

PERTH AMBOY HIGH SCHOOL



ELECTIVE COURSES

2018-2019



Performing Arts

Acting I **Grades 9 – 12** **5 Credits**

Prerequisite: None

This course is both an introduction to speech communications and an introduction to drama and the stage. Speech communications, how to read plays, how to portray characters, improvisation, performing scenes, and theories of acting, are some of the areas included.

Acting II **Grades 9 – 12** **5 Credits**

Prerequisite: Acting I

This is an advanced acting course for students who took Acting I and have been recommended to take this course. Monologues, scene work, reading plays, directing for the theatre, set design, performing for live audiences, and advanced acting techniques are included.

Acting III **Grades 11 – 12** **5 Credits**

Prerequisite: Acting II

This is an advanced acting course for students who have previously taken Acting I and Acting II. Advanced monologues, scene work, reading plays, directing, set design, costumes, make-up, performing for live audiences, and advanced acting techniques are included in this course. History of drama, Shakespeare, and other advanced works are included in this course.

Musical Theater **Grades 11 – 12** **5 Credits**

Prerequisite: Acting II

This course is designed to introduce students to musical theater while using skills previously learned in Acting I and Acting II. Students must have a recommendation from the teacher to take this course. Students will learn about musical theater history, in addition to having the opportunity to work in collaborative performance groups to perform songs, scenes, and choreography from various shows of musical theater.

Intro to Dance **Grades 9 – 12** **5 Credits**

The introductory level of dance takes place over the course of one year. It has a greater emphasis on learning and executing basic dance techniques. It offers beginner level work of Jazz, Ballet and Modern dance styles, in addition to Improvisation and Choreography. Daily class consists of vigorous warm-ups, across the floor combinations and center floor work. In addition, students will be continuously learning dance technique and terminology and will be given an education in dance history. Completion of this course will prepare students to continue into more advanced level of dance study.

Advanced Dance Company I **Grades 10 – 12** **5 Credits**

Prerequisite: Introduction to Dance and Instructor Audition

Advanced Dance Company I is an audition- based/recommendation only course which offers students a wide range of skills, knowledge and understanding of creativity. Throughout this course students will research and develop a strong sense of personal artistic identity as a performing artist or choreographer. This course emphasizes developing performance skills through the study of technique, and nurturing creative abilities through the study of improvisation and choreography. This course covers intermediate to advanced levels of: Terminology, Technique, Ballet, Jazz, Modern, Improvisation, Choreography, Peer Feedback and Analysis, and Performance.

Advanced Dance Company II **Grades 10 – 12** **5 Credits**

Prerequisite: ADC I and Instructor Audition

Advanced Dance Company II is an audition- based/recommendation only course which offers students a wide range of skills, knowledge and understanding of creativity. This class will move at a quicker pace,

and offer students a greater physical and mental challenge on a daily basis. Here, students will be able to integrate the theories and practices of dance, to test ideas through improvisational studies, to learn how embodied knowledge generates ideas, and to articulate those ideas through movement. This course emphasizes developing performance skills through the study of technique, and fostering creative abilities through the study of choreography. *A student may only be placed in Dance Company II if they audition or are recommended after passing through Intro to Dance, and Advanced Dance I.* This course covers advanced levels of: terminology, technique, Ballet, Jazz, Modern, Tap, improvisation, choreography, peer feedback and analysis, and performance and career preparation.

Advanced Dance Company III **Grades 11 – 12** **5 Credits**

Prerequisite: ADC II and Instructor Audition

Advanced Dance Company 3 is an audition- based course which offers students a wide range of skills, knowledge and understanding of creativity. Here, students will be able to integrate the theories and practices of dance, to test ideas through improvisational studies, to learn how embodied knowledge generates ideas, and to articulate those ideas through movement. This course emphasizes developing performance skills through the study of technique, and fostering creative abilities through the study of choreography. A student may be placed in this course only after successfully completing Advanced Dance Company 2. This course will also prepare students for college and dance program auditions.

Music Theory **Grades 9 – 12** **5 Credits**

Music Theory focuses on developing a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a musical score or work. Students will

receive an introduction to listening, writing, and understanding varied aspects of music, such as melody, harmony, texture, rhythm, form, musical analysis, composition, and musical style. Students will also receive an introduction to basic musicianship skills, such as dictation, rhythm speaking, and sight singing. By completing this course students will acquire the basic skills for vocal or instrumental performance.

Concert Choir **Grades 9 – 12** **5 Credits**

Concert Choir is a large performance ensemble for students who enjoy singing. Students receive instruction in musicianship, choral skills, and performance skills. Choral music ranging from the classics to the contemporary is explored. At times the choir sings in Latin, German, French, Italian and other languages. This course may be repeated in 10th, 11th and 12th grade. After school rehearsals may be expected and occasional evening concerts are required.

Voice Studio **Grades 11 – 12** **5 Credits** *Prerequisite: Instructor Audition, 11th / 12th graders*

Voice Studio is an advanced Performing Arts elective composed of the most outstanding Grade 11 – 12 vocal students. Here students will learn solo repertoire and explore their own voice as a soloist. The students' musical experiences will be further developed in different music genres, musical theory, voice science and anatomy.

AP Music Theory **Grades 11 – 12** **5 Credits** *Prerequisite: Music Theory with a grade of 90% or higher & teacher recommendation*

This is a college level course in music theory. Students will learn to read, notate, compose, sight-read, and hear music. Vocal, instrumental, and rock musicians will benefit from this course. This course will train students to increase their knowledge of the language of music, their ability to understand

what they hear in music, and their ability to perform music at an increased skill level. Students must receive the recommendation of a music teacher to be placed in A.P. Music Theory. Upon completion of the course, students will be encouraged to take the AP Music Theory Exam for possible waiver of the first year college music requirement for both music and non-music majors.

Intro to Band **Grades 9 – 12** **5 Credits**

In Introduction to Band, students will perform on one instrument accurately and independently with good posture, proper playing position, and good breath control appropriate for each instrument. Students with no prior instrumental experience will complete book one of the Band Expressions instrumental music method series, which will provide the technical skills necessary for achieving proficiency at the beginning level. Those with prior instrumental experience will engage in enriching activities to increase their technical ability and bring their musicality to the next level.

Concert Band **Grades 9 – 12** **5 Credits** *Consult Program of Studies for prerequisites*

The Perth Amboy High School Concert Band consists of all instrumental students regardless of ability level and is an ensemble course that presents and reinforces basic music theory concepts such ear training, basic form and analysis, performance and rehearsal etiquette, and music history before and after 1750. As band is a co-curricular class, required rehearsals and performances may take place outside the regular school day for a grade (i.e., after school rehearsals, winter and spring concerts, marching band, community celebrations). Successful students will demonstrate the ability to play the seven major scales per the All State requirements and the chromatic scale as prescribed for their instrument. Concert band members attend weekly rehearsals

and are graded on attendance, attitude, participation, and weekly assignments.

Keyboarding I **Grades 9 – 12** **5 Credits**

Keyboarding I will develop the fundamentals, proper techniques, and rudiments of playing the piano. This course is designed to stimulate student growth in music through the use of piano performance, basic theory, ear training, listening examples, and music history. The students' understanding of terminology used in music for tempo, articulation, phrasing, and style will be acquired through performance as well as musical examples, drawn from a variety of time periods and styles. Students will master techniques associated with finger names/numbers, rhythm, meter, notation, tempo, dynamics, and phrasing. More advanced students may set specific objectives regarding scales, arpeggios, sight-reading, keyboard harmony, and composition.

Keyboarding II **Grades 10 – 12** **5 Credits** *Prerequisite: Keyboarding I*

The second level of piano study is designed to continue developing basic keyboard and musicianship skills including fundamental technique, sight reading, scale playing, harmonization, transposition, accompaniment, ensemble playing, and piano repertoire representative of the Baroque, Classical, Romantic, and Contemporary periods. This level will also include a bigger emphasis on both written and aural music theory.

Keyboarding III **Grades 11 – 12** **5 Credits** *Prerequisite: Keyboarding II*

The third level of piano study is design continue developing skills in keyboarding, musicianship, site reading and performance. Students will study a wide repertoire of pieces, as well as solo and ensemble performance. This course will emphasize written and aural music,

as well as preparing students for college audition.

Strings I
Grades 9 – 12 **5 Credits**

Strings I is an elective performing arts course designed for students in grades 9-12. This course is designed to teach students the fundamentals of performing on a stringed instrument and help them develop a deeper understanding and appreciation of music and the art of performance. Students will learn

how to play the violin, viola, cello, or bass, perform a variety of musical repertoire on the selected instrument, learn how to read music, write and perform original compositions, and listen to, analyze, and describe music and musical performances in depth and with detail. During the course of study, students will also learn and experience the art of ensemble playing, develop important skills required to play and perform with a group of people, and follow proper rehearsal and performance etiquette.

Strings II
Grades 10 – 12 **5 Credits**
Prerequisite: Strings I

A continuation of Strings 1, students will continue to learn to play their chosen instruments. Students will also have the opportunity for solo performance as well as ensemble performance. Students will continue to perfect their ability to read music, as well as proper handling of their instrument.

Visual Arts

Foundations of Art
Grades 9 – 12 **5 Credits**

This course is a prerequisite for all additional work in the art department. Included will be the realms of basic drawing, crafts, pen and ink, pastel, watercolor, painting, and lettering. Foundations in Art will provide the student with a means of communication and invention so that he/she can express feelings, design, develop his/her perceptual skills, and exercise his/her creativity.

3-D Art I
Grades 10 – 12 **5 Credits**
Prerequisite: Foundations of Art

This class offers a new perspective on art, using all 3 dimensions. Students can take this class as an introductory level class that will fulfill their graduation requirement. Students will learn to create sculpture using a variety of mediums including paper, cardboard, clay and other such supplies. Students will be prepared for further study in 3-D Art classes.

Drawing I
Grades 10 – 12 **5 Credits**
Prerequisite: Foundations of Art

This course is for students with an interest in drawing beyond an introductory level. Students will explore drawing further; through in depth projects developing more advanced drawing skills including figure drawing, landscape, still life and more.

Drawing II
Grades 10 – 12 **5 Credits**
Prerequisite: Drawing I

Designed for students who would like to move their drawing skills to a more advanced level, this class is for the art student interested in building a drawing portfolio. Drawing materials and techniques will be further explored through a variety of projects.

Painting I
Grades 10 – 12 **5 Credits**
Prerequisite: Foundations of Art

This introductory painting course focuses on learning the fundamentals of painting including techniques and materials. Both drawing and painting skills are emphasized while exploring a variety of different painting media.

Painting II
Grades 11 – 12 **5 Credits**
Prerequisite: Painting I

Designed for students who would like to move their painting skills to a more advanced level, this class is for the art student interested in continuing their study of painting through the use of varying mediums and techniques. Historical reference, style and expressive quality will be the focus of this course.

Honors Fine Art
Grade 12 **5 Credits**
Prerequisite: Drawing II or Painting II

Students are presented with various visual problems and challenges which they must solve creatively using acquired art skills and techniques. Special emphasis on portfolio development is given to seniors who may be in the process of preparing an admissions portfolio for entrance into art school or college.

AP Studio Art
Grade 12 **5 Credits**
Prerequisite: Honors Fine Art or Instructor Audition

This course is designed to address a broad interpretation of drawing issues. Students are required to produce 24 quality pieces that demonstrate advanced concept, composition, and technical skill, fulfilling the 3 sections of the AP Portfolio: Quality, Breadth, and Concentration. Students will produce pieces based on realistic, observational drawing as well as abstract and design concepts. They will have the option of working in a variety of drawing and painting media. The final portfolio is submitted, reviewed, and rated by the AP College Board for college credit.

Computer Animation
Grades 11 – 12 **5 Credits**

Computer Animation is a challenging and rewarding course using industry-standard software programs: New Tek's Light Wave 3D and Adobe's Photoshop image-editing software. The introduction to Computer Animation begins with an overview of the history of the concepts, inventors and technologies that paved the way to the present day animation industry. The content of the course is project-based, progressively building upon skills and knowledge learned in class. Lessons focus on 3D modeling of objects and scenes, key-frame animation and creating plots for storyboards. Ultimately, students will understand the process that professionals follow to produce 3D animated movies, commercials, graphics and games and prepare students for careers in the tech industry.

Digital Art I
Grades 9 – 12 **5 Credits**

Digital Art provides students with the knowledge and techniques that will be used throughout their high school years and beyond to present ideas to others using various forms of media. Students will learn about the principles of design, basic color theory, photography and typography. Students will use these concepts and presentation techniques as well as creative and critical thinking skills to solve practical real world design problems. Activities include: t-shirt design, product design, billboards, CD covers, posters, logo design, resume design, event design, travel brochures and more. Students will use design software such as Adobe Photoshop, In-Design and Illustrator to create graphics. This course is recommended for students interested in the printing and publishing industry, communications, web design, commercial printing, newspaper, advertising fields and/or other related fields.

Digital Art II
Grades 10 – 12 **5 Credits**
Prerequisite: Digital Art I

Students will continue their education in Digital Art by using industry programs such as Photoshop, In-Design and Illustrator. Students will get firsthand look at the graphic design industry by creating advertisements, product packaging and other exciting projects. Students will also prepare a portfolio to apply to graphic design programs after high school graduation.

Photography
Grades 10 – 12 **5 Credits**

Students in the Photography course will learn about composition and lighting basics. They will produce portraits, landscapes, abstract/experimental and studio photography.

Film Animation
Grades 11 – 12 **5 Credits**
Prerequisite: Computer Animation I

Students taking the Film Animation course will be able to expand upon their knowledge obtained from the Computer Animation course. Students will use the industry standard software (Autodesk Maya) to learn and develop the skills needed for a career in digital arts through hands on training and experience. They will obtain the skills to produce a wide variety digital media including filmmaking, animation, and short animation films.

Computer Animation II
Grade 12 **5 Credits**
Prerequisite: Computer Animation I

This course is designed for students who wish to continue Computer Animation. Students in this course will continue to learn and develop the skills on the 3D computer animation process by using Light Wave & Photoshop.

Video Production Foundations
Grades 10 – 12 **5 Credits**

From camera angles and shot composition to storyboarding and script writing students in this class will learn how to make their ideas and imagination come to life. Students will be exposed to the various aspects of digital film and television production creating projects including music videos, short films and broadcast news programs. The intent of this course is to allow students to become familiar with the use of digital video cameras, editing software and the three stages of production. This course is project-based and requires students to participate in certain projects after school and on weekends.

Broadcast & Documentary Film Production
Grades 11 – 12 **5 Credits**

Prerequisite: Video Production Foundations with a grade of 85% or higher or departmental approval

This course is intended to further develop the skills learned in the Video Production Foundations course. The emphasis in this course will be on learning the job skills required in the television and film industries; including the production of an assortment of documentary style productions. Students will learn advanced studio and field production procedures using professional equipment while producing individual projects as well as working on assignments for the Panthers' Roar (the Perth Amboy High School Morning Show). Students will be responsible for a wide range of broadcasts airing on the daily morning show. Students in this course will produce a short film for the All American High School Film Festival. They will also attend the festival in New York City. This course is project-based and requires students to participate in projects after school and on weekends.

**Students are required to participate in projects after school and on weekends.*

Advanced Studio Production

Grades 11 – 12 5 Credits

Prerequisite: Broadcast & Documentary Film Production or approval of department supervisor/instructor

This is a project-based/lab course with the main objective of producing The Panthers' Roar, the Perth Amboy High School Morning Show. In this class, students have the ability to further develop their skills with broadcast technology, journalism, digital storytelling and media literacy. The course requirements are structured to meet with individual class preferences whenever possible. Students work both individually and as a team to produce a variety of projects. Students will also be responsible for producing PATV Magazine on a monthly basis and short films for the All American High School Film Festival. **This course is project-based and requires students to participate in projects after school and on weekends.*

21ST CENTURY LIFE & CAREERS

Digital Literacy

Grades 9 – 12 5 Credits

Digital Literacy is a year-long course meant to prepare student for 21st century learning. The goal of Digital Literacy is to teach and assess digital concepts and skills so that students can use computer technology in everyday life to develop new social and economic opportunities for themselves their families and their communities. As students master the tools learned, students will be asked to apply these tools in our project-based setting to investigate real-world issues and create meaningful and relevant communication. As a class we help each other respect others, the cyber world, the global communities and ourselves. Students will be afforded the opportunity to participate in testing to achieve the industry recognized credential Microsoft Office Specialist (MOS certification).

Tomorrow's Teachers

Grades 11 – 12 10 Credits

Prerequisite: English II, with a grade of 85% or Higher

The Tomorrow's Teachers Program is a rigorous elective offered to eleventh and/or twelfth grade level students. In this course, students will develop a greater understanding of the history of education in our state and nation, understand and demonstrate what is involved in becoming a teacher, and conclude what role they play in the future of education as a teacher, parent and civic leader. Within this course, each student will be afforded the opportunity to discover, through research and hands-on practice,

issues in education, teaching, methodologies and classroom observation and different methods of teaching. By the end of this course students will be able to know themselves better as individuals, learners, and community members. This core is aligned with New Jersey Core Curriculum States for Career Education and Consumer, Family and Life Skills.

Cooperative Office Education

Grades 11 – 12 5 Credits

Cooperative Office Education (COE) is a school-to-careers related work-study program designed for junior and senior students only. Classroom instruction emphasizes personal development, professional work ethic, and an introduction to entry-level office jobs. Through a cooperative arrangement between school and employers, students receive part-time supervised paid employment. Students will have an opportunity to acquire occupational skills necessary to obtain, maintain, and progress in an entry-level employment in the business workplace.

Transition to Work (TTW)

Grades 9-12 5 credits

The Transition to Work Course will assist special education high school students in developing the skills needed for competitive employment. The ultimate goal of the program is to prepare students for employment through career awareness, career exploration and work experience in both simulated and real world settings.

The TTW work course provides a pre-vocational experience that introduces students to the needs and expectations of the world of work. It is also an important part of the transition process to vocational opportunities after high school.

Culinary Arts I

Grades 10 – 12 5 Credits

In this course all aspects of food are explored including, safety, food preparation, management, food science, technology, and nutrition and wellness. Concepts are taught through class work, demonstration, and lab experiences. This knowledge will assist the student in daily life as well as provide a foundation for students who wish to further their knowledge and skills in the Advanced Foods course. Students will be aware of career opportunities in foods and related fields.

Baking & Pastry

Grades 11 – 12 5 Credits

Prerequisite: Cooking I

Students will learn the skill set necessary to become all-around bakers. They will be taught how to properly use ovens, mixers, sheeter, and scales to develop the desired final product. Safety practices and basic bakery principles are stressed throughout training. Practical applications include: cookies, cakes, sweet dough breads, rolls, pastries, tarts, and donuts.

Advanced Foods
Grades 11 – 12 **5 Credits**

Prerequisite: Cooking I

Students will build on the concepts learned in Cooking I, including careers in foods and related areas, technology in the food industry, food science and nutrition. Students will participate in a variety of activities including laboratory experiences and television production of a food/nutrition style program. This course will give students a depth of knowledge of the food industry as well as an enhanced foundation for further study.

Auto Shop I
Grades 10 – 12 **5 Credits**

The purpose of this course is to develop an understanding of and an appreciation for the uses of transportation as developed through the years. Exploratory experiences into the fields of aviation, rocketry, small internal combustion engines, and an introduction to the automobile will be the major consideration of the course. The opportunity exists for students to

prepare themselves for ownership of an automobile.

Advanced Auto Shop
Grades 11 – 12
5 Credits

Prerequisite: Auto I

The purpose of this course is to give students an opportunity to explore Auto Mechanics in fuller detail in order to develop the skills needed to obtain entry-level employment in the industry or pursue more comprehensive training in a trade school. The automotive power train will be discussed in further detail with the students able to make proper diagnosis, repairs and evaluation procedures used in the field today with a large emphasis on computer controlled engine management systems. Through the usage of field trips and guest speakers an attempt will be made to familiarize the students with every opportunity that is possible for them in this career field.

AVID (Advanced Via Individual Determination)
Grades 9 – 12
5 Credits

Prerequisite: Selection process, 2.4-3.5 GPA

The AVID course is an elective class for students who are college-bound. The AVID curriculum focuses on writing, inquiry, collaboration and reading (WICR) through the AVID High School curriculum in both teacher and tutor-led activities. While concurrently enrolled in a college-prep course of study, students learn strategies to enhance success. Note-taking, outlining, writing, speaking, reading, test-taking strategies, and self-awareness are stressed. In addition, the course includes college motivational activities and intensive preparation for ACT, SAT I, and SAT II.

NJ ROTC

Naval Science I
Grades 9-12
5 Credits

The purpose of this course is to introduce students to the precepts of citizenship, the elements of leadership, and the value of scholarship in attaining life goals. This course is designed to engender a sound appreciation for the heritage and traditions of America, with recognition that the role of sea power will be important in America's future, and develop in each cadet a growing sense of pride in his/her organization, associates, and self. These elements are pursued at a fundamental level.

Naval Science II
Grades 9 – 12
5 Credits

The purpose of this course is designed to engender a sound appreciation for the heritage and traditions of America, with recognition that the historically significant role of sea power will be important in America's future.

Naval Science III
Grades 9 – 12
5 Credits

The purpose of this course is to further develop the trait of leadership in students and introduce cadets to the vital importance of military justice, international law, and continue with the instruction of Naval Science to include astronomy, meteorology, weather, and the maneuvering board, and to provide an understanding of the facets of sea power, national security, and naval history.

Naval Science IV
Grades 9 – 12
5 Credits

The purpose of this course is to build on the basic qualities of a good follower and an effective leader provided in Naval Science I, 2, and 3, and to take a more in-depth look at what leadership is, and how to maximize your abilities in the leadership area

ENGLISH/LANGUAGE ARTS

College Research and Writing Grades 9 - 12 5 Credits

Prerequisite: English 8

College Research & Writing is a full-year, 5-credit, liberal arts elective course. Students in this course will be exposed to critical reading and writing with the intention to better prepare students who will be entering college with the skills necessary to be successful. The course will expose students to a variety of rhetorical approaches to enhance the students' writing. A special emphasis on adequate note-taking, close reading, applicable research and oral presentation skills is done within this course beyond the required English class.

Creative Writing Grades 10-12 2.5 Credits

Prerequisite: English I

Creative Writing is an elective course of study designed to allow students to use creative abilities in conjunction with language skills to develop original poetry and prose. Students will also examine and analyze examples of poetry and prose to increase their understanding of creative writing skills and techniques. Students in this course will be required to write in a variety of genres and demonstrate a facility for giving and receiving constructive criticism. In addition, students will develop strategies for brainstorming, organizing their thoughts, and transferring them into clear, polished creative and analytical writing.

Journalism Grades 10-12 5 Credits

Prerequisite: English I

Journalism is an elective course in which students will study the craft of news stories and written claims. Students will undertake an examination of the history of journalism and learn the appropriate terms associated with the field. In addition, students will understand and apply the steps involved in conducting interviews and gathering appropriate research for a variety of news stories. Students will also learn the various techniques reporters utilize when developing their stories and apply these techniques to their own stories. Throughout the course, students will effectively employ the writing process to develop original journalistic stories.

Mythology Grades 10-12 2.5 Credits

Prerequisite: English I

Mythology is an elective course that is offered through the English department. This course includes a survey of the major myths of Greek and Roman antiquity, including the appropriate gods, heroes and heroines, and how these stories reflect the culture and beliefs of the time. Students will compare classical myths with those from other cultures such as African, Native American, Asian, and Norse. Through the study of themes, students will examine the nature and social function of mythology, and how mythology has helped to shape modern religious beliefs.

Public Speaking Grades 10-12 2.5 Credits

Prerequisite: English I

The ability to effectively communicate well with others is one of the most important traits employers look for in their employees. Public speaking is an elective course that provides students with the basics needed in a variety of public and daily interactions. Students will understand the fundamentals of effective verbal and non-verbal communication. They will learn the essentials in developing and delivering speeches. They will understand how important it is to effectively listen and evaluate speakers for more than their messages. Finally, students will gain a sense of confidence in the delivery of both themselves and the topic in which they are presenting.

Science Fiction Grades 10-12 2.5 Credits

Prerequisite: English I

Science fiction, as an elective course, represents a blend of science, social science and arts. It frequently draws inspiration from science, as well as addressing the social issues relevant today by highlighting certain social aspects. Science fiction also serves to popularize science and affects public opinion about scientific, technological, moral and ethical issues. In this elective, students will read, discuss and evaluate authors' commentaries on society through a careful contemplation of the themes explored in the texts. Additionally, students study how science fiction authors use dialogue, point of view, tone, perspective, and proper conventions of fictional writing. Students discuss topics within texts such as artificial intelligence, utopian/dystopian societies, space travel, invasions of planet Earth, life in the future, alternate realities, rapidly evolving computer technology, or a shift in nature.

MATHEMATICS

Intro to Computer Science **Grades 10 - 12** **5 Credits**

Prerequisite: 8th Grade Math

This course is an introduction to computer science and software engineering for all students interested in developing software applications, not just using them. Through a project-oriented approach, students will explore a variety of programming systems and languages to create interactive applications and systems. By collaborating in a hands-on environment, students will learn problem solving, software design, debugging strategies, and the foundations of computer science (data structures, procedures, and algorithms).

Computer Science Java **Grade 12** **5 Credits**

Prerequisite: Geometry and Algebra II

Students enrolling in this course will be taught to program a personal computer and to apply their programming skills to problem-solving situations. The course requires good

computer knowledge, solid mathematical sense, and sharp analytical skills. Topics include mathematical notation, read, write, and decision statements, loops, nested loops, generation of random numbers, procedures, functions, strings, text files, and arrays.

Intro to Statistics **Grades 11 – 12** **5 Credits**

Prerequisite: Algebra II

Introduction to Statistics is an introductory course designed to give students insight into the use of statistical methods to describe and predict events in the world around them. Topics include graphical and numerical techniques to study patterns in data and departures from those patterns, methods and techniques for planning an experiment and gathering data, and techniques of statistical inference which are used to confirm models. Emphasis will be placed on real world applications as well as discussing and writing about statistics and its applications. The TI-84 graphing calculator will be used extensively as well as other statistical software.

SCIENCE

Anatomy and Physiology **Grade 12** **6 Credits**

Prerequisites: Biology, Chemistry, teacher recommendation

This course is a systematic study of the shape and structure of the organs of the human body and the functioning of those organ systems. It includes: cytology, histology, morphology, genetics, immunology, and pathology. *This course does not satisfy the third-year science requirement.*

Environmental Science **Grades 10 – 12** **6 Credits**

The goal of this course is to provide students with the scientific principles, concepts, and methodologies to understand the interrelationships of the natural world, identify and analyze environmental problems both natural and human-made, and evaluate the risks associated with these problems and examine alternative solutions for resolving and/or preventing them.

Forensic Science **Grades 9 – 12** **5 Credits**

Forensic Science is the application of scientific techniques and technology to the investigation of a crime and the presentation of evidence in a court of law. Study includes the applications of concepts from the areas of biology, chemistry, physics and geology to analyze and investigate evidence that may be discovered in a criminal investigation. Classroom activities include experiments, projects, and case studies. *This course does not satisfy the third-year science requirement.*

Space Science **Grades 10 – 12** **5 Credits**

This course is designed to give students a deeper understanding of astronomy, the solar system, and the universe beyond. Students increase their awareness of the scope and scale of our universe by gaining an understanding of Earth's place in this system.

Marine Science **Grades 11 – 12** **6 Credits**

Prerequisites: Biology

Marine Science is a laboratory course that introduces students to the study of marine environments. This is accomplished through the application of theory to the marine ecosystem available at the Perth Amboy waterfront. *This course does not satisfy the third-year science requirement.*

Fundamentals of Robotics **Grades 10 – 12** **5 Credits**

Prerequisites: Physics, Algebra I

This course introduces students to the design, building, and programming of robotic systems. Students apply the engineering design process to their robot creation and troubleshooting its operation. Some limited programming is included as students learn how equipment is controlled with logical instructions.

**Introduction to Design,
Engineering, and Solutions**
Grades 9-12 5 Credits

In this course students apply technology, engineering and scientific concepts to create solutions to various challenges. Students develop problem-solving skills and apply the engineering design process. Students also investigate technical careers.

Dynamics of Health Care
Grade 10 5 Credits

This course should be taken concurrently with Honors Biology.

Students explore community health, while improving research skills, applying statistical analysis and enhancing oral and visual presentation techniques. Students learn about employment options in the healthcare field and human health issues. Each student develops his/her own independent science research project with a foundation in

Psychology
Grades 10 – 12 5 Credits

This course is a general survey of the important concepts in psychology with traditional theories and modern developments. It includes topics such as the history of psychology, the biological foundations of behavior, learning, memory, problem solving, sensation and perception, states of consciousness, motivation, emotions, personality, intelligence, gender and sexuality and abnormal behavior.

Intro to American Government
Grades 10 – 12 5 Credits

This course is an introduction to political science, American government and politics and is structured to promote political and analytical understanding and thinking regarding American politics and government. Areas of concentration include principles, institutions, problems, processes, theory, philosophy, and ideology.

community health and learns how to structure, organize, publish, and communicate findings during a formal presentation.

**Medical Terminology and
Anatomy & Physiology I**
Grade 11 7 Credits

Prerequisites: Dynamics of Health Care

This course should be taken concurrently with Chemistry.

Medical Terminology is the study of words that pertain to body systems, anatomy, physiology, medical processes and procedures and a variety of diseases. It provides specialized language for the healthcare team, enabling healthcare workers to communicate in an accurate, articulate and concise manner. The course includes terms related to anatomy of the human body, functions of health and disease, and the use of language in processing medical/dental records and claim forms. Anatomy &

Physiology labs include slide work and dissections.

**Medical Terminology and
Anatomy & Physiology II**
Grade 12 7 Credits

Prerequisites: Med. Term / A&P I

This course allows further exploration of the structure and function of the human body. Following a sequential development of the major body systems in an organized and structured curriculum, the course is designed to give students an overview of human anatomical structure and an analysis of human physiological principles. Labs include slide work and dissections.

SOCIAL STUDIES

African American History
Grades 10 – 12 5 Credits

This course examines the continent of Africa and its Diasporas in Europe, Asia and the Americas, with special emphasis on the African-American and African-Caribbean experience. This course seeks to integrate analysis of race, class, gender, culture, migration, immigration, economics, politics, history, the arts, literature, community, Nation-building and globalization issues throughout the duration of this course. Students will be able to analyze primary and secondary sources from diverse sources to evaluate historical content and appreciate the struggle of Black people everywhere for self-determination, equality, respect and civil rights.

Contemporary World Issues
Grades 10 – 12 5 Credits

In this course, students will analyze governments, economies, peoples, and cultures from around the world.

Instruction emphasizes the structures and policies of the United States and how they compare to other systems in the international community. Students will apply critical thinking skills to examine current events and contemporary issues, including human rights, the strengths and weaknesses of globalization, America's role in the international economy, and severe environmental threats facing many regions around the world today.

Latin American Studies
Grades 10 – 12 5 Credits

This course offers students an opportunity to explore the diverse regions of the Caribbean, Mexico, and Central and South America through their history, politics, language, and culture of its people. The histories, artistic movements, social organizations, and political institutions that have shaped Latin America in the past and continue to define its present will be explored.

Human & Physical Geography
Grades 10 – 12 2.5 Credits

This course combines economic and cultural geography to explore the relationships between humans and their natural environment, and to track the broad social patterns that shape human societies. Featuring communities around the world that are grappling with major socioeconomic change, the programs help students understand present-day events within the scope of clearly recognizable trends, and realize the impact that government, corporate, and individual decisions may have on people and places near and far.

Sociology
Grades 10 – 12 2.5 Credits

This course examines the nature and scope of sociology, its terminology and concepts; studies sociological perspectives, social processes, social institutions, development of society, and characteristics of social life.

Intro to Philosophy/Rhetoric
Grades 10 – 12 5 Credits

This course is intended to complement the current battery of full year elective courses in the area of Social Studies. Students will be introduced to both classical and contemporary philosophical theories while fostering their ability to analyze, interpret, and defend through rhetoric. Students will exercise their skill in persuasive speaking and writing through the use of point-counterpoint and other strategies to persuade the reader/audience.