The Guidance Department
TONY MORMILE Director of Guidance

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The Program of Studies at Allentown High School

The program of studies at Allentown High School is constructed to satisfy the individual needs of all students. The curriculum is broad and attempts to fit each individual's needs. Through guidance, each student is expected to develop a personal program of studies based on his/her abilities, interests, and career plans.

Allentown High School utilizes Intensive Block Scheduling. The school day is divided into four 85 minute periods, and most courses last for half a year or 90 days. By the end of the school year, a student will have completed eight courses. The purpose of Intensive Block Scheduling is to improve the quality of student performance, increase the percentage of student achievement at higher levels and improve the climate for learning. Some of our courses run every other day all year to promote the continuity of instruction. We run the A/B model within the block schedule.

Please note that there are some courses for which it is necessary for students to meet certain prerequisites or obtain the current teacher’s recommendation in order to sign up for these courses.

*The listing of a course in this booklet does not necessarily mean that course will be available for the next school year. Availability of a course in the school schedule will depend upon the number of students who request a particular course.*

Program Planning

Each student should consider his/her own plans and after conferring with parents, teachers, and Guidance staff to individualize their program over four years to meet their unique needs and interests. It is expected that these plans will be reworked annually based upon the student's degree of academic success and changing objectives.

Guidance counselors have available a wide variety of program sequences for those interested in agriculture careers, performing arts, industrial arts, allied health careers, and other specialized areas. The course descriptions that follow are meant to serve as a guide in this process.

Final grades are utilized in calculating GPA. When a subject is repeated in summer school, the grade in the course from the school year will remain on the transcript and the grade from an approved and accredited summer high school will be added with the final grade. If a student takes a college course or an online/distance learning course, a final grade of “P” or “F” will be added to the transcript. “P” represents Pass and “F” represents a Failing grade.

Sample Program Plans

The following program indicates how students typically meet the Board’s graduation requirements. Electives should be chosen with careful consideration of college and career plans.

<table>
<thead>
<tr>
<th>9th Grade Year</th>
<th>10th Grade Year</th>
<th>11th Grade Year</th>
<th>12th Grade Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>English II</td>
<td>English III</td>
<td>English IV</td>
</tr>
<tr>
<td>World Cultures</td>
<td>Mathematics</td>
<td>US History II</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Science (Biology)</td>
<td>Science (Chemistry)</td>
<td>Science Elective</td>
</tr>
<tr>
<td>World Language I</td>
<td>US History I</td>
<td>US History I</td>
<td>Physical Education</td>
</tr>
<tr>
<td>World Language II</td>
<td>World Language III</td>
<td>World Language IV</td>
<td>Physical Education</td>
</tr>
<tr>
<td>Integrated Science</td>
<td>Physical Education</td>
<td>Elective Credits (15)</td>
<td>Elective Credits (15)</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Visual/Performing/Practical Art</td>
<td>Visual/Performing/Practical Art</td>
<td>Visual/Performing/Practical Art</td>
</tr>
<tr>
<td>Subject Area</td>
<td>Credits</td>
<td>Courses/ “Years”</td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>20</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><em>Must take each year of HS</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Health &amp; Physical Education</strong></td>
<td>20</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><em>Must take each year of HS</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td>15</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><em>Must include Algebra I and Geometry &amp; a 3rd year that builds upon these two courses</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>15</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><em>Must include Laboratory Biology; Chemistry, Environmental Science or Physics; and an additional lab/inquiry-based science class</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies</strong></td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>World Cultures or World Geography</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>United States History</strong></td>
<td>10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td>2.5</td>
<td>1 marking period</td>
<td></td>
</tr>
<tr>
<td><strong>World Language</strong></td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>One year required; two to three years recommended for college admission</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Visual/Performing Arts</strong></td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Career/Consumer/Family Life Skills</strong></td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Computer Technology</strong></td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>OTHER REQUIREMENTS</strong></td>
<td>MINIMUM 130 CREDITS REQUIRED</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

For the classes of 2016, 2017 & 2018, students will be able to satisfy the state requirement of demonstrating proficiency in English Language Arts by achieving a passing score on a Partnership for the Assessment of Readiness for College and Careers (PARCC) English Assessment in grades 9 or 10 or 11 and in Mathematics by achieving a passing score on PARCC Algebra I, Geometry, or Algebra II assessments.
Marking System/Honors and Advanced Placement

Course Changes
Course changes will be allowed one week into the semester. The official date will be announced from the Guidance Office. Students who do drop a course past the second week of the semester will be assigned a study hall. Any dropped courses past the mid-mark point of the first marking period of a semester will be graded with a “WF” or “WP”. A “WF” will affect the GPA like an “F” grade. No student can drop a course after the end of 1st/3rd marking periods. Any level change that needs to be made will be made prior to the end of the 1st/3rd marking periods.

Class Rank
AHS does not publicly report class rank. Class rank will be reported only for scholarship opportunities, military academies and any other programs where rank is a necessary requirement.

Honors and Advance Placement
Honors and AP courses are offered in English, Fine Arts, Foreign Language, Mathematics, Science and Social Studies, when a sufficient number of students enroll in these classes.

The materials covered in these classes are in greater depth and at an accelerated pace as compared to a regular course. In short, the courses will be more challenging and more rigorous. Students must meet minimum requirements established by each department in order to be recommended for Honors or AP courses.

As an incentive to those students who do not mind a challenge, but in a very pragmatic sense question why an individual should work harder when he/she could select a less challenging offering, the following quality points will be offered for grades earned:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Number Ranges</th>
<th>Quality Points</th>
<th>Quality Points Honors</th>
<th>Quality Points AP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95-100</td>
<td>4.0</td>
<td>4.5</td>
<td>5.0</td>
</tr>
<tr>
<td>A-</td>
<td>90-94</td>
<td>3.7</td>
<td>4.2</td>
<td>4.7</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>3.3</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
<td>3.0</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
<td>2.7</td>
<td>3.2</td>
<td>3.7</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>2.3</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
<td>2.0</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
<td>1.7</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>D</td>
<td>65-69</td>
<td>1.0</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>F</td>
<td>Below 65</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Preparation for Higher Education
Any student who plans to enter college or continue a formal education must be very careful as to which electives are chosen while in high school. Colleges generally require a minimum of 16-18 academic units from college preparatory areas of subject matter. A unit is equal to a year's work in an academic subject such as English, social studies, college preparatory mathematics, foreign language, or science. Most colleges will not accept less than two units of the same world language.

Each school of higher learning sets its own admission requirements, so specific rules cannot be given. It is the responsibility of the individual student to know the requirements of the college, technical, or nursing school to which he/she intends to apply. Each student will be given a Naviance account to assist with the college search and preparatory process. Also available on Naviance is an ACT/SAT Tutorial called PrepMe.

Most colleges today use the following criteria in determining who will be admitted: 1) high school record, 2) college entrance exam (SAT or ACT), 3) personal characteristics, 4) extracurricular activities, and 5) special talents. Some colleges require a personal interview and/or essay. Please see your guidance counselor for further information.
Recommended Course Selection for College Bound Students

The following recommendations are for students planning to continue education at a four year college. If unsure, it is always safer to take a college preparatory curriculum. Whenever possible, choose the highest level of a course.

<table>
<thead>
<tr>
<th>English Choices</th>
<th>Mathematics Choices</th>
<th>Science Choices</th>
<th>Social Studies Choices</th>
<th>World Language Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>Foundations of Algebra A</td>
<td>Integrated Science</td>
<td>World Geography</td>
<td>Spanish, Latin, French, Italian I</td>
</tr>
<tr>
<td>English I Honors</td>
<td>Foundations of Algebra B</td>
<td>Vetinary Science</td>
<td>World Cultures</td>
<td>Spanish, Latin, French, Italian II</td>
</tr>
<tr>
<td>English II</td>
<td>Algebra I</td>
<td>Animal Science</td>
<td>Early European History</td>
<td>Spanish, Latin, French, Italian III</td>
</tr>
<tr>
<td>English II Honors</td>
<td>Foundations of Geometry</td>
<td>Biology, CP Biology, or CP Biology Honors</td>
<td>Modern European History</td>
<td>Spanish, Latin, French, Italian IV</td>
</tr>
<tr>
<td>Adv. Writing</td>
<td>Geometry Honors</td>
<td>Environmental Science</td>
<td>Current Affairs</td>
<td>AP Latin</td>
</tr>
<tr>
<td>Creative Writing</td>
<td>Algebra II/Trigonometry</td>
<td>Astronomy Biotech Honors</td>
<td>Psychology</td>
<td>AP Spanish</td>
</tr>
<tr>
<td>Survey of Literature</td>
<td>Algebra II Honors</td>
<td>Emerging Diseases/ Genetics Forensic Science</td>
<td>Genocide</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>College Algebra</td>
<td>CASE Food Science</td>
<td>Financial Literacy or Economics Honors</td>
<td></td>
</tr>
<tr>
<td>Research Honors</td>
<td>Pre-Calc or Pre-Calc Honors</td>
<td>CP Physics &amp;CP Physics Honors</td>
<td>AP European History AP Human Geography</td>
<td></td>
</tr>
<tr>
<td>AP English Literature</td>
<td>Statistics</td>
<td>Adv. Topics in Physics</td>
<td>AP Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>Calculus</td>
<td>AP Biology</td>
<td>AP US History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP Statistics</td>
<td>AP Chemistry</td>
<td>AP Psychology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AP Calculus</td>
<td>AP Environmental Science</td>
<td>AP Government</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fine, Practical, Economics and Computer Literacy Requirements

<table>
<thead>
<tr>
<th>Courses that fulfill the Visual/Performing Arts requirement</th>
<th>Courses that fulfill the Career/Consumer/Family Life Skills requirement</th>
<th>Courses that fulfill the Computer Literacy requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Fundamentals of Art I</td>
<td>*Foods &amp; Nutrition</td>
<td>*Computer Technology</td>
</tr>
<tr>
<td>*Art II, Art III, Art IV</td>
<td>*Advanced Foods</td>
<td>*Computer Science I</td>
</tr>
<tr>
<td>AP Studio Art</td>
<td>*Advanced Baking &amp; International Cuisine</td>
<td>*Computer Graphics Design</td>
</tr>
<tr>
<td>*Computer Graphics Design I, II</td>
<td>*Child Development</td>
<td>PLTW Intro to Engineering</td>
</tr>
<tr>
<td>*Video Production I, II</td>
<td>*Fundamentals of Drafting</td>
<td>CAD</td>
</tr>
<tr>
<td>Computer Animation</td>
<td>*Advanced Drafting</td>
<td>Music Technology</td>
</tr>
<tr>
<td>Digital Photography</td>
<td>*Computer Aided Design (CAD)</td>
<td></td>
</tr>
<tr>
<td>Ceramics</td>
<td>*Architectural Design</td>
<td></td>
</tr>
<tr>
<td>Sculpture</td>
<td>*Engineering Design</td>
<td></td>
</tr>
<tr>
<td>Concert Choir</td>
<td>*Intro to Woodworking</td>
<td></td>
</tr>
<tr>
<td>*Music Technology</td>
<td>*Advanced Woodworking</td>
<td></td>
</tr>
<tr>
<td>Music Theory, AP Music Theory</td>
<td>*PLTW Intro to Engineering</td>
<td></td>
</tr>
<tr>
<td>Symphonic Band</td>
<td>*PLTW Principles of Engineering</td>
<td></td>
</tr>
<tr>
<td>*Greenhouse &amp; Floral Design</td>
<td>*PLTW Aerospace</td>
<td></td>
</tr>
<tr>
<td>*Nursery Plant Production &amp; Design</td>
<td>*Mechanics &amp; Technology</td>
<td></td>
</tr>
<tr>
<td>Public Speaking</td>
<td>*Advanced Mechanics and Technology</td>
<td></td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>*Music Technology</td>
<td></td>
</tr>
<tr>
<td>Advanced Theatre Arts</td>
<td>*Computer Graphics Design</td>
<td></td>
</tr>
<tr>
<td>Principles of Dance</td>
<td>*Business Law</td>
<td></td>
</tr>
<tr>
<td>Dance I, II</td>
<td>*Intro to Business</td>
<td></td>
</tr>
<tr>
<td>Musical Theater</td>
<td>*Accounting</td>
<td></td>
</tr>
<tr>
<td>Broadway Masterclass</td>
<td>*Greenhouse &amp; Floral Design</td>
<td></td>
</tr>
<tr>
<td>Performance Preparation</td>
<td>*Nursery Plant Production &amp; Design</td>
<td></td>
</tr>
<tr>
<td>Choreography</td>
<td>*Cannot meet both the Fine Art and Career Prep requirement at the same time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Financial Literacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Intro to Business</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Economics Honors</td>
<td></td>
</tr>
</tbody>
</table>
AGRICULTURAL SCIENCE AND TECHNOLOGY

Agri-Science is the nation's largest single industry. It employs 23 million people or 22 percent of the nation's work force. It is the third largest revenue-producing industry in New Jersey. Agri-Science includes the research, equipment, supplies, services, and technology used to produce commodities as well as the processing and marketing of those commodities. Courses in Agri-Science provide the necessary knowledge and skills needed by students who plan to enter college in the ever-advancing area of agriculture, or to start a career. Most major colleges today accept Agri-Science courses as college prep electives. 75% of those students who are graduates of the A.H.S. Agri-Science Department pursue advanced education in a two or four year college. All agriculture students will complete a Supervised Agriculture Experience (S.A.E.) during the school year. If agrichemical research, plant and animal genetics, agricultural sales and services, veterinary medicine, or production agriculture generates your interest, then maybe you should start your education with a class in the Agri-Science Department. Many of our classes now utilize the CASE approach. CASE stands for Curriculum for Agriculture Science Education. CASE is defined as an ambitious project started by the National Council for Agricultural Education in 2007. The project goal is to implement a national curriculum for secondary agricultural education that provides a high level of educational experiences to enhance the rigor and relevance of agriculture, food and natural resources (AFNR) subject matter. Besides elevating the rigor of AFNR knowledge and skills, CASE provides purposeful enhancement of science, mathematics and English language understanding.

Botanical Sciences
(LAB COURSE)
Prerequisite: None
Type of Science: Life
Entry Level: Grade 9

The Botanical Sciences course will expose students to the world of scientific plant research and production. Students will have experiences in various plant science concepts through laboratory based activities, projects, and problems. Student experiences will include the study of plant anatomy and physiology, classification, introduction to plant reproductive technologies, and alternative production technologies. Students will learn how to apply scientific knowledge and skills to use plants effectively for horticultural research and production. Students will discover the value of plant production and its impact on the individual, the local, and the global economy.

Articulation agreements with: Rutgers University, Mercer County Community College and SUNY Cobleskill

Animal Science
(LAB COURSE)
Prerequisite: None  *Athletes: this is not an approved NCAA course.
Type of Science: Life
Entry Level: Grade 9

Animal Science is a hands-on lab, activity, and project based curriculum to learn the characteristics of animal science. Students will work on projects similar to those that animal science specialists, such as veterinarians, zoologists, or industry personnel face in their respective careers. The knowledge and skills students develop will be used in future courses within the CASE™ (Curriculum for Agricultural Science Education) program. The study of companion and large animal topics covered in class include but are not limited to domestication and evolution of animal species, animal use, animal behavior, animal anatomy and physiology, and more. Dissection and investigation of each body system will occur.

Articulation agreements with: Rutgers University and SUNY Cobleskill

Equine Science

Prerequisite: C or better in Animal Science or Biology or concurrently enrolled in Animal Science or Biology
*Athletes: this is not an approved NCAA course.
Type of Science: Life
Entry Level: Grade 9

This course introduces students to equine science and management. The class will focus on safety, history, cells and tissues, physiology, functional anatomy, reproduction, genetics, nutrition, management, conformation and selection. Experiences will emphasize the unique biology of the horse and provide students with science-based information related to the function and management of the horse.

Veterinary Science
(LAB COURSE)
Prerequisite: B or better in Animal Science or CP Biology
Type of Science: Life
Entry Level: Grade 10

The veterinary science course is designed for students with plans or interests in the area of veterinary science or the medical field. The course strives to provide integration between academics and career skills. By participating in decision-making, problem solving, and career related activities, students are preparing for opportunities in animal health and management. Subject matter covered will include safety, medical terminology, posology, management, anatomy and physiology, diseases and disease control, and nutrition. Field Experience can be an option.

Greenhouse Management & Floral Design
Prerequisite: C or better in CP Biology
Entry Level: Grade 10

*This course meets the district requirement for a Fine Arts or Practical Arts course

This course is designed to prepare students for careers and post-secondary education in controlled environment plant production. Students will recognize and describe various greenhouse structures and design, applying scientific concepts to control the plant microclimate and enhancing plant productive abilities. Students will use scientific concepts to determine watering needs, fertilization, plant reproduction, soil requirements, and integrated pest management. Floriculture plant identification will be an integral part of the course. This course is designed to provide students with laboratory experiences in the greenhouse in the science of plant production. Floral design will be integrated into the course and
Nursery Plant Production and Design  
**Prerequisite:** C or better in CP Biology  
**Entry Level:** Grade 10  
*This course meets the district requirement for a Fine or Practical Arts course.*  
This course is designed to prepare students for careers in nursery plant production, landscape design, and landscape architecture. Students will apply scientific concepts to nursery plant production, including an understanding of plant anatomy and physiology to determine watering and soil needs, fertilizer requirements, plant reproduction technology, and pest control. Additionally, students will apply the concepts of art to properly design a landscape, including the concepts of balance, simplicity, proportion, and focalization of interest. An emphasis will be placed on mechanical drawing techniques and proper plant use. Laboratory experiences will include plant reproduction, plant anatomy, landscape design, landscape construction, and landscape maintenance. This course will meet the graduation requirement for fine, visual, or performing art as well as practical art.  
**Articulation agreement with:** Mercer County Community College  

Environmental Science  
*(LAB COURSE)*  
**Prerequisite:** None  
**Entry Level:** Grade 10  
**Type:** Life  
Including lecture and lab activities, this course provides students a study of contemporary environmental issues. The interconnections of economic, social, political, and ethical concerns related to the environment and natural resources are studied. A special emphasis is placed on New Jersey's diverse ecosystems to guide students to more effective, decision-making and state citizenship. Lab topics include but are not limited to solar energy, the food chain, geothermal energy, air pollution, species diversity, ecosystems, ground water, integrated pest control, human population, global warming, ocean, seas, and estuaries. Emphasis is also placed on career opportunities in the environmental sciences.  

Aquaculture & Wildlife Sciences  
*(LAB COURSE)*  
**Prerequisite:** C or better in Animal Science or CP Biology  
**Entry Level:** Grade 11  
This course is designed for students with plans or interests in the area of wildlife or aquaculture science. This class will take an in-depth look at science and management of wildlife and the production of aquaculture and hydroponic crops. Subject matter covered, but not limited to, includes biomes, ecological succession, natural and manmade aquatic systems, production of aquatic crops, fish anatomy, population controls, hydroponics, sustainability, and human and wildlife interactions. Students will have the opportunity to maintain aquaculture and hydroponic units. Labs will be an integral part of this course and include dissection of various species.  

Mechanics and Technology  
**Prerequisite:** None  
**Entry Level:** Grade 10  
This course is designed to provide students with introduction to mechanical systems, including laboratory and equipment safety, electricity, arc welding and cutting, and small engine theory. Students will learn the underlying theory of each concept and then apply it in laboratory experiences. Laboratories include electrical wiring, shielded metal arc welding, gas metal arc welding, plasma arc cutting, and small engine troubleshooting and repair. Additional laboratories may be added throughout the course as time allows. This course includes both classroom and laboratory instruction. This course may run in rotation with Advanced Mechanics and Technology.  

Advanced Mechanics and Technology  
**Prerequisite:** B or better in Mechanics or special permission with teacher approval  
**Entry Level:** Grade 11  
Advanced Mechanics and Technology builds upon the skills acquired in the earlier mechanics class. Students will receive advanced instruction in shop and laboratory safety, electrical, arc welding, and engine theory. Additional laboratory instruction includes diesel technology, oxy-acetylene welding, hydraulics, and multi-position welding. Students will also receive instruction in project planning and record keeping. Students will provide or design their own projects, after approval from the instructor. Equipment restoration and repair will occur as a class project. Students must be able to work independently and have outstanding work ethic. This course may run in rotation with Mechanics and Technology.  

Honors Biotechnology  
*(LAB COURSE)*  
**Prerequisite:** “B” average or better in College Prep Biology and College Prep Chemistry  
**Entry Level:** Grade 11  
Biotechnology is a course for students with an interest in post-secondary studies in the field of biotechnology. Students will complete hands-on, laboratory based activities, projects, and problems designed to build content knowledge and technical skills in the biotechnology industry. Students are expected to become proficient in skills involving micropipetting, bacterial cultures and transformations, electrophoresis, and polymerase chain reaction. Research and experimental design will be highlighted as students develop and conduct industry appropriate investigations. Students will be expected to maintain a laboratory notebook, such as those required by the scientific industry.  
**Articulation agreement with:** Rutgers University
Honors Food Chemistry

(LAB COURSE)

Prerequisite: B or better in either Botanical or Animal Science OR B or better in Biology and Chemistry

*Athletes: this is not an approved NCAA course.

Entry Level: Grade 11 or 12

Food Chemistry is a specialization course concentrating in: chemistry of food; safety of our food; food processing preservation and packaging; food health and security; preference and product availability and food product development. Students will seek scientific application to food and explore careers in this industry. Students will keep a scientific, laboratory notebook throughout the course.

Allentown High School Agricultural Sciences

Suggested Course Pathways

9th Grade
- Plant Pathway
  - Botanical Science

10th Grade
- Nursery Production & Design
  - Advanced Mechanics & Technology

11th Grade
- Greenhouse Management
  - Aquaculture & Wildlife Management

12th Grade
- Honors Biotechnology*
- Honors Food Chemistry*

*Can be taken Junior and/or Senior Year in Place of Another Course in the Sequence
ENGLISH

All English courses emphasize reading, writing, speaking, listening, and higher order thinking. A special emphasis on writing, especially revision and editing, is possible because the English Department offers a Writing Center available to all students every period every day. All courses also offer practice in the reading and writing skills necessary for success on the PARCC and college entrance tests.

English I
Prerequisite: None
Entry Level: Grade 9
A major emphasis in this class is the development of coherent essays. Students write journals in response to their reading and often select journal starts to polish as formal writing. Independent reading is encouraged through sustained silent reading and matching students to books they love, and the rich curriculum is divided into units that study various genres including the short story, the novel, the drama and poetry. Students are encouraged in all aspects of scholarship including organization, note taking, formal presentations, collaborative work, integrating technology and vocabulary study. PARCC skills development and a smooth transition to high school are also course goals.

English I — Honors
Prerequisite: "A" average in English, Advanced Proficient on the NJ Ask 7 and a teacher recommendation. (If one of these criteria are not met, you can request an alternate assessment in Language Arts to be given at AHS during the summer.)
Enter Level: Grade 9
The units of study are similar to those in English I, but the reading selections are longer and more complex. Writing and vocabulary practice are included in each unit of study. A greater emphasis is placed on research and independent multi-step projects in this advanced course.

English II
Prerequisite: English I
Entry Level: Grade 10
Building on the English I program, students explore the theme of heroes in myth, legends, tragedies, and contemporary fiction. Composition, grammar, and vocabulary are reinforced in each unit.

English II — Honors
Prerequisite: "A" average in English I or "B" or better in every marking period and on the final exam in English I Honors. Teacher recommendation is also required.
Enter Level: Grade 10
English II Honors addresses the units listed above, but requires greater proficiency in reading and writing to handle the number and complexity of projects and independent work.

English III
Prerequisite: English II
Entry Level: Grade 11
Students study the literature of various ethnic groups and eras in an examination of the American experience. In a variety of fiction and non-fiction works students explore the changing concept of the American Dream. Required writing includes journals, exposition, personal narratives, and research.

Advanced Writing and World Literature
Prerequisite: "A" average in English II or "B" or better in every marking period and on the final exam in English II Honors. Teacher recommendation is also required.
Enter Level: Grade 11
Advanced Writing is strongly recommended for college preparation as it offers refinement in all aspects of the writing process. Analysis and synthesis are emphasized in a formal research paper, an outgrowth of the required reading. Literature in the course includes comedies and tragedies that span the history of world literature.

Advanced Placement English Language & Composition
Prerequisite: "A" every marking period and on the final exam of English II Honors or Advanced Writing and World Literature; SAT/PSAT scores of 1100 or better on verbal section of SAT; teacher recommendation; evidence of successful timed writing
Entry level: Grade 11 or 12
This course engages students in becoming skilled readers of prose written in a variety of eras, disciplines, and rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. Students become aware of the connections among a writer's purpose, audience, expectations, and subjects, as well as of the conventions and resources of language that contribute to writing style and effect. Students are required to take the AP exam. (Exams are at the expense of the student).

Senior Selections

English IV: Creative Writing
Creative Writing is a college preparatory course, and is recommended for students who enjoy writing. The elements of style as well as various forms of fiction are studied and practiced. Daily journal writing on a variety of topics is transformed through the writing process into finished products. Culminating activities include a poetry portfolio and a children's book. Emphasis is placed on developing the writing process, and group sharing. Many of the products from the class are shared with outside publications, including Mercer County College's literary magazine, Aspirations, and our own literary magazine, Impressions.
Survey of Literature & Expository Writing
The reading in this course includes non-fiction and fiction. The writing process is emphasized. Special consideration is given to introductory paragraphs, and a variety of expository forms. A guided research paper is the culminating activity. Since the course is intended for the college-bound student, emphasis is placed on analysis and synthesis of critical essays.

English IV: Research & Themes
In this class, students learn how to access information and evaluate sources. Over the semester, students engage in projects that focus on the research process. Formal writing is emphasized through various research projects and papers. Thematic reading focuses on contemporary issues.

Research & Issues – Honors
Prerequisite: “A” every marking period and on the final exam in Eng. III; or “B” in every marking period and on final exam in Advanced Writing and World Literature. Teacher recommendation.
This course is designed to prepare students to be proficient in the research process necessary for success in college. Students will use research, especially electronic research, to investigate and to evaluate issues of violence, race and gender as they appear in American literature, film, music, and society. Literature addresses ethical and moral issues that are faced in today's culture.

English IV: Advanced Placement Literature & Composition
Prerequisite: Advanced Writing & World Literature with a grade of 95% or better each marking period and on the final exam or a grade of “B” or better in AP Language & Composition, a score of 1100 on the verbal sections of the SAT, a graded timed writing sample and teacher recommendation.
Advanced Placement English prepares seniors to take the AP test in Literature and Composition. The course emphasizes skills in the critical reading of literature and in writing about related ideas. This course is designed for students who are capable of college-level work, and who are willing to complete a rigorous and demanding course of study, which includes summer and vacation reading, individual writing conferences (held after school), in-depth study of poetry, short stories, novels, and plays, in-class timed writing, quarterly projects, and research-based essays. It is required that students electing this course will take the Advanced Placement test in May. (The exams are at the expense of the student).

ENGLISH ELECTIVE, GRADES 10, 11, 12

English Elective: Journalism
This intensive writing course provides students with the skills to compose news, features, editorials, and sports articles. Students evaluate and discuss ethical dilemmas facing writers in the information age. Additionally, they study the layout and design of different newspapers. Finally, they are exposed to digital photography and the art of integrating photography into a newspaper. Through these experiences, students come to understand the meaningful role that news media plays in the world. Students generate articles for the school newspaper, The Nutshell.
FAMILY AND CONSUMER SCIENCE

The cooking courses offered in Family & Consumer Sciences help students understand basic cooking skills, cooking terminology, kitchen safety and sanitation, and nutrition basics. Career and job clusters are also explored. Classroom activities provide practical hands-on experiences, background knowledge and skills that will aid our teens in managing their future.

**Foods and Nutrition**

*Prerequisite: None*

*Entry Level: Grade 10*

Food preparation skills and nutrition are the two major areas of study in this course. Basic cooking techniques are taught. Discovering the science behind food preparation for various food units is an integral part of the foods curriculum. Kitchen safety, measuring and the understanding of recipe terminology are continually stressed throughout the course. Career awareness in the culinary field is also explored. In terms of nutrition, students taking this course are able to evaluate their present eating pattern and gain an understanding of their nutritional needs.

**Advanced Foods**

*Prerequisite: B or better in Foods and Nutrition I and/or teacher recommendation*

*Entry Level: Grade 10*

Meal management techniques, kitchen sanitation, vegetable cookery, yeast breads, meat cookery, and sauces are the food preparation units studied in this class. A continuation of cooking techniques and the science behind food preparation are explored. Career opportunities in the culinary field are discussed. If you were successful in Foods and Nutrition and enjoy working with food, take this course.

**International Cuisine**

*Prerequisite: B or better in Foods and Nutrition*

*Entry Level: Grade 10*

International Cuisine is a 2.5 credit course designed to explore the food customs and cooking styles of various countries. Intensive student food labs will include the preparation of selected international recipes with emphasis on how geographical, cultural and religious backgrounds influence various global cooking styles. This course is designed to explore how the knowledge of food customs can assist us in becoming global citizens in our increasingly international lives.

**Advanced Baking**

*Prerequisite: B or better in Foods and Nutrition*

*Entry Level: Grade 10*

Advanced Baking is a 2.5 credit course. This course allows students a more in-depth study of baking and pastry arts. Areas of study include baking terminology, hand tools and small appliances use, functions of ingredients, strengthening of weights and measurements skills, and methods used in creating breads, pastries, cookies, and other desserts. The fundamentals of yeast dough are expanded upon in this course. The emphasis is on further development of food lab skills, as applied to baking.
The Fine Arts Department offers a wide range of elective courses designed to allow students to express themselves in the Arts. In addition to the course offerings, several activities are run throughout the school year which are open to all students, such as: the State Teen Arts Festival, the spring musical, the annual Holiday Concert, Spring Fine Arts Festival, private lessons, All Shore Chorus, All Shore Band, All State Band, jazz band, choir, art exhibitions and the Impressions magazine.

The following additional courses meet the graduation requirement for a fine, visual, or performing art: Landscape Nursery and Management and Greenhouse and Floral Design. Please see the Agricultural Science and Technology section of the course selection guide.

**Fundamentals of Art I**  
Prerequisite: None  
Entry Level: Grade 9  
This is a basic studio course designed to give the student an opportunity to explore, on an introductory level, the major areas of art, techniques, and processes. The art media introduced emphasizes realistic drawing, painting, and sculpture.

**Art II**  
Prerequisite: Art I  
Completing the fundamentals of Art I course, students may elect Art II. The basic art principles and media introduced in Art I are expanded upon. Pen and ink, clay coil construction, and abstract sculpture are introduced for the first time. The student will be encouraged to communicate ideas creatively on the two-dimensional, and three-dimensional plane.

**Art III (Advanced Fine Arts)**  
Prerequisite: Art II with at least a “B” average  
Entry Level: Grade 10/11  
Art III is offered to students who have completed Art II. Art techniques learned in Art II will be expanded upon. Students will study composition, and utilize the principles of design. The emphasis of this course is to expand the students' knowledge in a wide variety of media techniques. Projects included: pastel painting, watercolor, colored pencil, ceramic slab construction, scratchboard and printing techniques.

**Art IV (Portfolio Development)**  
Prerequisite: Advanced Fine Arts with at least a "B" average or juniors/seniors with a "B" average in Art II.  
Entry Level: Grades 11 & 12  
Art IV (Portfolio Development) is designed so that students will apply the knowledge they have learned to create their own body of work. Seniors who have completed Art II are eligible to take Portfolio. Juniors who have completed Art II may be eligible to take Portfolio with permission from the art teacher. These individualized projects are designed so that the students' ability is showcased in their portfolio. The assignments are major projects that the students will have to design and create. Art history and formal application of the major art forms are an integral part of this class. All the art projects undertaken by the students are expected to be executed on a technically proficient level.

**AP Studio Art**  
Entry Level: Grade 12  
Prerequisite: AP Studio Art is designed for the student that has completed Art I, and Art 2, and it is highly recommended that they have completed Art 3. Students must receive a “B” or higher in the preceding art classes to be eligible to take the course. This course can coincide with Portfolio/Art 4. The course is designed for seniors, but juniors may be admitted with special permission by the teacher.

This course is designed for the highly motivated art student. Students are encouraged to explore and experiment artistically in order to develop their own personal expression and artistic voice. Students will develop their conceptual processes, and gain insight into their artistic vision. This is a college level course, giving the students the opportunity to use technical skills in a variety of media. They will be able to demonstrate their ability to apply the principles of design into well organized compositions. Versatility of techniques is also emphasized as students develop ideation and solutions to problems. This course meets every day for the entire year. Students are responsible for completing a portfolio containing 29 pieces. In order to achieve this goal, students are required to do some work over the summer. Students enrolled in this AP course are required to take the AP exam in May. Exams are at the expense of the student.

**Ceramics**  
Prerequisite: Art I.  
Entry Level: Grades 10, 11, 12  
Ceramics is a ten week class. This class is for the student that enjoys working with clay. They will learn the history of ceramics. This class will explore the different types of clay construction: pinch pots, slab, coil, dugout, and wheel throwing. Students will also learn the basics of glazing, both low and high firing clay bodies.

**Sculpture**  
Prerequisite: Art I.  
Entry Level: Grades 10, 11, 12  
Sculpture is a ten week class. This class is for the student who likes to work with their hands creating three-dimensional works. The class will explore the history of sculpture; prehistorically to the present day. Students will work with a variety of materials in additive and subtractive techniques. They will explore abstract and representational work and create projects of each type.
Computer Graphics Design I
Prerequisite: Art I
Entry Level: Grade 10

Computer graphics emphasizes basic design skills, experimentation and the development of creativity in solving design challenges. Students learn how to communicate visually. Students learn the basics of Adobe Photoshop CS5 and Illustrator CS5 to produce print graphics. The course covers the elements and principles of design, color theory, typography, basic advertising, information graphics, logos and branding, magazine layout, and poster design. The course also has a section on digital photography and image manipulation. The class is project-based, and includes formal and informal class critiques, in-class exercise, a bit of writing, and some design history. An emphasis is placed on strong design fundamentals and good craftsmanship. The goal is to have a strong body of work and to learn concepts which will be useful in the “real world” of graphic design.

Digital Photography
Prerequisite: Art I, Computer Graphics I

Digital Photography may stand alone as an elective, or as a continuation of Computer Graphics I and II. The age of film is waning, and the digital process is an exciting and powerful world. Students will create and edit their own images in Adobe Photoshop CS5.1. Traditional concepts in how to create an initial high quality image will still apply. Historical and contemporary trends in Photography will be covered.

Computer Graphics Design II
Prerequisite: Art I, Computer Graphics Design I with a B or better

Computer Graphics II will continue to build on the concepts explored in the first course. Concentration will be on 2D design in typography, advertising, informational graphics, logo design, vectoring, image manipulation, print and web layout, color theory and animation. Emphasis placed on the Elements of Art and the Principles of Composition. Programs used are Adobe Illustrator and Photoshop CS5.

Video Production I
Prerequisite: None
Entry level: Grade 9-11

This is an entry-level course in the theory and techniques of TV production. Students will be required to participate in all phases of production for the school’s television studio. Technical and communication skills will be emphasized for successful broadcast performance related to the television industry. Students should be willing to devote time above and beyond the regular school day to fulfill the programming requirements of this course. It is also recommended that students possess a minimum degree of competency in the following: (a) locating, organizing and interpreting information, (b) placing ideas in logical order, (c) writing complete sentences, (d) reading and interpreting instrument readings.

Video Production II
Prerequisite: B in Video Production I and/or teacher recommendation
Entry level: Grade 10-12

This is an advanced level course in the theory and techniques of Video production. Students will be required to participate in all phases of production for the school’s television studio. Students will participate in the production of television shows for daily broadcasts of the morning announcements throughout the school year along with a bi-weekly magazine news show and special request programming. Technical and communications skills will be emphasized for successful broadcast performances related to the television industry. Students are required to devote time above and beyond the regular school day to fulfill the programming requirements of this course. It is also recommended that students possess a minimum degree of competency in the following: (1) locating, organizing and interpreting information, (b) placing ideas in logical order, (c) writing complete sentences, (d) reading and interpreting instrument readings.

Computer Animation
Prerequisite: Video Production I or Computer Graphics Design I

During this course, you will be introduced to a variety of exciting software packages that enable enhanced modeling, animation and visualization skills. The course emphasizes design and manipulation of digital images in a studio environment with outputs for video, film, or web media. Students will produce a portfolio of their work.

Advanced Video and Digital Cinematography
Prerequisite: Video Production I or Digital Photography
Entry level: Grade 10-12

Students will develop an in depth knowledge of using a Digital DSLR camera for shooting video. We will cover depth of field, ISO settings, writing and structuring a story concept for documentaries and short stories. They will also learn proper lens selection and creative shooting techniques. DSLR shooting has become immensely popular in the video production world. This course shows you how to get the most out of a DSLR camera.

Theatre Arts
Prerequisite: None
Entry Level: Grade 9

This course is designed to expose students to a broad spectrum of activities within the theatre, including acting training, stagecraft techniques, lighting, make-up, and directing. Students will be expected to give performances in the areas of mime, improvisation, monologues, scenes, and one-act plays.
Advanced Theatre Arts
Prerequisite: Theatre Arts I with at least a “B” average; audition required
Entry Level: Grade 11-12
This course is offered as a continuation of Theatre Arts. Heavy emphasis will be placed on performances with one-act plays and/or a full-length play being presented. Advanced scene and monologue study, as well as audition technique and directing will be included. Students will participate, when possible, in theatre festivals around the stage, and will also attend productions at the McCarter Theatre in Princeton. Class size will be limited, and enrollment based on audition.

Musical Theatre
Prerequisite: Theatre Arts
Entry Level: Grade 10-12
The course deals with the study of musical theatre performers, literature/materials and history. Previous singing or acting experience is suggested. Acting, singing, and dancing techniques and styles are explored, as well as performance preparation. Students may present songs and scenes in class and learn techniques for speaking in character.

Broadway Masterclass
Prerequisite: Musical Theatre
Entry Level: Grade 10-12
The Broadway Masterclass is a course that will cover the history of Broadway through the years, as well as how the Musicals have progressed and adapted over time. This course will allow students to study and perform a variety of Broadway repertoire of varying characters, while improving their singing and general performance skills. This is an audition only course.

Performance Preparation
Prerequisite: none
Entry Level: Grade 9
Performance preparation is a course that offers students preparing for auditions and performances the opportunity to learn about how to control your mind and body in pressured performance situations. It will cover a range of topics from anatomy of the voice, to basic relaxation techniques and rehearsal techniques, as well as allow the students many opportunities to perform and increase their level of comfort in front of an audience. This class is geared towards performers in music and theatre, especially those interested in pursuing the performing arts.

Dance I
Prerequisite: Principles of Dance or studio dance experience
Entry Level: Grade 9
Students will stretch, develop strength, endurance, flexibility, coordination, and proper body alignment while learning and creating different types of dance. Students will learn terminology and proper form. The body will be used as a tool for artistic expression, specifically with jazz, ballet, contemporary and more.

Dance II
Prerequisite: Dance I
Entry Level: Grades 10-12
This course will introduce elements and structures of dance composition mainly in application to the solo figure. This course encourages self-direction in their approach to choreography. Students will be personally responsible for creating solo pieces that are reflective of a particular time period, style, or plotline.

Choreography
Prerequisite: Dance I
Entry Level: Grades 10-12
In this course, students explore principles of choreographic invention for small groups and large ensembles. Problems and possibilities for movement invention involving more than one dancer are investigated. Pieces will be original and themed.

Public Speaking
Entry Level: Grade 10-12
The course will include voice exercises and practice at modulating and projecting, but the basis of the course will be a study of composition. As such, analysis of audience, occasion, and purpose will begin each speech unit. Answers to these questions will dictate a study of appropriate vocabulary choices, examples, props, length, tone, etc. Before students create and deliver speeches of their own, they will study (view and/or read) model speeches of the same type. Impromptu speeches will be done as practice and will be used to promote “thinking on their feet” and creativity. Participation informal debate will be the counterpoint, as students will use research and planning to defend or support a side of a controversial topic.

Concert Choir
Prerequisite: None
Entry Level: Grade 9
Concert Choir is a mixed choral group offered to all students who are interested in part-singing. Different styles and types of choral music will be performed. Each student must be able to sing with pitch awareness, a sense of rhythm and good tone quality. Students who participate in the choral activities are required, as part of the course, to attend all concerts and programs during the year.
Music Theory

Prerequisite: Must be able to read music
Entry Level: Grades 10-12

Music theory is the study of basic notation and mechanics of written music. Students interested in either music major or music minor at the college level should take this class. The focus of the class will be on the standard Western musical notation where students will strive to achieve high standards of music literacy and competence. Ear training and dictation will be taught along with the basic rules for writing four-part harmony. Limited music composition will be covered as time permits. Will be offered every other year.

AP Music Theory

Prerequisite: B or better in previous music courses.
Entry Level: Grade 11 or 12

This is a college level course. It is mandatory that the student take the AP exam in May. Learn to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. Develop aural, sight-singing, written, compositional, and analytical skills through a series of listening, performance, written, creative, and analytical exercises.

Music Technology

Entry Level: Grades 10-12

Music Technology is the study and use of music software and recording equipment. Students interested in a career in music production or a music degree at the college level should take this class. Students enrolled will learn how to work with various microphones/soundboards, GarageBand, Audacity, iMovie, digital loops/effects, podcasts, and film-music.

Symphonic Band

Prerequisite: Must have at least one year of experience playing a woodwind, brass, or percussion instrument. Any exceptions are at the discretion of the director.
Entry Level: Grades 9-12

Symphonic Band is offered to freshman through senior instrumental students who play brass, woodwind, and percussion instruments. Students who elect to participate in this performance-based course will be exposed to the finest standard concert literature. Students are required, as part of the course, to perform at evening concerts, adjudication festivals and graduation. In addition to the daily band class, each student will receive a weekly lesson in a small group setting where more individualized instruction can take place.
HEALTH AND PHYSICAL EDUCATION

Health and physical education help the individual develop in the areas of physical, intellectual, emotional, social and spiritual behaviors. These assets are gained through introduction to and instruction and participation in such activities as field hockey, archery, basketball, flag football, soccer, golf, tennis, volleyball, lacrosse, softball, team handball, recreational games, ultimate frisbee, physical conditioning, track and field, fitness testing, lifetime activities, and lifetime fitness. Written tests, as well as a skills test, are partial criteria for grading students in physical education. Students will receive 1 1/2 marking periods of physical education and 1/2 a marking period of health. Students, by grade, are given the following health offerings:

Seniors — Family Life Education
This course helps the student understand his or her own behavior so that he or she can relate to others and be better prepared for adult living. Communication skills, drug education, sexually transmitted diseases (STD's), marriage, dating, reproduction, birth control, birthing and HIV/AIDS are all researched and discussed as a group with teacher guidance. Videos and guest speakers are utilized to reinforce topic areas.

Juniors – The American Red Cross – First Aid/CPR/AED
This course will train individuals to overcome any reluctance to act in emergency situations and to care for life-threatening emergencies, such as respiratory or cardiac problems, sudden illness or injuries to infants, children or adults. First aid skills, as well as CPR skills for infants, children and adults will be practiced. This course combines lectures, demonstrations and video with hands-on training and practice. Participants in this course learn to recognize and respond to emergencies including shock, cardiac and breathing emergencies for adults, children and infants, heat and cold emergencies, sudden illnesses and poisonings. Additionally, participants will learn first aid for everything from cuts and scrapes to muscle, bone, and joint injuries.

- Successful completion of the course according to the American Red Cross standards will result in the opportunity to purchase Certification Cards.
- CPR – Adult: For the person who only needs adult CPR training, this hands-on skills training prepares them to respond to breathing and cardiac emergencies in adults.
- CPR – Child and Infant: Designed for those who care for children, either full time or occasionally, this course teaches participants how to recognize and care for breathing and cardiac emergencies in infants and children age 12 and younger.
- AED – Adult and Child: This course teaches individuals currently certified in CPR – Adult and CPR – Child how to safely use an AED to provide care for victims of sudden cardiac arrest.

Sophomores — Driver’s Education
This course establishes an understanding of the principles and practices of safety and efficiency in traffic as a driver or pedestrian. This is the theory component of the Driver Education course. It establishes the attitude and understanding for safe, cooperative, sportsmanlike use of motor vehicles. All students will take the state written driver education test at the end of the course.

Freshmen — Health: A Wellness Approach
The purpose of this course is to give each student a foundation of knowledge and habits for healthy living. Basic information in human anatomy, HIV/AIDS, drug education, birth control, sexually transmitted diseases (STD's), self-esteem, refusal skills, choices and teenage emotions are integral components of this course.

Sports Medicine (Elective) 5 Credits
Entry Level: Grades 11
This course is designed to introduce students to Sports Medicine. The objective of the class is to introduce the various aspects of Sports Medicine by providing them with a background in injury prevention, safety concerns, and care of athletic related injuries. The class is designed to meet the needs of the New Jersey Core Curriculum Standards for Comprehensive Health and Physical Education. The course will allow all students to achieve optimal wellness by learning and applying concepts related to injury prevention, safety concerns, and care of injuries.
Option II Guidelines

- Students must be a junior or senior to apply.
- Students must have an overall GPA of 3.0 to be eligible.
- Students must have received nothing lower than a B in 9th and 10th grade Physical Education classes.
- Student must play TWO VARSITY sports during the school year OR be involved in the equivalent of 150 minutes of physical activity per week in an outside activity OR a combination of the two, for example: 1 varsity sport and an outside activity for 75 minutes per week.
- If Option II is granted, student will be placed in a study hall.
- If student is granted Option II, they must remain in the building during their time in study hall.
- Study Hall time may be used for studying, doing homework, or taking an on-line course at parent’s expense (need based scholarships are available).
- Students in Option II may not take another course at the high school during this time as they must still take the health portion of the class for five weeks during the semester.
- There will be no changes made to the period the student has PE under any circumstances.
- If student is granted Option II, students must receive the signature of the high school varsity coach on the form. If it is an outside activity, student must present a letter on letterhead from the coach/director regarding their participation and describing the time spent on this activity weekly. Monthly time logs must be submitted to verify participation. At no time may a parent sign the log or the letter of participation.
- If the student does not remain an active participant of the activity, they will be returned to PE class.
- Acceptance of the activity to meet the standards for Option II approval is at the discretion of the Administration.

Option II serves as an alternative to traditional physical education. It is the responsibility of the student to obtain permission PRIOR to beginning an Option II. Option II applications are overseen by the Principal and Director of Guidance. Please note the due date of this application. If it is not turned in by that date, your application will not be considered.

YOUR APPLICATION IS DUE BY AUGUST 1 OF EACH SCHOOL YEAR. APPLICATIONS WILL NOT BE ACCEPTED AFTER THAT TIME!! (UNLESS A STUDENT MOVES INTO THE DISTRICT OR HAS A SCHEDULE CHANGE THAT WAS APPROVED BY THE PRINCIPAL) MAKE SURE ALL PARTS ARE PROPERLY COMPLETED. PLEASE BE SURE YOU HAND THE APPLICATION TO MRS. BARLOW IN THE MAIN OFFICE. SHE WILL DOCUMENT THAT WE HAVE RECEIVED A COMPLETED APPLICATION.
Directions: Please complete all sections. Remember, completion of this application does not guarantee that you will be granted the Option II. If an appeal must occur in reference to this process, the appeal must be completed within 1 week of notification.

Student’s Name ____________________________________________________

Currently Enrolled as a: Junior / Senior (Circle One)

Year of Graduation __________

Student’s Address __________________________________________________

Parent/Guardian Name _______________________________________________

Parent/Guardian Telephone # _________________________________________

E-Mail ____________________________

Name of Activity _____________________________

Supervisor of Activity’s Name _________________________________________

Supervisor’s Credentials ____________________________________________

Supervisor’s Phone Number & E-mail _________________________________

I agree that the information included in this application is accurate and truthful. I acknowledge the fact that the student is responsible to fill out the activity log completely, including all necessary signatures, and submit it every month to _________________. I also agree to ensure that all of the other guidelines and requirements of the AHS Option II Physical Education Program are met.

Please SIGN below:

Student ___________________________________________ Date _________

Parent/Guardian _________________________________ Date _________

Supervisor of Activity _____________________________ Date _________

I agree that the safety, cost and transportation, to and from an alternative activity, are the sole responsibility of the student’s parent/guardian. By completing the Option II request for physical education, the parent(s) agree to indemnify and hold harmless the Upper Freehold Regional School District, its agents or employees from any and all claims of any type, action, complaint, judgment, costs or personal injury, arising out of, or related to, the student’s participation in the Physical Education Option II Program.

Parent/Guardian _________________________________ Date _________
INDUSTRIAL EDUCATION AND TECHNOLOGY

If you enjoy making things with your hands or if you are not sure which end of a hammer to grab, then courses in the Woodworking program might interest you. Students will learn how to read plans, use tools and machinery safely and properly and construct projects. The technology course supports a hands-on approach to learning, enables students to develop critical thinking and decision-making skills in a cooperative group-oriented environment.

The drafting program will help students to develop the capacity to plan in an orderly fashion, to interpret the ideas of others, and to express themselves in an understandable manner. As students proceed with courses, they will become familiar with the drafting methods and processes used in industry thus providing students with the basic understanding necessary to progress into CADD (Computer Aided Design and Drafting).

Basic Drafting  
Prerequisite: None  
Entry Level: Grade 9

Students are given a series of drawing exercises designed to help the beginning drafter develop a basic understanding of the principles of graphic communications and the proper use of drafting instruments. These exercises allow students to demonstrate their knowledge of the material, by applying the drafting concepts and techniques they have learned.

Advanced Drafting  
Prerequisite: C or better in Basic Drafting  
Entry Level: Grade 9

Advanced Drafting will help students understand the practical aspect of drafting and design. Students will enhance the skills learned in basic drafting, allowing them to develop creative solutions to several problem-solving activities. Students will be involved in package design and writing assembly instructions.

Computer-Aided Design (CAD)/SoftPlan  
Prerequisite: None  
Entry Level: Grade 9 *This course meets the Computer graduation requirement.

The course is focused on the principles, concepts and use of complex graphic tools utilized in the field of architecture, structural systems and construction trades. Emphasis is placed on the application of CAD tools in the creation of floor plans, foundation plans, basic roof design, section and details and elevation drawings.

Architectural Design  
Prerequisite: B or better in Advanced Drafting  
Entry Level: Grade 10

Students will be able to read and interpret blueprints and working drawings. Designers will learn what constitutes good design. Ultimately they will participate in the development of two-dimensional designs and plans by constructing a three-dimensional structural model house.

Engineering Design  
Prerequisite: B or better in Advanced Drafting  
Entry Level: Grade 10

Students will explore aspects of Design through a series of specific design oriented projects. Design Engineers will incorporate CAD (computer-aided design) software in their design operations. Model building, such as truss bridges, towers, catapults and model planes are major components of the course.

Introduction to Woodworking Technology  
Prerequisite: None  
Entry Level: Grade 9

This is an exploratory course in the area of woodworking. Attention will be paid to shop safety, the use and care of hand tools and power tools and reading and working from a drawing or sketch. The student will be given the opportunity to select a project and develop or expand on the design. Also, a group project may be developed and completed by the class which emphasizes the basic principles of manufacturing.

Advanced Woodworking Technology  
Prerequisite: Intro. To Woodworking or equivalent  
Entry Level: Grade 10

Students have a strong desire to construct things and to express themselves through creative work. From opportunities for such expression come growth and mental development. These courses provide such opportunities. An appreciation of good design and good workmanship in their application to construction and to manufactured products are basic principles and attitudes that will be established with students, leading them toward continued investigation and study. Students are provided with the opportunity for creative work, experimentation, cooperative work, leadership, problem-solving, skill development, and the application of scientific principles which should lead to significant changes in attitude and an appreciation of the woodworking industry.
INFORMATION TECHNOLOGY

The business courses at Allentown High School are designed to prepare students who wish to enter the business world after completing their high school education or who wish to prepare for a business career in college. These courses meet a wide range of needs:

- Pre-professional courses help college-bound students who are interested in majoring in business administration and accounting.
- Vocational courses provide for the acquisition of skills and the development of competencies and qualities desirable for successful job attainment.
- Personal business courses help students increase their consumer and business sense, which is essential for good citizenship.

Introduction to Business

Prerequisite: None
Entry Level: Grade 9

This course introduces students to the world of business through coursework in economics, global economies, investing, and consumer protection. Students also spend time learning about the history and purpose of our Central Banking System with a trip to the Federal reserve Bank of Philadelphia and the Money-in-Motion exhibit. Students will have an opportunity to work on several projects designed to review business career options on the computer, make presentations using PowerPoint, and use the Internet to enhance textbook material and news sources and information. *May count for Financial Literacy requirement.*

Computer Technology I

Prerequisite: None
Entry Level: Grade 9

This course offers the essential knowledge and skills that all students need to be active, lifelong learners in a technology intensive environment. The curriculum is designed to form the foundation for continuous learning and to be applicable to ever-changing innovations. Computer Technology is an introduction to word processing, spreadsheet development, graphics, and presentation software. It also includes instruction in the use of Windows operating system, the Internet, email, and the refinement of keyboarding skills.

Computer Technology II

Prerequisite: Grade of “B” or better in Computer Technology I and teacher recommendation.
Entry Level: Grade 10

This course will continue the knowledge of the business of technology. It focuses on aspects of digital desktop publishing. Emphasis is on creative styles of business documents including: booklets, brochures, flyers, newsletters and promotional documents.

Accounting I

Prerequisite: “B” or better in Foundations of Algebra A and B, or “C” or better in Algebra I.
Entry Level: Grade 10

This course is for those students who feel they are interested in Accounting, or would like to take a course to broaden their knowledge of how to maintain personal records. Those individuals who attend college for business will find this course a great help as an introduction to college accounting. Students will learn the accounting cycle of a sole proprietorship for a fiscal period. Projects are used to give practice to all principles studied.

Accounting II

Prerequisite: Grade of “B” or better in Accounting I and teacher recommendation.
Entry Level: Grade 11

Accounting II is a computerized accounting course. It provides an advanced study of the three types of business: sole proprietorship, partnership and corporation through the use of QuickBooks. Journals are used in each business, distribution of profits and losses and preparation of financial statements is included through departmental accounting.

Business Law/Retail Marketing

Prerequisite: None
Entry Level: Grade 10

Business Law is designed to give students an understanding of the kinds of law under which they live and to provide students with a basic understanding of how laws affect both businesses and their personal lives. Students will spend time exploring contracts, debate ethical topics, and explore business concepts such as leadership, goal setting, and management skills. The second half of this class will deal with the 7 functions of marketing and will give students hands-on experiences through classroom projects including business planning, advertising, interview skills, and how to dress for success. Students will hone their social skills through the many group activities and elevate their presentation skills throughout the semester.
Information Technology offers courses designed to meet the needs of students who will be using a computer system for post-secondary work, whether in college or in business. All courses provide training in specific core “software tools”. With these tools a user can solve many computer problems. Computer Science courses are recommended for all college-bound students.

Computer Science I
Prerequisite: Algebra I with grade of “C” or better
Entry Level: Grade 9
Students will learn how computers operate. They will study the parts of a computer and its operating system. Instruction will be given in how to write programs that will run on our computers using BASIC and Visual Basic. Students will also learn how to use graphics programs, spreadsheets and word processing software. This course will be useful to a student who wants to work in the computer field after graduation or to a student planning to go to college for business, science, engineering, etc.

Computer Science II
Prerequisite: a grade of a “B” or better in Computer Science I
Entry Level: Grade 10
This course will continue with the study of the latest version of Windows, computer hardware including, but not limited to, the use of scanners, digital cameras, CD-ROMs and printers. Students will be introduced to Lazarus, Python and Visual C++ programming languages. Special attention will be paid to graphic arts programs such as CorelDRAW and Photoshop. Experimentation, as well as investigation of computer resources will be encouraged.

Computer Science III
Prerequisite: a grade of a “B” or better in Computer Science II
Entry Level: Grade 11
This course is an advanced, practical application section that allows students to work on programs in areas of special interest. New programming techniques will be explored and other programming languages will be surveyed.

PROJECT LEAD THE WAY
Science, Technology, Engineering, Mathematics (STEM) Education
Project Lead The Way (PLTW) prepares students to be the most innovative and productive leaders in Science, Technology, Engineering and Mathematics (STEM) and to make meaningful, pioneering contributions to our world. PLTW partners with high schools and colleges across the United States to provide a rigorous, relevant STEM education. Through an engaging, hands-on curriculum, PLTW encourages the development of problem-solving skills, critical thinking, creative and innovative reasoning and a love of learning. The PLTW high school STEM education program provides students with a foundation and proven path to college and career success in STEM-related fields. STEM education is at the heart of today’s high-tech, high-skill global economy. For America to remain economically competitive, our next generation of leaders must develop the critical reasoning and problem-solving skills that will help make them the most productive in the world. PLTW sparks the ingenuity, creativity and innovation within all of our students. Further information on Project Lead The Way can be obtained by speaking with your guidance counselor and/or visiting the website: www.pltw.org

Introduction to Engineering Design (PLTW)
Prerequisite: Concurrent enrollment in Algebra I *This course will fulfill the district’s computer requirement.
Entry Level: Grade 9 and 10 *Athletes: this course is not an approved NCAA course.
Students gain experience solving engineering problems using the design process and applying math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3D modeling software and documenting their work according to modern engineering standards. The course culminates in a final project where students utilize the schools' 3D printers to solve a problem identified by their team.

Principles of Engineering (PLTW)
Prerequisite: Completed Algebra I with B or better. Recommend completing Introduction to Engineering Design with a B or better, although not necessary for 11th/12th graders.
Entry Level: Grades 10, 11 and 12 *Athletes: this course is not an approved NCAA course.
Students explore a broad range of engineering topics, including simple and compound machines, the strength of materials and structures, robotic automation, energy systems, and the physics of motion. These topics are learned by engaging in challenging, hands-on learning activities. Students utilize VEX robotics kits to build working robots that solve problems presented throughout the course. Students will work in teams as they develop important skills needed to become a successful engineer.

Aerospace Engineering (PLTW)
Prerequisite: Principles of Engineering with B or better
Entry Level: Grades 10, 11 and 12 *Athletes: this course is not an approved NCAA course.
Aerospace Engineering exposes students to the world of flight and engineering related to aeronautics and aerospace design. Students learn hands-on about the physics of flight and aerodynamics as they design an airfoil and rocket propulsion system to be tested in a state of the art wind tunnel. Students learn basic mechanics associated with space satellites using industry-standard software, and they will explore robot systems through independent projects involving remotely operated vehicles. Students will work in teams as they develop important skills needed to become a successful engineer.
MATHEMATICS

The National Council of Teachers of Mathematics (NCTM) states, "Sound mathematics teaching requires an understanding of what students know, need to learn and then challenging and supporting them to learn it well." Students must learn mathematics with understanding, actively building new knowledge from prior knowledge. The Mathematics Department's goal is to maximize every student's knowledge of mathematics by maintaining high expectations and offering strong support. This is accomplished by offering a variety of courses designed to accommodate individual strengths and needs.

Foundations of Algebra A

Entry Level: Grade 9
*Athletes: Foundations of Algebra A and B are both needed for this to count for Algebra I under NCAA rules.

This is the first in a series of three courses designed for the student who needs to bolster their math skills to include a stronger numerical background in order to be successful in Algebra and Geometry. Extra emphasis will be placed on number sense and computational skills. Students who successfully complete Foundations of Algebra A will move on to Foundations of Algebra B.

Foundations of Algebra B

Prerequisite: Foundations of Algebra A (*C*/73 or better average strongly recommended)

Entry Level: Grade 9

This is the second course in a three part series of the Foundations Courses. In this course students will build upon the knowledge gained in Foundations of Algebra A and apply it to the more abstract content of Algebra. Specific topics in Algebra will be emphasized, such as solving equations, writing linear equations, working with expressions, patterns and sequences, and problem solving skills. Students who successfully complete this course will move on to Foundations of Geometry.

Algebra I

Prerequisite: *B*/83 average or better in 8th grade Math, 215 or higher on the NJ Ask 7 and a teacher recommendation. (If one of these criteria are not met, you can request an alternate assessment in Math to be given at AHS during the summer.)

Entry Level: Grade 9

This is a required course for the student who has displayed proficiency in 8th grade Math and scored 215 or higher on the math portion of the NJ Ask 7. In this course, students will learn to describe the world around them using statistics, algebraic expressions, equations and graphs. Problem-solving skills will be stressed and the foundation of all future math courses will be laid.

Foundations of Geometry A

Prerequisite: Foundations of Algebra B (*C*/73 or better average strongly recommended) or *C-*/70 or lower in 8th grade Algebra

Entry Level: Grade 9 or 10  *Athletes: this is not an approved NCAA course.

This is the third course in a three part series of the Foundations Courses. Students will learn practical Geometry and the essentials of the deductive reasoning process. Students may go on to Intermediate Algebra or Algebra II (with teacher recommendation) after successfully completing this course.

Geometry

Prerequisite: Algebra I "C"*/73 or better average strongly recommended OR "A"*/95 average in both Foundations of Algebra A/Foundations of Algebra B along with Teacher Recommendation

Entry Level: Grade 10, Grade 9 if 8th grade Algebra I grade average and the testing prerequisites are not met for Geometry Honors

After integrating previous algebraic concepts and skills into geometry and basic logic, students use axioms and the process of deductive reasoning to study plane and solid geometry. Activities are designed to bridge the gap between concrete and abstract thinking. Classes use real situations to promote independent thinking and learning to develop skills, and to see the importance of mathematics in everyday life.

Geometry Honors

Prerequisite: For incoming 9th graders: "A"*/95 average in 8th grade Algebra, Advanced Proficient on the NJ Ask 7 and a teacher recommendation. (If one of these criteria are not met, you can request an alternate assessment in Math to be given at AHS during the summer.) For 10th graders: "A"*/95 average in 9th grade Algebra along with teacher recommendation

Entry Level: Grade 9 or 10

This course covers the same topics listed for Geometry, but includes an emphasis on constructions and logical reasoning. Challenging and complex problems reinforce concepts and develop skills.

Foundations of Geometry B (Intermediate Algebra)

Prerequisite: Foundations of Geometry A or Geometry  *Athletes: this is not an approved NCAA course.

Entry Level: Grade 10, 11 or 12

This course is designed for students who want to bolster their college-level geometry and algebra skills. Emphasis will be placed on essential concepts, such as linear equations and inequalities, statistics and probability, and algebraic fractions, necessary for liberal arts courses on the college level and to prepare for the Geometry PARCC as well as Algebra II/Trigonometry.
Algebra II/Trigonometry  2 Semesters, 10 Credits
Prerequisite: Algebra I & Geometry ("C"/73 or better average in both strongly recommended) or Foundations of Algebra A, Foundations of Algebra B and Foundations of Geometry ("A"/95 or better average in all strongly recommended) or Intermediate Algebra ("C"/73 or better highly recommended).  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 10 or 11

In this course students will continue to pursue topics from Algebra I. Functions and linear programming are explored as well as trig functions and their applications and statistical analysis. Students attain skills necessary to go on to higher mathematics.

Algebra II Honors  5 Credits
Prerequisite: "B+/"87 average in Geometry Honors AND "A"/95 average in Algebra I OR "A"/95 in Geometry and "A"/95 average in Algebra I, along with a teacher recommendation.  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 10

Students coming from Geometry Honors continue the study of Algebra through solving equations, dealing with polynomials, exploring logarithms and rational functions. All topics are covered in depth. Enrichment activities enhance student appreciation of mathematics.

College Algebra  5 Credits
Prerequisite: Algebra II ("C-"/70 or better average strongly recommended or teacher recommendation).  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 12

This course is designed for 12th graders who would benefit from an additional year of math. Students will be better prepared for upcoming college placement exams and basic mathematical concepts that are necessary in today's society will be reinforced.

Statistics  5 Credits
Prerequisite: Algebra II ("B+"/87 or better average strongly recommended).  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 11 or 12

This course is designed for students who want to explore the exciting world of statistics. The ability to interpret or analyze information is vital in today's society. Topics such as data collection and representation, probabilities and probability distributions will be addressed. This provides a fourth year of math for students who want to further their math education.

Pre-Calculus  5 Credits
Prerequisite: Algebra II ("B-"/80 or better average strongly recommended), or Algebra II Honors ("C-"/70 or better average strongly recommended).  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 12

In this course students will study quadratic functions, rational functions, logarithms, exponential functions and trigonometric functions. This course provides a fourth year of math for students who wish to further their math education or to prepare students to move on to Calculus.

Pre-Calculus Honors  5 Credits
Prerequisite: Honors Geometry and Honors Algebra II ("B+"/87 average in both or teacher recommendation) OR "A"/95 or better in both Geometry and Algebra II.  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 11

In this course students study functions and function notations. Specific topics include rational functions, trig functions, logarithms and exponential functions. This course is designed for those students who are planning to take AP Calculus and therefore moves through some material at an accelerated pace or in greater depth.

Calculus  5 credits
Prerequisite: Algebra II and Pre-Calculus ("B"/83 or better average in both) or Pre-Calculus Honors ("B-"/80 or better average strongly recommended).  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grade 12

Calculus explores topics in functions and graphing and provides the student with backgrounds in differential and integral calculus.

Advanced Placement Statistics  2 semesters; 10 credits
Prerequisite: "B"/83 average or better in Algebra II Honors or Pre-Calculus Honors and teacher recommendation; "A/A"/90 average in Pre-Calculus and teacher recommendation.  It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)
Entry Level: Grades 11 or 12

This course is designed to cover a semester of College Statistics using analytical reading skills. Students will study four conceptual themes: exploring data, sampling and experimentation, anticipating patterns with probabilities, and statistical inference. Students are prepared for the AP Exam given in early May. It is required that students take the AP Exam in May. The exams are at the expense of the student.
Advanced Placement Calculus

Prerequisite: "B+/787 average in Pre-Calculus Honors & teacher recommendation or "A/A-"/90 average in Calculus with a teacher recommendation. It is highly recommended that students purchase their own graphing calculator for this course. (TI 84 Plus is the recommended calculator)

Entry Level: Grades 11 or 12

Advanced Placement Calculus covers one semester of college calculus. Both differential and integral calculus are explored through theory and application. Students are prepared for the AP exam (A/B) given in early May. It is required that students take the AP Exam in May. The exams are at the expense of the student.

AHS Math Course Order
Science helps people in their struggle to survive the hazards produced by nature. Science, too, has made it possible to have television, telephones, frozen food, cars, computers, atomic energy and countless other conveniences.

Conversely, civilization and science have created some problems that need solving. Our great industries are constantly polluting the air and the water. Supersonic planes create problems of noise and safety. The increase of population is threatening our wildlife as man expands into nature's realm. The use of D.D.T. and other chemicals threatens all animals, including humans. In many cases, the problem created by science can be solved by it. All citizens must make important decisions that affect many other people and their style of life. A study of physical and biological science can provide important information to aid this process.

Three years of science are required to graduate from Allentown High School. One course must be Biology; one must be Chemistry, Environmental Science or Physics; and the third may be an additional lab and or inquiry-based science class.

### The following additional courses meet the science requirement for graduation. Course descriptions can be found under the Agricultural Science section: Botanical Sciences, Animal Science, Veterinary Science, Honors Biotechnology, Aquaculture & Wildlife Sciences, Honors Food Chemistry and Equine Science.

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#### Integrated Science

(LAB COURSE)

**Prerequisite:** None

**Entry Level:** Grade 9

**Type:** Physical

Integrated Science is a laboratory science course that explores the relationship between matter, energy, and their relationship to living things.

Students will investigate physical science concepts through various demonstrations, labs and lectures.

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#### Biology

(LAB COURSE)

**Prerequisite:** Passing grade in Integrated Science and enrolled in Algebra or Foundations of Algebra.

**Entry Level:** Grade 10

**Type:** Life

This is a biological, college preparatory, science class designed for students who may need extra exposure to various topics and/or often struggle with science. Students will investigate life science concepts through various demonstrations, labs and lectures.

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#### College Prep Biology

(LAB COURSE)

**Prerequisite:** Incoming 9th grader must have earned a “B” in 8th grade science, in addition to either an "A" in 8th grade math or enrolled in Algebra I during 8th grade; current 9th grader, "A-" in Integrated Science and enrolled in Algebra I

**Entry Level:** Grade 9/10

**Type:** Life

College Prep Biology stresses the interrelationships of living things. Major animal and plant groups will be studied. The structure and function of the human body and laws of heredity that affect people will be discussed extensively. The laboratory activities will include microscopic investigation and field studies. CP Biology is recommended for those students planning to enter all science-related fields: nursing, medicine, farming, and similar occupations plus those needing a lab course for post-secondary school education.

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#### College Prep Biology Honors

(LAB COURSE)

**Prerequisite:** Incoming 9th grader must have earned a “B” in Algebra I, "A" in 8th grade Science; current 9th grader must have a teacher recommendation, grade of “A” in Science and a “B” in Algebra

**Entry Level:** Grade 10/9 with proper documentation

**Type:** Life

This course is designed for the advanced student who plans to attend college after graduation. CP Biology Honors covers the same major topics as CP Biology but in more depth and detail. Several additional topics such as the most recent bio-chemical findings will be covered. Laboratory activities stress independent work. Research is also an important component of the class. CP Biology Honors is recommended for those students planning to enter a scientific field or those whose interest in biology indicates an in-depth approach. Selection of students will be based on ninth grade teacher recommendation. Personal independence and maturity plus a quest for learning are important qualities to have when taking this class.

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#### Advanced Placement Biology

(LAB COURSE)

**Prerequisite:** Grade of "B+" or better in Honors Biology and College Prep Chemistry Honors or students must pass a pre-test WITH a “B+” or better. Completion of summer assignment. It is highly recommended that Anatomy and Physiology Honors be taken concurrently with this course.

**Entry Level:** Grade 11

**Type:** Life

Advanced Placement Biology is designed for highly motivated students considering careers in biological science or the medical profession. It is the equivalent of an introductory college level biology course. It provides students with the conceptual framework, facts, and analytical skills necessary to deal with the rapidly changing biological sciences. It is required that students who elect this course will take the Advanced Placement Test offered in May. Exams are at the expense of the student. Demonstrating proficiency on this test qualifies students to gain college
credit or advanced standing by fulfilling this college science requirement. Due to the complexity of this course, only students who can commit to completing a great deal of work independently outside of class should enroll in this course. Daily attendance is of primary concern, with minimum conflicts due to other classes or activities. After school time may be necessary.

Chemistry

(5 Credits)
(1 LAB COURSE)
Prerequisite: Algebra I completed.
Entry Level: Grade 10
Type: Physical
Chemistry is the study of the properties of matter and the changes it undergoes. The study of Chemistry is essential for students considering careers in the science and health related fields. Topics covered in class include the states of matter, atomic structure, chemical compounds, chemical reactions, bonding, periodic law and measurement systems. These areas are also studied with appropriate laboratory investigations where basic understandings of laboratory procedures and safety are taught. Emphasis of this course is placed on the basic concepts rather than the quantitative aspects of Chemistry requiring less mathematical application than the College Prep Chemistry course requires. The student will develop self-discipline and creative thinking while acquiring these fundamental concepts.

College Prep Chemistry

(5 Credits)
(1 LAB COURSE)
Prerequisite: Foundations of Algebra I A & B - "B" or better or Algebra I "C+" or better, “C” or better in CP Biology. The purchase of a scientific calculator is necessary for this course.
Entry Level: Grade 10
Type: Physical
This course provides students with an organized course of study dealing with the structure and composition of matter and its interactions. Furthermore, it deals with changes in matter, the mechanisms by which these changes occur, the products formed and the energy changes encountered. A basic understanding of laboratory procedures and safety are taught while the student learns through direct experience in the laboratory.

College Prep Chemistry Honors

(5 Credits)
(1 LAB COURSE)
Prerequisite: “B+” or better in Algebra I or concurrently taking Algebra II, “A” in CP Biology or “B” or better in CP Biology Honors. The purchase of a scientific calculator is necessary for this course.
Entry Level: Grade 10
Type: Physical
This course is designed for students interested in post-secondary science study, especially for those pursuing careers in engineering, medicine, computer science and technology. The activities in this course emphasize thinking skills and the laboratory component provides "hands-on" experience. The course covers many of the same topics described in CP Chemistry, but includes an emphasis on math and critical thinking skills. Students should have completed Algebra I since a strong mathematics/algebra background is required. It is suggested that student be enrolled in Algebra II or Geometry the same year they take CP Chemistry Honors.

Advanced Placement – Chemistry

(2 Semesters; 10 Credits)
(1 LAB COURSE)
Prerequisite: “B+” or better in CP Chemistry Honors & teacher recommendation, grade of "B" or better in Algebra II and completion of summer assignments. The purchase of a graphing calculator is necessary for this course. Completion of summer assignment.
Entry Level: Grade 11
Type: Physical
This course is created for the highly motivated student desiring material not covered in CP Chemistry Honors. Students will be given a further study in Inorganic Chemistry, a laboratory experience in quantitative analysis of unknowns, a deeper study in Organic Chemistry, and an introduction to Biochemistry. It is recommended for all students planning to enter post-secondary science study. It is required that students who elect this course will take the Advanced Placement Test offered in May. Exams are at the expense of the student.

College Prep Physics

(5 Credits)
(1 LAB COURSE)
Prerequisite: “C+” /77 in Algebra II or taking Algebra II concurrently & CP Chemistry teacher recommendation. (CP Biology and CP Chemistry completed) The purchase of a scientific calculator is necessary for this course.
Entry Level: Grade 11/12
Type: Physical
The emphasis of the course is the study of mechanics, including, but not limited to the introduction to measurement; kinematics equations of everyday motion in one dimension; dynamics and vectors, conservation of momentum; energy, power and simple machines; conservation of energy and the study of the universal laws of gravitation, as well as Einstein’s Theory of Relativity in a manner that will aid the student in his or her reasoning process. It is intended to prepare students to be able to relate the laws of physics in their own lives. The course uses multiple teaching methods throughout, including demonstrations, lectures, problem-solving activities, computer assisted learning modules, laboratory exercises and writing up laboratories, and internet research activities. The class will help students organize their thinking skills by dismissing many of the common misconceptions students have perceived in physics. There are many “hands-on” activities in this course which serve to reinforce important physics concepts and emphasize thinking skills.
College Prep Physics Honors

(LAB COURSE)
Prerequisite: "B"/83 or better in Algebra II, Grade of "B" /83 or better in CP Biology and CP Chemistry Honors, teacher recommendation/approval if in CP Biology and CP Chemistry. The purchase of a graphing calculator is necessary for this course. Completion of summer assignment.
Entry Level: Grade 12,11 for exceptional students
Type: Physical

CP Physics Honors is designed to be a single block, algebra and trigonometry- (not calculus) based introduction to physics, intended to prepare students to be able to relate the laws of physics in their own lives and professions, and ready them for college requirements in the physical sciences. The major emphasis of the course is the study of mechanics, including, but not limited to the introduction to measurement; the kinematics equations of everyday motion in one and two dimensions; dynamics and vectors, the conservation of momentum; energy, power and simple machines; the conservation of energy and the study of the universal laws of gravitation. There will also be a brief introduction to heat and the laws of thermodynamics; states of matter and buoyancy; wave motion and sound and music. Topics are covered in more detail in the second semester honors course entitled Advanced Topics in Physics.

The course uses multiple teaching methods throughout, including demonstrations, lectures, problem solving activities, computer assisted learning modules, laboratory exercises and writing up laboratories, and internet research activities.

Advanced Topics in Physics

(LAB COURSE)
Prerequisite: “B”/83 or better in CP Physics Honors, taking Pre-Calculus concurrently. The purchase of a graphing calculator is necessary for this course. Completion of summer assignment.
Entry Level: Grade 12,11 for exceptional students
Type: Physical

This course is designed for the students who desire further study in topics left uncovered in CP PhysicsHonors. It is a lab course based in algebra and trigonometry with an introduction to calculus based course especially for those students who desire to pursue more advanced physical sciences, including engineering in their lives and professions. Topics include wave motion, sound and simple harmonic motion; heat and the laws of thermodynamics; wave motion and sound: light, reflection and refraction, mirrors and lenses, diffraction and interference; static electricity; current electricity, series and parallel circuits; magnetic fields, induction and electromagnetism; quantum theory, the atom, nucleus and nuclear applications, the fundamental universal forces; special relativity, our universe and the history of the universe, and the written physics laboratory. The course uses multiple teaching methods throughout, including demonstrations, lectures, problem-solving activities, computer assisted learning modules, laboratory exercises and writing up laboratories, and internet research activities. It is required that students who elect this course will take the Advanced Placement Test offered in May. Exams are at the expense of the student.

Environmental Science

(LAB COURSE)
Prerequisite: “B”-or better in College Prep Biology or “B+” or better in Biology or teacher recommendation
Entry Level: Grade 11
Type: Life

Including lecture and lab activities, this course provides students a study of contemporary environmental issues. The interconnections of economic, social, political, and ethical concerns related to the environment and natural resources are studied. A special emphasis is placed on New Jersey’s diverse ecosystems to guide students to more effective, decision-making and state citizenship. Lab topics include but are not limited to solar energy, the food chain, geothermal energy, air pollution, species diversity, ecosystems, ground water, integrated pest control, human population, global warming, ocean, seas, and estuaries. Emphasis is also placed on career opportunities in the environmental sciences.

AP Environmental Science

(LAB COURSE)
Prerequisite: “A” in College Prep Biology or “B” or better in CP Biology Honors
Entry Level: Grade 11/12
Type: Life

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the inter-relationships 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 or preventing them. It is required that students who elect this course will take the Advanced Placement Test offered in May. Exams are at the expense of the student.

Intro to Geology & Oceanography

(LAB COURSE)
Prerequisite: “B” or better in CP Chemistry
Entry Level: Grade 11/12
Type: Physical

This course will stress the interdependence of the geological sciences on the concepts of rock and mineral formation and identification, the theory of plate tectonics, reading and developing geologic maps, the nature of the fossil record, superposition, the geologic time scale, physical and chemical oceanography. Laboratory activity projects stress independent work. Living in such a geologically diverse, coastal state as New Jersey, students need to know and understand the geologic activity responsible for the formations within our state and the world.
Emerging Diseases/Genetics

Prerequisite: Students have already completed CP Biology and CP Chemistry and have a “B-“/80 or better average in both. Chemistry is not a suitable alternative to CP Chemistry as a prerequisite for this course.

Entry Level: Grade 11-12

Type: Life

This course will be one marking period of each topic. Laboratory activity projects stress independent and group work.

Emerging Diseases will investigate the global impact of disease on the economic and social structure worldwide and the United States. To do this, students will understand the biology of disease-pathogen, vector, host and symptoms. Students will prepare presentations, which demonstrate how they would approach these problems.

The genetics course will expose students to some of the advanced techniques that are part of the AP biology course. It is a 10 week course opposite Emerging Diseases. The course will focus on delving deeper into genetic concepts covered very briefly in CP Biology. We will highlight techniques to extract DNA from bacteria, Drosophila fruit fly experiments to track patterns of inheritance, and DNA analysis using gel electrophoresis.

Forensic Science

Prerequisite: Students have already completed CP Biology and CP Chemistry and have a “B-“/80 or better average in both. Chemistry is not a suitable alternative to CP Chemistry as a prerequisite for this course.

Entry Level: Grade 11

Type: Life

Forensic Science will be a multi-disciplinary science course, which demonstrates how modern technology, science, and lab techniques are utilized today to ”solve” crimes. Students will be expected to be active researchers in pseudo-crime investigations. These activities will involve a great deal of student participation, research and investigation via the Internet and other sources.

Introduction to Astronomy

Prerequisite: CP Biology “B” or better and “B” or better in CP Chemistry, and a teacher recommendation.

Type: Physical

Astronomy is intended as a survey course covering major topics and themes in Astronomy. Students will learn about the formations of stars and planets, theories concerning the formation of the universe, cosmology and our place in space through laboratories, lecture, research and models. The class will build on established scientific skills with Internet-intensive projects and lessons.

Anatomy/Physiology

Prerequisite: CP Biology “B” or better and “B” or better in CP Chemistry, and a teacher recommendation.

Type: Life

This college preparatory elective level science course includes a detailed and rigorous study of many human body systems. Relationships between body systems and structure and functions are of focus throughout the course. Homeostatic balance between the body systems is also discussed. This course is recommended for students interested in learning more about the human body and the processes that occur but not planning on a career in the health fields. Laboratory activities will include microscopic analyses of tissue specimens as well as few dissections to accompany the subject matter.

Anatomy/Physiology – Honors

Prerequisite: “B+“ or better in CP Biology Honors and CP Chemistry Honors; or, an "A" in CP Biology and Chemistry PLUS a teacher recommendation.

Type: Life

*Athletes: this course is currently under consideration for NCAA approval.

This college preparatory elective honor level science course includes a detailed and rigorous study of many human body systems. Relationships between body systems and structure and functions are of focus throughout the course. Homeostatic balance between the body systems is also discussed. This course is recommended for students interested in a health related career, especially those students who plan to study medicine, nursing, physical therapy, and athletic training. Laboratory activities will include microscopic analyses of tissue specimens as well as a few dissections to accompany the subject matter.
AHS Science Course Order

Integrated Science

With teacher recommendation

Biology

With teacher recommendation

Chemistry

With teacher recommendation

Environmental Science

Elective Course Options – please consult the Course Selection Guide for prerequisites

Anatomy & Physiology

AP Biology

Anatomy & Physiology Honors

AP Chemistry

Environmental Science

AP Environmental Science

Introduction to Astronomy

Emerging Diseases/Genetics

Intro to Geology & Oceanography

Forensic Science

Botanical Sciences

Animal Science

Equine Science

Aquaculture & Wildlife Sciences

Honors Biotechnology

Honors Food Chemistry
SOCIAL STUDIES

The goals of the Social Studies Department are to improve basic social studies skills; to make students aware of their American heritage; to create an awareness of their place as historical beings; to improve inquiry skills, and to prepare all students to participate in our democratic society. The curriculum pattern was designed to meet the aforementioned goals. The ninth grade courses teach basic social studies skills: using information, reading maps, interpreting tables, graphs and charts, determining sequence; exposes students to various cultures; helps students to distinguish fact from opinion; and teaches the fundamentals of geography, government, economics, and social organization. The tenth grade program is a chronological introduction to American history covering everything from our European background to the end of the Civil War. In the eleventh grade, students study American history from the last decade of the 19th century to today. The Social Studies Department also offers many elective courses all designed for students desiring to further their knowledge of Social Studies. Courses in this department will trace our roots back to their Judeo-Christian, Greco-Roman backgrounds and follow the development of the modern nation-state through today’s happenings. Sociology explores the behaviors of groups of people. Topics included are socialization, interactions, organizations, institutions, and social problems. Psychology examines individual behavior, personality, theories and stresses research methods. Current Affairs uses breaking news to learn about the history of the issues under consideration. Genocide explores the horrors of these events and the ways to prevent them from occurring in the future. Crime and Justice provides an in-depth look at our laws and the criminal justice system. In addition, the Social Studies Department offers six AP courses, which allow students to earn college credit while in high school.

Introduction to Social Science/World Geography
Prerequisite: None
Entry Level: Grade 9
The first portion of this course is a general introduction to social studies including: sociology, government, economics, anthropology and study skills. The remainder of the course is an up-to-date study of the world’s resources, climate, and people. The course includes a study of maps, nations, and world problems of today. Topics range from animal and vegetable life to energy and conservation. It is a study of how people have adapted themselves to their environment as well as a study of humanity’s impact upon the environment.

World Cultures
Prerequisite: None
Entry Level: Grade 9
The first portion of this course is a general introduction to study and geography skills. The remainder of the course proceeds to explore the history, religion, and culture of Europe, Russia, Latin America, Middle Eastern, African and Asian regions, plus an examination of current events. Students will learn through various means of individual and group projects, written assignments, classroom discussion and presentations, and various other activities that will assist students in understanding their study of World Cultures.

World History – Honors
Prerequisite: Advanced Proficient on the NJ Ask 7, “A” average in both 8th grade Social Studies and Language Arts and a teacher recommendation. (If one of these criteria are not met, you can request an alternate assessment to be given at AHS during the summer.)
Entry Level: Grade 9
This course takes a thematic look at world history. The course explores major government and economic systems, religions and the development of the modern world. Students will be required to do more extensive work in the fields of research, writing, outside readings and oral presentations.

Early European History
(WESTERN CIVILIZATION)
Entry Level: Grade 11 or 12
The course requires daily completion of homework reading assignments. Activities include poems, stories, video skits, collages, role playing, speeches, debates, songwriting/singing and more. The primary emphasis of the course is to familiarize students with the forces and trends that have shaped our civilization from the Ancient Greeks to the Reformation. This course is strongly recommended to students who plan on attending college.

Modern European History – Honors
(WESTERN CIVILIZATION II)
Prerequisite: B or better in World History Honors or US I Honors
Entry Level: Grade 10
The course requires daily completion of homework reading assignments. Activities include poems, stories, video skits, collages, role playing, speeches, debates, songwriting/singing and more. This course is open to 10-12 grade students. The primary emphasis of this course is to familiarize students with the forces and trends that have shaped our civilization from the Middle Ages through Industrial Revolution. This course is required for students who plan on taking AP European History and is highly recommended for students who plan on attending college.

U.S. History I
Prerequisite: (Students coming from World Geography must have an “A” and a recommendation from their teacher).
Entry Level: Grade 10
This course commences with the French and Indian War; followed by how our country will deal with balancing liberty while maintaining order, 1776-1830; continues with an understanding of how our nation emerges during the time period of 1800-1860; examines how our country handles the divisions that will occur, including an uneasy reunion, 1848-1877. We will conclude with the country expanding further Westward and the advances made in Industry surpassing Britain, making the United States number one in the world.
U.S. History I – Honors 5 Credits
Prerequisite: B or better in World History Honors or A in World Cultures or Teacher Recommendation
Entry Level: Grade 10
This course explores the same course content as U.S. History I, but in greater depth. Students will be required to do extensive research and writing along with oral presentations. Students will be required to read several books outside the daily textbook readings.

U.S. History II 5 Credits
Prerequisite: US History I (Students coming in from Early United States History need a “A” or better in Early U.S. History and a recommendation from their teacher).
Entry Level: Grade 11
This course deals with United States History from the late 19th century to today. Areas of study are the evolution of U.S. Government including civil and criminal rights, the changes in the U.S. economy, foreign affairs, and the examination of current events. Students will learn through various means of individual and group projects, written assignments, classroom discussion and presentations, and various other activities that will assist the students in their understanding of U.S. History II, equipping the students with a foundation about their country and world as they proceed out of high school.

U.S. History III 2.5 Credits
Prerequisite: US I and US II
Entry Level: Grade 12
This is a half semester course designed for students to investigate the main political, social, and economic events during the late 20th and early 21st centuries. Beginning with the Watergate scandal, students will be able to examine the reaction of citizens and those abroad to America’s role as a world power and its foreign policy objectives. Additionally, students will gain an in depth understanding of recent events regarding terrorism and economic turmoil.

Early United States History 5 Credits
Prerequisite: None
Entry Level: Grade 10
This course deals with U.S. History from the era of European colonization to the latter 19th century. Emphases are placed upon American independence, the creation of the Constitution, the establishment of effective government, the Civil War and Reconstruction. Students will be assigned individual and group projects, papers, and will be required to actively participate in class.

Modern United States History 5 Credits
Prerequisite: US History I or Early US History
Entry Level: Grade 11
This course deals with United States History from the late 19th century to today. Areas of study are the evolution of U.S. Government including civil and criminal rights, the changes in the U.S. economy, foreign affairs, and the examination of current events. Students will learn through various means of individual and group projects, written assignments, classroom discussion and presentations, and various other activities that will assist the student in their understanding of U.S. History II, equipping students with a foundation about their country and world as they proceed out of high school.

Current Affairs 2.5 Credits
Prerequisite: World Cultures or World Geography
Entry Level: Grade 10, 11 or 12
In the quest to define the study of Current Affairs – the simple definition is the coverage of “political events and problems in society which are discussed in newspapers, and on television and radio” – in addition to the Internet, other areas of study will include but are not limited to (topics not in any particular order): Federal Government, Media, Constitutional Rights (Supreme Court) Social and Domestic Policy Issues, Foreign Issues and Policy, Global Environment, and controversial issues.

Crime and Justice 2.5 Credits
Prerequisite: World Cultures or World Geography
Entry Level: Grade 11 or 12
The course will promote a greater understanding of our criminal justice system, the rights of the accused, the role that state and federal courts play in individual and societal responsibility, and the importance of judicial review along with landmark Supreme “Court rulings that have shaped our justice system. Students will be exposed to litigation in the civil field. Crime and Justice is a one semester course which will, among other things, make students aware of the many careers available in the apprehension, detention, and rehabilitation of individuals within our criminal justice system. Activities include simulations of court case, debates, video skits, role-playing, and research. Crime and Justice requires daily completion of homework, reading assignments, and classroom participation.

Genocide 5 Credits
Prerequisites: None
Entry Level: Grades 11-12 only, due to nature and graphic content
This course is an exploration into the dark side of human nature and behavior. The horror of the Holocaust will be examined and compared with other acts of genocide and inhumanity, including the destruction of Native American cultures, the Armenian genocide of WWI and the more recent government-sponsored mass murders in Rwanda; research on intolerance will be conducted with an emphasis on proposing solutions to these problems in our society today. There is no textbook in this course. Students will rely on excerpts of primary source materials, current media reports, videos, testimonials, and individual research. Sensitive topics are discussed in the class.
Financial Literacy  
Prerequisite: None  *Athletes: this is not an approved NCAA course.
Entry Level: Grade 11 or 12
Economics covers basic economics, concepts such as scarcity, supply, and demand, comparative advantage, financial literacy, budgeting and checking and other bank accounts. In addition, the class will cover business organization and entrepreneurialism, including theories of economics, business planning, globalization, and the stock market.

Introduction to Psychology  
Prerequisite: None
Entry Level: Grade 11 or 12
Introduction to Psychology is a one semester course which will, among other things, make students aware of the many careers available in the mental health areas, promote a greater understanding of self, as well as others, and lead to better skills in learning, memory, behavior, perception, motivation, personality theory, stress and disturbance, and therapy.

Introduction to Sociology  
Prerequisite: World Cultures or Geography
Level: Grades 10, 11, 12
Introduction to Sociology is a course which examines society and culture with a particular emphasis on contemporary American society. The following topics will be explored: our values, socialization, class structure, institutions, religion and effects of technology. This course will include the examination of social problems, and will focus on the research process itself. This course is recommended for college-bound students planning to major in the liberal arts.

Economics Honors  
Prerequisite: B or better in Algebra I and B or better in Algebra II or concurrently taking Algebra II, B in all English courses.
Level: Grade 11 or 12
This course is designed to afford prospective AP Macroeconomics students with a foundation of the content of macroeconomics, and the study of economics in general. The course will cover the key concepts of Economic Analysis, Tools and Systems, along with the role of Economic Decision Makers on the Market. Through these concepts, students will be introduced to the basic graphs and models used in economic analysis, and become exposed to the rigors of the AP course for which they are preparing.

A.P. Macroeconomics  
Prerequisite: ‘B’ or better in Honors Economics and teacher approval.
Entry Level: Grade 11 or 12
Macroeconomics is the study of behavior of the U.S. economy. The course follows the AP Curriculum. Topics to be studied include production, consumption and distribution, GDP, fiscal and monetary policy as well as aggregate supply and demand. There is an emphasis on critical reading and writing. It is required that students selecting this course will take the AP exam in May. The exams are at the expense of the student.

A.P. United States History  
Prerequisite: “B” or better in US History I Honors, or “A” in US I History, or “A” in English II and written assessment.
Advanced Placement American History is designed to help high level students earn college credit for a survey course in United States History. Extensive reading outside the textbook and significant writing will be completed by students enrolled in this course. This course is offered to juniors to fulfill the U.S. History II curriculum requirement. Since students who take this course will have already taken U.S. History I, 19th and 20th U.S. century history will be emphasized. It is required that students who take this class will take the Advanced Placement Exam in May. The exams are at the expense of the student.

A.P. European History  
Prerequisite: A “B” or better in Modern European History Honors
Entry Level: Grade 11 or 12
This course follows the A.P. curriculum; topics include The Elizabethan Era, Industrialization, Decline in Church Influence, Unification of Italy and Germany, the World Wars, and The Cold War Era to the present. There is an emphasis on critical reading and writing. It is required that students selecting this course will take the A.P. Exam in May. The exams are at the expense of the student.

A.P. Psychology  
Prerequisite: B+ or better in Psychology and teacher recommendation; “A” in most recent social studies or English courses
Entry Level: Grade 11 or 12
The AP course in Psychology will provide the students with an overview of current psychological research methods and theories. This course includes the exploration of the therapies used by professional counselors and clinical psychologists and examines the reasons for normal human reactions. Specific areas of study include the brain, sense functions, the process of human development, human aggression, and learning. AP Psychology is a one-semester course designed to challenge students to investigate relevant concepts such as intelligence, abnormal behavior, and personality development. Coursework will include college level reading and writing. This course is open to accelerated 11th and 12th grade students. AP Psychology requires daily completion of homework assignments and class participation. This class also prepares students for the AP exam. It is required that students take the AP Exam in May. The exams are at the expense of the student.
A.P. Government and Politics  
**Prerequisite:** "B" or better in US I Honors and "A" in Crime and Justice, or "A-" or better in US I and "A-" or better in Crime and Justice, or "A" in US I and "B" or better in US I Honors.  
**Entry Level:** Grade 11 or 12

The AP course in United States Government and Politics will give students an analytical perspective on government and politics in the United States. This course includes both the study of general concepts used to interpret United States politics and the analysis of specific examples. It also requires familiarity with various institutions, groups, beliefs, and ideas that constitute U.S. policies. Specific areas of study include Constitutional Underpinning of United States Government, Political Beliefs and Behaviors, Political Parties, Interest Groups, Mass Media, Institutions of National Government, Public Policy, Civil Rights and Civil Liberties. AP Government is a one-semester course designed to challenge students to think critically and prepare themselves for the self-disciplined rigors of college. The course is open to accelerated 11th and 12th grade students. AP Government and Politics requires daily completion of homework reading assignments and classroom participation. It is required that students take the AP Exam in May. The exams are at the expense of the student.

Child Growth and Development  
**Prerequisite:** None  
**Level:** Grade 9 or 10

This is a course for the future teacher. It provides background information, examining education from a historical perspective to modern day education. It then provides prospective teachers with practical information to use in planning and implementing their own lessons. Students will learn what makes a teacher effective by promoting active learning and using technology to enhance learning among diverse learners. Students will design an instructional plan, choose teaching strategies, and measure learning. Students will observe teachers in the elementary and high school who know how to manage classrooms. This course will inspire the student to explore the teaching profession and create an effective learning environment for their future students.

Introduction to Professional Practices Honors  
**Prerequisite:** B or better in Child Growth and Development; overall B average in courses  
**Level:** Grade 11 or 12

A course of high school juniors and seniors who aspire to become teachers. The course includes four themes: Experience Learning; Experiencing the Profession; Experiencing the Classroom; and Experience Education. A variety of hands-on activities and a strong emphasis on observations, and field experiences are required. Emphasis is also placed on teaching in critical shortage subject areas.

AP Human Geography  
**Prerequisite:** B or better in English and Social Studies courses.  
**Entry Level:** Grade 10, 11 or 12

This is a college level course. It is mandatory that the student take the AP Exam in May. The purpose of the AP Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth’s surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. This course is linked to seventy one career areas and over twenty college majors.
**SPECIAL SERVICES DEPARTMENT**

**English 9/English 10/English 11/English 12**

This course provides instruction and remediation in the areas of reading, writing, vocabulary, grammar, and communication skills. All instruction is based on an Individualized Education Plan developed by the Child Study Team, the teacher, and the parent in order to meet each student's needs. The curriculum in each course parallels the mainstream English curriculum.

**Mathematics**

This course will provide instruction in fundamental mathematical skills and concepts. The program of study is drawn for each student's Individualized Education Plan as developed by the Child Study Team, the teacher, and the parent. Practical skills are emphasized by simulating everyday applications of math.

**Introduction to Pre-Algebra**

This is a one semester course for those students who have been previously exposed to basic math, but still need to strengthen these skills in order to work independently and without a calculator. A student taking this class should have a preliminary number sense, without calculator assistance or teacher prompts, as follows: 1) above average fluency with basic addition, subtraction, multiplication and division facts; 2) a good sense of numerical quantities including approximation and estimation and to recognize number line relationships such as place value concepts, comparisons and equivalent numbers; 3) recognize number patterns and the number properties, associative, commutative, identity of one and zero, not necessarily identifying their names, but concepts; 4) have a sense of numerical cause and effect that leads to a student asking himself/herself, “Does my answer make sense?” The topics of this course include: Whole numbers, Prime and Composite Numbers, Factors, Fractions, Decimals, Percents, Number Expressions, Order of Operations, and Integers and solving word problems throughout the previously listed skills. This course is designed to build and strengthen math skills in order to facilitate a successful transition to the mainstream Foundations of Algebra, Part A course or RCR Fundamentals of Algebra 1A. Student evaluation will consist of assessing the acquisition of the above skills as outlined in each student’s Individualized Educational Plan.

**Introduction to Fundamentals of Algebra 1A**

This course is designed to build and strengthen Algebra skills in order to facilitate a successful transition to the mainstream Foundations of Algebra 1A or RCR Fundamentals of Algebra 1B. A student taking RCR Fundamentals of Algebra 1A should have a strong mastery of the skills covered in Pre-Algebra. The student should be able to independently apply these skills to different types of math problems and have a basic ability to indicate math proofs as they apply to the four basic aspects of Pre-algebra: patterns, procedures, relationships among quantities and basic structure, such as order of operations, substituting numerical values and then simplifying, and factoring. When performing simple math calculations, a student should be able to transition his reliance on paper and pencil to mental math. Topics include: Absolute value, adding, subtracting, multiplying and dividing integers, solving equations and inequalities, the coordinate plane, graphing linear equations and inequalities, relations assets and ordered pairs, identifying and finding slope, writing equations in point slope and slope intercept form and comparing parallel and perpendicular lines. Student evaluation will consist of assessing the acquisition of the above skills as outlined in each student’s Individualized Educational Plan.

**Fundamentals of Algebra 1B**

Resource Center Fundamentals of Algebra 1B is designed to build and strengthen Algebra skills in order to facilitate a successful transition to the mainstream Foundations of Algebra, Part B. A student taking RC Fundamentals of Algebra 1B should have a strong mastery of the skills covered in Resource Center Fundamentals of Algebra 1A, most notably integer rules, solving simple and complex equations, coordinate plane and slope applications and comparisons. The student should also have an understanding of basic vocabulary such as variable, coefficient, exponent, equation, expression, constant, like terms, inverse and distributive property. The student should be able to independently apply these skills to different types of problems and have a basic ability to indicate math proofs as they apply to the four basic aspects of algebra: patterns, procedures, relationships among quantities and basic structure, such as balancing equations, factorization, checking by substitution, using tables to develop sequences and plotting resulting points on a coordinate plane, thus seeing how variables rely on one another. In addition, a student should have a processing and response time better than the average special education math student, and should be able to process and complete multi-step calculations. Topics in this course include: Solving equations and inequalities review, data and data analysis, exponents and functions, quadratic functions and equations, working with polynomials and rational expressions. Student evaluation will consist of assessing the acquisition of the above skills as outlined in each student’s Individualized Educational Plan.

**Introduction to Geometry**

In this course students will learn practical Geometry and the essentials of the deductive reasoning process. The program of study is drawn from the student’s Individualized Education Plan and parallels the mainstream Foundations of Geometry curriculum.

**Science I – Integrated Science**

This course is designed to provide instruction in the basic concepts of Integrated Science. The program of study is drawn from the student’s Individualized Education Plan and parallels the mainstream Integrated Science Curriculum.

**Science II – Biology**

This course is designed to provide instruction in the basic concepts of Biology. The program of study is drawn from the student's Individualized Education Plan and closely parallels the mainstream Biology curriculum.

**Science III – Environmental Science**

This course is designed to provide instruction in the basic concepts of Environmental Science. The program of study is drawn from the student's Individualized Education Plan and closely parallels the mainstream Environmental Science curriculum.
Social Studies

This course is designed to introduce the student to fundamental concepts in social studies. This course includes world geography and world cultures.

Social Studies United States History I

This course deals with U.S. History from the era of European colonization to the latter 19th century. Emphases are placed upon American independence, the creation of the Constitution, the establishment of effective government, the Civil War and Reconstruction.

Social Studies United States History II

This course deals with United States History from the late 19th century to today. Areas of study are the evolution of U.S. Government including civil and criminal rights, the changes in the U.S. economy, foreign affairs, and the examination of current events.

Life Science/Math/Social Studies

This course focuses on teaching students independent living skills and how to become active and positive community members. Students will work on communication and occupational therapy skills which are integrated into the curriculum. In addition, students will work on how to find, obtain and keep a job. Instruction will also be given on handling money, balancing a budget, preparation and serving of food, and hygiene. All instruction is based on an Individualized Education Plan developed by the Child Study Team, the teacher, and the parent in order to meet each student's needs.

Reading Enrichment Program

These courses offer remedial reading instruction to selected high school students who have received a teacher recommendation. The program centers on an intensive multi-sensory approach which enables students to remediate fundamental reading sub-skill deficiencies that interfere with decoding, speed, fluency and comprehension.

In-Class Resource Program

In effort to improve success of students with disabilities in general education classes, we provide a Special Education teacher in many classes at the high school. The Special Education Teacher actually participates in the instruction of the general education program as a viable teaching staff member and is responsible for any modification and/or accommodations needed for mastery of the general education course content.
WORLD LANGUAGES

The most immediate and perhaps greatest benefit of foreign language study is the help it affords students in understanding their own language. In an era when the development of basic skills is the focal point of many State programs, one must not overlook the very practical role that the study of foreign language plays in this effort. In language classes students develop the same skills normally associated with learning English. They learn to sharpen their awareness of prefixes and suffixes, to master grammar, to decipher sentences and to improve reading comprehension. Many students readily admit that they have learned a great deal about English in foreign language classes.

French I

Prerequisite: None

C'est Extraordinaire! French I provides practice in all four basic language skills: listening, speaking, reading and writing. Students will learn about the culture of teenagers in Belgium, Canada, France, Ivory Coast, Martinique, Monaco, Senegal, Switzerland and Tunisia. By the end of the first year, students will have acquired a practical vocabulary, will be able to read French on an elementary level, will be able to understand simple spoken French, and will be able to carry on a simple conversation.

French II

Prerequisite: French I (C or better)

Having been introduced to the French speaking world, students will want to improve their skills in speaking, understanding, reading, and writing French. Additional attention is given to correct pronunciation of difficult sounds, vocabulary development and expressions commonly used by French speaking people. Students will study and use verbs in the present, past, and imperfect tenses. A study of Paris and the Island of Martinique is included on this level. Students will have the opportunity to go to France as exchange students.

French III

Prerequisite: French II (C or better)

This course is conducted primarily in French. There is a general review of grammar as well as an introduction to literature. French culture and civilization and an introduction to French History are integral parts of the course. Oral reports, compositions, as well as group discussions help to increase fluency in French. Students will study and use verbs in future, conditional, and subjunctive tenses. French films are shown in conjunction with the students' reading assignments. Students will use the Internet to explore French culture, history, and geography. Students will have the opportunity to go to France as exchange students.

French IV Honors

Prerequisite: French III (B or better)

This course aims at consolidation of previous learning through study of the development of French literature. This is done through the reading of French novels, oral reports, research, and written reports. Adverb and grammar review is provided. At this level students should have acquired a true understanding of another culture and an appreciation of the beauty and influence of the French language. French films, as well as magazines and newspapers, are included at this level. Students will have the opportunity to go to France as exchange students.

French V Honors

Prerequisite: French IV-Honors (B or better)

This course is designed for advanced students who want to perfect their language skills. Emphasis will be placed on French history, literature, culture, and advanced language structure. Conversation and composition will be an integral part of their course work. The course will be taught in the target language. Students will study original novels by Satre, Camus and Hugo. Students will also have the opportunity to go to France as French exchange students.

AP French

Prerequisite: French V Honors (Final grade A- and teacher recommendation)

This is a college level course, which requires an intense amount of work at a very advanced level. The students are required to take the AP exam in the spring. Exams are at the expense of the student.

Italian I

This course is an introduction to the Italian language and culture. Students communicate on a variety of topics such as exchanging greetings, describing family and friends, talking about the weather and more. Students will be exposed to Italian and Italian American culture through readings, film, music and the use of varied media and technology.

Prerequisite: Italian I (C- or better)

Having been introduced to the Italian language and culture in Italian I, students will continue to improve their skills in speaking, understanding, reading and writing Italian. Additional attention is given to correct pronunciation of difficult sounds, vocabulary development, and expressions commonly used by Italians. Students continue to study Italian and Italian American culture through readings, lectures, discussions and the use of varied media and technology.

Italian III

Prerequisite: Italian II (C or better)

This course reinforces basic communication skills and includes a more intense study of grammar. This course includes an introduction to literature with an emphasis on Italian and Italian-American culture and history. Oral reports, compositions, as well as group discussions help to increase fluency in Italian.
Italian IV Honors  
Prerequisite: Italian III (B or better)  
In this course, students will refine their communication skills and develop a profound understanding of Italian through a rigorous curriculum that incorporates the intensive study of literature, non-fiction texts, film and other media. Students will deepen their language ability with a comprehensive study of advanced grammar points. Students will become conversant with Italian and Italian-American history and culture by researching, presenting, blogging and performing a variety of other tasks.

Latin I  
Prerequisite: None  
In Latin I we study the foundations of Latin, along with Roman culture and Greek mythology. We emphasize reading and listening skills. Nearly every difficult word students will encounter in school or work lives has roots in Latin or Greek, and students who have taken two or more years of Latin score 140-160 points higher on average on the SAT than those who don’t.

Latin II  
Prerequisite: Latin I (C or better)  
Latin II continues the work of Latin I, studying the language, culture, and mythology of ancient Rome. As the semester progresses, we will prepare to read Latin literature in Latin III Honors.

Latin III – Honors  
Prerequisite: Latin II (C+ or better)  
In Latin III Honors, we finish learning the foundations of Latin, and move on to reading literature, including an account of the eruption of Vesuvius. We also read mythology in Latin, and begin reading a Latin comic book. In addition, we will begin to study Greek and Roman history.

Latin IV – Honors  
Prerequisite: Latin III (B or better)  
In Latin IV Honors, we continue reading Latin literature, along with simple stories and comics in Latin for the sake of review. We will read an account of an ancient haunted house, along with other historical and literary selections. By the end of this course, students will be prepared either to take AP Latin or Latin V Honors.

Latin V – Honors  
Prerequisite: Latin IV Honors (B or better)  
In Latin V Honors, students will study the same material as in the AP course, but will not be expected to do the same amount or level of work. Students will become proficient at reading Latin literature. The readings include Vergil’s Aeneid, a masterpiece which is at the heart of all Western literature.

A.P. Latin  
Prerequisite: Latin IV Honors (A- or better, with teacher recommendation)  
This is a college level course which requires a great amount of work at a very advanced level. Students will become proficient at reading Latin literature. The readings include Vergil’s Aeneid, a masterpiece which is at the heart of all Western literature. Students are required to take the AP Exam in the Spring; and students should realize that being successful on the AP Exam will require a large amount of studying in March and April. Exams are at the expense of the student.

Introduction to Spanish  
Prerequisite: None  
Students will gain the ability to carry on a simple conversation in Spanish by the end of this introductory course. The history and culture of Spanish speaking people will also be studied. Students completing this course may decide to continue their study of Spanish by taking Spanish I.

Spanish I  
This course is for the highly motivated student who desires to finish Spanish I in one semester. Reading, writing, speaking and listening comprehension are introduced and practiced at an accelerated pace.

Spanish I Honors  
Prerequisite: 8th grade Spanish – Final Grade of an A and teacher recommendation  
This course continues with the study of Spanish I at an advanced level. Emphasis is placed on honing reading, writing, speaking, and listening skills in preparation for honors level Spanish courses. Upon finishing this course, students will be expected to enroll in Spanish 2 Honors.

Spanish II  
Prerequisite: Spanish I or IB (C or better)  
Having been introduced to the Spanish speaking world in Spanish I, students will certainly want to improve their skills in speaking, understanding, reading and writing Spanish. Additional attention is given to correct pronunciation of difficult sounds, vocabulary development, and expressions commonly used by Spanish speaking people.
Spanish II — Honors
Prerequisite: Spanish I (Final Grade A and teacher recommendation)
This course is designed for the advanced language student. Spanish II Honors covers material in greater depth and at an accelerated pace. Students in this course have an interest in mastering the language which goes beyond that of students who are primarily interested in fulfilling their college language requirements.

Spanish III
Prerequisite: Spanish II (C or better)
In this course there is a more intense study of grammar, and an introduction to literature with an emphasis on Hispanic culture and history. Oral reports, compositions, as well as group discussions help to increase fluency in Spanish.

Spanish III — Honors
Prerequisite: Spanish II (Final Grade A) or Spanish II Honors (B or better) and teacher recommendation.
This course is designed for the advanced language student. Spanish III Honors covers material in greater depth and at an accelerated pace. Students in this course have an interest in mastering the language which goes beyond that of students who are primarily interested in fulfilling their college language requirements.

Spanish Cinema and Conversation
Prerequisite: Spanish III (C or better)
Grade Level: Grade 10
This course is designed to continue the study of Spanish through the medium of film. The students will converse, write and examine the culture in the target language through the use of various films. The main focus of the course is to improve visual, auditory and verbal skills in regard to the Spanish language.

Spanish IV
Prerequisite: Spanish III (C or better)
This course enables students to develop a genuine feeling of the meaning of Spanish words, expressions and concepts. The students work on language structure, reading comprehension and articulation in Spanish.

Spanish IV — Honors
Prerequisite: Spanish III (Final Grade A) or Spanish III Honors (B or better) and teacher recommendation.
Spanish IV Honors combines the study of the literature of Spain and Hispanic countries with the extensive study of advanced grammatical structures. Via literature, the student will be transported into the world of fable, fantasy, historical reality, poetry and emotion. Various periods of Spanish and Hispanic American literature will be explored. Advanced grammatical structures will be thoroughly examined and practiced to prepare students for AP Spanish.

Spanish V — Honors (Pre-AP Spanish)
Prerequisite: Spanish IV (Final Grade A) or Spanish IV Honors (B or better) and teacher recommendation.
This course is designed for the advanced language student. Students may decide to take this course before taking AP Spanish. Students are expected to work on language structure, reading comprehension and articulation in Spanish. In addition, major literary works will be studied.

A.P. Spanish
Prerequisite: Spanish V Honors (Final Grade A and/or teacher recommendation)
This course is a college level course which requires an intense amount of work at a very advanced level. The students are required to take the A.P. exam in the spring. Exams are at the expense of the student.
Senior Practicum

The Senior Practicum creates an opportunity for seniors to learn to function as responsible, contributing adult citizens through one of four options (listed below). The Senior Practicum serves as a rite of passage by teaching students who have functioned primarily in a traditional, insulated, school structure to function in the more self-directed, personally responsible world of adults. The activities of The Senior Practicum provide opportunities for greater self-direction and teach students to bring their own particular strengths and talents to a given initiative.

The Senior Practicum activities can be pursued in one of four areas:

1. A community service project, which provides students an opportunity to demonstrate and explore their responsibility as citizens by "giving back" to the community.
2. An unpaid internship in some aspect of the adult world of government, business, or the service professions.
3. An independently produced product or performance that demonstrates a deep understanding and command of a given area of interest and developing expertise. This product or performance will benefit themselves and others within or outside of the school community.
4. A college level course in an area that is not covered through our high school curriculum.

Grades are issued on a Pass/Fail basis and are determined by the successful completion of the following tasks:

1. A weekly e-journal
2. Weekly time sheets
3. Written self-evaluations
4. Sponsor evaluations
5. Participation in seminars and lunch meetings
6. A final project presentation
7. A final written report

Credits are determined by the number of blocks and hours a student elects to complete. A minimum of 120 hours during 1 block is required for 5 credits. Up to 10 credits may be earned.
Allentown High School cooperates with Monmouth and to some extent Mercer County Vocational Schools to provide our students with a variety of vocational training opportunities. In most cases students attend vocational school for half of the school day and take their academic subjects at Allentown High School for the remainder of the day. Vocational programs are available on a county basis and subject to transportation distance from Allentown.

**VOCATIONAL SCHOOLS**

**MCVSD Aberdeen**
February 5, 2015 7:00PM
450 Atlantic Avenue, Aberdeen
(732) 566-5599
Programs Offered
Commercial Art
Diesel Mechanics
Marine Trades & Technology

**CULINARY EDUCATION CENTER**
January 21, 2015 6:30PM
February 18, 2015 7:00PM
101 Drury Lane, Asbury Park
(732) 988-3299
Programs Offered
Culinary Arts

**MCVSD Freehold**
February 19, 2015 7:00PM
21 Robertsville Road, Freehold
(732) 462-7570
Programs Offered
Cosmetology
Heating, Ventilation & Air Conditioning (HVAC)
Plumbing

**MCVSD Hazlet**
February 11, 2015 7:00PM
417 Middle Road, Hazlet
(732) 264-4995
Programs Offered
Auto Mechanics
Carpentry
Cosmetology
Dental Assistant

**MCVSD Keyport**
NO OPEN HOUSE

**MCVSD Middletown**
February 26, 2015 7:00PM
2 Swartzel Drive, Middletown
(732) 671-0650
Programs Offered
Auto Mechanics
Electricity
Allied Health: Nursing

**MCVSD Neptune**
NO OPEN HOUSE
105 Neptune Blvd., Neptune
(732) 431-7245
Programs Offered
Cosmetology- Visit Freehold February 19, 2015 at 7:00PM
Patient Care/Medical Assistant- Visit Middletown February 26, 2015 at 7:00PM
High School Admissions Events
To learn more about our programs and admissions, please join us at an upcoming information session.

OCTOBER 14, 2014 6:00PM - 7:00PM
District Information Session
Location: Assunpink Center, 1085 Old Trenton Road, Trenton, NJ 08690 (Across from MCCC West Windsor Campus)

NOVEMBER 15, 2014 10:00AM—11:00AM
District Information Session
Location: Assunpink Center, 1085 Old Trenton Road, Trenton, NJ 08690 (Across from MCCC West Windsor Campus)

DECEMBER 11, 2014 6:00PM—7:00PM
District Information Session
Location: Arthur R. Sypek Center, 129 Bull Run Road, Pennington, NJ 08534 (input ‘Trenton’ if using GPS)

JANUARY 27, 2015 6:00PM—7:00PM
District Information Session
Location: Arthur R. Sypek Center, 129 Bull Run Road, Pennington, NJ 08534 (input ‘Trenton’ if using GPS)

FEBRUARY 19, 2015 6:00PM—7:00PM
District Information Session
Location: Arthur R. Sypek Center, 129 Bull Run Road, Pennington, NJ 08534 (input ‘Trenton’ if using GPS)

MARCH 11, 2015 2:00PM—6:00PM
Health Careers Center Open House (postsecondary programs)
Location: Health Careers Center, 1070 Klockner Road, Trenton, NJ 08619 (across from Nottingham HS)
ARThUR R. SYPEK CENTER

Applied Academics
Automotive Collision Technology
Automotive Technology
Automotive Technology Fundamentals
Baking & Dining Services
Building Maintenance Trades
Business Office Applications & Technology
Cosmetology
Criminalistics and Criminal Science
Culinary Arts
Graphic Arts Technology
Health & Child Care
Landscape Maintenance & Design
Retail Food Marketing

Assumpink Center

Architectural/Engineering Design
Carpentry
Cosmetology
Diesel Technology
Electrical Construction
Health Occupations (1 yr.)
Health Science Academy (Grades 9-12)
Heating, Ventilation, Air Conditioning and Refrigeration Technology

MCCC Career Prep

Business Administration
Criminal Justice
Dance
Exercise Science
Fire Science Technology
Hospitality Management
Information Technology
Professional Cooking
Radio and Television Production
Theatre

College Credit