical development

Sound mathematical reasoning to develop conjectures and support conclusions.

Students must learn to communicate effectively using appropriate English, symbolic notations, tables, lists and graphs. Successful students must find and make connections among mathematical ideas and their applications to real-world situations.

The Haverford High School mathematics program contains required sequential courses with prerequisites. Unless otherwise noted, a prerequisite course must be successfully completed with a grade of “B” in honors, a grade of “C” in college prep, and a passing grade in the career track before a student continues with the next course at the same level. Any student not meeting these prerequisites may continue with the next course in the sequence but at a lower level or should retake the course at the same level. These prerequisites are necessary to provide the student with the opportunity to develop a proficient understanding of the concepts and skills. Serious consideration should be given to teacher recommendations regarding the next mathematics course to be scheduled.

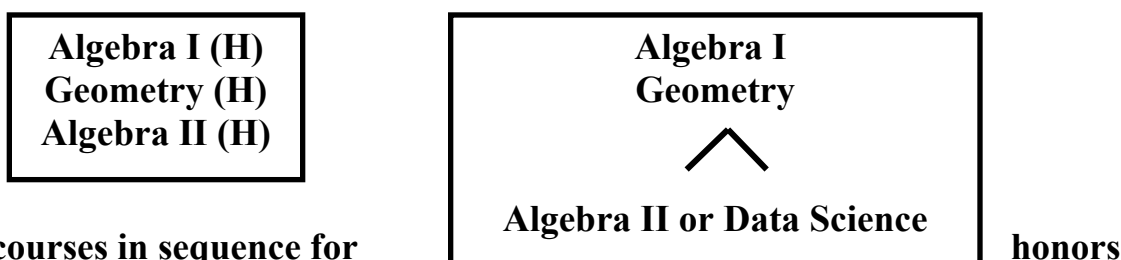
The course selection process is based on the following course prerequisites, the scope and nature of the work required, the course's demands, graduation requirements, and standardized test scores. All students must complete four (4) credits in mathematics. Because the SATs include concepts covered in Algebra 1, Geometry, and Algebra 2, it is highly recommended that students complete Algebra 2 by their junior year. It is also strongly recommended that level 2 (College Prep) students take one math course per year. Additional higher-level math courses including Pre-Calculus, Probability/Statistics, and possibly Calculus are recommended for students continuing mathematics or science study after high school. *A TI graphing calculator is highly recommended for all mathematics courses.*

Course Sequence for Math

Graduation Requirements

4 Credits

All students are required to take at least 4 credits of math, statistics, or computer science courses. Additional higher-level math courses including Pre-Calculus, Probability/Statistics, and possibly Calculus are recommended for students continuing mathematics or science study after high school.



The first three math courses in sequence for students are Algebra I, Geometry and Algebra II. These courses lay the foundation necessary for mathematical literacy. The recommended core curriculum provides the prerequisite conceptual understanding for students to be prepared for more complex levels of the remaining math courses. If you are not taking honors courses there is an additional option entitled Data Science which can be taken after Geometry. All courses are offered at various levels to allow all students access to the curriculum. If you are planning to change levels (honors to college prep or college prep to honors) you **MUST** speak to your present math teacher.

<u>Computer Science Electives</u>	<u>Math Electives</u>	<u>AP Math Electives</u>
Mobile Apps for IOS I or II Mobile Apps Lite AP Computer Science A AP Computer Science Principles	Algebra III Calculus College Entrance Exam Prep Data Science Probability/Statistics Pre-Calculus with Limits Transitional Math	Advanced Placement Calculus AB (<i>full year</i>) Advanced Placement Calculus BC (<i>full year</i>) Advanced Placement Calculus C (semester) Advanced Placement Statistics (<i>full year</i>)

Students in the class of 2020 and beyond who are not proficient on the Keystone Algebra 1 Exam are encouraged and recommended to take the Keystone Algebra 1 Seminar.

Algebra I (H) – MA00901- 1 credit, one semester course, **honors level**. Open to grade 9 only. This course covers the expected content of any algebra 1 class. The topics covered include: graph interpretations, graphing linear and nonlinear functions, combining like terms, the distributive property, writing and solving linear equations, similar figures and direct variation, multiplication of binomials, slope, equation of lines, factoring, solving quadratics by factoring and the quadratic formula, solving systems of equations, properties of exponents, solving inequalities, and rational expressions and equations. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of the TI graphing calculator. A TI-84 graphing calculator is highly recommended for this course. This course will prepare students to take the Algebra 1 Keystone Exam.

Algebra I (CP) – MA00902 – 2 credit, full year course, **college prep level**. This course covers the expected content of any algebra 1 class. The topics covered include: graph interpretations, graphing linear and nonlinear functions, combining like terms, the distributive property, writing and solving linear equations, similar figures and direct variation, multiplication of binomials, slope, equation of lines, factoring, solving quadratics by factoring and the quadratic formula, solving systems of equations, properties of exponents, solving inequalities, and rational expressions and equations. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course. This course will prepare students to take the Algebra 1 Keystone Exam.

Algebra I Seminar – MA01100 - 1 credit, one semester course, **unleveled**. This requirement is state-mandated and is for students who were **not** proficient on the Keystone Algebra I Exam. All of the concepts from Algebra 1 will be covered. Individualized plans for students will be developed as indicated by the student's results on the Keystone Algebra 1 Exam. Students will retake the Keystone Algebra 1 Exam at the completion of this course. **Enrollment in the course is mandatory for those students who were not proficient on the Keystone Algebra 1 Exam. This course will be automatically scheduled in lieu of another math course.**

Geometry (H) – MA01201 – 1 credit, one semester course, **honors level**. Open to ALL students in grades 9, 10, 11 and 12. **Prerequisite: Honors Algebra I with an expected minimum final grade of B.** This course covers the expected content of any geometry class. The topics covered include: transformations, symmetry, attributes and characteristics of shapes, angle relationships, area, Pythagorean Theorem, similarity, triangle similarity and congruence, trigonometry (sine, cosine, and tangent), special right triangles, and the law of sines and cosines, proofs with triangles and quadrilaterals, coordinate geometry, angles and areas of polygons, volume and surface area of prisms, relationships within circles, equation of a circle, and characteristics, volume and surface area of pyramids, cones and spheres. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of the TI graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Geometry (CP) – MA01202 – 1 credit, one semester course, **college prep level**. Open to ALL students in grades 10, 11 and 12. ***Prerequisite:** Algebra I with an expected minimum final grade of C.* This course covers the expected content of any geometry class. The topics covered include: transformations, symmetry, attributes and characteristics of shapes, angle relationships, area, Pythagorean Theorem, similarity, triangle similarity and congruence, trigonometry (sine, cosine, and tangent), and special right triangles, proofs with triangles and quadrilaterals, coordinate geometry, angles and areas of polygons, volume and surface area of prisms, relationships within circles, equation of a circle, and characteristics, volume and surface area of pyramids, cones and spheres. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Geometry (CT) – MA01203 – 1 credit, one semester course, **career track level**. Open to ALL students in grades 10, 11 and 12. ***Prerequisite:** Passing grade in Algebra I.* This course covers the expected content of any geometry class. The topics covered include: transformations, symmetry, attributes and characteristics of shapes, angle relationships, area, Pythagorean Theorem, similarity, triangle similarity and congruence, trigonometry (sine, cosine, and tangent), and special right triangles, proofs with triangles and quadrilaterals, coordinate geometry, angles and areas of polygons, volume and surface area of prisms, relationships within circles, equation of a circle, and characteristics, volume and surface area of pyramids, cones and spheres. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Algebra II (H) – MA01301 – 1 credit, one semester course, **honors level**. Open to ALL students in grades 10, 11 and 12. ***Prerequisite:** Honors Geometry with an expected minimum final grade of B.* This course covers the expected content of any algebra 2 class. The topics covered include: functions, sequences, exponential functions, transformations of parent graphs, solving systems of equations algebraically and graphically, and solving systems of inequalities graphically, logarithms, trigonometric functions, polynomial functions, conic sections, and analytic trigonometry. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Algebra II (CP) – MA01302 – 1 credit, one semester course, **college prep level**. Open to ALL students in grades 10, 11 and 12. ***Prerequisite:** Geometry with an expected minimum final grade of C.* This course covers functions, sequences, exponential functions, transformations of parent graphs, solving systems of equations algebraically and graphically, and solving systems of inequalities graphically. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Algebra II (CT) – MA01303 – 1 credit, one semester course, **career track level**. Open to ALL students in grades 10, 11 and 12. ***Prerequisite:** Passing grade in Geometry.* This course covers functions, sequences, exponential functions, transformations of parent graphs, solving systems of equations algebraically and graphically, and solving systems of inequalities graphically. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Algebra III (CP) – MA01402 – 1 credit, one semester course, **college prep level**. Open to ALL students in

grades 10, 11 and 12. **Prerequisite:** *Algebra II (CP) or Algebra II (CT) with an expected minimum final grade of C.* This course covers logarithms, trigonometric functions, polynomial functions, and analytic trigonometry. Technology is used to enrich problem-solving skills and to develop graphing techniques through the use of a graphing calculator. A TI-84 graphing calculator is highly recommended for this course.

Transitional Math – MA01503 –1 credit, one semester course, **career track level.** Open to students in grades 11 and 12. **Prerequisite:** *Geometry.* This course provides a foundation in the mathematic skills needed to be successful in a college or trade school entrance exam. These skills include arithmetic of whole numbers, fractions, decimals, ratios, proportions and percentages, algebraic topics including signed numbers, graphing and solving equations, solving word problems and geometric topics including area and volume.

Course outcomes and expectations:

- Apply problem solving skills to math-related problems
- Apply algebra and geometry skills to problem solve
- Use the language and notation of mathematics
- Demonstrate increased confidence in basic mathematical ability without using a calculator

Introduction to Data Science – MA06001 (H) or MA06002 (U) – 1 credit, one semester course, **honors level or unleveled.** Open to students in grades 10, 11, and 12. Prerequisite: Geometry. This course will introduce students to the main ideas in data science. Students will learn to be data explorers as they develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, and the power of data in society. ****There will be an opportunity for students to earn honors level (H) credit for this course by completing additional coursework as assigned by the instructor.**

Probability/Statistics (H) – MA03001 – 1 credit, one semester course, **honors level.** Open to students grades 10, 11, and 12. **Prerequisite:** *Algebra II (H)(MA01301) with an expected minimum final grade of B.* **This course does not prepare a student for the AP exam.** A Texas Instrument graphing calculator is required. This is an advanced course that strives for familiarity with and use of probability, descriptive and parametric statistics, as well as sampling techniques. Students are expected to do group/individual tasks to collect, organize, and analyze data. From these analyses, students will communicate their findings and make predictions. This course employs practical situations and information sources, activities, and labs. Students are expected to proficiently use the statistics portion of the graphics calculator as a modeling and communications tool.

Course outcomes and expectations for **both** Honors and Academic are:

- Make decisions based on determined probabilities, measure of central tendency, variability or normal distribution
- Calculate simple counting problems with the set and fundamental counting principles, permutations, and combinations
- Represent data samples and the probabilities with the appropriate tables, equations and graphs
- Model theoretical and real world data with discrete and continuous probability distributions
- Collect, organize and analyze data and appropriately communicate the results, hypotheses or conjectures
- Model real world data with graphing calculators, spreadsheets and a computer statistics application

Probability/Statistics (CP) – MA03002 – 1 credit, one semester course, **college prep level**. Open to students grades 10, 11, and 12. ***Prerequisite:** Algebra II (CP), Algebra III (CP) or Data Science with an expected minimum final grade of C.* However, if a student plans to take Algebra III, it should be taken immediately following Algebra II. A Texas Instrument graphing calculator is required. In this core course students become familiar with and use probability, descriptive and parametric statistics, and sampling techniques. Students are expected to do group/individual tasks to collect, organize, and analyze data. From these analyses students will communicate their findings and make predictions. This course uses many practical situations and information sources activities, and labs. Students are expected to proficiently use the statistics portion of the graphics calculator as a modeling and communications tool.

Advanced Placement Statistics – MA03101 – 2 credit, year-long course, **AP level**. Open to grades 11 and 12. ***Prerequisite:** Algebra II (H) with an expected minimum final grade of B.* A Texas Instruments graphing calculator is required. Upon completion of this course, students will have a solid foundation in the four major themes of the AP exam:

- Exploratory analysis of data makes use of graphical and numerical techniques to study patterns and departures from patterns
- Data must be collected according to a well-developed plan if valid information on a conjecture is to be obtained
- Probability is the tool used for anticipating what the distribution of data should look like under a given model
- Statistical inferences guide the selection of appropriate models

Materials used to teach the course come from textbooks, classroom discussions, newspapers, journals, medical newsletters, videos, and the internet. The student version of MiniTab is the software package used on the computer. Students will be expected to complete statistics computer assignments. In accordance with the honors expectations, projects are a major part of the course. Students will be expected to complete a final project AFTER the AP exam.

Pre-Calculus with Limits (H) – MA04001 – 1 credit, one semester course, **honors level**. Open to students grades 10, 11, and 12. ***Prerequisite:** Algebra II (H) or Algebra III with an expected minimum final grade of B or better.* A Texas Instrument graphing calculator is required. (TI-84) This is an advanced pre-calculus course in which students explore the concepts of functions, (polynomial, trigonometric, exponential, logarithmic, absolute value, rational and piece-wise), as well as their inverses (if they exist). Students are expected to be strong, independent learners who can work in study groups. Students use the characteristics of functions to discuss the relationship between related quantities.

Course outcomes and expectations for **both** Honors and College Prep are:

- Represent functions with tables, equations and graphs
- Classify and identify functions by their properties and characteristics.
- Model theoretical and real-world data with functions using the graphing calculator
- Manipulate expressions into equivalent forms
- Explore the limit concept and process to functions
- Communicate about the notions of functions orally and in writing

Pre-Calculus with Limits (CP) – MA04002 – 1 credit, one semester course, **college prep level**. Open to students grades 11 and 12. ***Prerequisites:** Algebra II (H) with a final grade of C or better or Algebra III (CP)*

with a final grade of B or better. A Texas Instruments graphing calculator is required. (TI-84) This is a pre-calculus course presented with a slower pacing than **Pre-Calculus (H)**. Students will explore the concepts of functions, (polynomial, trigonometric, exponential, logarithmic, absolute value, rational, and piece-wise), as well as their inverses (if they exist). Students use the characteristics of functions to discuss the relationships between quantities. This course is designed for students who wish to extend their study of high school mathematics and to prepare for the possibility of taking college calculus; however *it is not intended for students planning to take AP Calculus at Haverford* (such students should schedule **Pre-Calculus (H)** instead).

Calculus (H) – MA04101 – 1 credit, one semester course, **honors level**. Open to students in grades 11 and 12. **Prerequisites:** *Pre-Calculus with Limits (H) with an expected minimum final grade of B. This course is not sufficient for success in the Advanced Placement Calculus Exam.* Calculus covers the introduction and application of the concepts of a function's limits, derivatives, and integrals of a function. Real-valued functions are used and applied to model theoretical and realistic situations. The graphing calculator aids as a modeling and communication tool for investigating the characteristic behavior of functions.

Course outcomes and expectations are:

- Apply the limit concept process to Difference Quotients, Riemann Sums and other functions
- Create functions that model real world and theoretical situations
- Apply differential calculus to solve theoretical and real world problems
- Compute the value of the definite integral to solve theoretical and real world problems
- Apply appropriate technologies to investigate and confirm calculus concepts/applications
- Communicate about the applications and concepts of calculus orally and in writing

Advanced Placement Calculus AB – MA04201 – 2 credit, year-long course, **AP level**. Open to students in grades 11, and 12. **Prerequisites:** *Pre-Calculus with Limits (H) with an expected minimal final grade of B. A graphing calculator is required.* The TI-Nspire CX - CAS is highly recommended if the student plans on taking the Advanced Placement Exam. This course prepares students for the Calculus AB Advanced Placement Exam. Calculus covers the introduction and application of the concepts of a function's limits, derivatives, and integrals of a function. Real-valued functions are used and applied to model theoretical and realistic situations, and completes the application of integration. The course introduces differential equations and explores slope fields.

Course outcomes and expectations are:

- Apply the limit concept process to Difference Quotients, Riemann Sums and other functions
- Create functions that model real world and theoretical situations
- Apply differential calculus to solve theoretical and real world problems
- Compute the value of the definite integral to solve theoretical and real world problems
- Apply appropriate technologies to investigate and confirm calculus concepts/applications
- Communicate about the applications and concepts of calculus orally and in writing.
- Become familiar with the format and grading system of the AP exam
- Complete and review model AP exam questions
- Apply appropriate technologies to investigate and confirm the notions of calculus as defined by the Advance Placement syllabus

Advanced Placement Calculus BC – MA04301 – 2 credit, year-long course, **AP level**. **Prerequisites:** *Pre-Calculus with Limits (H) with an expected minimal final grade of B.* This course prepares students for

the Calculus BC Advanced Placement Exam. A graphing calculator is required. The TI-Nspire CX - CAS is highly recommended if the student plans on taking the Advanced Placement Exam. This course is an advanced collegiate-based theoretical course that includes all the concepts and procedures of Calculus AB plus the additional content tested on the BC exam including more advanced integration techniques, work with sequences and series, Taylor polynomials, and calculus techniques applied to parametric, polar and vector functions.

Course outcomes and expectations are:

- Apply the limit concept process to Difference Quotients, Riemann Sums and other functions
- Create functions that model real world and theoretical situations
- Apply differential calculus to solve theoretical and real world problems
- Compute the value of the definite integral to solve theoretical and real world problems
- Apply appropriate technologies to investigate and confirm calculus concepts/applications
- Communicate about the applications and concepts of calculus orally and in writing.
- Become familiar with the format and grading system of the AP exam
- Complete and review model AP exam questions
- Apply appropriate technologies to investigate and confirm the notions of calculus as defined by the Advance Placement syllabus
- Apply sophisticated calculus integration techniques to solve theoretical problems
- Use infinite series, elementary differential equations, and multi-variable calculus to solve theoretical and real-world problems
- Apply appropriate technologies to investigate and confirm the notions of calculus as defined by the Advance Placement syllabus (BC LEVEL)

Advanced Placement Calculus C – MA04401 – 1 credit, second semester only course, **AP level**.

Prerequisites: *AP Calculus AB with an expected minimal final grade of B.* Description as above. This course is designed for students who took the full year AB course and wish to continue the AP Calculus curriculum. The course consists of topics covered in the BC course that are not covered in the AB course in order to prepare for the AP Calculus BC Exam.

AP Computer Science A – MA07101 – 1 credit, one semester course, **AP level**. Open to all grades.

Prerequisite: *Successful completion of Algebra II.* The AP Computer Science A course is a college-level introductory course intended for students considering STEM majors as well as for students who will likely major in other disciplines and want to be informed citizens in today's technological society. Computer science embraces problem solving, hardware, algorithms, and perspectives that help people utilize computers to address real-world problems in contemporary life. Fundamental topics include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, object-oriented and imperative design, and the ethical and social implications of computing. This course emphasizes the development of coding skills using the Java programming language. Prior experience with computer programming is not needed. Students taking this course are expected to take the AP Computer Science A exam.

AP Computer Science Principles – MA06101 – 1 credit, one semester course, **AP Level**. Open to all grades. This course introduces students to programming and coding along with various computer science applications including a multi-disciplinary approach to teaching the underlying principles of computation. The course introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns and computing impacts. AP Computer Science Principles also gives students the opportunity to use current technologies to create computational artifacts for self-expression and problem solving.

Mobile Apps for IOS I – MA07200 – 1 credit, one semester course, **honors level or unlevleled**. Open to all grades. **Prerequisite:** *Successful completion of Algebra I.* Students will build and deploy iOS applications from

end to end. Students will learn the basics of sequential and object-oriented programming, data structures, and designing user interfaces. They will learn how iOS applications are designed and developed and use those skills to create complete working applications that run on iPads, iPhones, and AppleTV. ****There will be an opportunity for students to earn honors level (H) credit for this course by completing additional coursework as assigned by the instructor.**

Mobile Apps for IOS II (H) – MA07301 – 1 credit, one semester course, **honors level or unlevleled**. Open to all grades. *Prerequisite: Successful completion of Mobile Apps for IOS I.* This iOS Development course builds upon skills developed in Mobile Apps I. It provides students an opportunity to build and publish iOS applications from end to end. Students will complete more advanced modules not reached in Mobile Apps I and design and build original iOS apps for iPhone, iPad, and AppleTV. Students will learn how to work collaboratively on large projects using GitHub and publish at least one app on Apple’s App Store.

Mobile Apps Lite – MA07400 – .5 credits, one quarter course, **unlevleled**. Open to all grades. This is an abridged version of the Mobile Apps course. Students do not need to take this prior to Mobile Apps I. It may be taken before, in place of, or even after Mobile Apps I (as a Lite version of Mobile Apps II). This course will provide students an opportunity to build and deploy iOS applications. Students will learn the basics of programming, data structures, and designing user interfaces, and they will use those skills to create complete working applications that run on iPads and iPhones.

College Entrance Exam Prep – MI06100 – .5 credits, one quarter course, **unlevleled**. Open to students in 10, 11, and 12 grades only. *Prerequisites: Successful completion of Algebra I, Geometry, Algebra II and English 9.* **A Texas Instruments TI-84 graphing calculator is required.** This course is designed for students who wish to develop their test-taking skills for the ACT, PSAT, SAT, and other standardized tests.

Course outcomes and expectations:

- Identify and apply the significant numeric/algebraic/geometric concepts, procedures and problem solving to simulate the PSAT, SAT and ACT
- Increase vocabulary, develop focused reading and writing strategies
- Identify specific test constructions and strategies that will be modeled in the PSAT, SAT and ACT
- Identify and discuss data that will help improve personal performances on simulated PSAT, SAT and ACT

Music Department

The music department provides a variety of activities and courses for all interested students, fosters the development of individual abilities, and offers ample opportunities for growth, understanding and expression through musical activities. Courses are scheduled so that any student can participate in any combination of BOTH instrumental and vocal ensembles. Students wishing to participate in any combination of band, orchestra, or chorus should enroll in the appropriate course as described. Certain students may compete for participation in district, regional and state performance festivals through the Pennsylvania Music Educators Association. Various groups are required to perform in school concerts and may be involved in school shows.

Band Offerings

Concert Band – MU01000 (*Band Sectional for all instruments – MU01200*) – 1 credit, year-long course, **unleveled**. Open to students in ALL grades. Class meets Block 4, every other day. **Prerequisite:** *Audition held in January for the following school year. Late entering students must audition.* Attendance at band camp prior to the opening of school in the fall and participation in the marching band at football games and community events is required. (Exact times and dates for band camp will be announced and posted on the instructor's website.) Participation in band is designed to develop a greater understanding of music through study and performance of a wide variety of band literature. Required performances include football games, parades, pep rallies and concerts.

Course outcomes and expectation are:

- Perform a variety of moderately difficult music at marching band events and concerts
- Demonstrate an understanding of musical concepts through listening and critiquing
- Demonstrate individual improvement in the performance areas of pitch, rhythm, steady pulse, intonation, tone, dynamics, marked tempo, articulation, style, and musicianship

Band Concentration – MU01100 (*Band Sectional for brass and woodwinds – MU01200, Percussion Sectional for percussionists – MU03100*) - 2 credit, year-long course, **unleveled**. Open to ALL grades. Class meets Block 4 every day. This course includes all participation and performance responsibilities for the concert band and wind ensemble. Open to wind ensemble members who are not in the chamber singers. Course outcomes are the same as concert band and wind ensemble.

Jazz Ensemble – MU03000 – .4 credits, year-long course, **unleveled**. Open to all grades. The class meets 2-3 times a week, after block 4. Some evening rehearsals are required. **Prerequisite:** *Students must be a member of one of the High School major instrumental ensembles (String Orchestra, String Ensemble, Concert Band or Wind Ensemble. Selection is through audition only. Auditions are held in May/June of the previous school year.* Topics of study for this course include a wide range of musical styles related to the jazz idiom. Performances include concerts, festivals and competition. The Jazz Lab band is a non-credit introductory ensemble to the Jazz Ensemble.

Course outcomes and expectations are:

- Perform advanced jazz literature
- Improvise as a soloist in a variety of jazz styles
- Participate in all concerts and festivals
- Demonstrate an understanding of musical concepts through listening and critiquing

Wind Ensemble – MU05000 (*Band Sectional for brass and woodwinds – MU01200, Percussion Sectional for percussionists – MU03100*) – 1 credit, year-long course, **unleveled**. Open to students in ALL grades. Class meets Block 4, every other day. **Prerequisite: Selection is through audition only.** Group instrumentation is based on standard wind ensemble instrumentation and may change slightly from year to year based on qualifications of those who audition. Students who are not selected for the wind ensemble will have the opportunity to participate as a member of the concert band. Attendance at band camp prior to the opening of school in the fall and participation in the marching band at football games and community events is required. Participation in wind ensemble is designed for exemplary musicians to develop a greater understanding of music study and performance of a wide variety of advanced band literature.

Course outcomes and expectations include:

- Perform moderately difficult to advanced ensemble music at marching band events and concerts
- Perform advanced chamber ensemble literature at a recital
- Demonstrate an advanced understanding of musical concepts through listening and critiquing
- Demonstrate individual improvement in the performance areas of pitch, rhythm, steady pulse, intonation, tone, dynamics, marked tempo, articulation, style, and musicianship

Competition Marching Band - *No credit*. Open to all students. Students who are not in Concert Band, or who are not Wind Ensemble members, must pass an audition. **Prerequisite: Attendance at band camp prior to the opening of school in the fall (Exact times and dates to be announced.)**

Outcomes and expectations are:

- Compete with other school bands by performing an intricate marching field drill and playing challenging music
- Demonstrate the simultaneous responsibilities of playing music and marching
- Show proper posture, instrument carriage and movement technique
- Perform with poise at a high level of excellence at all times

Chorus Offerings

Chamber Singers – MU02000 (*Chamber Singers Sectional – MU02100*) – 1 credit, year-long course, **unleveled**. Chamber Singers is an auditioned SATB choir aiming to further develop vocal, choral and musical skills through the study of more rigorous repertoire. This course meets during fourth block, every other day, for the duration of the school year. It is open to students in grades 10-12 who were previously in Concert Chorale or an equivalent choir at another school. All students must pass an audition prior to enrolling. Students must also be concurrently enrolled in MU02100, Chamber Singers sectional, which meets 1-2 times per week after school.

Course outcomes and expectations are:

- Develop and perform with advanced vocal/choral skills
- Develop poise in performance
- Research the style, period, and foreign language of the music being studied
- Perform advanced chamber music
- Compete for positions in Pennsylvania Music Educator Association festival chorus

Concert Chorale – MU02200 (*Chorale Sectional – MU02400*) – 1 credit, year-long course, **unleveled**. Concert Chorale is an SATB choir aiming to develop vocal, choral and musical skills. This course meets during fourth block, every other day, for the duration of the school year. It is open to students of all levels, but students must complete a vocal screening prior to admission. Students must also be concurrently enrolled in MU02400, Concert Chorale sectional, which meets 1-2 times per week after school.

Course outcomes and expectations are:

- Apply techniques learned to choral literature from all styles and periods
- Develop a commitment to excellence in choral performance and concert presence
- Compete for positions in Pennsylvania Music Educators Association (PMEA) festival choruses (grades 10, 11 and 12)
- Participate in social and creative events arranged by the Student Choral Council
- Develop communication skills which enhance other areas such as musical theater and drama

Choral Concentration – MU02300 (*Chamber Singers Sectional – MU02100*) – 2 credit, year-long course, **unleveled**. Open to ALL grades. Class meets Block 4 every day. This course includes all participation and performance responsibilities for the Concert Chorale and Chamber Singers. Open to Chamber Singers who are not in Wind Ensemble or String Ensemble.

Course outcomes and expectations are:

- Build musicianship by increasing vocal stamina
- Develop leadership skills by assisting director with small group sectionals
- Learn Music administration skills by filing music correctly and assisting in program writing

String Offerings

String Orchestra – MU04000 (*String Sectional – MU04300*) – 1 credit, year-long course, **unleveled**. Open to students in ALL grades. Class meets Block 4 every other day. **Prerequisite:** *Auditions held in January for the following school year. Late entering students must audition.* Students are eligible to audition for participation in Pennsylvania Music Educators Association (PMEA) orchestra festivals. Students must be enrolled in BOTH MU04000 and MU04300.

Course outcomes and expectations are:

- Study and perform a variety of literature in concerts throughout the year
- Develop appropriate conduct of a musician or as an audience member
- Demonstrate technical proficiency on a stringed instrument
- Recognize and critically listen to various works of orchestra literature

String Ensemble – MU04100 (*String Sectional – MU04300*) – 1 credit, **unleveled**. Open to grades 10, 11, and 12**. Class meets Block 4 every other day. Students must be enrolled in **both** MU04100 and MU04300 to receive credit. **Prerequisite:** *Selection is through audition only.* **9th Grade students may audition in special cases approved by the director.

Course outcomes and expectations include:

- Study and perform a variety of literature in concerts throughout the year
- May perform in various chamber ensembles
- Develop appropriate conduct of a musician or of an audience member
- Demonstrate technical proficiency on a stringed instrument
- Recognize and critically listen to various works of orchestra literature

Students are eligible to audition for participation in PMEA orchestra festivals and may perform in various chamber ensembles.

String Concentration – MU04200 (*String Sectional – MU04300*) – 2 credit, year-long course, **unleveled**. Open to grades 10, 11, and 12. Class meets Block 4 every day. Course outcomes and expectations are the same as above. This option is open to String Ensemble members who are not in Chamber Singers.

Instrumental/Choral Combination Offerings

One credit, year-long course. Open to students in ALL levels. Open to all grades. Class meets Block 4, every other day. ***Prerequisites: Year-end grade of “B” or better in both instrumental and choral music from the previous year in Haverford School District. Late entering students must audition. Permission from each of the appropriate ensemble directors must be obtained before registering for a combination course.***

Students will participate in all of the events for the following possible combination of courses:

MU06000 Concert Band and Chamber Singers
MU06100 String Ensemble and Concert Chorale
MU06200 String Orchestra and Chamber Singers
MU06300 Wind Ensemble and Concert Chorale

Students will attend each of their choral and instrumental ensemble rehearsals daily, splitting the block equally between the two. Students are responsible for all coursework and information disseminated in each choral and instrumental rehearsal. Quarterly grades will be determined by averaging the separate choral and instrumental grades as determined by the respective directors.

See the course descriptions for the requirements and course outcomes of the individual ensembles. Students are also required to register for the choral and instrumental sectionals appropriate to the ensembles in which they plan to participate.

Students participating in the choral and instrumental programs simultaneously in the format detailed above may register for their choral ensemble in one semester and their instrumental ensemble in the remaining semester if they wish to have each course listed on their course transcript separately, rather than using the Instrumental/Choral Concentration course designation. Quarterly grades will be determined as detailed above, regardless of which course title is listed.

Sectionals

Sectional Rehearsals - .2 credit for each sectional. These sectional rehearsals are required for courses as described above. They meet one day a week after Block 4. Students are evaluated and receive specialized instruction in a smaller group setting. Students cannot receive credit for, nor be enrolled in, a sectional unless enrolled in the corresponding course. Course outcomes and expectations are the same as above.

MU01200 Band Sectional
MU02100 Chamber Singers Sectional
MU02400 Chorale Sectional
MU03100 Percussion Sectional
MU04300 Strings Sectional

MU05100 Orchestra Winds Sectional (by audition and based on instrumental balance needs of a symphony orchestra as directed by the musical selection) Open to grades 9, 10, 11 and 12.

Music Electives

Music Production 1 – MU07100 – .5 credits, one quarter course, **unleveled**. Open to ALL grades. *No prerequisite.* This course is designed for the student who has little or no experience in the area of digital recording. Students will use Audacity and GarageBand software. Learn how to place microphones, create professional quality digital recordings, mix audio, and upload completed projects to the internet using music production software on the computer.

Course outcomes and expectations are:

- Develop an understanding of the basic concepts of digital recording/editing
- Demonstrate an understanding of microphones and placement for live recording
- Mix an audio recording using digital audio software
- Create beats using loops, MIDI, and audio
- Upload completed projects and songs to the internet

[**Music Production 1 ~ Alternate Day – MU07150** - .5 credits, every other day for one semester, **unleveled**. Same course description as above. This course is designed for music students but is an option for all students.]

Music Production 2 – MU07200 – .5 credits, one quarter course, **unleveled**. Open to ALL grades. *Prerequisite: Music Production 1.* This course may be taken more than once for credit. This course will go beyond the basics of Digital Recording 1. Students will gain in-depth knowledge of music production in the digital world using a drum machine, MIDI keyboard, loops, and microphones. Students will use Logic Pro music production software on the computer.

Course outcomes and expectations are:

- Develop an understanding of advanced digital recording concepts
- Demonstrate an understanding of microphones and placement for recording specific instrument such as drums, guitar, bass, and horns
- Mix a professional audio recording using music production software
- Create beats using a drum machine, MIDI keyboard, loops, and microphones
- Create real-world projects such as a movie soundtrack and radio commercial
- Upload completed projects and songs to the internet

Piano Lab – MU08100 – .5 credits, one quarter, **unleveled**. Open to all grades. No prerequisite. This class meets in the music lab. This course is designed for the student with little or no experience playing the piano. Students will learn to play melody and chords on the piano keyboard and to read basic music notation. This course may be taken as a prerequisite to Musicianship 2: Basic Music Theory.

Course outcomes and expectations are:

- Develop an understanding of piano music notation and learn to read basic notes and rhythm patterns
- Perform several songs in a variety of styles
- Improvise basic accompaniment patterns

Basic Music Theory – MU08200 – .5 credits, one quarter, **unleveled**. Open to all grades. This class meets in the music lab. **Prerequisite:** *A grade of C or better in Piano Lab MU08100, Guitar Lab MU08400 or a demonstration of piano or guitar competency by playing the pieces on pages 58 & 59 of the Musicianship 1 text.* See Mr. Hart or Mr. Fein for further details.

Students will learn how to write basic songs including melody and chords. The fundamentals of music theory such as the reading and writing of basic music notation, scales and key signatures are an integral part of this course. Entry-level music theory and music notation software are used extensively. There is also use of electronic keyboards. Students requesting permission for entry into the Musicianship sequence at this level are required to demonstrate knowledge and skills consistent with the successful completion of Musicianship 1: Piano Lab MU07300. This course may be taken as a prerequisite to Musicianship 3: Advanced Music Theory and Composition.

Course outcomes and expectations are:

- Develop an understanding of the basic elements of music theory and notation
- Demonstrate an understanding of music theory concepts through testing
- Compose melodies using music notation software
- Write an original song

Advanced Music Theory and Composition – MU08300 – .5 credits, one quarter, **unleveled**. This class meets in the music lab. **Prerequisite:** *A grade of C or better in Basic Music Theory MU08200, a B or better on the Basic Music Theory competency exam, and a demonstration of piano proficiency as described in the prerequisites for Musicianship 2.* See Mr. Hart or Mr. Fein for details.

This course is designed for the student with an intermediate to advanced understanding of musical concepts. Students will be given the opportunity to write a variety of musical compositions and perform those using Electronic MIDI keyboards. There is extensive use of music notation and sequencing software, electronic keyboards, and MIDI technology.

Course outcomes and expectations are:

- Develop an understanding of harmonic structures and intermediate/advanced elements of music theory including chord scales, four-part writing, cadences, 7th chords, non-harmonic tones, modulation, and jazz/contemporary harmony
- Demonstrate the ability to write single and multi-part original musical compositions using music notation software and MIDI systems

Guitar Lab – MU08400 – .5 credits, one quarter, **unleveled**. Open to students in ALL levels and ALL grades. No prerequisite. *This course may be taken more than once for credit.* This class meets in the music lab and integrates GarageBand music production software. This course is designed for the student with little or no experience playing the guitar. The purpose of this course is to prepare students for a lifetime of guitar playing and music appreciation. Students will learn to play melodies and chords on the electric guitar using fingerstyle and picking techniques. Students will perform solo and ensemble literature in a variety of musical styles and read standard music notation. This course may be taken as a prerequisite to Musicianship 2: Basic Music Theory.

Course outcomes and expectations are:

- Develop an understanding of guitar music notation and learn to read basic notes and rhythm patterns
- Develop an understanding of basic guitar technique including left/right hand techniques
- Perform several songs (melody and chord progression) in a variety of styles
- Improvise basic accompaniment patterns

[**Guitar Lab ~ Alternate Day – MU08450** - .5 credits, every other day for one semester, **unleveled**. Same course description as above. This course is designed for music students but is an option for all students.]

Ukulele Lab – MU08700 - .5 credits (1 quarter course) – Unleveled, open to all grades. No prerequisite. This course is designed for the student with little or no experience playing the ukulele. The purpose of this course is to prepare students for a lifetime of ukulele playing and music appreciation. Students will learn to play melodies and chord progressions on the ukulele using strumming and fingerstyle techniques. Students will perform solo and ensemble literature in a variety of musical styles.

Course outcomes and expectations are:

- Develop an understanding of tablature and traditional music notation and learn to read basic notes and rhythm patterns.
- Develop an understanding of basic ukulele technique including left/right hand techniques.
- Perform several songs (melody and chord progression) in a variety of styles.
- Improvise basic accompaniment patterns.

Best Buddies General Music - MU08600 - .5 credits (1 quarter course) – Unleveled, open to all grades. No prerequisite. The Best Buddies music elective pairs students with disabilities with a peer buddy. Students will work collaboratively throughout the course to support each other's musical growth. Class activities include bucket drumming, playing the piano keyboard, playing ukulele, and composing/arranging with Chrome Music Lab and GarageBand.

Course Goals:

- Students will learn the core concepts of bucket drumming and perform a variety of arrangements.
- Students will learn how to play melodies and chords on the piano keyboard and perform a variety of songs.
- Students will learn how to play chords and melodies on the ukulele and perform a variety of songs.
- Students will compose/arrange music using Chrome Music Lab and GarageBand music production software and incorporate loops, the MIDI keyboard, and audio recorded with a microphone.
- Students will explore music through singing and movement.

Courses Offered on Alternate Day (A/B) Schedule for Music Students

The chart below lists courses that may be offered on an alternate day (A/B) schedule to complement music classes. (May be selected by non-music students as well.)

NUMBER	COURSE NAME	TIME
SS05551	AP Psychology (odd years: 2019-20, 2021-22)	year-long, alternate days
SS04051	AP United States Government and Politics (even years: 2020-21, 2022-23)	year-long, alternate days
EN05050	Advanced Studio Theatre	semester-long, alternate days
AR04450	Ceramics I	semester-long, alternate days
AR04750	Computer Animation	semester-long, alternate days
EN05250	Creative Writing	semester-long, alternate days
MU07150	Music Production	semester-long, alternate days
AR05150	Digital Photography 1	semester-long, alternate days
PE00950	PE for Ninth-Grade Students	semester-long, alternate days
PE01050	Health for Tenth-Grade Students	semester-long, alternate days
PE02150	Lifetime Fitness	semester-long, alternate days
PE02250	Fitness/Weight Training	semester-long, alternate days
PE02050	General Physical Education	semester-long, alternate days
MU08450	Guitar Lab	semester-long, alternate days
TE01350	Manufacturing Technology I	semester-long, alternate days

Physical Education/Health Department

All students graduating from Haverford High School should be able to demonstrate life management skills by setting goals and priorities in their personal lives and by implementing a plan for physical and mental health. The following courses were designed to meet these life-long goals.

All students must take and pass a minimum of three .5 credit courses during their high school career. The typical sequence of courses would be a physical education course taken in the freshman year, Health Education in the sophomore year, and an additional physical education course taken at any time freshman through senior year.

All students are required to have sneakers and should be prepared for activity on their first physical education class day.

Course Descriptions

Physical Education for 9th Grade Students – PE00900 – .5 credits, one quarter course, unlevleled. Class meets four days a week in the gym and one day a week in the fitness center. Open to grade 9 only. Proper dress is required to participate in this class. Areas of concentration will be physical fitness activities, competitive games, and recreational games. Activities may include but are not limited to the following: soccer, touch football, pickleball, badminton, volleyball, ultimate frisbee, and floor hockey. Throughout the course students will work to improve their cardiovascular endurance and overall muscular strength and endurance. At least one day a week will be dedicated to cardiovascular training. Students will be required to learn the muscles of the body and have a basic understanding for developing a strength training and cardiovascular workout routine. Students will also participate in Fitnessgram fitness testing as a way to set personal fitness goals.

[Physical Education for 9th Grade Students ~ Alternate Day – PE00950 – .5 credits, one semester course, unlevleled. This course meets every other day. Course description is the same as above.]

Health for 10th Grade Students – PE01000 - .5 credits, one quarter course, unlevleled. Students will participate in health education five days a week. Units that are covered in this class include Mental Health, Nutrition, First Aid & CPR, Alcohol Education, Drug Education, and Human Sexuality and Communicable Disease Education.

[Health for 10th Grade Students ~ Alternate Day – PE01050 – .5 credits, one semester course, unlevleled. This course meets every other day. This course is designed for music students but is an option for all students. Course description is the same as above.]

****After the completion of the above courses,** students can choose to take one or more of the Physical Education electives listed below. At least one additional Health and Physical Education course is necessary to fulfill graduation requirements.

Physical Education Electives

General Physical Education – PE02000 – .5 credits, one quarter course, **unleveled**. Students will participate in physical education class 5 days a week. This course will address individualized, team and fitness activities. Proper dress is required. Areas of concentration will be physical fitness activities, competitive games, and recreational games. Various field trips may require a nominal fee. Students will also participate in *Fitnessgram* fitness testing.

[**General Physical Education ~ Alternate Day – PE02050** – .5 credits, one semester course, **unleveled**. This course is designed for music students but is an option for all students. Course description is the same as above.]

Lifetime Fitness – PE02100 – .5 credits, one quarter course, **unleveled**. Students will participate in physical activities 5 days a week. Proper dress is required. Students will gain knowledge of health-related components of fitness including:

- Cardiovascular endurance
- Muscular strength
- Flexibility

In addition, students will gain a better understanding of lifetime sports. These include but are not limited to baseball, basketball, volleyball, tennis, and badminton. Basic skills and regulations will be taught at this level. Finally, students will also learn the importance of maintaining good nutrition and appropriate dietary intake throughout their lives. Various field trips may require a nominal fee. Students will also participate in *Fitnessgram* fitness testing.

[**Lifetime Fitness ~ Alternate Day – PE02150** – .5 credits, one semester course, **unleveled**. This course is designed for music students but is an option for all students. Course description is the same as above.]

Fitness/Weight Training – PE02200 – .5 credits, one quarter course, **unleveled**. This course is designed to offer students an in-depth look into the areas of strength and conditioning. Exploration of various techniques and equipment will be the foundation of this course. Students will learn the basic design of individual strength programs, and establish lifelong fitness habits, and/or correct form and movement of exercises. Students will be required to participate in activities that will challenge them both mentally and physically, while safety procedures are emphasized. Form and movement are essential for improved performance and injury prevention. Furthermore, students will gain an understanding of how the various body systems respond to different strength and conditioning modalities.

The course is set up in 4 units: 1. Warm-up and Flexibility, 2. Anaerobic Training, 3. Aerobic Endurance Training, and 4. Program Design and Resistance Training.

[**Fitness/Weight Training ~ Alternate Day – PE02250** – .5 credits, one semester course, **unleveled**. This course is designed for music students but is an option for all students. Course description is the same as above.]

Advanced Personal Fitness – PE02500 - .5 credit, 1 quarter course, **unleveled**. Students that have previously completed the “Fitness and Weight Training” or “Functional Fitness and Sport Performance”, courses will have the option to enroll in a more personalized fitness journey by selecting “Advanced Personal Fitness”. There are a wide variety of different types of strength and conditioning modalities and each individual should strive for their own personal experience in terms of short and long-term fitness goals. It is important to have the knowledge and ability to create one's own path towards wellness through movement. In this course, students will identify their personal fitness goals for the short term and long term, while understanding how to select an appropriate fitness modality that will help them reach their goals. Students will track their progress on a weekly basis by analyzing their physiological response to the fitness plan they have selected. One day a week the class will be held in the gym for a fitness game-based activity.

Fitness and Sport – PE02400 - .5 credit, 1 quarter course, **unleveled**. The goal Functional Fitness and Sport Performance is to expose students to the many benefits of the Crossfit training methodology, which can be summarized as *“constantly varied functional movements executed at high intensity”*. The course examines the various models of fitness and how those models can be applied to a fitness program and a healthy lifestyle. Students will develop the technique for performing the foundational functional movement series (deadlift, squat, press) and progress to more complex ground based, explosive movements such as the “clean and jerk” and “snatch”. Students will also challenge their endurance and strength in daily WODs (Workout of the Day) that provide measurable results and allow for friendly competition between classmates. Athletic performance development, plyometric training and cardiovascular endurance, as well as other components of fitness will be highlighted in this adaptable and scalable course that is intended for all students.

Physical Education Concentration – PE02300 - .5 credits, one quarter course, unleveled. This class meets 5 days a week in the gym. Proper dress is required. This course is designed for students, who enjoy physical activity, are athletically minded, and who desire a higher level of competition. Course includes: • Competitive gym activities, sport psychology methodology, motivation and goal setting and an overall focus of working in a group/team atmosphere towards a common goal.

Health and Wellness – PE04000 – .5 credits, one quarter, **unleveled**. Open to 11th and 12th grade students only. Class meets five days a week. The course will cover issues related to health decision-making throughout one’s lifetime. Guest speakers and field trips will be incorporated into the course where appropriate. Various field trips may require a nominal fee. Topics may include but are not limited to the following:

- Human Sexuality/Relationships
- Consequences of Drug/Alcohol Use
- Nutrition and Wellness

Science Course Selection for Haverford High School

Graduation Requirements

4 Credits

Engineering to Learn Biology Chemistry

The first three required science courses lay the foundation necessary for science literacy and achievement of standards as designated by the PA and national documents. The math requirement for the first course is Algebra I. It must have already been completed or be taken concurrently with Engineering to Learn (Formerly IPS). The number of required science credits for graduation is four. The first three courses in sequence are Engineering to Learn, Biology, and Chemistry. Once successfully completed, students may choose an additional course from any of the selections listed below. The recommended core curriculum provides the prerequisite conceptual science understandings for students to be prepared for the more complex levels of the remaining science courses. The strands of science studies, listed by discipline are:

Biological:

- Anatomy & Physiology
- AP Biology
- Biotechnology

Environmental:

- Environmental Science
- Marine Ecology
- AP Environmental Science

Physical (Chemistry & Physics):

- Forensic Chemistry
- AP Chemistry
- Engineering Design
- Physics (H)
- AP Physics 1 and 2
- AP Physics C: Mechanics
- AP Physics C: Electricity

****If you plan on taking an AP science course before your senior year, it is recommended that you double up in science prior to your junior year.**

****Students who do extremely well in Honors science classes, and are independently motivated, may petition their counselor and teacher for approval to take the AP version of Chemistry and/or Biology instead of the first level course.**

Engineering to Learn (H) – SC01001 – 1 credit, one semester course, **honors level**. ETL is the 9th grade selection in the recommended core curriculum sequence. ***Requisite: Must also be enrolled in MA00901, Algebra I (H).*** ETL is an introductory science course designed to focus on future ready skills; Communication, Critical Thinking, Creativity, and Collaboration in a project-based learning environment. With a major focus on the Engineering part of Science, Technology, Engineering and Math (STEM), this course is designed to challenge the most capable science students and to develop critical and analytical thinkers and problem solvers. Through problem and project based learning, students explore engineering and physical science concepts to arrive at a solution to the problem at hand. Students will be assessed in a variety of ways including presentations, screencast, summary paper, trifold poster, and test.

Engineering to Learn (CP) – SC01002 – 1 credit, one semester course, **college prep level**. Engineering to Learn is the 9th grade selection in the recommended core curriculum sequence. This course provides thorough academic preparation through project oriented activities. Same description as above. ***Requisite: Must also be enrolled in MA00902 - Algebra I (CP), MA00010 – Mathematics I, or MA00090 – Mathematics 9 (Supplemental).***

Advanced Placement Biology – SC03201 – 2 credit, year-long course, **AP level**. Open to grades 11 and 12. ***Prerequisites: Engineering to Learn, Biology & Chemistry (Honors or college prep, with an expected minimum final grade of B, Open to 10th grade students; however all students will need the pre-requisite knowledge from Biology and Chemistry).*** This course includes the study of basic and advanced knowledge of recent developments in the following topics: Cell biology, biochemistry, cell energetics, molecular genetics, heredity, evolution, biotechnology and ecology. Assessments include tests, quizzes, written lab reports, projects, and oral presentations.

Course outcomes and expectations include:

- Apply learning to biological, ethical, and financial societal issues both present and future
- Participate in and contribute to group activities
- Produce oral and written reports related to specific course content
- Utilize various scientific tools: microscopes, and chemical testing agents
- Employ technology to enhance learning and research

Biology (H) – SC03101 – 1 credit, one semester course, **honors**. Open to students in grades 9, 10, 11 and 12. ***Prerequisite: Engineering to Learn, with a minimum expected final grade of B.*** Biology is the second course in the required core curriculum sequence. This introductory course focuses on the concepts of life processes. Concepts include energy flow, structure and function, reproduction, genetics, evolution, ecology, taxonomy and organisms. The course emphasizes the similarities among organisms at a variety of organizational levels.

Students are expected to:

- Participate in and contribute to group and individual activities such as labs, modeling, problem solving, data collection and organization and written reports
- Apply scientific processes to classroom activities and everyday life

Biology (CP) – SC03102 – 2 credit, year-long course, **college prep level**. Open to students in grades 9, 10, 11 and 12. **Prerequisite: Engineering to Learn.** Biology is the second course in the required core curriculum sequence. This introductory course focuses on the concepts of life processes. Concepts include energy flow, structure and function, reproduction, genetics, evolution, ecology, taxonomy and organisms. The course emphasizes the similarities among organisms at a variety of organizational levels.

Students are expected to:

- Participate in and contribute to group and individual activities such as labs
- Demonstrate modeling, problem solving, data collection, organization and written reporting
- Apply scientific processes to classroom activities and everyday life
- Explore careers in life sciences
- Integration of the PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards

Advanced Placement Chemistry – SC02201 – 2 credit, year-long course, **AP level**. Open to grades 11 and 12. **Prerequisites: Chemistry (H) (SC02101), Algebra II.** A scientific calculator is required. This course expands on and uses, in greater depth, all of the basics learned in Chemistry I; such as atomic theory, kinetic molecular theory, and the conservation of matter and energy to demonstrate the structure of matter, periodicity, bonding, stoichiometry, gas laws, chemical equilibrium, kinetics, physical and thermal chemistry, oxidation/reduction reactions, organic and biochemistry, nuclear chemistry, and electrochemistry.

Course outcomes and expectations include:

- Demonstrate the ability to perform complex multi-step college-level problems involving abstract concepts and requiring advanced manipulations with a scientific calculator
- Predict equations for a variety of different types of chemical reactions
- Extrapolate chemical phenomena (both through the use of mathematical equations as well as through descriptive chemistry) if given data or collected data via experimentation.
- Develop and perfect techniques of manipulating various laboratory instruments and apparatus in performing advanced experiments, and write comprehensive reports on these experiments effectively communicating information to others in both written and oral form
- Apply chemistry concepts to a variety of everyday situations involving environmental and ecological awareness
- Integration of the PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards

Chemistry (H) – SC02101 – 1 credit, one semester course, **honors level**. Open to students in grades 10, 11 and 12. Chemistry is the third course in the required core curriculum sequence. **Prerequisite: Engineering to Learn, Biology, Algebra I – with a minimum expected final grade of B (which may be taken concurrently).** Instruction is focused on inquiry and problem solving, involving activities that relate to real life applications and experiences. The nature of the course requires students to continually revisit fundamental chemistry principles throughout the semester, extending their understanding and applying these concepts in new context. All levels, while addressing the needs and abilities of different students, is divided into the following major concept areas:

Course outcomes and expectations include

- Structure of Matter – atomic structure, bonding, organic and biochemistry
- Physical & Chemical Properties of elements & compounds
- Energy Sources & Transfer of Heat – chemical reactions, laws of conservation of energy and matter, gas laws, electrochemistry, oxidation-reduction and stoichiometry

Assessments at all levels include authentic end of the unit projects, written lab reports, group analysis problems or data, quizzes, tests and final exam.

Chemistry (CP) – SC02102 – 1 credit, one semester course, **college prep level**. Open to students in grades 10, 11 and 12. Chemistry is the third course in the required core curriculum sequence. ***Prerequisite: Engineering to Learn, Biology.*** This course is divided into the following major concept areas:

Course outcomes and expectations include

- Structure of Matter – atomic structure, bonding, organic and biochemistry
- Physical & Chemical Properties of elements & compounds
- Energy Sources & Transfer of Heat – chemical reactions, laws of conservation of energy and matter, gas laws, electrochemistry, oxidation-reduction and stoichiometry

Assessments at all levels include authentic end of the unit projects, written lab reports, group analysis problems or data, quizzes, tests and final exam.

Chemistry (CT) – SC02103 – 1 credit, 1 semester course, **career track level**. Open to students in grades 10, 11 and 12. For students who may have not met the Algebra I math requirement and need the required course for graduation. ***Prerequisite: Engineering to Learn, Biology.*** Topics include atomic and molecular theory, physical and chemical properties of elements and compounds, acid/base theories, and the conservation of matter and energy. Assessments will include tests, quizzes, and written reports. Portfolio projects are performed during the semester demonstrating knowledge of principles to include: determination of physical properties, determination of atomic structure, identification of unknown substances, or the presentation of a survey of selected topics.

Course outcomes and expectations include:

- Demonstrate an understanding of the basic concepts of chemistry including: atomic structure, physical and chemical properties of elements and compounds, the mole, stoichiometry, chemical bonding, energy relationships, acids and bases, oxidation-reduction, and gas laws
- Apply chemistry to everyday situations and environmental/ecological concerns
- Complete lab activities and prepare formal written reports communicating the methods, procedures, analyses and results of laboratory investigations
- Demonstrate the ability to carry out multi-step problem
- Employ scientific method in analyzing chemical and physical phenomena
- Make hypotheses and use accepted Laws of chemistry and physics to explain chemical and physical behaviors of matter

Forensic Chemistry – SC02400 – 1 credit, one semester course, **unleveled**. Open to grades 11 and 12. ***Prerequisites: Completion of Engineering to Learn, Biology and Chemistry.*** A challenging course for the student interested in the scientific crime detection methods used by crime laboratories. This course is focused on the Science, Technology, Engineering, and Math (STEM) initiatives and is designed to challenge the most capable science students and to develop critical and analytical thinkers. Instruction is focused on an inquiry, problem-solving course connected to rich and dynamic exploration of real world learning. The emphasis will be on chemical principles and laboratory techniques with reference to biological and physical evidence.

Course Outcomes & Expectations

- Demonstrate a basic understanding of organic and biochemistry as applies to forensics
- Develop & apply lab skills in organic and inorganic analysis used in forensics as chromatography, spectroscopy, and extractions.
- Develop scientific literacy by reading and researching case histories
- Opportunities for interaction with professionals in the field of forensics

Anatomy & Physiology (H) – SC04101 – 1 credit, one semester course, **honors level**. Open to students in grades 11 and 12. ***Prerequisites: Engineering to Learn, Biology, and Chemistry.*** Topics include: cell and tissue structure: and integumentary, skeletal, muscular, digestive, cardiovascular, and reproductive systems. Course assessments include: tests, quizzes, laboratory work, written and oral reports, laboratory practicals, and a final examination.

Course outcomes and expectations include:

- Understanding and development of anatomical terminology as applied to clinical situations
- Discuss the interrelationships between structures and functions of the major organ systems and their microstructures
- Explain the importance of the body's specialized functions, including protection, support, movement, integrative ability, coordination, processing, transporting, and reproduction
- Demonstrate an understanding of course content through laboratory investigations (including dissection), tests, quizzes, and class work

Anatomy & Physiology (CP) – SC04102 – 1 credit, one semester course, **college prep level**. Open to students in grades 11 and 12. ***Prerequisites: Engineering to Learn, Biology, and Chemistry.*** Topics include: cell and tissue structure: and integumentary, skeletal, muscular, digestive, cardiovascular, and reproductive systems. Course assessments include: tests, quizzes, laboratory work, written and oral reports, laboratory practicals, and a final examination.

Course outcomes and expectations include:

- Understanding and development of anatomical terminology as applied to clinical situations
- Discuss the interrelationships between structures and functions of the major organ systems and their microstructures
- Explain the importance of the body's specialized functions, including protection, support, movement, integrative ability, coordination, processing, transporting, and reproduction
- Demonstrate an understanding of course content through laboratory investigations (including dissection), tests, quizzes, and class work

Biotechnology – SC04200 – 1 credit, one semester course, **unleveled**. Open to students in grades 11 and 12. ***Prerequisites: Successful completion of Engineering to Learn, Biology, and Chemistry.*** This course is another in the strand focused on the Science, Technology, Engineering and Math (STEM) initiative. Instruction is focused on an inquiry, problem-solving course connected to rich and dynamic exploration of real world learning. Concepts introduced in this course will include laboratory safety, instrument calibration, DNA form and function, manipulation of DNA, cell transformation, and applications of genetic engineering. Laboratory techniques introduced may include DNA extraction using restriction enzymes, horizontal gel electrophoresis, polymerase chain reaction, bacterial transformation, protein purification by chromatography, protein analysis by comparative spectroscopy, and vertical gel electrophoresis. The following technology used in this course will be the

Fischertechnik kits and PASCO probeware. Students interested in exploring careers such as forensics, genetics, and genetic engineering should consider this course.

Environmental Science (H) – SC04301 – 1 credit, one semester course, **honors level**. Open to students in grades 11 and 12. *Prerequisite: Engineering to Learn, Biology, and Chemistry (Honors or college prep) with a minimum grade of C.* Topics include basic principles and concepts of the structure and functions of a variety of ecological systems and their interconnectedness with social and economic systems to achieve global sustainability. Assessments include tests, quizzes, and laboratory work including on-site fieldwork at a local stream, and a final examination. The subjective portion will include a three-day laboratory experience to be completed during the semester.

Environmental Science (CP) – SC04302 – 1 credit, one semester course, **college prep level**. Open to students in grades 11 and 12. *Prerequisite: Engineering to Learn, Biology, and Chemistry (Honors or college prep).* Topics include basic principles and concepts of the structure and functions of a variety of ecological systems and their interconnectedness with social and economic systems to achieve global sustainability. Assessments include tests, quizzes, and laboratory work including on-site fieldwork at a local stream, and a final examination. The subjective portion will include a three-day laboratory experience to be completed during the semester.

Marine Ecology (H) – SC04401 – 1 credit, one semester course, **honors level**. Open to students in grades 11 and 12. *Prerequisites: Engineering to Learn, Biology, and Chemistry.* Marine ecology is the scientific study of marine life, habitats, populations and interactions between organisms and their environment. This includes all factors that may contribute to the development of these various interactions, both biotic and abiotic.

Instruction will focus on three big ideas.

- The Ocean as a Habitat - topics include the formation of our ocean basins to the currents that circulate needed nutrients
- Human Intervention in the Sea - topics include the effects of resource harvest and water pollution on the overall sustainability of the ocean.
- The Diversity of Living Things - topics include a taxonomic journey through the life at sea as we classify the diversity of living things.

Marine Ecology (CP) – SC04402 – 1 credit, one semester course, **college prep level**. Open to students in grades 11 and 12. *Prerequisites: Engineering to Learn, Biology, and Chemistry.* Marine ecology is the scientific study of marine life, habitats, populations and interactions between organisms and their environment. This includes all factors that may contribute to the development of these various interactions, both biotic and abiotic.

Instruction will focus on three big ideas.

- The Ocean as a Habitat - topics include the formation of our ocean basins to the currents that circulate needed nutrients
- Human Intervention in the Sea - topics include the effects of resource harvest and water pollution on the overall sustainability of the ocean.
- The Diversity of Living Things - topics include a taxonomic journey through the life at sea as we classify the diversity of living things.

Advanced Placement Environmental Science I – SC04501 – 1 credit, first semester only course, **AP level**. Open to Grades 11 and 12. *Prerequisites: Engineering to Learn, Biology, and Chemistry.* Students must be prepared to work outdoors for many of the labs. Examples of advanced topics included are:

Interdependence of Earth's systems, Renewable and Non-renewable resources, Environmental Quality, Global Changes and their Consequences, Environment and Society, and Choices for the Future. Assessments include tests, quizzes, and laboratory work including on-site fieldwork, and a final examination.

Course expectations and outcomes include:

- Apply the scientific method and ecological principles to everyday situations
- Participate in group laboratory activities
- Utilize various scientific tools and technology: PASCO probes and software, microscopes, water, air, and soil quality analysis kits
- Demonstrate an understanding of the material through laboratory and field experiences
- Integration of the PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards

Environmental Science II (H) – SC04601 – 1 credit, second semester only course, **honors level**. Open to grades 11 and 12. **Prerequisite: Advanced Placement Environmental Science I (SC04501) with an expected minimum final grade of B.** This course is an advanced collegiate – based theoretical course that extends the concepts, principles, and procedures of AP Environmental Science I. This course will further prepare students for success on the AP test. After the AP exam, students will focus on laboratory research.

Course expectations and outcomes include:

- Complete and review model AP exam questions
- Apply appropriate PASCO technologies to investigate and conform to the notions of ecology as defined by the Advanced Placement Syllabus
- Discuss applications and concepts of Ecology, both orally and in writing

Physics (H) – SC04701 – 1 credit, one semester course, **honors level**. Open to grades 11 and 12. **Prerequisites: Engineering to Learn, Biology, Chemistry, Algebra II (H) & Pre-Calculus (H) with an expected minimum final grade of B in each. Pre-Calculus (H) may be taken concurrently.** Scientific calculator is required. This is an intensive laboratory based introductory physics course is recommended for anyone who plans to attend college and has an interest in science. The course surveys kinematics (the study of motion), dynamics (Newton's Laws and how forces affect motion), momentum, energy, electricity, magnetism, light, and sound. Assessments include tests, labs, quizzes, investigations, projects, reports, posters, problem solutions, event predictions and explanations. Students will solve problems using the physics relationships, laws, and concepts.

Course outcomes and expectations include:

- Perform lab investigations and write complete lab reports
- Make predictions and write complete justifications to show the reasoning behind the prediction using physics concepts
- Complete a project meeting minimum criteria using concepts covered
- Organize and solve problems using many of the physics relationships and concepts covered
- Apply physics to everyday situations
- Integration of the PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards
- Complete/ build a project in which the laws of physics are demonstrated and discuss the relation of your project to these laws of physics

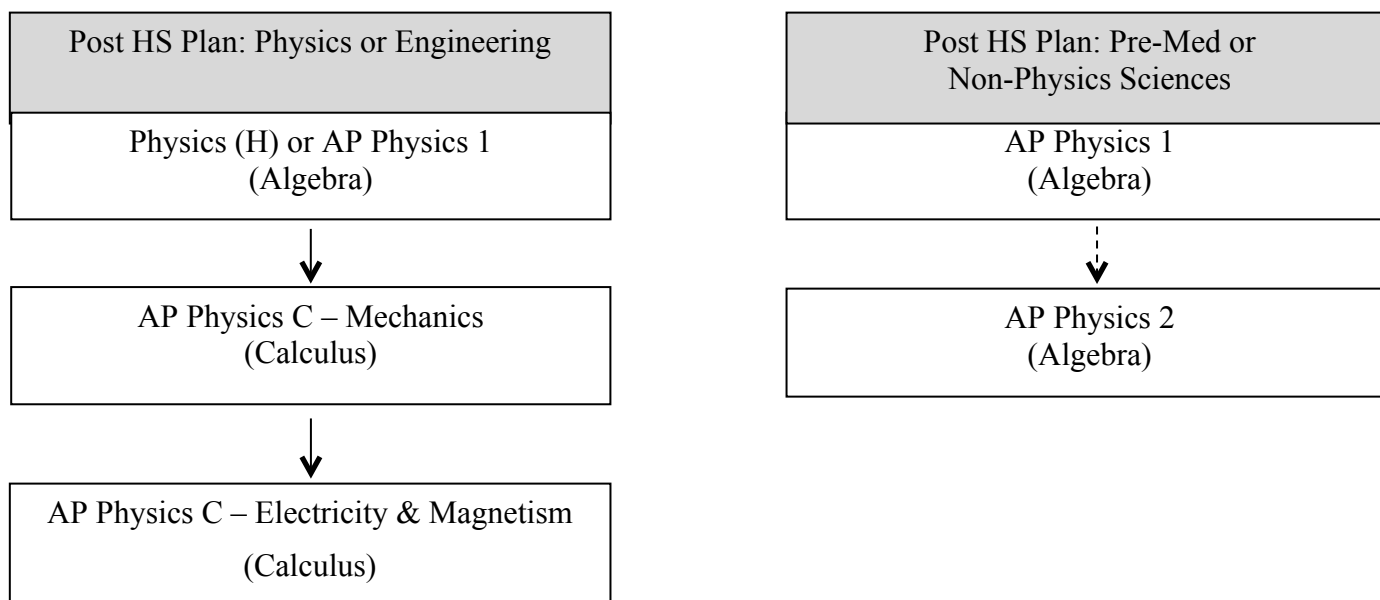
Engineering Design (CP) – SC04702 – 1 credit, one-semester course, *Prerequisite: Must have completed, ETL.* This class will build upon the foundations of the Engineering To Learn class. Students will investigate the environment by learning firsthand, real-world issues, and developing solutions to the problems in the community using the Engineering Design Process, S.T.E.M. activities, and career exposure. Problem-based learning challenges students to learn as active problem-solvers confronted with a real local problem to solve. Students will reach out and build relationships with the local professional community throughout the process. Students should expect to assume major responsibility (both individually and collectively) for their learning and instruction, students will use problem-solving skills for the development of both scientific knowledge and future-ready skills; Communication, Critical Thinking, Creativity, and Collaboration in a project-based learning environment.

Earth Science – SC06000 – .5 credits, one quarter course, **unleveled**. Open to grades 9, 10, 11 and 12. This quarter-long course will focus on the planet's external forces that control our weather and climate, as well as the internal processes that form our rocks and minerals. What causes weather? How do hurricanes form? What is climate change, and how can we affect it? What are minerals? How do various igneous rocks form? Topics include the Atmosphere, Meteorology, Storms, Climate; Minerals, Igneous, Metamorphic, and Sedimentary Rocks. Projects and presentations will be used in part throughout the course; we will interpret weather maps, topographic maps, track tropical storms, determine mineral composition, and predict weather patterns.

Astronomy – SC06100 – .5 credits, one quarter course, **unleveled**. Open to grades 9, 10, 11 and 12. This quarter-long course will focus on the planet and its place in the solar system, as well as the evolution of stars and the universe. How did our solar system form? How can we determine the composition of planetary atmospheres/stars? What does a stars life cycle look like? How did the universe come to be? Topics include the Sun-Earth-Moon system, our solar system and its planets, stellar evolution, galaxies, the universe, and the theories of origin. Projects and presentations will be used throughout this course; as well as home-based observations; astronomy based current events, sky simulations, and labs dealing with optics, the Doppler effect, and Kepler's laws.

Create Code Construct – SC06200 – .5 credits, one quarter course, **unleveled**. Open to grades 9, 10, 11 and 12. *This course may be taken more than once for credit.* This course combines computer coding, robotics, and electronics in one course. No prior knowledge of coding or electronics is required. The program used is Arduino CTC 101 which has 5 modules and introduces students to the foundations of programming and basic coding, Arduino boards and digital signals, analog signals and serial communication, robotics, power systems and motors, wireless communication via Bluetooth and advanced sensors.

AP Physics Sequence Options



Advanced Placement Physics C: Mechanics – SC04801 – 1 credit, one semester FALL only course, **AP level**. Open to grades 11 and 12. ***Prerequisites: AP Calculus AB ~ (MA04201) with an expected minimum final grade of ‘B’ in each.*** Scientific calculator required. This course will focus on the mechanics part of the Advanced Placement Physics Test "C" of the College Entrance Examination Board. The course includes equilibrium, kinematics, dynamics, work and energy, impulse and momentum, rotation, and periodic motion. Assessments will include: tests, labs, quizzes, investigations, projects, problem solutions, event predictions and explanations. Students will solve problems requiring the application of the laws of physics, relationships, and concepts including AP questions.

Course outcomes and expectations include:

- Perform lab investigations and write complete lab reports
- Make predictions and write complete justifications to show the reasoning behind the predictions using physics concepts
- Complete a project meeting minimum criteria using concepts covered
- Organize and solve problems using many of the physics relationships and concepts covered
- Apply physics to everyday situations
- Use computer simulations to examine how changing certain parameters can affect the outcome in a given situation, or how real life situations compare to ideal cases studied in class
- Integration of PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards

Advanced Placement Physics C: Electricity & Magnetism – SC05001 – 1 credit, one semester SPRING only course, **AP level**. Open to grades 11 and 12. ***Prerequisites: AP Physics C - Mechanics (SC04801) and AP Calculus AB (MA04201) with an expected minimum final grade of B in each.*** Scientific calculator required. This course will focus on the electricity and magnetism part of the Advanced Placement Physics Test "C" of the College Entrance Examination Board. The course includes electrostatics, Gauss’s Law,

electric circuits, magnetic fields and forces, electromagnetism, electromagnetic induction, and Maxwell's equations.

Assessments will include: tests, labs, quizzes, investigations, projects, problem solutions, event predictions and explanations. Students will solve problems requiring the application of the laws of physics, relationships, and concepts including AP questions.

Course outcomes and expectations include:

- Perform lab investigations and write complete lab reports
- Make predictions and write complete justifications to show the reasoning behind the predictions using physics concepts
- Complete a project meeting minimum criteria using concepts covered
- Organize and solve problems using many of the physics relationships and concepts covered
- Apply physics to everyday situations
- Use computer simulations to examine how changing certain parameters can affect the outcome in a given situation, or how real life situations compare to ideal cases studied in class
- Integration of PASCO technology and computer software program for a complete implementation of the PA Science and Technology Standards

Advanced Placement Physics 1 : Algebra-Based – SC05101 – 1 credit, one semester FALL only course, AP level. Open to grades 11 and 12. ***Prerequisites: Engineering to Learn, Biology (H), Chemistry (H), Pre-Calculus (H) with an expected minimum final grade of B. Pre-Calculus (H) may be taken concurrently. Scientific calculator is required.*** This course provides a systematic development of the main principles of physics, emphasizing problem solving and helping students develop a deep understanding of physics concepts including Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. AP Physics 1 provides a foundation in physics for students in the life sciences, pre-medicine, and some applied sciences. Assessments include: tests, labs, quizzes, investigations, projects, reports, problem solutions, event predictions and explanations.

Course outcomes and expectations include;

- Perform lab investigations and write complete lab reports
- Make predictions and write complete justifications to show the reasoning behind the prediction using physics concepts
- Complete a project meeting minimum criteria using concepts covered
- Apply physics to everyday situations
- Use computer simulations to examine how changing certain parameters can affect the outcome in a given situation, or how real life situations compare to ideal cases studied in class
- Integration of PASCO technology and computer software program

Advanced Placement Physics 2: Algebra- Based – SC05201 – 1 credit, one semester SPRING only course, AP level. Open to grades 11 & 12. ***Prerequisites: AP Physics 1, and Pre-Calculus (H) with an expected minimum final grade of B in each. Pre-Calculus (H) may be taken concurrently. Scientific calculator is required.*** This course provides a systematic development of the main principles of physics, emphasizing problem solving and helping students develop a deep understanding of physics concepts including fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. AP Physics 2 provides a foundation in physics for students in the life sciences, pre-medicine, and some applied

sciences. Assessments include: tests, labs, quizzes, investigations, projects, reports, problem solutions, event predictions and explanations.

Course outcomes and expectations include;

- Perform lab investigations and write complete lab reports
- Make predictions and write complete justifications to show the reasoning behind the prediction using physics concepts
- Complete a project meeting minimum criteria using concepts covered
- Apply physics to everyday situations
- Use computer simulations to examine how changing certain parameters can affect the outcome in a given situation, or how real life situations compare to ideal cases studied in class
- Integration of PASCO technology and computer software program

DCTS SCIENCE PROGRAM OFFERINGS

ENGINEERING AND COMPUTER SCIENCE

A cluster of programs for students seeking challenging and fulfilling STEM careers in engineering, design, and computer network technologies.

Engineering Technologies/Technicians [CIP 15.9999]

Computer Networking & Digital Forensics [CIP 11.0901]

Advertising, Design, & Commercial Art [CIP 50.0402]

Management Information Systems [CIP 52.1201]

HEALTH AND BIOSCIENCES

A cluster of programs that prepares students for exciting career pathways in medicine, nursing, and allied health.

Health Sciences [CIP 51.9999]

Emergency & Protective Services [CIP 43.9999]

Medical Careers [CIP 51.9999]

Dental Technology [CIP 51.0601]

Exercise Therapy & Sports Science [CIP 51.2604]

Biomedical Technology and Laboratory Science. [CIP 51.9999]

Social Studies Department**Graduation Requirement****4 Credits****United States History****World History****United States Civics and
Government****Social Studies Elective
Choice(s)**

All students in the School District of Haverford Township will work within the disciplines of history, geography, economics, political science, philosophy, sociology, psychology, government and law. All students will use the generally accepted operating procedures of social science research and presentation methodology to come to a reasoned, sophisticated understanding of their society and the world in which they live. All students will make informed decisions and seek to influence their peers for the betterment of society.

Advanced Placement Electives**AP European History****AP Human Geography****AP Macroeconomics****AP Microeconomics****AP Psychology****AP United States Government and Politics****AP United States History****AP World History****Social Studies Electives****20th Century Pop Culture****African American Studies****Choices in Crisis: A Study of the Holocaust****Criminal Justice****Economics****Elections****Environmental History****Global Conflicts in the Modern World****Psychology****Sociology****Women's Studies**

Freshman Social Studies Courses

Advanced Placement United States History – SS03101 – 2 credits, year-long course, **AP level**. Must be recommended by 8th grade Social Studies teacher. Open to grade 9. Satisfies the 9th grade social studies requirement. To be an American is to be descended from immigrants; to be part European, part, Africa, and part Indian; to have opportunities and always to face new challenges; to be an innovator and a capitalist; to have rights and responsibilities; to be a democrat and a republican; to have an inspiring heritage and to struggle to live up to that heritage; to have a past of greatness and an obligation to pass that heritage to the next generation.

Advanced Placement United States History will explore the story of America, from colonial beginnings through the creation of a nation and that growth of that nation—its politics, its economy, its territory, its spirit, and its culture--all the way to the present. Students will read and discuss a college level text, documents from the time, and scholarly articles. They will learn to research, to document, to analyze, and to write history. We will read selections American poetry, listen to American music, and examine great American art and architecture. We will learn the inspiring and the alarming sides of American history as well as how to recognize bias and how to think critically. Extra credit will be given for watching the best American movies outside class and then discussing them in class for the benefit of all.

Course outcomes and expectations are:

- Develop skills in critical reading, research, analysis, and writing while completing this course
- Demonstrate knowledge of basic chronology and major events
- Analyze and evaluate topics of major historical significance
- Be well prepared to take the A.P. exam in U.S. History

United States History- Part 2 (H) – SS03001 – 1 credit, one semester course, **honors level**. In this course, students will examine the evolution of the political, social, and economic aspects of America from post-Civil War to modern times. Students will develop a detailed understanding of how America became the country it is today by evaluating the impact of decisions made by prominent historical figures. Students will analyze primary and secondary sources to develop an understanding of different perspectives surrounding key events in American History. Students will work to develop and defend claims relating to questions historians still ponder.

Course outcomes and expectations are:

- Develop skills in critical reading, analysis and writing
- Analyze and evaluate topics and perspectives of major historical significance
- Defend a claim through source analysis and provide evidence from credible sources

United States History- Part 2 (CP) – SS03002 – 1 credit, one semester course, **college prep level**. In this course, students will examine the evolution of the political, social, and economic aspects of America from post-Civil War to modern times. Students will develop a detailed understanding of how America became the country it is today by evaluating the impact of decisions made by prominent historical figures. Students will analyze primary and secondary sources to develop an understanding of different perspectives surrounding key events in American History. Students will work to develop and defend claims relating to questions historians still ponder.

Course outcomes and expectations are:

- Develop skills in critical reading, analysis and writing
- Analyze and evaluate topics and perspectives of major historical significance
- Defend a claim through source analysis and provide evidence from credible sources

Sophomore Social Studies Courses

Advanced Placement World History – SS02101 – 2 credit, year-long course, **AP level**. Open to grades 10, 11, and 12. Recommended for 10th grade honors students interested in an AP course. Satisfies the 10th grade social studies requirement. Also, a good elective for 11th and 12th graders interested in expanding their understanding of world cultures and history. **Prerequisite:** *Successful completion of 9th grade honors social studies with a recommended minimum final grade of ‘B’*. Focusing on human societies’ growing complexities between 1250 and the present, students survey the political, economic, social, and cultural development of Africa, the Americas, Asia and Europe, in preparation for the Advanced Placement (AP) World History exam. Major areas of study include early world civilizations, exploration, the Renaissance, Reformation and Enlightenment in Europe, political and industrial revolutions, 19th century nationalism and imperialism, 20th Century wars, and decolonization and globalization. Critical reading of an advanced text and other sources, as well as critical class discussion and writing, are integral components of this course.

World History (H) – SS02001 – 1 credit, one semester course, **honors level**. **Prerequisite:** *Successful completion of 9th grade social studies*. This course is an intensive study of world cultures and history designed to enhance the student’s appreciation of world diversity through the study of history, society, politics and religion.

Course outcomes and expectation are:

- Demonstrate in-depth knowledge of the historical development and contemporary issues of the following regions: Africa, Middle East, Asia, and Europe
- Develop an appreciation for the diversity of cultures within the regions of study
- Complete a research-based semester long project that will enable students to develop an appreciation for the diversity of cultures in the world
- Evaluate and interpret primary sources integral to the philosophical foundations of selected regions
- Compare regions of study through written essays, debates, and other oral presentations

World History (CP) – SS02002 – 1 credit, one semester course, **college prep level**. **Prerequisite:** *Successful completion of 9th grade social studies*. This course encourages students to investigate world cultures and history designed to enhance the student’s appreciation of world diversity through the study of history, society, politics and religion. Students will be exposed to varying customs of different cultures.

Course outcomes and expectations are:

- Demonstrate in-depth knowledge of the historical development and contemporary issues of the following regions: Africa, Middle East, Asia, and Europe
- Develop an appreciation for the diversity of cultures within the regions of study
- Complete a research-based semester long project that will enable students to develop an appreciation for the diversity of cultures in the world.
- Evaluate and interpret primary and secondary sources on the history of selected regions
- Compare regions of study through written essays, debates, and other oral presentations

World History (CT) – SS02003 – 1 credit, one semester course, **career track level**. **Prerequisite:** *Successful completion of 9th grade social studies*. This course is the study of the diverse ways people live and their economic, religious, political and governmental activities. This course encourages students to investigate world cultures and history designed to enhance the student’s appreciation of world diversity through the study of history, society, politics and religion. Speaking, writing and discussion skills will be emphasized throughout the course as well.

Course outcomes and expectations are:

- Demonstrate in-depth knowledge of the historical development and contemporary issues of the following regions: Africa, Middle East, Asia, and Europe
- Demonstrate an understanding of the cultural diversity of the regions studied
- Complete projects examining the impact of geography on the cultures of selected regions
- Compare regions of study through written and oral presentation
- Complete a portfolio of selected student work throughout the duration of the course

Junior Social Studies Courses

Advanced Placement United States Government and Politics – SS04001 – 1 credit, one semester course, **AP level**. Open to grades 11 and 12. AP United States Government and Politics is an advanced political science course. The course is divided into five main sections: foundations of American democracy, interactions among branches of government, civil liberties and civil rights, American political ideologies and beliefs, and political participation. Students will examine in depth the U.S. Constitution, landmark Supreme Court cases, foundational documents. Students will read a college-level textbook, develop their writing and test-taking skills through written analysis of current events to prepare for the AP United States Government and Politics exam in the spring.

Course outcomes and expectations:

- Demonstrate a high level of understanding of the U.S. Constitution, its allocation of power, structure of government it created
- Demonstrate an in-depth understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Demonstrate a high level of understanding of the following topic areas: voting, voting systems, political parties, the media, the impact of money on elections, interest groups, and political campaign strategies. For each area, students will be familiar with the issue's history as well as the role it plays in current politics
- Be prepared to take the AP American Government exam

[**Advanced Placement United States Government and Politics ~ Alternate Day – SS04051** – 1 credit, year-long, every other day. Same description as above. This course is designed for students in the music program but is an option for all students. *Offered in even years, e.g. 2018-19, 2020-21.*]

United States Civics and Government (H) – SS04101 – 1 credit, one semester course, **honors level**. Open to grades 11 and 12. In this course, students will examine how both the American government and political system work. When studying how the U.S. government operates, students will learn about the U.S. Constitution, the division of power between local, state, and national government, and each of the three branches (legislative, executive, and judicial). The other component of the course allows students to understand the key parts of the political process; students will learn the differences between political parties, the election process for both presidential and congressional races, the influence of money in politics, the role of the media, and the influence of interest groups. All students will be required to maintain a current events portfolio.

Course outcomes and expectations:

- Demonstrate an understanding of the U.S. Constitution and the structure of the U.S. governmental system it created
- Demonstrate an understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Understand how the government impacts daily life and how Supreme Court cases affect students' and Americans' civil rights and civil liberties
- Encourage active participation in democracy through learning the differences between political parties' beliefs, and understanding how U.S. voting systems work

- Develop an understanding of the strengths and shortcomings of mass media, and learn to differentiate between facts, values, and myths presented through the media and political campaigns

United States Civics and Government – SS04100 – 1 credit, one semester course, **unleveled**. Open to grades 11 and 12. In this course, students will examine how both the American government and political system work. When studying how the U.S. government operates, students will learn about the U.S. Constitution, the division of power between local, state, and national government, and each of the three branches (legislative, executive, and judicial). The other component of the course allows students to understand the key parts of the political process; students will learn the differences between political parties, the election process for both presidential and congressional races, the influence of money in politics, the role of the media, and the influence of interest groups. All students will be required to maintain a current events portfolio.

Course outcomes and expectations:

- Demonstrate an understanding of the U.S. Constitution and the structure of the U.S. governmental system it created
- Demonstrate an understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Understand how the government impacts daily life and how Supreme Court cases affect students' and Americans' civil rights and civil liberties
- Encourage active participation in democracy through learning the differences between political parties' beliefs, and understanding how U.S. voting systems work
- Develop an understanding of the strengths and shortcomings of mass media, and learn to differentiate between facts, values, and myths presented through the media and political campaigns

Senior Social Studies Courses

Advanced Placement United States Government and Politics – SS04001 – 1 credit, one semester course, **AP level**. Open to grades 11 and 12. AP United States Government and Politics is an advanced political science course. The course is divided into five main sections: foundations of American democracy, interactions among branches of government, civil liberties and civil rights, American political ideologies and beliefs, and political participation. Students will examine in depth the U.S. Constitution, landmark Supreme Court cases, foundational documents. Students will read a college-level textbook, develop their writing and test-taking skills through written analysis of current events to prepare for the AP United States Government and Politics exam in the spring.

Course outcomes and expectations:

- Demonstrate a high level of understanding of the U.S. Constitution, its allocation of power, structure of government it created
- Demonstrate an in-depth understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Demonstrate a high level of understanding of the following topic areas: voting, voting systems, political parties, the media, the impact of money on elections, interest groups, and political campaign strategies. For each area, students will be familiar with the issue's history as well as the role it plays in current politics
- Be prepared to take the AP American Government exam

[Advanced Placement United States Government and Politics ~ Alternate Day – SS04051 – 1 credit, year-long, every other day. Same description as above. This course is designed for students in the music program but is an option for all students. *Offered in even years, e.g. 2018-19, 2020-21.*]

United States Civics and Government (H) – SS04101 – 1 credit, one semester course, **honors level**. Open to grades 11 and 12. In this course, students will examine how both the American government and political system work. When studying how the U.S. government operates, students will learn about the U.S. Constitution, the division of power between local, state, and national government, and each of the three branches (legislative, executive, and judicial). The other component of the course allows students to understand the key parts of the political process; students will learn the differences between political parties, the election process for both presidential and congressional races, the influence of money in politics, the role of the media, and the influence of interest groups. All students will be required to maintain a current events portfolio.

Course outcomes and expectations:

- Demonstrate an understanding of the U.S. Constitution and the structure of the U.S. governmental system it created
- Demonstrate an understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Understand how the government impacts daily life and how Supreme Court cases affect students' and Americans' civil rights and civil liberties
- Encourage active participation in democracy through learning the differences between political parties' beliefs, and understanding how U.S. voting systems work

- Develop an understanding of the strengths and shortcomings of mass media, and learn to differentiate between facts, values, and myths presented through the media and political campaigns

United States Civics and Government – SS04100 – 1 credit, one semester course, **unleveled**. Open to grades 11 and 12. In this course, students will examine how both the American government and political system work. When studying how the U.S. government operates, students will learn about the U.S. Constitution, the division of power between local, state, and national government, and each of the three branches (legislative, executive, and judicial). The other component of the course allows students to understand the key parts of the political process; students will learn the differences between political parties, the election process for both presidential and congressional races, the influence of money in politics, the role of the media, and the influence of interest groups. All students will be required to maintain a current events portfolio.

Course outcomes and expectations:

- Demonstrate an understanding of the U.S. Constitution and the structure of the U.S. governmental system it created
- Demonstrate an understanding of how the Legislative, Executive and Judicial branches function and interact as a federal system of government
- Follow and analyze significant current news items and connect them to the areas of content studied in this course
- Understand how the government impacts daily life and how Supreme Court cases affect students' and Americans' civil rights and civil liberties
- Encourage active participation in democracy through learning the differences between political parties' beliefs, and understanding how U.S. voting systems work
- Develop an understanding of the strengths and shortcomings of mass media, and learn to differentiate between facts, values, and myths presented through the media and political campaigns

Social Studies Electives

Advanced Placement European History – SS05301 – 2 credits, year-long course, **AP level**. Open to grades 11 and 12. AP European History is designed to be the equivalent of a two-semester introductory college or university European history course. In AP European History students investigate significant events, individuals, developments, and processes in four historical periods from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing historical evidence; contextualization; comparison; causation; change and continuity over time; and argument development. The course also provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; individual and society; and national and European identity.

Advanced Placement Human Geography – SS05401 – 1 credit, one semester course, **AP level**. Open to grades 10, 11 and 12. A.P. Human Geography introduces students to college-level introductory human geography. The content is presented by themes rather than by regions of the world and is organized around the main divisions of human geographic study: economic geography, cultural geography, political geography, and urban geography. Case studies examined in the course involve all regions and cultures of the world, with an emphasis on the present day. Historical information enriches the analysis of the impacts of concepts such as globalization, colonialism, and humans' interactions with the environment. Students will develop skills in approaching problems geographically, using maps and geospatial technologies, thinking critically about texts and graphic images, interpreting cultural landscapes, and applying geographic concepts such as scale, region, diffusion, interdependence, and spatial interaction, among others.

Some specific topics with which students will engage in the course are:

- problems of economic development and cultural change.
- consequences of population growth, changing fertility rates, and international migration.
- impacts of technological innovation on transportation, communication, and industrialization.
- struggles over political power and control of territory.
- conflicts over the demands of ethnic minorities, the role of women in society, and the inequalities between developed and developing economies.
- explanations of why location matters to agricultural land use, industrial development, and urban problems.
- the role of climate change and environmental abuses in shaping the human landscapes on Earth.

Advanced Placement Macroeconomics / Microeconomics

A Macro/Micro cycle of AP Economics will introduce students to the entire discipline of economics allowing them to develop a detailed understanding and application of economic principles and analytical decision making skills essential for problem solving. The courses will be offered in alternating years (In 2018-19 AP Microeconomics will be offered). Students are encouraged to become productive workers, responsible citizens, prudent savers and investors, effective participants in a global economy, knowledgeable consumers and life-long decision makers. If they so choose, students will have the opportunity to fully prepare for both Micro and Macro portions of the AP exam.

Advanced Placement Macroeconomics – SS05101 – 1 credit, **AP level**. Open to grades 11 and 12. Macroeconomics will introduce the student to the national and international economy with special emphasis on how government actions influence the economy. The course will embed AP exam formats, evaluation of exam questions, use of AP rubrics and scoring systems. If they so choose, students will have the opportunity to fully prepare for Macro portion of the AP exam. *Offered in odd years, e.g. 2019-20, 2021-22*

Advanced Placement Microeconomics – SS05201 – 1 credit, AP level. Open to grades 11 and 12.

Microeconomics will give students a thorough understanding of the principles of economics as applied to the individual as decision maker, consumer, and producer, within larger economic systems. The course will embed AP exam formats, evaluation of exam questions, use of AP rubrics and scoring systems. If they so choose, students will have the opportunity to fully prepare for Micro portion of the AP exam. *Offered in even years, e.g. 2018-19, 2020-21.*

Course outcomes and expectations for both AP Economics courses are:

- Understand the “economic way of thinking” by systematic use of analytical decision making skills to discuss and solve problems
- Demonstrate the ability to understand and manipulate complex graphic models.
- Develop an understanding of the economic system which will enable them to take an active and informed role in the economic decisions in their own community and government
- Develop critical thinking skills that will enable the students to evaluate economic problems, analyze and determine points of view
- Apply economics to everyday situations
- Prepare to take AP exam

Advanced Placement Psychology – SS05501 – 1 credit, one semester course, AP level. Open to grades 11 and 12. This course is designed to introduce students to the scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the research and methods psychologists have used to establish facts, principles, and phenomena associated with each of the major subfields within psychology. Students will analyze biological and social causes and effects of human behavior, cognition, personality, intelligence, and mental health.

[**AP Psychology ~ Alternate Day – SS05551 – 1 credit, year-long every other day course, AP level.** Same course description as above. This course was designed for music students but is an option for all juniors and seniors. *Offered in odd years, e.g. 2019-20, 2021-22.*]

Advanced Placement United States History – SS03101 – 1 credit, one semester course, AP level.

Recommended for 12th grade honors students interested in an AP course. Open to grade 12. ***Prerequisite: Successful completion of honors level US Civics and Government with a recommended minimum final grade of ‘B’.*** Satisfies the 11th grade social studies requirement. To be an American is to be descended from immigrants; to be part European, part, Africa, and part Indian; to have opportunities and always to face new challenges; to be an innovator and a capitalist; to have rights and responsibilities; to be a democrat and a republican; to have an inspiring heritage and to struggle to live up to that heritage; to have a past of greatness and an obligation to pass that heritage to the next generation.

Advanced Placement United States History will explore the story of America, from colonial beginnings through the creation of a nation and that growth of that nation—its politics, its economy, its territory, its spirit, and its culture--all the way to the present. Students will read and discuss a college level text, documents from the time, and scholarly articles. They will learn to research, to document, to analyze, and to write history. We will read selections American poetry, listen to American music, and examine great American art and architecture. We will learn the inspiring and the alarming sides of American history as well as how to recognize bias and how to think critically. Extra credit will be given for watching the best American movies outside class and then discussing them in class for the benefit of all.

Course outcomes and expectations are:

- Develop skills in critical reading, research, analysis, and writing while completing this course
- Demonstrate knowledge of basic chronology and major events
- Analyze and evaluate topics of major historical significance
- Be well prepared to take the A.P. exam in U.S. History

20th Century Pop Cultures – SS06100 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. This course is designed to help students identify deeply held cultural values expressed throughout Popular Culture. By analyzing popular TV, movies, music, fashion, youth culture and advertising from the 20th and 21st centuries, students will come to recognize these important values, their historical foundations, as well as how the profit orientation of American society creates the context for all pop cultural expressions.

Course outcomes and expectations are:

- Analyze primary sources including film, music, ads and TV shows, demonstrating an understanding of the cultural values expressed in these sources
- Analyze primary sources including film, music, ads and TV shows demonstrating an understanding of the historical influences upon modern popular culture
- Complete a journal analyzing and reflecting upon various popular cultural artifacts
- Complete a historical and evaluative research project on a pop culture icon

African American Studies – SS06400 - .5 credit, one quarter course, unleveled. Open to grade 10, 11 and 12. The African American Studies course at Haverford High School is designed to provide students with an overview of the African American experience beginning with pre-Colonial Africa through modern times. A major goal of this course is to cultivate an understanding of the role and contributions of African Americans to the growth and development of the United States. The course will highlight the social, cultural and political contributions of African Americans to American society. Units will be taught through the lens of the unique cultural and political experiences of African Americans in the United States.

The course begins with a study of the rich intellectual and cultural history of Africa. Students will also learn how our nation was built, focusing on the experiences of Africans (free and enslaved) who resisted slavery and how they defined freedom for themselves. The course continues with a study of the social and political challenges (racism, mass incarceration, economic inequality) that continue to affect American society today. The course will promote critical thinking about race, and other systems of difference that shape individual and group interactions, American identity, and culture.

Choices in Crisis: A Study of the Holocaust – SS06500 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. This course will provide students with the opportunity to study the impact of individuals on the Holocaust. Students will develop a deeper understanding of the major events in order to contextualize those events and reinforce that the Holocaust was not inevitable, but was a result of choices and decisions made by individuals, institutions, and nations over the years. Through analysis of primary and secondary sources, students will study the causes and effects of the Holocaust, different perspectives on events, and compare different individual experiences during this time period. This will include studying the economic problems from WWI that led to the persecution of certain groups as scapegoats as well as other events that contributed to the Holocaust and persecution of Jews. Students will analyze how individuals responded to unjust actions as well as contemplate how they might personally respond in a similar situation. Students will use the geography of the region to understand the relationship of Germany to Poland, France and other countries impacted by the Nazi regime. This course will work to foster empathy and deepen student interest through inquiry-based learning and critical thinking. Students will apply their understanding of the impact of the behaviors of the perpetrators, victims, and bystanders during the Holocaust to contemporary events and their own lives. Students

will learn how to take informed action while improving their reading and writing skills through a variety of engaging activities.

Criminal Justice System – SS05800 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. This is a nine-week elective course open to students in 10th, 11th, and 12th grade that will introduce students to the Criminal Justice System in the United States. The course will cover issues and controversies dealing with crime, justice, law enforcement, prison, and other factors dealing with the criminal justice system. Students will be expected to discuss and debate these issues and be able to connect them to current events. Topics will include, but are not limited to: theories of justice, types of crimes, the juvenile justice system, serial killers and profiling, criminal rights, and the trial process.

Economics (CP) – SS05002 – 1 credit, one semester course, **college prep level**. Open to grades 11 and 12. This course will enable students to apply economic concepts to situations of personal, community and national interest. It meets the basic goals of the National Council for Economic Education, a group organized to promote economic literacy. Students are encouraged to become productive workers, responsible citizens, prudent savers and investors, effective participants in the national and global economies, knowledgeable consumers and life-long decision makers.

Course outcomes and expectations are:

- Demonstrate knowledge of the major concepts/generalizations that define economics
- Critically analyze the importance of entrepreneurship as a strategy to revitalize an economy, increase employment and stimulate world-wide productivity
- Develop a detailed understanding of financial markets and realistic long-term expectations of success in personal investment
- Understand the American free enterprise system and explore roles as citizens

Elections – SS06600 - .5 credit, one quarter course, unleveled. Open to grade 10, 11 and 12. This seminar course will be conducted during local and national election cycles respectively and taught through a dynamic historical, political, and psychological lens. As a vehicle for civic engagement, this course will offer students the opportunity to explore the historical developments of American political ideology, the formation of the modern campaign, politics of polling, social media and popular culture influences on the electorate, and rationales and approaches to voting. Political topics will be addressed through extensive, scholarly primary and secondary source material and student knowledge will be assessed through written assignments, Socratic Seminar discussions/debates, and dynamic, interactive projects.

Topics that will be explored include but are not limited to: the importance and influence of debates and party conventions, types and strategies of political advertising, and patterns of party realignment. The course will also utilize the vast amount of political and legal experts involved in local, state, and national politics in our area. Students in the course will employ their knowledge about the election process to help manage Haverford High School's elections for student government by organizing its voting, candidate speeches and debates, and student campaigning.

Environmental History – SS06700 - .5 credit, one quarter course, unleveled. Open to grade 10, 11 and 12. Environmental History addresses the causes and consequences of today's environmental challenges by focusing on human interaction with the environment. Behavioral economics, human psychology, history, and culture increasingly affect environmental challenges and solutions. Topics range from global to local: energy, population, transportation, resources, food and agriculture, coastal erosion, suburban sprawl, and social justice implications of climate change. Assessments include tests, quizzes, and an inquiry-based project.

Global Conflicts in the Modern World – SS05900 – .5 credits, one quarter course, **unleveled**. Open to students in grades 10, 11 and 12. Students study the workings of global politics in the modern world, exploring the causes of conflicts and crises in both domestic and foreign domains. The strategies, goals, tactics, and motivations of groups involved in revolutions, rebellions, and acts of terrorism are explored. Students are expected to examine political philosophies as well as propose solutions to many global political issues.

Course outcomes and expectations are:

- Demonstrate an understanding of names, terms, and concepts relating to global conflicts by completing a final project
- Demonstrate the ability to use research methods by examining web sites on the internet and reporting findings to the class
- Demonstrate persuasive writing skills by writing an editorial about a current controversial global issue
- Demonstrate knowledge of current affairs by maintaining a portfolio of current news events
- Demonstrate communication skills by actively participating in class debates and discussions

[Global Conflicts in the Modern World ~ Alternate Day – SS05950 - .5 credits, every other day for one semester. Same course description as above. This course is designed for music students but is an option for all students in the 10th, 11th, and 12th grades.]

Psychology (CP) – SS05602 – .5 credits, one quarter course, **college prep level**. Open to grades 11 and 12. This course is an introduction to the various types of psychology. The application of course understandings allows students to relate key concepts to the interpretation of their own behavior and that of others. Topics include the history of psychology, human development, personality, conscience and the process of learning. **This course is not appropriate for students who have completed AP Psychology (SS05501).*

Course outcomes and expectations are:

- Discuss and analyze topics related to the course
- Analyze primary sources including film
- Complete a dream analysis journal
- Complete a research project within the field of psychology.

Sociology – SS06200 – .5 credits, one quarter course, **unleveled**. Open to grades 11 and 12. This sociology elective is designed to increase student knowledge of human social interaction. Students study the role of individuals and groups in society, while developing an understanding of social interactions and analyzing solutions to social problems.

Course outcomes and expectations are:

- Demonstrate an understanding of sociological theories and vocabulary
- Complete both oral and written class projects
- Examine social issues using current information found in newspapers, in magazines and on the internet

Women's Studies – SS06800 – .5 credits, one quarter course, **unleveled**. Open to grades 10, 11 and 12. This course is open to all Haverford students who wish to examine the various roles and responsibilities of women over time and the different lenses through which women are viewed both historically and in the contemporary world. It will pay particular attention to the way society identifies women and how this has evolved through political, social and economic pressure. We will investigate how race, religion, ethnicity, geography and wealth have led to a diversity of experiences, and look at the challenges of multiracial feminism. The course will encourage global awareness as we compare experiences in the USA to experiences in the Middle East, Africa, and Europe. We will examine the phases of Feminism and look at how political rights eventually led to social and economic rights. Finally, we will study how disadvantaged groups can advocate for social change to create a more just and generous society.

Special Education Department

Students enroll in courses offered by the Special Education Department per the consensus of their Individualized Education Program (IEP) team. Only *eligible* students may enroll in courses offered by the department and furthermore may only register for specific courses with the endorsement of each student's case manager, school counselor, and grade-level administrator. ***All course enrollments are subject to review and audit by of the Office of Secondary Special Programs.***

The Special Education Department offers core replacement (*supplemental level*) courses in two of the four major subject areas (i.e., English & Mathematics) as well as specific courses in instructional support, emotional support, and skills support.

Through the IEP team process, families and students collaborate with professionals from the Office of Secondary Special Programs to discuss suitable courses of study; design annual goals that meet the unique learning needs of the student, and craft an appropriate transition plan which promotes progress towards graduation.

Foundations of English 9 – EN00090 & Foundations of English 10 – EN00100 (1.0 credit, year-long): These are core replacement courses for regular education English at the equivalent grade-levels and most students complete both *EN00090&EN00100* in consecutive years for continuity as well as to ensure the full scope of sequence of grade-level anchors are reviewed. Students who enroll in this course sequence are working in mixed grade-level groups of students with similar learning profiles. These courses provide for exposure to grade-level concepts, as well as continued development of fundamental literacy skills. This course sequence emphasizes: literature, writing, oral comprehension, spelling, and reading comprehension.

Course outcomes and expectations are:

- Develop functional reading skills through direct instruction in reading accuracy (decoding), fluency and comprehension
- Develop an ability to complete various writing samples using the *ACEACER* concept
- Learn and apply the essentials of research citations using the Modern Language Association (MLA) format
- Demonstrate an ability to write a thesis-based research report
- Demonstrate an understanding of correct structure, mechanics and usage in writing
- Develop public speaking skills
- Develop/strengthen vocabulary skills using Membean program
- Use a thematic approach to discuss literature

Selected texts: Students will read at least one novel of their choice, per year, in addition to the required readings for the course sequence. ****These courses do not currently meet NCAA eligibility standards for English credit.***

Foundations of English 11 – EN00110 & Foundations of English 12 – EN00120 (1.0 credit, year-long): These are core replacement courses for regular education English at the equivalent grade-levels and most students complete both *EN00110&EN00120* in consecutive years for continuity as well as to ensure the full scope of sequence of grade-level anchors are reviewed. Students who enroll in this course sequence are working in mixed grade-level groups of students with similar learning profiles. These courses provide for exposure to grade-level concepts, as well as continued development of fundamental literacy skills. This course sequence emphasizes the practical application of: reading, writing, research, and study skills.

Course expectations and outcomes are:

- Develop functional reading skills through direct instruction in reading accuracy (decoding), fluency and comprehension
- Develop an ability to complete various writing samples using the *ACEACER* concept
- Develop vocabulary skills in conjunction with reading/writing assignments
- Develop comprehension skills through reading works of drama and fiction and completing “Chapter Summaries” and other curriculum-based assessments
- Complete a formal research paper including note cards, visual aids and citations
- Apply a thematic approach to literature discussion
- Apply public speaking skills when working in cooperative learning groups and to make oral presentations to small groups

Selected texts: Students will read at least one novel of their choice, per year, in addition to the required readings for the course sequence. **These courses do not currently meet NCAA eligibility standards for English credit.*

Foundations of Mathematics 9 – MA00090 & Foundations of Mathematics 10 – MA00100

(1.0 credit, year-long): These are core replacement courses for regular education Mathematics at the equivalent grade-levels and most student complete both *MA00090&MA00100* in consecutive years for continuity as well as to ensure the full scope of sequence of grade-level anchors are reviewed. Students who enroll in this course sequence are working groups of students with similar learning profiles. These courses provide for exposure to grade-level concepts, as well as continued development of fundamental mathematics skills. This course sequence emphasizes: math fluency and problem-solving skills, data interpretation, integer operations and graphing equations, probability, fractions, algebraic sentences and solving equations.

**These courses do not currently meet NCAA eligibility standards for Mathematics credit.*

Foundations of Mathematics 11 – MA00110 & Foundations of Mathematics 12 – MA00120

(1.0 credit, year-long): These are core replacement courses for regular education Mathematics at the equivalent grade-levels and most student complete both *MA00110&MA00120* in consecutive years for continuity as well as to ensure the full scope of sequence of grade-level anchors are reviewed. Students who enroll in this course sequence are working in mixed grade-level groups of students with similar learning profiles. These courses provide for exposure to grade-level concepts, as well as continued development of fundamental mathematics skills. This course sequence emphasizes: math fluency and problem-solving skills, numbers and operations, measurement, algebraic concepts, geometry, data analysis and probability.

**These courses do not currently meet NCAA eligibility standards for Mathematics credit.*

Academic Skills (A/B) – MI00055/MI00065 (0.50 credit, semester course, alternating day schedule):

This course is designed for students with either Individual Education Programs (IEP) to support progress in the general education curriculum. Students specifically focus on executive functioning skills (e.g., organization, long-term planning, processing, etc.), study skills, and test-taking skills. This service must be described in either the IEP Accommodations Plan and students can only enroll in this course as a result of an IEP team, or multidisciplinary team, decision. Students can enroll in this course for one or both semesters. This course runs on an alternating day schedule, opposite of study hall, throughout the semester(s) in which it is scheduled.

Academic Skills I – MI00155/MI00165 (1.0 credit, semester course): This course is designed for students with Individual Education Programs (IEP) to support progress in the general education curriculum. Students specifically focus on executive functioning skills (e.g., organization, long-term planning, processing, etc.), study skills, and test-taking skills as well as receive direct, remedial instruction in one of the two primary

academic areas (i.e., literacy, mathematics). This service must be described in student's IEP, and students can only enroll in this course as a result of an IEP team decision. Students who enroll in this course split their assigned support block with direct instruction in either remedial literacy or mathematics, per their IEP.

Positive Life Strategies – MI02000 (2.0 credit, year-long course *or* 1.0 credit year-long alternate day course): This course is designed for students with Individual Education Programs (IEP) to support their social and emotional development as well their general progress in the general education curriculum. Students specifically focus on processing and coping skills through individual and small-group work. This service must be described in the student's IEP, and students can only enroll in this course as a result of an IEP team decision. Students who enroll in this course will have an opportunity to receive individualized counseling per their IEP. Students who enroll in this course also work on positive behavioral outcomes per their IEP.

Reading and Math Skills – LS01000 (2.0 credits year-long course): This course sequence is designed for students with Individual Education Programs (IEP) to support further development of literacy, mathematics and writing in everyday use. There is both a classroom component to build reading and math skills, in coordination with a community-based instruction component to further support learning.

Everyday Skills Application – LS08000 (2.0 credits, year-long course, grades 10-12): This course is designed for students with Individual Education Programs (IEP) to teach students the necessary skills to support student independence. It is a comprehensive program that provides direct instruction in pre-vocational skills, social skills, relationships, and independent living. There is a community-based instruction component to carry over skill use into the community; students may have the opportunity to work in the School Store to practice vocational skills.

Autism Support and Services-(2.0-6.0 credits, year-long course) This is a course designed to teach students with an Individual Education Program (IEP) the necessary social and academic skills to succeed in both school and in the community. This service must be described in the student's IEP, and students can enroll in this course as a result of an IEP team decision.

Technology Education Department

The technology education curriculum is designed to provide a balanced mix of theoretical and practical knowledge with an abundant amount of hands-on activities included to reinforce conceptual understanding. The intent is to take advantage of the students' interest in discovering, creating, problem solving, and constructing, with a variety of tools, machines, materials, and processes. The long term goal of technology education is to promote technological literacy as a basic focal point in the general education of all individuals. This type of education will provide students with basic understandings and skills (literacy) needed to function effectively in a technological world.

Course Descriptions

Commercial Drone Aviation – TE01800 .5 credits, one quarter class – unlevleled, open 9-12. No Prerequisite. Learning all of the ins-and-outs of legally flying an unmanned aerial vehicle can be complex, confusing, and intimidating. Students will learn hands-on how to successfully handle a UAV in a variety of conditions, understand the various settings and features of a drone, explore various career opportunities for commercially licensed drone pilots, and study FAA rules and regulations to prepare for the FAA Drone Pilot Exam. Students must be 16 years of age to take the exam. Please note that students who choose to take the FAA Drone Pilot Exam upon completion of the course will be responsible for all fees.

Introduction to Practical Woodworking – TE01000 – .5 credits, one quarter course, **unlevleled**. Open to all grades. *No prerequisite.* This course provides basic technical knowledge of basic woodworking material technology, including both instruction and project work. Students will learn safe and efficient operation of hand and machine tools. The course provides career information and a basic background in a variety of related fields. Students gain insight into avocation and vocational choices and may better select more specialized courses within the woodworking area. The material technology of woodworking will be introduced after thorough safety instruction. This course will allow students to work in several technologies. The proper technical language will be introduced and used exclusively. An understanding and development of project plans will begin the class. Students work on two projects. Assignments are performed in the classroom with few out of class work.

Course outcomes and expectations are:

- Demonstrate use and maintenance of basic woodworking equipment
- Design a project with an understanding of plan reading and development
- Demonstrate safe and proper use of all equipment through testing
- Develop individual drawings and cost/material sheets
- Organize a notebook of all plans, procedures, and handouts/homework
- Demonstrate effective and safe use of materials and equipment and proper maintenance of facilities

Introduction to Cabinet and Furniture Making – TE01100 – .5 credits, one quarter course, **unlevleled**. Open to students in grades 10, 11 and 12. *Prerequisites: Students must have passed Practical Woodworking.* This course provides technical knowledge in basic and advanced furniture and cabinet making techniques and procedures. Relationships to industrial processes, careers, and related technologies are examined. A series of technical problem-solving techniques are used to complete project work. Research and development work is done in plan development, project improvement, cost estimating, and in an examination of the history of the processes being utilized. The correct technical language of this material technology is used. Students build on previously learned skills in the practical woodworking class. The mastery of advanced technological processes and the ability to problem solve and communicate technically help all students excel in our technological society. Assignments completed in class with minimal outside work.

Course outcomes and expectations are:

- Demonstrate use and maintenance of basic and advanced woodworking machines
- Design a woodworking project utilizing advanced joinery techniques
- Develop plans including price and material calculations as well as all parts and accessories
- Demonstration of the proper use of all equipment along with an understanding of all safety procedures must be demonstrated
- Individual drawings and cost/material sheets
- Organize a notebook of all processes learned, plan development, and handouts/homework
- Effective and safe use of materials and equipment and proper maintenance of all facilities

Construction Technology I – TE01200 – .5 credits, one quarter course, **unleveled**. Open to all grades. *No prerequisite*. Construction Technology I is an instructional program that prepares an individual for employment or continued education in the occupations of Carpentry, Electrical Wiring, Masonry, or Plumbing. Construction Technology I is a basic course teaching fundamentals of safety, tools, math, and basic carpentry, electrical, masonry, and plumbing skills as well as general home repair.

Manufacturing Technology I – TE01300 – .5 credits, one-quarter course, **unleveled**. Open to all grades. *No prerequisite*. The course is designed around the STEM education concept (Science, Technology, Engineering, and Mathematics integration). Learn about the types of manufacturing systems and processes used to create the products we purchase every day. It is designed to give students a glimpse into the world of Manufacturing including design, engineering, valuable workplace soft skills, inventory management, and quality assurance.

[**Manufacturing Technology (Alternate Day) – TE01350** – .5 credits, every other day for one semester, unleveled. This course is designed for students in the music program but is an option for all students.]

Manufacturing Technology II – TE01900 .5 credits, one quarter course – **unleveled**, open 9-12. *Prerequisite – TE01300* This course builds on the material from Manufacturing Technology I, introducing manufacturing systems, exploring careers in manufacturing, and understanding how manufacturing technology fits in today's business model. Students will design, plan, produce, market, and distribute their own products.

Computer Aided Manufacturing – TE01700 – .5 credits, one quarter course, **unleveled**. Open to all grades. The computer aided manufacturing course is an innovative class built around technology and the design process. Students will use their creativity to design and build wood projects and incorporate parts manufactured on the AXYZ CNC router. Students will use EnRoute, AutoCAD and other graphic design software to create parts to incorporate into their projects. Students will also utilize traditional tools, machines, and finishing techniques to complete their final wood projects.

Course outcomes and expectations are:

- Demonstrate the safe and proper use of all equipment used
- Complete all aspects of design from thumbnail sketches through final plan and ending with production run
- Complete production run and prototype craftsmanship

Technical Drawing Courses

These three technical drawing courses will guide students through different drafting techniques from fundamental skills and processes through Computer Aided Drafting (CAD) and into the world of animation. Each course has been carefully prepared to give students a very personal feel with blend of all tools of many professions. Students will learn to visualize in both 2-D and 3-D, animate concepts and designs, develop and strengthen their technical imagination, to think precisely, and learn to read and write in the language of industry, drafting.

Introduction to Mechanical Drawing and CAD – TE01400 – 1 credit, one semester course, **unleveled**. Open to all grades. *No prerequisite*. Introduction to Mechanical Drafting and CAD lays out the groundwork for skills a student might need who is interested in engineering, architecture, industrial design, interior design, tool design, model makers, CNC machining, technical illustrators, artists, computer animation and film ...just to name a few. Throughout this class, students will be challenged to learn the use of different drafting tools and techniques involved in the world of industry. Although the class begins with hand drafting by pencil and other tools, it transitions to computer, giving the students a better feel for what is being used in today's cutting edge applications. The final CAD and drafting work will be to produce a set of drawings for a furniture design project, the entertainment center. This design project ties all their newly developed design skills together with a design project of their own.

Course outcomes and expectations are: (these apply to both manual skills and CAD skills)

- Demonstrate the use and care of all drafting equipment
- Create thumbnail sketches and produce both pencil and CAD drawings that meet ANSI standards
- Apply the acceptable set up and format of professional presentation
- Master the principles of orthographic projection, oblique and isometric drawings
- Demonstrate the ability to visualize in three dimensions and create CAD based solid models
- Build skills upon both individual and cooperative-team work with class
- Organize a portfolio of concepts discussed during class and from textbook readings and assignments
- Assignments evaluated for completeness and understanding
- Apply the concepts and steps of a "design brief" as it relates to getting a design off the ground
- Gain an understanding of how from pencil sketching to CAD and the animation process impact on the visualization of a concept

Architectural Computer Aided Drafting – TE01500 – 1 credit, one semester course, **unleveled**. Open to all grades. *Prerequisite: Introduction to Mechanical Drawing with a grade of "C" or better*. Open to all students. Prepares students for a technical career in engineering, architecture, industrial design, interior design, model makers, technical illustrators, artists, computer animation and film ...just to name a few. The class will focus on the solid modeling of a residence and from this model produce a full set of architectural plans including

kitchen renderings, walk through animations and a hand built ¼ scale model. This course is completely computer based though the model will be constructed by hand.

Course outcomes and expectations are:

- Participate in individual and cooperative-team work
- Organize a portfolio of concepts developed during class discussions and textbook readings
- Complete assignments that are evaluated for completeness and understanding
- Demonstrate effective use of drafting equipment and mechanical drawing principles
- Produce floor plans, elevations, door and window schedules, stair/wall section/fireplace details, electrical plan, site plan, kitchen perspectives and renderings, animate full motion walk through and a ¼ scale model
- Create thumbnail sketches and produce both pencil and CAD drawings that meet ANSI standards
- Apply the acceptable set up and format of professional presentation
- Master the principles of animating walk-throughs
- Build skills upon both individual and cooperative-team work with class
- Assignments evaluated for completeness and understanding

Advanced Computer Aided Drafting & Design (CADD) – TE01600 – 1 credit, one semester, **unleveled**. Open to all grades. **Prerequisite:** *Introduction to Mechanical Drawing with a grade of “C” or better*. This course is for students interested in engineering, architecture, industrial design, interior design, tool design, model makers, CNC machining, technical illustration, artists, computer animation, film ...just to name a few.

Course outcomes and expectations are:

- Participate in individual and cooperative-team work with class
- Organize a notebook of concepts developed during class discussions and textbook readings
- Complete assignments that are evaluated for completeness and understanding
- Demonstrate effective use of computer equipment and mechanical drawing principles
- Apply geometric construction principals to design
- Use the CNC machine to manufacture parts and understand the connection between the CAD drawn components to the application to the CNC process
- Apply advance solid modeling techniques
- Produce high quality renderings and animations
- Demonstrate the use and care of all drafting equipment
- Create thumbnail sketches and produce both pencil and CAD drawings that meet ANSI standards
- Apply the acceptable set up and format of professional presentation
- Master the principles of geometric construction
- Demonstrate an advanced ability to visualize in three dimensions and create CAD based solid models
- Build skills upon both individual and cooperative-team work with class
- Organize a portfolio of concepts discussed during class and from textbook readings and assignments
- Assignments evaluated for completeness and understanding
- Apply the concepts and steps of a “design brief” as it relates to getting a design off the ground
- Gain an understanding of how pencil sketching to CAD to the animation process impacts on the art of the visualization of a concept

DCTS TECHNOLOGY PROGRAM OFFERINGS

CONSTRUCTION TECHNOLOGY

A cluster of construction trade programs offering career opportunities in designing, planning, managing, building, and maintaining the built environment.

Building Trades [CIP 46.0401]

Carpentry [CIP 46.0201]

Electrical Construction Technology [CIP 46.0399]

Heating, Ventilation, and Air Conditioning/Plumbing [CIP 47.0201]

Welding Technology/Welder [CIP 48.0508]

LOGISTICS, DISTRIBUTION & TRANSPORTATION

A cluster of programs that prepares students for career opportunities to manage, service, maintain, and ensure that people, materials, and goods arrive where they need to be safely and on time.

Automotive Technology [CIP 47.0604]

Collision Repair Technology [CIP 47.0603]

Logistics & Inventory Management [CIP 52.0203]

World Language Department

The mission of the World Language Department is to prepare students for citizenship in a multi-cultural, multi-lingual global community. The department promotes proficiency in languages along with knowledge of cultures and literature. Our teachers seek to provide students with language competency, an enhanced knowledge of the traditions, achievements, and lifestyles of the international community, and an appreciation of differences and similarities among peoples and nations.

Outcomes in World Language Study

Why is World Language study your passport to opportunity? As a Haverford world language student, you will be able to achieve the following outcomes:

- Acquire a multicultural perspective
- Facilitate entrance into college
- Strengthen one's potential in today's competitive job market
- Become a functional member of the global community
- Increase SAT scores
- Travel the world

In addition, world language students will be able to:

- Display knowledge of areas and cultures of the world where the target language is spoken
- Communicate across cultures in the 4 skills of language learning: listening, speaking, reading, and writing
- Demonstrate awareness of the intellectual, artistic, and literary contributions of target cultures

****The Haverford High School World Language program is comprised of sequential courses with prerequisites. Unless otherwise noted, it is strongly recommended that a prerequisite course be successfully completed with a minimum grade of "B" in honors and a minimum grade of "C" in college prep before a student continues with the next course at the same level.** Any student following the honors track not meeting this prerequisite may continue with the next course in the sequence but at a lower level. Any student who does not meet the prerequisites should have a discussion with his/her teacher to determine the next course to be taken. These prerequisites are necessary to provide the student with the opportunity to develop a proficient understanding of the concepts and skills needed for mastery of the language. To assist our students with their selections, serious consideration should be given to teacher recommendation regarding the next World Language course to be scheduled. **NOTE- Middle School first year language courses and High School first year language courses are the same courses.**

ALL 1st YEAR LANGUAGE COURSES ARE ONE SEMESTER IN LENGTH, 1.0 CREDIT. OPEN TO ALL STUDENTS IN ALL GRADES. NO PREREQUISITE.

ALL 2nd YEAR TO 5th YEAR COURSES ARE ONE SEMESTER IN LENGTH, 1.0 CREDIT. OPEN TO ALL STUDENTS IN ALL GRADES. PREREQUISITE: THE PREVIOUS YEAR(S) OF THE LANGUAGE.

Spelling and handwriting are important. If you get stuck on a word, use a dictionary, thesaurus, or online resources. This is not a test, and you are not being graded on spelling or handwriting. The purpose of this activity is to help you learn and practice the language.

FRENCH COURSES

French I – WL01102 – 1 credit, one semester course, **college prep level**. This course is an introduction to French language and culture. All materials used are student-oriented and relevant for communication when traveling in a French-speaking country. Students will have the opportunity to learn about cultural similarities and differences of people who speak the French language. Various readings, on line work and videos will supplement learning.

TEXTBOOK: T 'ES BRANCHE series

French II – WL01202 – 1 credit, one semester course, **college prep level**. *It is strongly recommended that French I was completed with a minimum grade of a C to be successful in this course.* This course is a continuation of the first year's outcomes of demonstrating proficiency in the skills of listening, speaking, reading and writing. There is a strong focus on the cultural aspects of the many countries in the French-speaking world. Students can look forward to a high level of participation in the learning process as they become involved in a variety of classroom activities. Various readings, on line work and videos will supplement learning.

TEXTBOOK: T 'ES BRANCHE series

French III (H) – WL01301 – 1 credit, one semester course, **honors level**. *It is strongly recommended that French II was completed with a minimum grade of a B to be successful in this course.* In this course, there is a smooth transition to a more intense grammatical, verbal, and vocabulary development. French is spoken most of the time, with a high level of student participation. Cultural material is presented and discussed in the target language. Students are encouraged to use more free expression. Various readings, on line work and videos will supplement learning.

TEXTBOOK: T 'ES BRANCHE series

French IV (H) – WL01401 – 1 credit, one semester course, **honors level**. *It is strongly recommended that French III (H) was completed with a minimum grade of a B to be successful in this course.* Students will review and refine previously learned material as well as study new structures. With this foundation plus additional vocabulary, students will be introduced to French literature in the study of LE PETIT PRINCE. This class is conducted in French. The essential range of grammar will be completed at this level. Various readings, on line work and videos will supplement learning.

TEXTBOOK: T 'ES BRANCHE series / Le Petit Prince

AP French Language & Culture – WL01501 – 1 credit, one semester course, **AP level**. **FIRST SEMESTER ONLY.** *It is strongly recommended that French IV (H) was completed with a minimum grade of a B to be successful in this course.* This course serves as the first step of preparation for the French AP exam. Advanced grammatical structures and development of vocabulary will be mastered via literary selections and continued work in various texts. Speaking and listening skills will be enhanced through oral proficiency based activities and authentic materials. The class will be conducted entirely in French. **IT IS HIGHLY RECOMMENDED THAT ANY STUDENT WHO PLANS ON TAKING THE AP FRENCH LANGUAGE EXAM ALSO TAKES THE WORLD LANGUAGE SEMINAR IN THE SECOND SEMESTER.**

TEXTBOOKS: **BARRON’S AP FRENCH, MAIGRET ET LE CLOCHARD, L’ÉCOLE DES FEMMES, JEAN DE FLORETTE, CONNAISSANCES et REACTIONS, UNE FOIS POUR TOUTES** AND VARIOUS LITERARY EXCERPTS.

France and Modern Western Civilization (H) – WL01901 – 1 credit, one semester course, **honors level**. This course will allow students to experience the global impact of French history, literature, and art in the modern age: from the Age of Reason to the present. This multi-media course will feature selected readings from French literature and an analysis of the significant effects of the French language, cuisine, and fashion on the world. Topics covered will include – The Age of Reason, France in North America, the French Revolution, the Napoleonic Age, and modern Republican France. The extensive use of French cinema will allow the student to be immersed in the historical and cultural development of France.

TEXTBOOKS: **TRESORS DU TEMPS, SELECTED RESOURCES**

~~Spoken and written language, culture, history, geography, and art. This course includes AP French language, projects, literature, and art.~~

ITALIAN COURSES

Italian I – WL02102 – 1 credit, one semester course, **college prep level**. This course is an introduction to Italian in which the students will be taught the four basic skills of listening, speaking, reading, and writing in order to form a solid foundation for future language study. Students will learn Italian which is necessary to communicate in authentic situations. This course represents a communicative approach to language study.

TEXTBOOK: **SENTIERI**

Italian II – WL02202 – 1 credit, one semester course, **college prep level**. *It is strongly recommended that Italian I was completed with a minimum grade of a C to be successful in this course.* After a rapid review of some basic grammar, the four skills are developed at a more intensive pace with a growing emphasis on Italian structure. Through presentations of skits and role-plays, students will communicate what they have learned.

TEXTBOOK: **SENTIERI**

Italian III (H) – WL02301 – 1 credit, one semester course, **honors level**. *It is strongly recommended that Italian II was completed with a minimum grade of a B to be successful in this course.* This course continues the work accomplished in the first two years at a more accelerated pace. Students are encouraged to speak in the target language while developing a strong grammatical base. Various activities will enable the students to refine their skills as well as to explore the rich world of Italian culture. The class is conducted in Italian.

TEXTBOOK: **SENTIERI**

Italian IV (H) – WL02401 – 1 credit, one semester course, **honors level**. **FIRST SEMESTER ONLY.** *It is strongly recommended that Italian III (H) was completed with a minimum grade of a B to be successful in this course.* This course consists of an intensive grammar review, with emphasis on grammar for personal communication. . The study of the Italian verbal system will be completed. Aspects of Italian culture will be discussed. The class will be conducted in Italian.

TEXTBOOKS: **IMMAGINA**

AP Italian Language & Culture – WL02501 – 1 credit, one semester course, **honors level**. **SECOND SEMESTER ONLY.** *It is strongly recommended that Italian IV (H) was completed with a minimum grade of a B to be successful in this course.* This course is an introduction to various Italian literary genres. Students will have the opportunity to improve their oral skills as well as reading, writing and listening skills. The course is conducted entirely in Italian.

TEXTBOOKS: **IMMAGINA**

Italian Culture via Cinema – WL02701 – 1 credit, one semester course, **honors level**. **Prerequisite of Italian IV Honors.** This honors level course will focus on cultural appreciation and connections as well as communicative language learning by utilizing authentic materials from film, and music. Students will be exposed to Italian-speaking culture via project-based learning to help create awareness of our global society. Students will leave this course feeling better prepared and more proficient for communication in the real world, college and/or AP course. This course will be taught primarily in Italian and requires students to communicate in the target language.

LATIN COURSES

Latin I – WL03102 – 1 credit, one semester course, **college prep level**. This course is an introduction to the language and culture of the ancient Romans. It emphasizes reading skills and provides, through its inflectional system, a unique insight into the nature of language. Word study, particularly of English derivatives, is a prominent feature of the course.

TEXTBOOK: **ECCE ROMANI** series

Course Outcomes

- Read silently and aloud for comprehension of simple Latin
- Demonstrate knowledge of vocabulary, basic inflectional systems, and syntax
- Research and present information on ancient Rome, its early history, and its influence on modern life (e.g. architecture, entertainment)
- Demonstrate a basic knowledge of selected classical myths and their influence
- Recognize Latin roots in English words

Latin II – WL03202 – 1 credit, one semester course, **college prep level**. *It is strongly recommended that Latin I was completed with a minimum grade of a C to be successful in this course.* This course involves a more in-depth exploration of the structure of the language as well as a continuing emphasis on acquisition of vocabulary, reading skills, and English derivatives. Cultural topics include an in depth study of the Julio-Claudian Emperors, Roman history and classical heroes.

TEXTBOOK: **ECCE ROMANI** series

Course Outcomes

- Read and understand increasingly more complex Latin
- Read familiar Latin aloud with accurate pronunciation, appropriate phrase grouping, voice inflection and expression
- Demonstrate an increased knowledge of vocabulary, inflectional systems, syntax, and English derivatives
- Investigate and explain the influence of Latin upon a modern field of study (e.g. science, music, law)
- Investigate selected facts of Roman history during the Empire
- Investigate the major contributions of prominent figures in the early Roman Empire

Latin III (H) – WL03301 – 1 credit, one semester course, **honors level**. *It is strongly recommended that Latin II was completed with a minimum grade of a B to be successful in this course.* Following a thorough grammar review and completion of a grammar study, students will read and interpret the prose and poetry of selected Roman authors including Phaedrus and Ovid.

TEXTBOOKS: **ECCE ROMANI** series and selected Latin Literature.

Course Outcomes

- Read Latin and translate with appropriate phrase grouping, voice inflection and expression
- Identify and analyze characteristic or noteworthy features of an author's style, including use of word choice and placement, and figures of speech
- Compare and contrast elements of the art, literature, mythology and philosophy of their own world with that of the ancient world

- Demonstrate a knowledge of the vocabulary, inflectional systems, and syntax appropriate to the authors they read
- Demonstrate an understanding of complex grammar constructions

Latin IV (H) – WL03401 – 1 credit, one semester course, **honors level**. *It is strongly recommended that Latin III was completed with a minimum grade of a B to be successful in this course.* In this course, students will develop awareness of and a respect for the Latin language and Roman culture through advanced reading of authentic poetry and prose.

Course Outcomes

- Read Latin poetry aloud, demonstrating mastery of pronunciation, meter, and appropriate expression
- Demonstrate a knowledge of inflectional systems and syntax appropriate to the authors they read
- Translate previously prepared passages accurately
- Read and comprehend new material at sight
- Identify and analyze characteristic features of the poet's style, including use of word choice and placement, imagery, figures of speech, sound and metrical effects, as seen in specific passages
- Analyze and discuss particular motifs or general themes in the authors' works

Latin V (H) – WL03401 – 1 credit, one semester course, **honors level**. *It is strongly recommended that Latin IV was completed with a minimum grade of a B to be successful in this course.* In this course, students will develop awareness of and a respect for the Latin language and Roman culture through advanced reading of authentic poetry and prose.

Course Outcomes

- Read Latin poetry aloud, demonstrating mastery of pronunciation, meter, and appropriate expression
- Demonstrate a knowledge of inflectional systems and syntax appropriate to the authors they read
- Translate previously prepared passages accurately
- Read and comprehend new material at sight
- Identify and analyze characteristic features of the poet's style, including use of word choice and placement, imagery, figures of speech, sound and metrical effects, as seen in specific passages
- Analyze and discuss particular motifs or general themes in the authors' works

AP Latin: Vergil and Caesar – WL03601 – 1 credit, one semester course, **honors level**. *It is strongly recommended that Latin IV (H) was completed with a minimum grade of a B to be successful in this course.* Students read selections from Vergil's Aeneid and Caesar's Gallic Wars as preparation for the AP Latin exam. Students may opt not to take the AP Exam. In this course students will progress in their ability to read, translate, understand, analyze and interpret Latin. This course requires extensive reading.

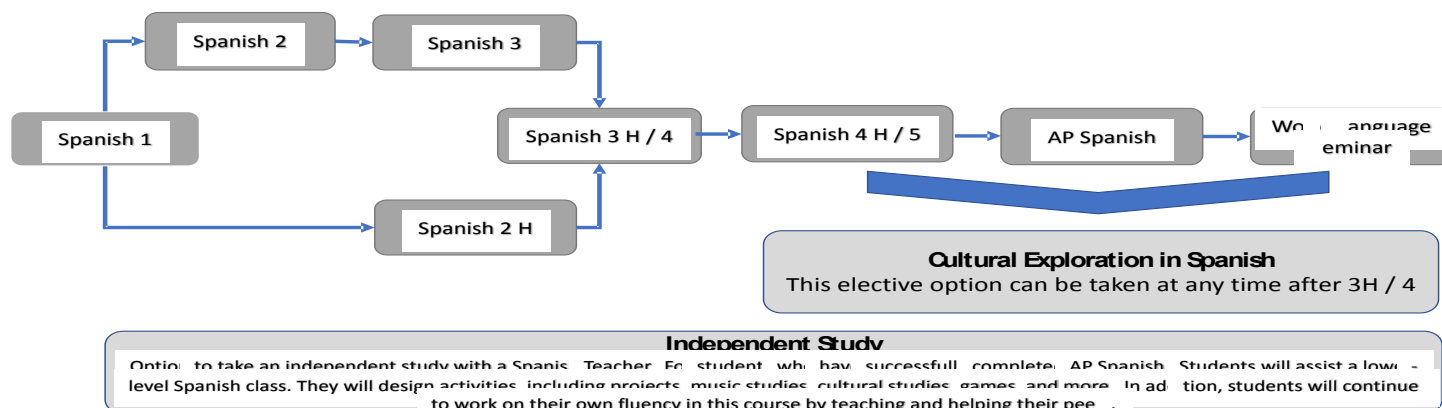
Course Outcomes

- Demonstrate a thorough grasp of grammatical structures and vocabulary
- Gain an appreciation of the epic poetry of Vergil by translating the selections accurately and interpreting critically
- Become familiar with the meter, stylistic devices, and grammatical constructions found in the Aeneid

- Understand the major themes of the Aeneid, especially as they relate to the mythological and historical background against which the Aeneid was written
- To become familiar with the sequence of historical events as narrated by Julius Caesar in the *DBG (De bello Gallico)*
- To read and translate the Latin passages required by the College Board for AP Latin

SPANISH COURSES

Please note: Spanish II through Spanish V has two tracks. Your Spanish I teacher will recommend which Spanish track to pursue.



Spanish I – WL04102 – 1 credit, one semester course, **college prep level**. This course is an introduction to Spanish language and culture. Students will be able to converse in elementary Spanish, learn basic reading and writing skills, and will demonstrate knowledge of Spanish traditions and culture.

TEXTBOOK: **REALIDADES** series

Spanish II (H) – WL04201 – *It is strongly recommended that Spanish I was completed with a minimum grade of a B and a teacher recommendation is given to take this honors course.* This course stresses a multi-faceted approach to a hands-on, student-centered learning experience. There are many varied activities which permit the students to further develop their language skills. The rich world of Hispanic culture is explored. This is an Honors level course. Success on the final exam in both the written and the oral components is required for continuation at the Honors level.

TEXTBOOK: **REALIDADES** series

Spanish II (CP) – WL04202 – 1 credit, one semester course, **college prep level**. *It is strongly recommended that Spanish I was completed with a minimum grade of a C to be successful in this course.* This college prep course is communicative and student-centered, which allows the student to experience everyday situations in which he/she will utilize the four basic skills of language learning. Videos, readings, and cultural units will further enhance the student's understanding of the Spanish-speaking world.

TEXTBOOK: **REALIDADES** series

Spanish III (H)/Spanish IV – WL04301 – 1 credit, one semester course, honors level. *Prerequisite: Successful completion of Spanish II (H) – a minimum grade of B is strongly recommended.* This course allows students to use their critical thinking skills to make cross cultural comparisons as they continue to explore the Spanish- speaking world. The focus is on achieving greater proficiency in listening, reading, writing, and speaking skills. Success on the final exam, in both the written and the oral components, is required for continuation in the Honors program.

TEXTBOOK: REALIDADES series

Spanish III (CP) – WL04302 – 1 credit, one semester course, college prep level. *It is strongly recommended that Spanish II was completed with a minimum grade of a C to be successful in this course.* This course stresses a multi-faceted approach which enhances the student's learning experience. There are many varied activities which permit the students to refine the language skills they have already developed. The rich world of Hispanic culture is explored in depth.

TEXTBOOK: REALIDADES series

Spanish IV (H)/Spanish V – WL04401 – 1 credit, one semester course, honors level. *Prerequisite: Successful completion of Spanish III (H) – a minimum grade of B is strongly recommended.* This course encompasses previously learned vocabulary and grammatical structures and introduces more complex ways to express requests, future actions, and descriptions of events and people in the past. Students will continue to learn about the diverse Hispanic cultures and use their critical thinking skills to differentiate and make comparisons. This course is conducted in Spanish. Success on the final exam in both the written and the oral components is required for continuation in the Honors program.

TEXTBOOK: REALIDADES series

AP Spanish Language & Culture – 1 credit, one semester course, AP level. WL04501 – FIRST SEMESTER ONLY – *Prerequisite: Successful completion of Spanish IV (H) or Spanish V – a minimum grade of B is strongly recommended.* Along with the World Language Seminar (WL09001), this course serves as preparation for the Spanish AP exam. Advanced grammatical structures and development of vocabulary will be mastered via literary selections and continued work in various texts. Speaking and listening skills will be enhanced through oral proficiency based activities and authentic materials. **** IT IS HIGHLY RECOMMENDED THAT ANY STUDENT WHO PLANS ON TAKING THE AP SPANISH LANGUAGE EXAM ALSO TAKES THE WORLD LANGUAGE SEMINAR IN THE SECOND SEMESTER.****

TEXTBOOKS: REALIDADES series, Una Vez Mas, Triangulo, on line resources and teacher prepared material

Spanish Culture – WL04701- 1 credit, one semester course, **honors level. Prerequisite of Spanish III Honors or Spanish IV.**

This honors level course will focus on cultural appreciation and connections as well as communicative language learning by utilizing authentic materials from literature, art, dance, film, and music. Students will be exposed to different Spanish-speaking cultures via project-based learning to help create awareness of our global society. Students will leave this course feeling better prepared and more proficient for communication in the real world, college and/or AP course. This course will be taught in Spanish and requires students to communicate in the target language.

OTHER COURSES

World Language Seminar (H) – WL09001 – 1 credit, one semester course, **honors level**. **SECOND SEMESTER ONLY**. ***Prerequisite: Students need to have completed an AP World Language course.*** This course will reinforce all skills needed for success in World Language AP tests including grammatical practice, oral proficiency exercises, reading comprehension and listening skills. Authentic test materials and realia will be incorporated. It is strongly recommended that students planning to take the AP exam enroll in this seminar. Please note: This course is open to students who are preparing for the AP Exam in any language. This course is taught on a pass/fail basis and will not be included in the determination of GPA, class rank, or honor roll.

Course outcomes and expectations are:

- Review format and grading system of the AP exam
- Complete and evaluate previous AP exam questions using the AP rubric and scoring systems
- Write timed essays for practice in demonstrating the ability to formulate and support ideas utilizing documentary evidence

BUSINESS						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Accounting I	BU01100	1	semester	unleveled	9,10,11,12	22
Accounting II (H)	BU01201	1	semester	honors	9,10,11,12	22
Advanced Marketing (H)	BU03401	0.5	quarter	honors	9,10,11,12	25
Business Law	BU01300	1	semester	unleveled	10,11,12	23
Entrepreneurship	BU03000	0.5	quarter	unleveled	9,10,11,12	24
Marketing	BU03100	0.5	quarter	unleveled	9,10,11,12	24
Computer Applications I	BU01400	0.5	quarter	unleveled	9,10,11,12	23
Computer Applications II	BU01450	0.5	quarter	unleveled	9,10,11,12	23
Co-op Education	BU05000	1	semester	unleveled	11,12	25
Personal Finance	BU03300	0.5	quarter	unleveled	9,10,11,12	24
Web Communications and Design	BU01500	1	semester	unleveled	9,10,11,12	23
Introduction to Sports Management	BU03600	0.5	quarter	unleveled	9,10,11,12	25
ENGLISH						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
English 9 (H)	EN01001	1	semester	honors	9,10,11,12	26
English 9 (CP)	EN01002	1	semester	college prep	9,10,11,12	26
English 9 (CT)	EN01003	2	yearlong	career track	9,10,11,12	26
English 10 (H)	EN02001	1	semester	honors	9,10,11,12	27
English 10 (CP)	EN02002	1	semester	college prep	9,10,11,12	27
English 10 (CT)	EN02003	1	semester	career track	9,10,11,12	27
AP English Language and Composition	EN03201	1	semester	advanced placement	11	29
English 11 (H)	EN03001	1	semester	honors	9,10,11,12	29
English 11 (CP)	EN03002	1	semester	college prep	9,10,11,12	29
English 11 (CT)	EN03000	1	semester	career track	9,10,11,12	30
AP English Literature and Composition	EN04101	2	yearlong	advanced placement	12	31
English 12 (H)	EN04001	1	semester	honors	9,10,11,12	31
English 12 (CP)	EN04002	1	semester	college prep	9,10,11,12	31
English 12 (CT)	EN04003	1	semester	career track	9,10,11,12	31
Advanced Studio Theater ~ alternating days	EN05050	0.5	semester	unleveled	9,10,11,12	32
Creative Writing	EN05200	0.5	quarter	unleveled	9,10,11,12	32
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Creative Writing ~ alternating days	EN05250	0.5	semester	unleveled	9,10,11,12	32

INDEX

Dystopian Literature	EN06200	0.5	quarter	unleveled	9,10,11,12	35
Film Study	EN06300	0.5	quarter	unleveled	9,10,11,12	35
Literature and Philosophy	EN05300	0.5	quarter	unleveled	10,11,12	32
Media Studies I	EN05900	1	semester	unleveled	10,11,12	34
Media Studies II	EN06000	1	semester	unleveled	10,11,12	34
Media Studies III	EN06100	1	semester	unleveled	10,11,12	34
Poetry for Everyone	EN05800	0.5	quarter	unleveled	9,10,11,12	33
Reading Enrichment	EN00600	1	semester	unleveled	10,11,12	35
Research and Debate	EN05400	0.5	quarter	unleveled	11,12	33
Shakespeare	EN05600	0.5	quarter	unleveled	9,10,11,12	33
College Entrance Exam Prep	MI06100	0.5	quarter	unleveled	10,11,12	35
Studio Theater	EN05000	0.5	quarter	unleveled	9,10,11,12	32
FAMILY & CONSUMER SCIENCES						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Best of Baking	FC03100	0.5	quarter	unleveled	9,10,11,12	37
Child Development I	FC01100	1	semester	unleveled	10,11,12	36
Child Development II	FC01200	1	semester	unleveled	10,11,12	36
Child Development III	FC01300	1	semester	unleveled	11,12	36
Contemporary Sewing and Crafts	FC03500	0.5	quarter	unleveled	9,10,11,12	38
Foods for Today	FC03200	0.5	quarter	unleveled	9,10,11,12	37
Foods of the World	FC03300	0.5	quarter	unleveled	10,11,12	38
Interior Design	FC03600	0.5	quarter	unleveled	9,10,11,12	39
Preparing for Adult Life	FC03000	0.5	quarter	unleveled	11,12	37
Preparing for Parenthood	FC03400	0.5	quarter	unleveled	9,10,11,12	38
DCTS Hospitality, Tourism & Human Services Options	VT01100/VT01200	4	yearlong	unleveled	11,12	39
FINE ARTS						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Animation I	AR04700	0.5	quarter	unleveled	9,10,11,12	42
Animation I ~ alternating days	AR04750	0.5	semester	unleveled	9,10,11,12	42
Animation II	AR04800	0.5	quarter	unleveled	9,10,11,12	42
AP Studio Art: 2-D Design*	AR01401	1	semester	advanced placement	11,12	41
AP Studio Art: 3-D Design*	AR01501	1	semester	advanced placement	11,12	41
AP Studio Art: Studio Drawing*	AR01601	1	semester	advanced placement	11,12	41
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Art I	AR01100	1	semester	unleveled	9,10,11,12	40
Art II	AR01200	1	semester	unleveled	9,10,11,12	40
Art History	AR03000	0.5	quarter	unleveled	9,10,11,12	41

INDEX

Ceramics I	AR04400	0.5	quarter	unleveled	9,10,11,12	42
Ceramics I ~ alternating days	AR04450	0.5	semester	unleveled	9,10,11,12	42
Ceramics II	AR04500	0.5	quarter	unleveled	9,10,11,12	42
Ceramics III	AR04600	0.5	quarter	unleveled	10,11,12	42
Digital Photography I	AR05100	0.5	quarter	unleveled	10,11,12	43
Digital Photography I ~ alternating days	AR05150	0.5	semester	unleveled	10,11,12	43
Digital Photography II	AR05200	0.5	quarter	unleveled	10,11,12	43
Fashion Design I	AR04100	1	semester	unleveled	10,11,12	42
Fashion Design II	AR04200	1	semester	unleveled	10,11,12	42
Graphic Design I	AR04900	0.5	quarter	unleveled	9,10,11,12	43
Graphic Design II	AR05000	0.5	quarter	unleveled	9,10,11,12	43
Painting Studio I	AR05300	0.5	quarter	unleveled	10,11,12	43
Painting Studio II	AR05400	0.5	quarter	unleveled	10,11,12	43
Portfolio Preparation (H)*	AR04001	0.5	quarter	honors	11,12	41
Sculpture I	AR05700	0.5	quarter	unleveled	9,10,11,12	43
Sculpture II	AR05800	0.5	quarter	unleveled	10,11,12	43
Sculpture III	AR05900	0.5	quarter	unleveled	10,11,12	43
World Crafts	AR06000	0.5	quarter	unleveled	9,10,11,12	44

MATHEMATICS

Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Algebra I (CP)	MA00902	1	semester	college prep	9	47
Algebra I (H)*	MA00901	1	semester	honors	9	47
Algebra I Seminar	MA01100	1	semester	college prep	10,11	47
Algebra II (CP)	MA01302	1	semester	college prep	10,11,12	48
Algebra II (CT)	MA01303	1	semester	career track	10,11,12	48
Algebra II (H)*	MA01301	1	semester	honors	10,11,12	48
Algebra III (CP)	MA01402	1	semester	college prep	10,11,12	49
AP Calculus AB*	MA04201	2	yearlong	advanced placement	11,12	51
AP Calculus BC*	MA04301	2	yearlong	advanced placement	11,12	52
AP Calculus C*	MA04401	1	semester	advanced placement	11,12	52

Course Name	Course #	Credit	Term	Level	Grade(s)	Page
AP Computer Science A*	MA07101	1	semester	advanced placement	9,10,11,12	52
AP Computer Science Principles	MA06101	1	semester	advanced	9,10,11,12	52

INDEX

				placement		
AP Statistics*	MA03101	2	yearlong	advanced placement	11,12	50
Calculus (H)*	MA04101	1	semester	honors	11,12	51
Geometry (CP)	MA01202	1	semester	college prep	10,11,12	48
Geometry (CT)	MA01203	1	semester	career track	10,11,12	48
Geometry (H)*	MA01201	1	semester	honors	9,10,11,12	47
Introduction to Data Sciences	MA06001 (H) or MA06002 (U)	1	semester	honors or unlevleled	10,11,12	49
Mobile Apps for IOS I	MA07200	1	semester	college prep	9,10,11,12	53
Mobile Apps for IOS II	MA07301	1	semester	college prep	9,10,11,12	53
Mobile Apps Lite	MA07400	0.5	quarter	college prep	9,10,11,12	53
Pre-Calculus with Limits (CP)	MA04002	1	semester	college prep	10,11,12	51
Pre-Calculus with Limits (H)*	MA04001	1	semester	honors	10,11,12	50
Probability and Statistics (CP)	MA03002	1	semester	college prep	10,11,12	50
Probability and Statistics (H)*	MA03001	1	semester	honors	10,11,12	49
College Entrance Exam Prep	MI06100	0.5	quarter	unlevleled	10,11,12	53
Transitional Math	MA01503	1	semester	career track	11,12	49
MUSIC						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Band Concentration	MU01100	2	yearlong	unlevleled	10,11,12	54
Band Sectional	MU01200	0.2	yearlong	unlevleled	9,10,11,12	58
Chamber Singers ~ alternating days	MU02000	1	yearlong	unlevleled	10,11,12	56
Chamber Singers Sectional	MU02100	0.2	yearlong	unlevleled	10,11,12	56
Choral Concentration	MU02300	2	yearlong	unlevleled	10,11,12	56
Chorale Sectional	MU02400	0.2	yearlong	unlevleled	9,10,11,12	58
Concert Band ~ alternating days	MU01000	1	yearlong	unlevleled	9,10,11,12	54
Concert Band & Chamber Singers ~ alternating days	MU06000	1	yearlong	unlevleled	10,11,12	58
Concert Chorale ~ alternating days	MU02200	1	yearlong	unlevleled	9,10,11,12	56
Music Production 1	MU07100	0.5	quarter	unlevleled	9,10,11,12	59
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Music Production 1 ~ alternating days	MU07150	0.5	semester	unlevleled	9,10,11,12	59
Music Production 2	MU07200	0.5	quarter	unlevleled	9,10,11,12	59
Guitar Lab	MU08400	0.5	quarter	unlevleled	9,10,11,12	61
Jazz Ensemble	MU03000	0.4	yearlong	unlevleled	9,10,11,12	54
Piano Lab	MU08100	0.5	quarter	unlevleled	9,10,11,12	60
Basic Music Theory	MU08200	0.5	quarter	unlevleled	9,10,11,12	60

INDEX

Advanced Music Theory and Composition	MU08300	0.5	quarter	unleveled	9,10,11,12	60
Best Buddies General Music	MU08600	0.5	Quarter	Unleveled	9,10,11,12	61
Orchestra Winds Sectional	MU05100	0.2	yearlong	unleveled	9,10,11,12	58
Percussion Sectional	MU03100	0.2	yearlong	unleveled	9,10,11,12	58
String Concentration	MU04200	2	yearlong	unleveled	10,11,12	57
String Ensemble ~ alternating days	MU04100	1	yearlong	unleveled	10,11,12	57
String Ensemble and Concert Chorale~ alternating days	MU06100	1	yearlong	unleveled	10,11,12	58
String Orchestra ~ alternating days	MU04000	1	yearlong	unleveled	9,10,11,12	57
String Orchestra and Chamber Singers ~ alternating days	MU06200	1	yearlong	unleveled	10,11,12	58
Strings Sectional	MU04300	0.2	yearlong	unleveled	9,10,11,12	58
Ukulele Lab	MU08700	0.5	quarter	unleveled	9,10,11,12	61
Wind Ensemble ~ alternating days	MU05000	1	yearlong	unleveled	10,11,12	55
Wind Ensemble & Concert Chorale ~ alternating days	MU06300	1	yearlong	unleveled	10,11,12	58

PHYSICAL EDUCATION AND HEALTH

Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Fitness/Weight Training Class	PE02200	0.5	quarter	unleveled	9,10,11,12	64
Fitness/Weight Training Class ~ alternating days	PE02250	0.5	semester	unleveled	9,10,11,12	64
General Physical Education	PE02000	0.5	quarter	unleveled	9,10,11,12	64
General Physical Education ~ alternating days	PE02050	0.5	semester	unleveled	9,10,11,12	64
Health and Wellness	PE04000	0.5	quarter	unleveled	11, 12	65
Health Education Grade 10	PE01000	0.5	quarter	unleveled	10	63
Health Education Grade 10 ~ alternating days	PE01050	0.5	semester	unleveled	10	63
Lifetime Fitness Class	PE02100	0.5	quarter	unleveled	9,10,11,12	64
Lifetime Fitness Class ~ alternating days	PE02150	0.5	semester	unleveled	9,10,11,12	64
Physical Education Grade 9	PE00900	0.5	quarter	unleveled	9	63
Physical Education Grade 9 ~ alternating days	PE00950	0.5	semester	unleveled	9	63
Physical Education Concentration	PE02300	0.5	quarter	unleveled	9,10,11,12	65
Advanced Personal Fitness	PE02500	0.5	quarter	unleveled	9,10,11,12	65
Fitness and Sport	PE02400	0.5	quarter	unleveled	9,10,11,12	65

SCIENCE

Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Anatomy & Physiology (CP)	SC04102	1	semester	college prep	11,12	70
Anatomy & Physiology (H)*	SC04101	1	semester	honors	11,12	70
AP Biology*	SC03201	2	yearlong	advanced placement	11,12	67
AP Chemistry*	SC02201	2	yearlong	advanced placement	11,12	68
AP Environmental Science I*	SC04501	1	semester	advanced placement	11,12	71
AP Physics 1: Algebra-Based*	SC05101	1	semester	advanced	11,12	75

INDEX

				placement		
AP Physics 2: Algebra-Based*	SC05201	1	semester	advanced placement	11,12	75
AP Physics C: Electricity & Magnetism*	SC05001	1	semester	advanced placement	11,12	74
AP Physics C: Mechanics*	SC04801	1	semester	advanced placement	11,12	74
Engineering Design (CP)	SC04702	1	semester	college prep	11,12	73
Astronomy	SC06100	0.5	quarter	unleveled	9,10,11,12	73
Biology (CP)	SC03102	2	yearlong	college prep	10,11,12	68
Biology (H)*	SC03101	1	semester	honors	9,10,11,12	67
Biotechnology	SC04200	1	semester	unleveled	10,11,12	70
Chemistry (CT)	SC02103	1	semester	career track	10,11,12	69
Chemistry (CP)	SC02102	1	semester	college prep	10,11,12	69
Chemistry (H)*	SC02101	1	semester	honors	10,11,12	68
Create Code Construct	SC06200	0.5	quarter	unleveled	9,10,11,12	73
Earth Science	SC06000	0.5	quarter	unleveled	9,10,11,12	73
Environmental Science (CP)	SC04302	1	semester	college prep	11,12	71
Environmental Science (H)*	SC04301	1	semester	honors	11,12	71
Environmental Science II (H)*	SC04601	1	semester	honors	11,12	72
Forensic Chemistry	SC02400	1	semester	unleveled	11,12	69
Engineering to Learn (CP)	SC01002	1	semester	college prep	9	67
Engineering to Learn (H)*	SC01001	1	semester	honors	9	67
Marine Ecology (CP)	SC04402	1	semester	college prep	11,12	71
Physics (H)*	SC04701	1	semester	honors	11,12	72
DCTS Engineering and Computer Science	VT01100/VT01200	4	yearlong	unleveled	11,12	77
DCTS Health and Biosciences	VT01100/VT01200	4	yearlong	unleveled	11,12	77
SOCIAL STUDIES						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
20 th Century Pop Cultures	SS06100	0.5	quarter	unleveled	10,11,12	88
African American Studies	SS06400	0.5	quarter	unleveled	10,11,12	88
United States Civics and Government	SS04100	1	semester	unleveled	11,12	83
United States Civics and Government (H)	SS04101	1	semester	honors	11,12	82
AP European History*	SS05301	2	yearlong	advanced placement	11, 12	86
AP Human Geography	SS05401	1	semester	advanced placement	10,11,12	86

INDEX

AP Macroeconomics*	SS05101	1	semester	advanced placement	11,12	86
AP Microeconomics*	SS05201	1	semester	advanced placement	11,12	87
AP Psychology*	SS05501	1	semester	advanced placement	11,12	87
AP Psychology* ~ alternating days	SS05551	1	yearlong	advanced placement	11,12	87
AP United States Government and Politics*	SS04001	1	semester	advanced placement	11,12	82
AP United States Government and Politics* ~ alternating days	SS04051	1	yearlong	advanced placement	11,12	82
AP United States History*	SS03101	1	semester	advanced placement	11,12	87
AP United States History*	SS03101	2	yearlong	advanced placement	9	79
AP World History*	SS02101	2	yearlong	advanced placement	10,11,12	80
Choices in Crisis: A Study of the Holocaust	SS06500	0.5	quarter	unleveled	10,11,12	88
Criminal Justice System	SS05800	0.5	quarter	unleveled	10,11,12	89
Economics (CP)	SS05002	1	semester	college prep	11,12	89
Elections	SS06600	0.5	quarter	unleveled	10,11,12	89
Environmental History	SS06700	0.5	quarter	unleveled	10,11,12	89
Global Conflicts in the Modern World	SS05900	0.5	quarter	unleveled	10,11,12	90
Global Conflicts in the Modern World ~ alternating days	SS05950	0.5	semester	unleveled	10,11,12	90
Psychology (CP)	SS05602	0.5	quarter	college prep	11,12	90
Sociology	SS06200	0.5	quarter	unleveled	11,12	90
United States History- Part 2 (H)	SS03001	1	semester	honors	9,11	79
United States History- Part 2 (CP)	SS03002	1	semester	college prep	9,11	79
Women's Studies	SS06800	0.5	quarter	unleveled	10,11,12	90
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
World History (CT)	SS02003	1	semester	career track	10	80
World History (CP)	SS02002	1	semester	college prep	10	80
World History (H)*	SS02001	1	semester	honors	10	80
SPECIAL EDUCATION						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Academic Skills (A/B) ~ alternating days	MI00055	0.5	semester	unleveled	9,10,11,12	93
Academic Skills I	MI00155	1	semester	unleveled	9,10,11,12	93
Everyday Skills Application	LS08000	2	yearlong	unleveled	9,10,11,12	94
Foundations of English 9	EN00090	2	yearlong	unleveled	9	92
Foundations of English 10	EN00100	2	yearlong	unleveled	10	92

INDEX

Foundations of English 11	EN00110	1	semester	unleveled	11	92
Foundations of English 12	EN00120	1	semester	unleveled	12	92
Foundations of Math 9	MA00090	2	yearlong	unleveled	9	93
Foundations of Math 10	MA00100	2	yearlong	unleveled	10	93
Foundations of Math 11	MA00110	1	semester	unleveled	11	93
Foundations of Math 12	MA00120	1	semester	unleveled	12	93
Positive Life Strategies	MI02000	1 or 2	yearlong	unleveled	9,10,11,12	94
Reading and Math Skills	LS01000	2	yearlong	unleveled	9,10,11,12	94
Autism Support and Services		2	yearlong	Unleveled	9,10,11,12	94
TECHNOLOGY EDUCATION						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
Advanced Computer Aided Drafting and Design (CADD)	TE01600	1	semester	unleveled	9,10,11,12	98
Architectural Computer Aided Drafting	TE01500	1	semester	unleveled	9,10,11,12	97
Commercial Drone Aviation	TE01800	0.5	quarter	unleveled	9,10,11,12	95
Computer Aided Manufacturing	TE01700	0.5	quarter	unleveled	9,10,11,12	97
Introduction to Cabinet and Furniture Making	TE01100	0.5	quarter	unleveled	10,11,12	95
Construction Technology I	TE01200	0.5	quarter	unleveled	9,10,11,12	96
Manufacturing Technology I	TE01300	0.5	quarter	unleveled	9,10,11,12	96
Manufacturing Technology I ~ alternating days	TE01350	0.5	semester	unleveled	9,10,11,12	96
Manufacturing Technology II	TE01900	0.5	quarter	unleveled	9,10,11,12	96
Introduction to Practical Woodworking	TE01000	0.5	quarter	unleveled	9,10,11,12	95
Introduction to Mechanical Drawing and CAD	TE01400	1	semester	unleveled	9,10,11,12	97
DCTS Construction Technology	VT01100/VT01200	4	yearlong	unleveled	11,12	99
DCTS Logistics, Distribution & Transportation	VT01100/VT01200	4	yearlong	unleveled	11,12	99
WORLD LANGUAGE						
Course Name	Course #	Credit	Term	Level	Grade(s)	Page
AP French Language & Culture*	WL01501	1	semester	advanced placement	9,10,11,12	101
AP Italian Language & Culture*	WL02501	1	semester	advanced placement	9,10,11,12	103
AP Latin: Vergil and Caesar*	WL03601	1	semester	advanced placement	9,10,11,12	105
AP Spanish Language & Culture*	WL04501	1	semester	advanced placement	9,10,11,12	108
France and Modern Western Civilization (H)*	WL01901	1	semester	honors	9,10,11,12	102
French I	WL01102	1	semester	college prep	9,10,11,12	101
French II	WL01202	1	semester	college prep	9,10,11,12	101
French III (H)*	WL01301	1	semester	honors	9,10,11,12	101
French IV (H)*	WL01401	1	semester	honors	9,10,11,12	101
Italian I	WL02102	1	semester	college	9,10,11,12	103

INDEX

				prep		
Italian II	WL02202	1	semester	college prep	9,10,11,12	103
Italian III (H)*	WL02301	1	semester	honors	9,10,11,12	103
Italian IV (H)*	WL02401	1	semester	honors	9,10,11,12	103
Italian Culture via Cinema	WL02701	1	semester	honors	10,11,12	103
Latin I	WL03102	1	semester	college prep	9,10,11,12	104
Latin II	WL03202	1	semester	college prep	9,10,11,12	104
Latin III (H)*	WL03301	1	semester	honors	9,10,11,12	104
Latin IV (H)*	WL03401	1	semester	honors	9,10,11,12	105
Latin V (H)*	WL03501	1	semester	honors	9,10,11,12	105
Spanish I	WL04102	1	semester	college prep	9,10,11,12	107
Spanish II (CP)	WL04202	1	semester	college prep	9,10,11,12	107
Spanish II (H)	WL04201	1	semester	honors	9,10,11,12	107
Spanish III (CP)	WL04302	1	semester	college prep	9,10,11,12	108
Spanish III (H)*	WL04301	1	semester	honors	9,10,11,12	108
Spanish IV (CP)	WL04402	1	semester	college prep	9,10,11,12	108
Spanish IV (H)*	WL04401	1	semester	honors	9,10,11,12	108
Spanish V	WL04502	1	semester	college prep	9,10,11,12	108
Spanish Culture	WL04701	1	semester	honors	10,11,12	109
World Language Seminar (H)*	WL09001	1	semester	honors	9,10,11,12	110