

MESSAGE FROM THE PRINCIPAL

Salem High School is a comprehensive high school and aims to prepare all students for college or for their future career path. We offer a full range of courses in language arts, mathematics, humanities, and science at the College Preparatory, Honors, Advanced Placement, and International Baccalaureate level, as well as several world languages and technology enhanced courses related to research, graphic design, and engineering. Our academic programs are designed to challenge our students and to promote student thinking and creativity. Our Project Lead the Way Program is a pre-engineering program. Salem High School is the only school in the area to offer the International Baccalaureate Diploma Programme. Many of our academic courses award dual credit with Salem Community College. Additionally, our IB and AP programs allow our students to complete college level work, while gaining college credits at thousands of colleges and universities. We also have state of the art computer labs and science labs, Promethean Boards in all classrooms, and computer applications labs for graphic design strands leading to specialized study in the fields of digital imaging, desktop publishing, and image editing. We offer a video production program, which provides instruction in digital video editing and a Fine Arts Department that provides our students the opportunity to showcase their talents in art, dance, choir, and instrumental performances. Salem High School meets all the technological demands of education today. The goal of Salem High School is to provide the highest quality education for students by offering rigorous academic programs, while supporting students on their path to success.

You Can't Hide Our RAM PRIDE!

Yours in Education,
John R. Mulhorn
Principal, Salem High School



Table of Contents

General Information

Counseling Philosophy	4
Program Selection	4-6
Graduation Requirements	4-6
Course & Program Structure	6-7
Dr. Forman Acton Endowment.....	9

Course Descriptions

International Baccalaureate	10-14
English	
College Prep, Honors and AP	15-17
Electives	17
Mathematics	
College Prep, Honors and AP	17-19
Science	
College Prep, Honors and AP	19-21
Elective	21
Social Studies	
College Prep, Honors and AP	22-23
Electives	24-25
World Languages	25-26
Health & Wellness Education	27
Dance	28-29
Business Technology	29-30
Applied Technology	30-32
Art.....	32-33
Music	33-34
Family & Consumer Science	34
Special Education	35
List of Course Offerings	38-41
International Baccalaureate Program.....	42



Counseling Philosophy

School Counseling at Salem High School is an integral part of education. Academic advising, counseling, and career education are everyone's responsibility. Our students are the focus. The programs in our educational program are designed to help everyone achieve his/her potential. A cooperative effort involving students, parents, teachers, counselors and administrators is needed to help guide students for the most appropriate, challenging program of studies for responsible and productive citizenship.

Students and school counselors are matched primarily by alphabetical order. Students with last names beginning with A through M work with Mr. David Hunt. Those with last names beginning with N through Z work with Mrs. Regina Gatson.

Program Selection

The programs students pursue in high school should reflect their aspirations, abilities, and achievements. Since a young adult's post-high school plans for employment, college or vocational technical training sometimes change, students are encouraged to review on occasion the match between their chosen program of study and their long range goals.

Courses at Salem High School provide students with the opportunity to meet their educational needs. Beyond the state or local requirements, students are encouraged to select courses that are appropriate for their abilities and aspirations.

Counselors are available to advise students on their academic program. The counselor reviews a student's test scores, past and current academic performance and career goals. Together with teachers' recommendations for courses and academic levels, the final choice, aside from Honors and Advanced Placement courses which have specific academic performance criteria for admission, is determined by the students and their parents. Students having difficulty in an academic area may receive additional help from their teachers, or further instruction upon the recommendation of the Child Study Team. This recommendation follows an extensive evaluation of the student by the Child Study Team. Parents, teachers, or students may initiate a review by referring the student to the Intervention and Referral Service team.

Graduation Requirements

Graduation requirements are established by the Department of Education of the State of New Jersey and the Salem City Board of Education. The requirements for each student are established at the time of entrance to high school.

The credit and course requirements to qualify for graduation are as follows:

- **Earn a minimum of 130 credits**
- **State graduation requirements (must meet ONE criteria from English Language Arts and Mathematics)**
- 4 credit years Language Arts
- 3 credit years Mathematics including Algebra I
- 3 credit years Science including Biology
- 1 credit year World Languages

English Language Arts	Mathematics
Passing score on a State ELA Grade 9	Passing score on State Algebra I
Passing score on a State ELA Grade 10	Passing score on State Geometry
Passing score on a State ELA Grade 11	Passing score on State Algebra II
Passing score on a State NJGPA	Passing score on State NJGPA
SAT \geq 400	SAT \geq 400
ACT \geq 16	ACT \geq 16
Accuplacer Write Placer \geq 6	Accuplacer elementary Algebra \geq 76
PSAT \geq 22	PSAT \geq 22
ASVAB-AFQT \geq 31	ASVAB-AFQT \geq 31
Meet the Criteria of the NJDOE Portfolio Appeal	Meet the Criteria of the NJDOE Portfolio Appeal

- 2 credit years United States History
- 1 credit year World History
- 1 credit year Fine, Performing Arts
(Required course for 9th graders is listed on Page 35)
- 1 credit year Practical Arts
- 4 credit years Physical Education and Health for each year at Salem HS
- 1 credit year Careers/Economics

Students passing a course earn credits based on the number of periods a class is scheduled to meet each week.

If a student should fail a required English or social studies, math or science course, that course must be made up in summer school or repeated.

Course Structure

Courses at Salem High School are:

Of two lengths:

- 5 credit or full year
These courses last for all four marking periods of the school year.
- 2.5 credit semester or half year
These courses last for two marking periods, (one semester) and finish after a half year.

Of three levels:

- International Baccalaureate (IB)
These courses are for students with outstanding motivation and achievement who intend to qualify for the International Baccalaureate Diploma. In subjects for which they are offered, these courses carry the most demanding workload for students at the grade level.
- Honors or Advanced Placement
These courses are for students with outstanding motivation and achievement. Courses for which an Honors level will be offered are identified with a (Hn) next to the course name.
- College Preparatory
These courses are intended to prepare students for the demands and challenges of college level work after graduation.

Of two kinds of credit:

- Satisfying subject area requirements and graduation requirements
Most courses fit this category. They satisfy the subject area credit requirements on page 5 and yield credit toward high school graduation.
- Provide graduation credit only
Some courses do not count toward subject area requirements, but they do count toward graduation. They are elective courses or they may be remedial courses in nature and also carry state designation.

Grading System

Academic Grades	Numerical Grades	UnWeighted	Honors Weighted	AP Weighted	IB Weighted
A	90-100	4	5	5	5.25
B	80-89	3	4	4	4.25
C	70-79	2	3	3	3.25
D	60-69	1	1	1	1
F	0-59	0	0	0	0

Honors & Advanced Placement Programs

In all Honors classes due dates are rarely, if ever, adjusted. Late work will take a ten-point deduction per day and will not be accepted after the second day without an attached note from the student's parent/guardian. No work will be accepted after five days beyond the due date. Students are required to complete an intense amount of independent reading and writing; more than would be expected of students in a College Prep level courses. Students will be allowed to request Honors courses during their freshman and sophomore years only. Honors level study during the junior and senior years must be at the AP or IB level.

International Baccalaureate Diploma Program (IB)

Life in the 21st century, in an interconnected, globalized world, requires critical-thinking skills and a sense of international-mindedness, something that International Baccalaureate® (IB) Diploma Program students come to know and understand. The IB Diploma Program is designed as an academically challenging and balanced program of education with final examinations that prepares students, normally aged 16 to 19 for success at university and life beyond. The program is normally taught over two years and has gained recognition and respect from the world's leading universities. Honors students, who are entering their junior year are eligible to enter the program. For more information contact our Guidance Office.



Forman Sinnickson Acton

Professor Emeritus of Computer Science at Princeton University, Dr. Forman Acton died February 18, 2014 at the age of 93. He left a \$30 million endowment toward a foundation to benefit the Salem City children.

Forman S. Acton was born on 1920 in Salem, New Jersey, where ancestors of the Sinnickson and Acton families had lived since the 1600's. Forman attended the Salem School District, leaving to attend high school at Philips Exeter Academy in New Hampshire where he graduated in 1939. At Princeton University he majored in engineering and earned his Bachelor's of Science degree in 1943 as well as a Master's of Science degree in chemical engineering in 1944. Mr. Acton began teaching at Princeton shortly thereafter, but was drafted into the U.S. Army in June of 1944 and was stationed in Spartansburg, South Carolina. During his tenth week of basic training, Forman was transferred to a technical plant in Oak Ridge, Tennessee. This plant produced the U-235 isotope which was the explosive element of the Hiroshima bomb. In December of 1945, Forman was given an Honorable Discharge from the Army Corp of Engineers.

Forman went on to Ohio State University to work with John L. Synge for six months. He left with Professor Synge to pursue mathematical applications in engineering. Forman was a graduate student for three years at Carnegie Institute of Technology to earn his Doctor of Science degree in applied math. He accepted a job with the National Bureau of Standards at an institute for Numerical Analysis at UCLA which was devoted to the new electronic computing machines. Forman worked on one of the first digital computers called SWAC.

In 1952, Acton returned to Princeton to direct the Analytical Research Group working on military weapons. While contributing to systems such as the U-2 spy plane and the Nike missile, Acton became an expert in using and teaching others to use another of the very first computers, the IAS machine. During this time Acton worked with other important figures including Princeton Professor John Tukey who coined the terms "software" and "bit" and Thomas Kurtz who earned a Ph.D. in mathematics in 1956 and went on to co-invent the computer language BASIC.

In 1963, Acton accompanied the first computer to the Indian Institute of Technology near Kanpur, India where he set up the computer center and began teaching classes. In the spring of 1967 Forman returned to teach at Princeton. In 1985, the Computer Science Department established the Engineering Department of Princeton. Forman authored three published textbooks: Analysis of Straight-Line Data, Numerical Methods That Usually Work, and Real Computing Made Real-Preventing Errors in Scientific and Engineering Calculations. Forman taught for 37 years and retired in 1990. His generosity will benefit the students of the Salem City School District for generations to come.

IB Courses

IB Biology HL

Grades 11-12

6 credits

Prereq: CP or Honors Biology

The IB Diploma Program Biology higher level course covers the relationship of structure and function at all levels of complexity. Students learn about cell theory, the chemistry of living things, plant science and genetics, among many other topics to further their understanding of and learning about biology. Throughout this challenging course, students become aware of how scientists work and communicate with each other. Further, students enjoy multiple opportunities for scientific study and creative inquiry within a global context. This course is for students that plan to enter the medical field.

IB Chemistry HL

Grades 11-12

6 credits

Prereq: CP or Honors Chemistry

This course is designed as a 2-year course that meets the higher level requirements for the Group 4 (Experimental Sciences) component of the International Baccalaureate Diploma Program. The course work and textbook are at the college level. This course will focus on not only the basic content knowledge of Chemistry, (covered in year 1), but also spend the second year focusing on higher level or advanced topics in the course. Students will also experience a heavy emphasis on technical writing in the sciences, through writing lab reports for their Internal Assessments. This course is for students that plan to enter the engineering field.

IB Math Analysis and Approaches SL

Grades 11-12

5 credits

Prereq: CP or Honors Algebra II

This course focuses on introducing analytic methods with an emphasis on calculus—appropriate for pure mathematicians, engineers, scientists, economists, those with an interest in analytic methods. This subject is aimed at students who will go on to study subjects with substantial mathematics content such as mathematics itself, engineering, physical sciences, or some economics.

IB Math Applications and Interpretation SL

Grades 11-12

5 credits

Prereq: CP or Honors Geometry

This course focuses on applications and interpretation with an emphasis on statistics, modeling and use of technology—appropriate for those with an interest in the applications of mathematics and how technology can support this. This subject is aimed at students who will go on to study subjects such as social sciences, natural sciences, medicine, statistics, business, some economic courses, psychology and design.

IB Language (English) A: Literature HL

Grades 11-12

5 credits

Prereq: CP or Honors English II

This is a two-year study of literature as art which challenges students to develop and communicate knowledge and understanding of that art. The first year begins with three English works of different genres and eras, culminating in an oral presentation on one; it ends with three non-English works of different genres, cultures, and eras, culminating in a written essay on one. The second year involves English works of different cultures and eras, beginning with a select poet's poetry,

a select novel, and a select play and culminating in an oral commentary on one of the poems and a discussion of the novel or play; the year ends with four works of the same genre and culminates in a written essay on two or more of them and a written commentary on a never-studied work.

IB History of Americas HL Grades 11-12 5 credits

Prereq: CP or Honors US History I

This history course satisfies the IB Group 3 “Individuals and Societies” component of the IB Diploma Program. It will be taught over two years and will follow the Higher Level (HL) core syllabus. The first year of History of the Americas, taught in the 11th Grade, will be a general study of 20th Century US History. However, there will be a more in-depth study on subjects including: comprise of the Depression, World War II and the Cold War.

The year two curriculum consists of one Prescribed Subject, The Arab-Israeli Conflict (1945-1979) and two World History Topics: Causes, Practices and Effects of War and Origins and Development of Authoritarian and Single-Party States. In addition, students will make connections between the different historical events and contemporary global affairs. Finally, IB students will use what they have learned over the two years. Lastly, the Internal Assessment, consisting of a Historical Investigation, will be introduced junior year. Students will be expected to work on it over the summer and then complete a Final Draft their senior year.

IB Art SL, I and II Grades 11-12 5 credits

This is a two year program, which encourages students to challenge their creative thinking which includes investigating artists from many cultures, provoking analytical skills, cultivating problem-solving skills, making connections to other classes, and developing original studio work. Students develop technical proficiency, confidence, and record their investigations experimenting with many types of media within their studio work and digital Process Portfolio. Students discuss and articulate their process by comparing and contrasting works, and recording their research and thoughts creating a presentation, 10-15 digital screens for a Comparative Study. Students create an exhibit with a curatorial rationale and exhibition text by each project for their Internal Assessment. Students are required to work at home in addition to class time and do assignments over the summer. Students are required to visit galleries and attend museum exhibitions recording the experience.

IB Dance Theory SL, I and II Grades 11-12 5 credits

Consistent with the educational philosophy of the IB, the Diploma Program dance curriculum aims for a holistic approach to dance, and embraces a variety of dance traditions and dance cultures—past, present and looking towards the future. Performance, creative and analytical skills are mutually developed and valued whether the students are writing papers or creating/performing dances. The curriculum provides students with a liberal arts orientation to dance. This orientation facilitates the development of students who may become choreographers, dance scholars, performers or those, more broadly, who seek life enrichment through dance.

IB Music SL, I and II**Grades 11-12****5 credits**

Students develop their knowledge and potential as musicians, both personally and collaboratively. Involving aspects of the composition, performance, and critical analysis of music, the course exposes students to forms, styles and functions of music from a wide range of historical and socio-cultural contexts. Students create, participate in, and reflect upon music from their own background and those of others. They develop practical and communicative skills which provide them with the opportunity to engage in music for further study, as well as for lifetime enjoyment.

IB Language B Spanish: SL**Grades 11-12****5 credits****Prereq: CP or Honors Spanish II**

This course is an accelerated and rigorous continuation of Spanish language and culture. This course is completed over two years of study. IB Spanish B is designed for students who have previously completed Honors Spanish I and II. The IB prescribed themes are: identities, experiences, human ingenuity, social organization and sharing the planet. Some of the topics discussed could include: health and well being, customs and traditions, communication and technology, scientific innovation, education, the environment, beliefs and values, human rights and migration. Students will be assessed internally and externally by the IB Programme for their skills in listening, speaking, reading, and writing all in the acquired language, Spanish.

IB Theory of Knowledge/CAS/EE**Grades 11-12****5 credits**

TOK plays a special role in the Diploma Program by providing an opportunity for students to reflect on the nature of knowledge, and on how we know what we claim to know. This is a two year course.

The fundamental question of TOK is “how do we know that?” Students are encouraged to think about how knowledge is arrived at in different disciplines, what the disciplines have in common and the differences between the disciplines. TOK both supports and is supported by the study of other DP subjects, as students are required to explore knowledge questions against the backdrop of their experiences in their other DP subjects. Discussion and critical reflection form the backbone of the TOK course, centering around discussions of questions such as: What counts as evidence for X? What makes a good explanation in subject Y? How do we judge which is the best model of Z? How can we be sure of W? What does theory T mean in the real world? How do we know whether it is right to do S? Through discussions of these types of questions students gain greater awareness of their personal and ideological assumptions, as well as developing an appreciation of the diversity and richness of cultural perspectives. The TOK course is assessed through an oral presentation and a 1600 word essay.

Creativity, Activity, Service (CAS) is at the heart of the Diploma Program, and is one of the three essential core elements in every student’s Diploma Program. Students are involved in a variety of self-initiated and collaborative experiences that deepen their understanding of academic studies. The CAS Strands are: Creativity-arts, and other experiences that involve creative thinking; Activity-physical exertion contributing to a healthy lifestyle; Service-an unpaid and voluntary exchange that has a learning benefit for the student. The rights, dignity and autonomy of all those involved are respected. The emphasis in CAS is on helping students to develop their own identities, in accordance with the ethical principles embodied in the IB mission statement and the IB learner profile. Possibly, more than any other component in the

Diploma Program, CAS contributes to the IB's mission to create a better and more peaceful world through intercultural understanding and respect. This is a requirement in order to be an IB graduate.

The Extended Essay is an in-depth study of a focused topic chosen from the list of approved Diploma Program subjects—normally one of the student's six chosen subjects for the IB diploma. It is intended to promote high-level research and writing skills, intellectual discovery and creativity. It provides students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (a teacher in the school). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject chosen. The Extended Essay can be no more than 4,000 words. This is a requirement in order to be an IB graduate.



English

CP English I

Grade 9

5 credits

This course is designed to introduce students to American, British, and World literature thereby providing a framework for subsequent literature study. Various genres will be explored to include novels, drama, poetry, and short stories. Non-fiction works will be read as well. Vocabulary and reading comprehension strategies will be emphasized. A major component of this course is writing, and students are required to maintain a portfolio of their work. In addition, students will learn the research process culminating in a research paper. Critical and analytical skills in both reading and writing will be a focus of this course.

Honors English I

Grade 9

5 credits

This is an accelerated study of various genres, including the novel, the play, the short story and the poem, with a strong emphasis on the study of mythology. It is a well-rounded course, and students will be expected to look at literature from various perspectives including art, film, performance, psychology and philosophy. This course is an academically enriching program that builds upon basic skills and concepts that students learned in middle school language arts. The course focuses most heavily on reading and analyzing literature, writing coherently and effectively, and increasing command of vocabulary. In addition, this course emphasizes public speaking and critical thinking skills. A research paper is a course requirement, and students will continue to build their writing portfolios.

CP English II

Grade 10

5 credits

Prereq: CP English I

A survey of American literature is the basis for this course. Students will continue to read critically and analytically a variety of genres to include drama, novels, short stories, and poetry. Non-fiction will be read as well. Moreover, vocabulary and reading comprehension will be emphasized to enhance students' skills. An emphasis on writing will be continued with students maintaining a portfolio of their work. The study of the research process will be continued with students composing a research-based literary analysis to reflect this area of concentration.

Honors English II

Grade 10

5 credits

Prereq: CP or Honors English I

Honors English II is an accelerated course designed to meet the academic needs of and challenge the superior English student through an offering of intensive reading, writing, and research opportunities. The course focuses intensively on writing, and offers a survey of American literature at advanced levels. The course attempts to reconstruct the historical and cultural context in which these literary works were produced. Additionally, the course will look at the politics of literary reputation and trace the trajectory of fame and literary repute for each writer. This course is designed to make the student a better reader and writer with emphasis on critical thinking and writing. The course stresses literary analysis, well-organized compositions, analysis of rhetorical

devices, grammatical forms and usage, and Scholastic Aptitude Test (SAT) preparation. Course content builds on the use of the pre-tenth grade summer reading list. Throughout, students will develop literary interpretations and critical essays using primary literary sources. This course requires a greater degree of independence and competence in communicating and critical thinking. A research paper is a course requirement, and students will continue to build their writing portfolios.

CP English III **Grade 11** **5 credits**

Prereq: CP English II

British literature is the focus of this course which will include a Shakespearian play, novels, poetry, and short stories. Non-fiction will be included also. Students will continue to hone their comprehension, critical, and analytical skills in reading; comprehension strategies, and vocabulary will be emphasized to enhance these skills. Writing skills will continue to be reinforced and a writing portfolio will be maintained. A literary analysis is required.

AP Language and Composition **Grade 11-12** **5 credits**

Prereq: CP or Honors English II

The purpose of this course is to help students “write effectively and confidently in their college courses across the curriculum and in their professional and personal lives” (College Board, *AP English Course Description*, pg 7). This course is structured to meet the rigorous requirements and guidelines of the current *AP English Course Description*. With the use of rhetorical strategies and an emphasis on nonfiction writing, students will learn how to become analytical thinkers, critical readers, and clear communicators in both writing and speech.

CP English IV **Grade 12** **5 credits**

Prereq: CP English III

Students will explore the literature of various cultures through the study of world literature. Students will continue to deepen their comprehension, critical, and analytical reading skills. Vocabulary study will be a major component of this course as well. Students will continue to broaden their writing experiences and a portfolio will be maintained. A research-based literary analysis will be required. In addition, students will explore the college essay and application.

AP English Literature and Composition **Grade 11-12** **5 credits**

Prereq: CP English III or AP Language and Composition

Advanced Placement literature is an English elective course taught at a college level with the content, approaches, and expectations commensurate with a college English course. In the spring, students are expected to take the Advanced Placement Exam in literature and receive college credit for scores of 3, 4, or 5, depending on the requirements of individual colleges. This is a course which analyzes *how* an author makes meaning; it deals in elements of style analysis in the novel, drama, and poetry. Assessment is primarily through in-class timed writings similar to those actually done on the AP Exam and formal papers written outside of class. The course also includes oral presentations and seminars led by individual students which count as either tests or quizzes, depending on the amount of work involved.

English Elective

African American Literature Grades 10-12 2.5 credits

This course is an overview of African American literature from its ancient beginnings to modern times. The course will explore this literature's effect upon the American literary, social, cultural, and political landscapes. Visits to various museums and other relative venues will be used to emphasize this literature.

Mathematics

CP Algebra I Grade 9 5 credits

College Prep Algebra I is designed and recommended for the student who has mastered basic arithmetic and pre-algebra topics, and plans to attend college following high school. This course places emphasis on the structure of algebra, real numbers, various problem-solving techniques, and the gradual development of deductive reasoning. Basic concepts reviewed include: number lines, sets, variables, simplifying expressions, solving equations and inequalities with one and two variables, graphing equations and inequalities, solving systems of equations and inequalities, and operations with polynomials. Emphasis is also placed on mathematical language precision.

Honors Algebra I Grade 9 5 credits

Honors Algebra I is designed and recommended for the student who has excelled in arithmetic and pre-algebra topics, and plans to attend college following high school. Similar to College Prep Algebra I, this course places emphasis on the structure of algebra, real numbers, various problem-solving techniques, and the gradual development of deductive reasoning. Basic concepts reviewed include: number lines, sets, variables, simplifying expressions, solving equations and inequalities with one and two variables, and graphing equations and inequalities. Honors Algebra I continues by exploring advanced topics such as: solving and factoring polynomials, and exponential growth and decay, solving and graphing quadratics. Emphasis is also placed on mathematical language precision. Students electing the Honors level must earn a final grade of 'A' or 'B' in their 8th grade mathematics course.

CP Geometry Grades 10 - 12 5 credits

Prereq: CP or Honors Algebra I

This course is designed for sophomores and follows Algebra I. This course follows the New Jersey Student Learning Standards for Mathematics. Topics include basic terms and concepts of geometry, analyzing, defining, and applying relationships between lines and polygons, drawing geometric figures in a coordinate plane and justifying the properties of the figures, using theorems and postulates to determine similarity and congruence of polygons, analyzing properties of circles, analyzing properties of two-dimensional and three-dimensional figures, using trigonometric ratios to determine lengths and measures of segments and angles, and performing geometric constructions and designs.

Honors Geometry **Grades 10 - 12** **5 credits**

Prereq: CP or Honors Algebra I, Score of 4 or 5 on Algebra I State

This course is designed for sophomores following Honors Algebra I and for freshmen who have successfully passed the Algebra I Placement Test. Sophomores may take it at the same time as Honors Algebra II in order to take Calculus in grade 12 or IB Math in grades 11 and 12. This course follows the New Jersey Student Learning Standards for Mathematics. Topics include: basic terms and concepts of geometry, analyzing, defining, and applying relationships between lines and polygons, drawing geometric figures in a coordinate plane and justifying the properties of the figures, using theorems and postulates to determine similarity and congruence of polygons, analyzing properties of circles, analyzing properties of two-dimensional and three-dimensional figures, using trigonometric ratios to determine lengths and measures of segments and angles, and performing geometric constructions and designs.

CP Algebra II **Grades 10 - 12** **5 credits**

Prereq: CP or Honors Geometry

College Prep Algebra II continues mathematics preparation for the college bound student. Operations with algebraic expression, linear operations with algebraic expression, linear equations, and inequalities are reviewed. The course continues with the study of: relations, functions, rational and irrational numbers, complex numbers, exponents, systems of equations, and graphing of linear, quadratic and polynomial functions. Emphasis is on understanding concepts, not merely technique.

Honors Algebra II **Grades 10 - 12** **5 credits**

Prereq: CP or Honors Geometry

Honors Algebra II continues mathematics preparation for the college bound student. Operations with algebraic expressions, linear operations with algebraic expressions, linear equations, and inequalities are reviewed. The course continues with: the study of relations, functions, rational and irrational numbers, complex numbers, exponents, systems of equations, and graphing of linear and quadratic functions. Additional topics include: rational exponents, trigonometry, statistics, radical function, exponential functions, logarithmic functions, polynomial expressions and equations. Emphasis is on understanding concepts, not merely technique. Sophomores may take this course at the same time as Geometry in order to take Calculus in grade 12. One written report is required of each student on some topic appropriate to this course.

Honors Pre Calculus **Grades 11 - 12** **5 credits**

Prereq: CP or Honors Algebra II

Qualified students are encouraged to take this course as preparation for Calculus and other college level mathematics. It should definitely be taken by students who intend to major in mathematics, business, engineering, or science in college. This course consists of topics such as: coordinate geometry, functions, inverses, logarithms, and trigonometry.

AP Calculus**Grade 12****5 credits****Prereq: Pre Calculus**

AP Calculus is designed for students desiring either advanced placement in college mathematics or a course in calculus before beginning college work in fields such as science, business, engineering, or mathematics. Topics include analytic geometry, differential and integral calculus of algebraic functions, elementary transcendental functions, applications of differential calculus, and geometric and physical applications of integration. The class covers all areas presented on the AP Calculus test.

College Algebra**Grade 12****5 credits**

Prereq: CP Geometry and Algebra 2 All students enrolled in the class will have the option to take the C.L.E.P. exam for college credit. The examination covers material that is usually taught in a one-semester college course in Algebra. Nearly half of the test is made up of routine problems requiring basic algebraic skills; the remainder involves solving non-routine problems in which one must demonstrate an understanding of concepts. The test includes questions on basic algebraic operations, linear and quadratic equations, inequalities, and graphs; algebraic, exponential, logarithmic functions, and miscellaneous other topics.

Science

CP Biology Lab**Grade 9****6 credits**

Biology is the study of life; plants, and animals are studied as organisms which are related in their cellular structure and function. Other areas considered are reproduction, heredity, microbiology, and ecology. Laboratory exercises are performed to strengthen the understanding of concepts.

Honors Biology Lab**Grade 9****6 credits**

Honors Biology involves a deductive approach to the study of living things. Beginning with the characteristics that all organisms share, then delving into each of those concepts in depth, providing a broad and thorough background. Ways of exploring how and why things happen focus on solving problems by testing possible solutions to see whether they work.

AP Biology Lab**Grades 11-12****6 credits****Prereq: CP or Honors Biology**

AP Biology is an intensive course designed to be the equivalent of an introductory biology course taken in college. The emphasis is on developing an understanding of biological concepts rather than an accumulation of facts. The student should understand and appreciate the science of biology as a process and a personal experience in scientific inquiry that develops their problem solving and critical thinking skills. This course also prepares the high school

student to take the AP exam given in May. In order to pass the exam (usually this is with a score of 3 or higher), students must be highly motivated and driven to excel in this challenging course. The format for this class will be primarily lecture and lab, supported by interactive labs, and hands on activities.

CP Chemistry Lab **Grades 10-11** **6 credits**

Prereq: CP or Honors Biology

This course is laboratory based so that chemical principles can be drawn from the students' experiences in class. Observations, measurements, experiments computer simulations, and engineering projects lead to the development of foundational knowledge of chemistry. Students delve into a study of atomic structure and properties of matter, bonding of chemical reactions, periodicity of the elements, matter and energy in living systems, and the human impact on our planet and sustainability. Upon the completion of this course, students should have a firm basis upon which to draw in any post-secondary study of this subject.

Honors Chemistry Lab **Grades 10-11** **6 credits**

Prereq: CP or Honors Biology

This course is laboratory based so that chemical principles can be drawn from the students' experiences in class. Observations, measurements, experiments computer simulations, and engineering projects lead to the development of foundational knowledge of chemistry. Students delve into a study of atomic structure and properties of matter, bonding of chemical reactions, periodicity of the elements, matter and energy in living systems, and the human impact on our planet and sustainability. Upon the completion of this course, students should have a firm basis upon which to draw in any post-secondary study of this subject. This course is recommended for students preparing for college.

AP Chemistry Lab **Grades 11-12** **6 credits**

Prereq: CP or Honors Chemistry

This course is designed to be the equivalent of the General Chemistry course usually taken during the first college year. This course is organized around a few underlying principals called The Big Ideas covering the core scientific principals, theories and processes governing chemical systems. This course is taken with the idea in mind that students will take the AP Exam.

CP Physics Lab **Grade 11** **6 credits**

Prereq: CP or Honors Chemistry and Biology

Physics is the study of matter and its motion through space and time, along with related concepts such as energy and force. This course focuses on problem-solving as well as guided-inquiry or open inquiry of hands-on activities, and labs. Students will be introduced to the topics of one-dimensional kinematics, projectile motion, Newton's laws, energy and conservation of energy, and momentum and conservation of momentum. Opportunities are provided to understand the ideas of objects and systems, forces, and waves.

AP Physics Lab **Grades 10-12** **6 credits**

Prereq: CP Physics

Physics is the study of the relationship of matter and energy. The concepts are developed in a logical sequence from motion to fission. Ideas from the study of mechanics, heat, light, and electricity serve to prepare a broad understanding of classical Newtonian physics. Experiments, films, demonstrations, and lectures are combined to strengthen principles studied. Topics include: scientific notation, use of trigonometric functions, graphic analysis, vectors, dynamics, kinematics, momentum and The Conservation of Momentum, Keeler's Law, Newton's Law, work and power, energy and the conservation of energy, heat, electricity, the Quantum Theory, and the atom. *Students intending to pursue a career in Engineering are encouraged to take this course.

CP Environmental Science Lab Grade 11 6 credits**Prereq: CP or Honors Chemistry and Biology**

This course is an introduction into environmental science and environmental problems. This course can help prepare students for the AP environmental course. Problem solving and critical thinking will be used to discuss problems such as: population growth, endangered species, and pollution. This course studies a combination of earth science, biology, chemistry and geography. There is an emphasis on lab activities and engineering projects.

AP Environmental Science Lab Grades 11-12 6 credits**Prereq: CP or Honors Biology and Chemistry**

The goal of the AP Environmental Science course is to provide students with the scientific principals, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. This is an introductory college level course that focuses on environmental issues such as pollution, biodiversity and population. This course can be used to prepare students who are interested in studying environmental engineering in college. Lab and field investigations are important components to this course.

Science Elective

CP Anatomy & Physiology I Grades 11 - 12 5 credits

This course is designed for students interested in entering the health profession. Emphasis will be placed on function and the basic mechanism of disease. Recent advances in medicine, biotechnology, immunology, and molecular genetics will also be covered. Cell structure, tissue, function, and organ systems are also part of the course.

CP Anatomy & Physiology II Grades 11 - 12 5 credits**Prereq: Anatomy & Physiology I**

This course is designed for students interested in entering the health profession. The course will continue a deeper study of the curriculum and content of anatomy & physiology I.

Social Studies

CP World History

Grade 9

5 credits

College Prep. World History presents a comprehensive exploration of world history with major emphasis upon the Renaissance and Reformation, the Age of Exploration and Empire, Africa, Asia, and the modern world. Added depth is provided by a variety of resources including texts, primary source reading, special projects, written and oral reports, extensive group research activities and a rigorous focus on research skills. Students selecting Honors level of this course must earn a final grade of 'A' or 'B' in their 8th grade English course.

Honors World History

Grade 9

5 credits

Honors World History presents a extensive exploration of world history with major emphasis upon the Renaissance and Reformation, the Age of Exploration and Empire, Africa, Asia, and the modern world. Added depth is provided by a variety of resources including texts, primary source reading, academic conversations, historical methods, special projects, written and oral reports, extensive group research activities and a rigorous focus on research skills. Students selecting the Honors level of this course must earn a final grade of 'A' or 'B' in their 8th grade English course.

CP US History I

Grade 10

5 credits

Prereq: CP or Honors World History

College Prep. U.S. History I is designed to meet the needs of college bound high school students who need added depth rather than added breadth in their approach to United States history. This depth is provided by differentiated materials such as texts, primary source readings, special projects, written and oral reports, increased group research, and a more rigorous emphasis upon research skills. The student will learn basic research techniques including the use of our LRC and inter-library loan systems. Students may interview local resource people and agencies. Course content covers the period of American history from the Colonial period to the 1890's.

Honors US History I

Grade 10

5 credits

Prereq: CP or Honors World History

Honors U.S. History I is designed to meet the needs of college bound high school students who need added depth rather than added breadth in their approach to United States History. This depth is provided by differentiated materials such as texts, primary source readings, academic conversations, historical methods, special projects, written and oral reports, increased group research, and a more rigorous emphasis upon research skills. The student will learn basic research techniques including the use of our LRC and inter-library loan systems. Students may interview local resource people and agencies. Course content covers the period of American history from the Colonial period to the 1890's.

CP US History II **Grade 11** **5 credits**

Prereq: CP or Honors U.S. History I

College Prep. U.S. History II is a continuation of College Prep. U.S. History I. Course content covers the period from the 1890's to the present. It also involves the study of American forms of government at the federal, state, and local level. The course encourages discussion, interaction, and attendance of public meetings.

AP U.S. Government & Politics **Grades 11-12** **5 credits**

Prereq: CP or Honors U.S. History I

The Advanced Placement Program in United States Government and Politics is designed to introduce students to the important facts, concepts and theories pertaining to United States government and politics. While engaging in the study of general concepts used to interpret U.S. government and politics and the analysis of specific examples of politics in action, students will develop an analytical perspective on government and politics in the United States. Through this process students will become familiarized with various institutions, groups, core beliefs, and ideas that constitute U.S. government and politics and will become acquainted with the variety of theoretical perspective and explanations for various behaviors and outcomes inherent in the American political system. Students will develop a critical understanding of the strengths and weaknesses of the American political system, as well as their rights and responsibilities as citizens.

AP U.S. History **Grades 11-12** **5 credits**

Prereq: CP or Honors World History and U.S. History I

The Advanced Placement Program in United States History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials--their relevance to a given interpretive problem, their reliability, and their importance --and to weigh the evidence and interpretations presented in historical scholarship. An Advanced Placement United States History course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format.

Social Studies Electives

Introduction To Law

Grades 10-12

5 credits

This course is designed to help the students acquire basic knowledge of his/her rights and responsibilities in our legal systems. Areas covered are contracts, civil and criminal law, a review on court procedures and criminal investigation. Students with specific interests other than law may acquire, through this course, an adequate legal background.

AP Psychology

Grades 10-12

5 credits

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas.

Economics

Grades 11 - 12

2.5 credits

Economics is a one-semester course designed to provide students with a basic grasp of economic theory and economic systems. The course will examine the role of business, workers and consumers, and money and banking, in the American system of free enterprise. Finally, students will examine the role of the government in managing the economy, the global economy, and personal finance issues.

History Through Film & Media Grades 10-12 2.5 credits

Through the use of films, the Internet, television, newspapers and magazines, students will study a variety of issues and problems that society has faced, and continues to face today. This course will also examine how accurately Hollywood portrays historical events and characters, and what dangers exist for American democracy if a large portion of our population believes in a history that never really happened. Using films, as well as primary and secondary sources, students will analyze the accuracy and impact of Hollywood films and United States history. The course will also cover both the national and international scene, and will include current events as well as current issues. Included will be videos and discussions related to: prejudice, terrorism, censorship, capital punishment, citizenship and the rights of individuals under the law.

Holocaust and Genocide Grades 10-12 2.5 credits

This course explores the Jewish Holocaust during World War II, as well as contemporary examples of Genocide. In addition, students will learn about what can happen when prejudice and discrimination are allowed to flourish and individuals and governments fail to take a stand against injustice. Ultimately, students will have the opportunity to define their own role as responsible citizens of the world.

World Languages

CP Spanish I Grades 9-12 5 credits

This is an introductory course to Spanish language and culture. This course will provide students with basic vocabulary such as: numbers, days, months, colors, telling time and the alphabet. Students will use present tense. This course will cover many topics in depth such as: school supplies and courses, home, and family members. There will also be a huge emphasis on culture including the importance of *Cinco de mayo*, *Navidad*, *Los días de los muertos* and much more. The students will also study the geography and some cultural similarities/differences of the 21 official Spanish-speaking countries.

Honors Spanish I Grades 9-12 5 credits

This course is an accelerated and rigorous introduction to the Spanish language and culture. A high level of student participation is achieved through the use of the materials and activities designed by the teacher to enable the student to use the language correctly for communication and the basic skills of listening, speaking, reading, and writing. The course is especially designed to prepare students for Spanish II Honors and IB Spanish.

CP Spanish II**Grades 10-12****5 credits****Prereq: CP Spanish I or Honors Spanish I**

This course is a continuation of Español I. This course will provide students with additional language skills and will focus on a variety of topics such as: travel arrangements, reservations and service in restaurants, one's daily routine, pastimes, health and vacations. Students will be able to use both present and preterit (past tense). There will be many cultural aspects such as: *Jai-Alai*, *Cuzco y Machu Pichu*, and much more. The students will also study the geography and some cultural similarities/differences of the 21 official Spanish-speaking countries.

Honors Spanish II**Grades 10-12****5 credits****Prereq: CP or Honors Spanish I**

This course is an accelerated and rigorous continuation of the Spanish language and culture. A high level of student participation is achieved through the use of the materials and activities designed by the teacher to enable the student to use the language correctly for communication and the basic skills of listening, speaking, reading, and writing. This course is especially designed to prepare students for IB Spanish.

Health and Wellness Education

Introduction to Health and Wellness Grade 9 4 or 5 credits*

This integrated health and physical education program will include:

Introduction to Health—Health and wellness, physical fitness and health, alcohol and tobacco, building healthy peer relationships, infectious diseases, reproduction, and nutrition.

Wellness I—Personal fitness (emphasis on cardiovascular fitness, muscular endurance, and muscular strength), ‘new games’, tennis, and volleyball.

Highway Safety and Wellness Grade 10 4 or 5 credits*

This integrated health and physical education program will include:

Highway Safety—Driving strategies, driver fitness, driving in the HTS, alcohol/other drugs and driving, road hazards and vehicle failure, owning and maintaining a vehicle.

Wellness II—Personal fitness (emphasis on cardiovascular fitness, flexibility, and power), cooperative games, recreational activities, and soccer.

Lifetime Health and Wellness Grades 11-12 4 or 5 credits*

This integrated health and physical education program will include:

Lifetime Health — Designed specifically for high school and college students. This class provides a comprehensive set of skills that may enable you to save a life. You’ll be certified in both First Aid and CPR/AED, and be prepared to respond to a variety of emergencies involving infants, children and adults.

Wellness — Personal fitness, cardiovascular fitness, speed, coordination, frisbee games, golf, and softball.

Personal Health and Wellness Grades 11-12 4 or 5 credits*

This integrated health and physical education program will include:

Personal Health — Mental and emotional health, environmental health, first aid, illegal drugs, HIV/AIDS, violence prevention/conflict resolution, human development, birth through adolescence, and personal nutrition.

Wellness — Personal fitness (emphasis on cardio-vascular fitness, agility, and balance, floor hockey, table tennis/badminton, lacrosse/cricket).

Teen PEP Grades 11-12 4 or 5 credits*

This class is designed for selected junior students providing them with educational training that addresses a range of topics related to sexual health. It gives these peer educators the information, communication skills, and confidence to be effective sexual health advocates and leaders among the student body by conducting a series of structured workshops with groups of younger students.

* 4 credits if student is enrolled in a science lab

Dance

CHOREOGRAPHY SERIES

Introduction to Dance Grades 9-12 5 credits

This course is designed to introduce students to basic composition and choreography concepts. Students will learn and discuss selected choreographic works from all dance forms including hip hop. Students will compose different choreographic works using basic elements of dance and form. Students will see a variety of choreographies on video and film. There will be opportunities to see live and/or videotaped performances.

Introduction to Dance II Grades 9-12 5 credits

Prereq: Intro. To Dance Instructor recommendation

This course is designed to build upon the concepts learned in Dance Composition. Students will build a choreographic work that will include learning how to select dancers, music, costumes, hair design, lighting and computer generated technology. There will be opportunities to see live and/or videotaped performances.

PERFORMANCE DANCE SERIES

Performance Introduction Grades 9-12 5 credits

An emphasis is placed on developing good performance skills in jazz, ballet, and modern concert dance forms. Students will perform in the SHS Dance Ensemble (SHSDE). The dance ensemble has a performance season that includes several performances from December through May. There will be opportunities to see live and/or videotaped performances within the region.

Performance Concepts Grades 9-12 5 credits

Prereq: Performance Introduction or Instructor recommendation

This course is a continuation of Performance Introduction. An emphasis is placed on developing good performance skills in jazz, ballet, and modern concert dance forms. Students will perform in the SHS Dance Ensemble (SHSDE). The dance ensemble has a performance season that includes several performances from December through May. There will be opportunities to see live and/or videotaped performances within the region.

Performance Techniques I Grades 10-12 5 credits

The emphasis of this course is to design dance pieces that will build and enhance the students' artistic sensibility and technical skill. The student will have the opportunity to explore their own creative voice through choreography and performance. Students will perform in the Salem High School Dance Ensemble (SHSDE). The ensemble has a performance season that includes several performances from December through May. There will be opportunities to see live and/or videotaped performances within the region.

Performance Techniques II Grades 11-12 5 credits

Prereq: Performance Techniques I or Instructor recommendation

This course is a continuation of Performance Applications. This course is designed to increase and enhance the skills the students have been built as participants of the Performance course sequence. Students will continue study in different dance techniques including ballet (Vagonova Method), Jazz, Modern and a form of African dance technique. Students will perform with the Salem High School Dance Ensemble. The dance ensemble has a performance season that includes several performances from December through May.

Performance Techniques III Grades 11-12 5 credits

Prereq: Performance Techniques II or Instructor recommendation

Students will assist in directing, designing and staging works for the Spring concert. This course is designed for the student who wishes to pursue a major or minor dance degree. Students will be encourage to attend workshops throughout the Northeast region to enhance their skills. Students will perform with the Salem High Dance Ensemble and will be encouraged to stage new works and assist the director in rehearsing the ensemble for performances during the season. There will be opportunities to see live and/or videotaped performances within the region.

Business Technology

Computer Applications I Grades 9-12 5 credits

This course prepares students to use the Windows computer operating system as a communication tool. Students are introduced to basic keyboarding skills and taught skills to improve speed and accuracy. Students become proficient in the computer applications of Microsoft: Word, Excel, PowerPoint and Publisher, as well as Google Docs.

Image Editing Grades 9-12 5 credits

This course will introduce students to the graphic design field. Students can gain useful Adobe skills needed for many career fields such as: artists, advertisers, animators, fashion designers, and photographers. Adobe Photoshop is used to color, paint, retouch photos, and alter images. Many special effects will be used to create one-of-a-kind designs to produce buttons, greeting cards, animation, and calendars. Scanners and color laser printers will be used.

Graphic Design Grades 10-12 5 credits

Recommend: Image Editing

Learn how to draw computer graphics using Adobe Illustrator. Illustrator is a standard in the graphic arts industry and is used by thousands of artists around the world. Students create logos and package labels.

Introduction to Computer Science

In Intro to CS students will explore the various technologies changing our world and get to develop their own projects, including creating their own video games! In this course we will examine PC hardware and how to build your own computer, networking, the internet, and cybersecurity. We will also cover creating pixel art with Photoshop to make game assets, and finally utilize Scratch and Python to create video games. We will discuss AI, machine learning, virtual reality, and mixed reality as well. If you like working with technology, join us!

Career Exploration

Grades 11-12

2.5 credits

This is a course offered to juniors and seniors and is designed to empower and prepare our students in the skills needed to achieve success in a global environment. The primary components of the course include utilizing self-assessments tools (Naviance) to research and analyze career and educational information and choices, gain financial literacy by using online programs (Knowledge Matters), understanding how changes in a global economy will impact career choices, college research, visits from guest speakers which will enhance their communication, listening, interviewing, and public speaking skills. Student will also create a resume, complete the common college application and essay, and enhance interview skills.

Applied Technology

Introduction to Engineering Design

Project Lead the Way

Grades 9-12

5 credits

Introduction to Engineering Design (IED) is a high school level course that is appropriate for 9th or 10th grade students who are interested in design and engineering. The major focus of the IED course is to expose students to design process, research and analysis, teamwork, communication methods, engineering standards, and professional technical documentation practices.

Students will employ engineering and scientific concepts in developing solutions to various engineering design problems. In addition, students use Autodesk Inventor, a state of the art 3D solid modeling software package. Using the software as one of a set of tools, students design solutions to solve proposed problems. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges that increase in difficulty throughout the course.

Introduction to Engineering Design™ is one of three foundation courses in the Project Lead The Way® high school engineering program. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology.

Principles of Engineering**Project Lead the Way****Grades 10-12****5 credits****Prereq: Introduction to Engineering**

Principles of Engineering (POE) is a survey course of the major classic discipline fields of engineering. The course also exposes students to some of the major concepts that they will encounter in freshman and sophomore college level engineering courses of study. Students will be exposed to mechanical, electrical, structural and civil engineering disciplines by designing robots, bridges and working with various technical projects working with such equipment as hydrogen fuel cells and variable DC electrical converters. These projects allow students to develop strategies to enable and direct their own learning, which is the ultimate goal of education.

Principles of Engineering is the second of two foundation courses in the Project Lead The Way high school engineering program. Students must pass the IED course before enrolling in the POE course. The course applies and concurrently develops the design content from the IED course as well as secondary level knowledge and skills in mathematics, science, and technology.

Civil Engineering and Architecture**Project Lead the Way****Grades 11-12****5 credits****Prereq: Principles of Engineering**

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architecture design software.

Engineering Design and Development**Project Lead the Way****Grades 10-12****5 credits****Prereq: Prin. of Engineering , Civil Engineering /Architecture, Digital Electronics**

The knowledge and skills students acquire throughout PLTW Engineering come together in EDD as students identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of practicing engineers. Students apply the professional skills they have developed to document a design process, and they complete EDD ready to take on any post-secondary program or career.

Computer Science**Grade 12****5 Credits****Project Lead The Way (PLTW)**

The program's interdisciplinary courses engage students in compelling, real-world challenges. As students work together to design solutions, they learn computational thinking – not just how to code – and become better thinkers and communicators. Students take from the courses in-demand knowledge and skills they will use in high school and for the rest of their lives, on any career path they take. PLTW Computer Science courses are part of the AP + PLTW computer science pathway.

Cybersecurity **Grade 12** **5 Credits**

Project Lead the Way (PLTW)

Prereq: Principals Of Engineering, Computer Science

This course helps students identify cybersecurity threats and protect against them. Detect intrusions and respond to attacks. Begin to examine your own digital footprint and better defend your own personal data. Learn how organizations protect themselves in today's world. Whether seeking a career in the emerging field of cybersecurity or learning to defend their own personal data or a company's data, students in PLTW Cybersecurity establish an ethical code of conduct while learning to defend data in today's complex cyber world.

Introduction to Video Production (Video) Grade 9 5 credits

The Introduction of Video Production class exposes students to the exciting world of visual media capture and manipulation. Students learn the basics of camera operation, shot composition and fundamentals of video editing. Through a series of hands on activities, students plan and produce a variety of visual media projects for specific audiences.

Digital Media Production and Video Editing Grades 10-12 5 credits

Prereq: Introduction to Video Production

This class equips students with practical knowledge and skills necessary for television, video and film production. Students learn camera operation, video editing, lighting and audio techniques, as well as basics of scriptwriting. Emphasis of this class is placed on developing skills necessary to produce a variety of media programs and projects, as well as creative thinking and collaboration.

Advanced Digital Media Production and Video Editing Grades 11-12 5 credits

Prereq: Introduction to Video Production and Digital Media Production & Video Editing

Fusing all the skills acquired in previous media production courses, this class focuses on live television production and broadcast journalism. Performing all job responsibilities of a television crew, students produce a morning announcements show with all its main components– news, packages, sports and weather updates. Additionally, students produce longer format programs such as documentaries, in-depth investigative reports and promotional videos for online audiences. Emphasis of this class is placed on performance, scriptwriting, independent work, social media engagement and coordination as well as career readiness and critical thinking.

Art

Art Fundamentals **Grades 9-12** **5 credits**

This is an introductory course designed to teach the elements and principals of design. Students will develop an art vocabulary through project based assignments. Students will practice using many materials such as pencil, watercolor, pastels, markers, and tempera paint. Art history will be included

Drawing and Painting	Grades 10 - 12	5 credits
Prereq: Art Fundamentals		

Artistic Ceramics	Grades 9 - 12	5 credits
--------------------------	----------------------	------------------

Independent Painting and Drawing **Grades 11-12** **5 credits**
Prereq: Invitation to the Arts and Drawing and Painting

Music

Orchestra	Grades 9-12	5 credits
------------------	--------------------	------------------

Concert Band	Grades 9-12	5 credits
---------------------	--------------------	------------------

Page 33

and performance experience through an emphasis on the development of musicianship and professionalism. All styles of music are investigated, rehearsed, and performed during the course of the semester. Throughout the school year, students will have the opportunity to perform at concerts. Attendance at all rehearsals is required. Students who elect to participate in this course must have a minimum of one year experience on the instrument they intend to play.

Beginning Instrumental Music Grades 9-12 5 credits

This course focuses on the development of fundamental music skills: note reading, rhythms, and instrument technique. This course is open to any student wishing to play a musical instrument with less than one year of experience.

Concert Choir Grades 9 - 12 5 credits

Choir is an elective course open to all students. All styles of music are studied from early times to present day. Performance and vocal techniques, musicianship, repertoire, and poise are stressed. Participation at performances throughout the year is required.

Advanced Choir Grades 10-12 5 credits

This course is for advanced students who have passed Concert Choir. All styles of music are studied, and more advanced techniques covered. Topics such as musicianship, note reading, and performance techniques are studied more in-depth. Participation in performances throughout the year are required.

Family & Consumer Science

Food, Family & Finances Grades 9-12 5 credits

This is an independent living course in which students will examine choices related to the foods they eat, caring for a family, and managing their finances. Students will plan and prepare foods with a focus on nutritional value, safety, sanitation, and the uses of kitchen equipment. Family responsibility will be emphasized as students investigate decisions to be made in caring for and raising a child. Students will have the opportunity to take home an infant simulator for one weekend. Students will participate in personal and family finance simulations as they explore consumer rights and responsibilities to become informed educated consumers.

Introductory Care Giving Grades 9-12 5 credits

This course is for students interested in child or adult care careers. Students will gain valuable information regarding developmental issues that impact children and older adults in addition to learning how to set up educational and recreational activities for each. Students will have the opportunity to take home an infant simulator for one weekend. Students will explore career options in these care giving occupations.

Special Education

The Resource Center programs offer individual and small group instruction designed to educate classified students in the least restrictive environment according to I.D.E.A. (Individuals with Disabilities Education Act), the laws of New Jersey and the student's Individualized Educational Program. The Resource Center student must meet mandated requirements for a New Jersey High School diploma including number and type of credits, attendance, and grade average for passing classes. Any exception must be stated in student's Individualized Education Program (IEP). Typically, students are enrolled in these courses as a result of IEP implementation.

For students who have been identified by the Child Study Team, a Special Needs program is available. Students will be scheduled for these courses by a member of the Child Study Team in consultation with the student's school counselor in accordance with the Individual Educational Plan (IEP).

Course Offerings

Course levels: IB International Baccalaureate, AP Advanced Placement
HN Honors, CP College Prep., DC Dual Credit

English

Course name	Grades	Levels	Credits
English IV	12	IB/AP/CP	5
English III	11	IB/AP/CP	5
English II	10	HN/CP	5
English I	9	HN/CP	5
African American Literature	10/11/12	CP	2.5

Mathematics

Course name	Grades	Level	Credits
AP Calculus	12	AP	5
IB Math Calculus SL	12	IB	5
Pre AP Calculus	11/12	HN	5
IB Math SL (Pre-calculus)	11	IB	5
IB Math Studies SL	11/12	IB	5
Algebra II	10/11/12	HN/CP	5
College Algebra	12	CP	5
Geometry	10	HN/CP	5
Algebra I	9	HN/CP	5

Course Offerings

Course levels: IB International Baccalaureate, AP Advanced Placement
HN Honors, CP College Prep., DC Dual Credit

Social Studies

Course name	Grades	Level	Credits
United States History	11/12	AP	5
United States Government & Politics	11/12	AP	5
IB History of the Americas	11/12	IB	5
United States History II	11	CP	5
United States History I	10	HN/CP	5
World History	9	HN/CP	5
Introduction to Law	10/11/12	CP	5
African-American History	10/11/12	CP	2.5
Economics	11/12	CP	2.5
Psychology	10/11/12	AP	5
Sociology	10/11/12	CP	2.5
History Through Film & Media	10/11/12	CP	2.5
Holocaust & Genocide	10/11/12	CP	2.5

Science

Course name	Grades	Level	Credits
Physics	11/12	AP/CP	6
IB Chemistry HL	11/12	IB	6
Chemistry	10/11/12	AP/CP/HN	6
IB Biology HL	11/12	IB	6
Biology	9	HN/CP	6
Biology	11/12	AP	6
Environmental Science	11/12	AP/CP	6
Anatomy & Physiology	11/12	CP	5

World Languages

Course name	Grades	Level	Credits
Spanish I, II	9/10/11/12	CP/HN	5
IB Language B Spanish SL	11/12	IB	5

Course Offerings

Course levels: IB International Baccalaureate, AP Advanced Placement
HN Honors, CP College Prep., DC Dual Credit

Business Technology

Course name	Grades	Levels	Credits
Web Design	10/11/12	CP	5
Graphic Design	10/11/12	CP	5
Image Editing	9/10/11/12	CP	5
Computer Applications I	9/10/11/12	CP	5
Computer Applications II	10/11/12	CP	5
Desktop Publishing	10/11/12	CP	5
Automated Accounting II	10/11/12	CP	5
Automated Accounting	9/10/11/12	CP	5
Careers	11/12	CP	2.5

Applied Technology

Course name	Grades	Level	Credits
Introduction to Engineering Design	9/10/11/12	CP	5
Principles of Engineering	10/11/12	CP	5
Civil Engineering & Architecture	10/11/12	CP	5
Engineering Design & Development	10/11/12	CP	5
Video Programs and Digital Editing	10/11/12	CP	5
Cable Access Programming	11/12	CP	5
Basics of Video Production	11/12	CP	5
Computer Science	11/12	CP	5
Cyber Security	11/12	CP	5

Family & Consumer Science

Course name	Grades	Level	Credits
Food, Family & Finances	10/11/12	CP	5
Introductory Care Giving	10/11/12	CP	5

Physical Education / Health

Course Name	Grades	Level	Credits
Introduction to Health & Wellness	9	CP	4 or 5
Highway Safety and Wellness	10	CP	4 or 5
Personal Health & Wellness	11/12	CP	4 or 5
Teen PEP	11/12	CP	4 or 5
Weight Lifting	11/12	CP	4 or 5
Dance courses, as listed below, may also qualify as PE credit.			

Course Offerings

Course levels: IB International Baccalaureate, AP Advanced Placement
HN Honors, CP College Prep., DC Dual Credit

Visual, Fine, & Performing Arts

Course Name	Grades	Level	Credits
<u>Dance</u>			
Performance Techniques	11/12	CP	5
Dance Composition	9/10/11/12	CP	5
Dance Composition II	9/10/11/12	CP	5
Performance Methods	11/12	CP	5
Performance Introduction	9/10/11/12	CP	5
Performance Concepts	9/10/11/12	CP	5
Performance Applications	10/11/12	CP	5
Performance Internship	10/11/12	CP	5
<u>Art</u>			
Independent Painting & Drawing	9/10/11/12	CP	5
Artistic Ceramics	9/10/11/12	CP	5
Drawing & Painting	9/10/11/12	CP	5
<u>Music</u>			
Marching Band	9/10/11/12	CP	5
Concert Band	9/10/11/12	CP	5
Beginning Instrumental Music	9/10/11/12	CP	5
Concert Choir	9/10/11/12	CP	5
Advanced Choir	9/10/11/12	CP	5

International Baccalaureate Diploma Program (IB)

	<i>Grade 11</i>	<i>Grade 12</i>
Language A HL	IB English HL	IB English HL
Language B SL	World Language SL	World Language SL
History HL	IB History of Americas HL	IB History of Americas HL
Math SL	IB Math Analysis and Approaches IB Math SL Applications and Interpretation SL	IB Math Analysis and Approaches IB Math SL Applications and Interpretation SL
Science HL	IB Biology HL IB Chemistry HL	IB Biology HL IB Chemistry HL
6 th Subject/other	IB Music SL IB Art SL IB Dance Theory SL	Theory of Knowledge Extended Essay Creativity, Activity and Service

