**AP Courses Available at the Morris Hills Regional District**

**ART**

**ADVANCED PLACEMENT ART HISTORY (VP430)**

**Grades 11, 12; 5 credits; One Year Elective; Prerequisites:  None**

This is a comprehensive course, equivalent to the introduction of Art History on a college level.  Learning to understand, interpret, and critique painting, sculpture, architecture and other forms of visual art will be addressed within the parameters set forth by the College Board.  During the course, students examine major forms of artistic expression from the past and present, as well as from a variety of cultures and through museum trips.  Students will critically examine and analyze what they see in oral and written form.  This course will prepare students to take the Advanced Placement Art History Exam provided and administered by the College Board in May.  College level writing skills will be utilized.

**ADVANCED PLACEMENT STUDIO ART: 2D Design (VP440)**

**Grade 12; 5 credits; One Year Elective; Prerequisite: Introduction to Art Studio; 3 art classes taken previously or a portfolio review with the AP teacher.**

This course provides an intense studio work experience for the serious art student who demonstrates exemplary technical skills, time on task, and the ability to generate college level art concepts, while meeting deadlines and accepting the rigorous responsibility for completing a minimum of 24 college-level pieces of artwork. The focus of this class is on the development of a 2-D Design portfolio (media such as graphic design, digital imaging, photography, collage). Instruction is individualized to meet the needs of the college bound and the career oriented art vocational student. The class provides a forum for long-term, large-scale, self-motivated projects and museum trips at a college foundation level culminating with an installation of work in the Senior Studio Art Show. Portfolio presentation and evaluation, infusion of career information, participation in critiques, self-evaluation, and enhanced independent study will be highlighted. Intelligent awareness of materials, processes and techniques will be stressed. The major objective of the course is to prepare portfolios for Advanced Placement evaluation. This course has a required Summer Assignment.

**ADVANCED PLACEMENT STUDIO ART: 3D Design (VP442)**

**Grade 12; 5 credits; One Year Elective; Prerequisite: Introduction to Art Studio; 3 art classes taken previously or a portfolio review with the AP teacher.**

This course provides an intense studio work experience for the serious art student who demonstrates exemplary technical skills, time on task, and the ability to generate college level art concepts, while meeting deadlines and accepting the rigorous responsibility for completing a minimum of 24 college-level pieces of artwork. The focus of this class is on the development of a 3-D Design portfolio (media such as sculpture, ceramics, jewelry). Instruction is individualized to meet the needs of the college bound and the career oriented art vocational student. The class provides a forum for long-term, large-scale, self-motivated projects and museum trips at a college foundation level culminating with an installation of work in the Senior Studio Art Show. Portfolio presentation and evaluation, infusion of career information, participation in critiques, self-evaluation, and enhanced independent study will be highlighted. Intelligent awareness of materials, processes and techniques will be stressed. The major objective of the course is to prepare portfolios for Advanced Placement evaluation. This course has a required Summer Assignment.

**ADVANCED PLACEMENT STUDIO ART: Drawing (VP441)**

**Grade 12; 5 credits; One Year Elective; Prerequisite: Introduction to Art Studio; 3 art classes taken previously or a portfolio review with the AP teacher.**

This course provides an intense studio work experience for the serious art student who demonstrates exemplary technical skills, time on task, and the ability to generate college level art concepts, while meeting deadlines and accepting the rigorous responsibility for completing a minimum of 24 college-level pieces of artwork. The focus of this class is on a wide range of approaches and media.  Line quality, light and shade, rendering of form and composition are addressed through a variety of means which could include painting, printmaking or mixed media. Instruction is individualized to meet the needs of the college bound and the career oriented art vocational student. The class provides a forum for long-term, large-scale, self-motivated projects and museum trips at a college foundation level culminating with an installation of work in the Senior Studio Art Show. Portfolio presentation and evaluation, infusion of career information, participation in critiques, self-evaluation, and enhanced independent study will be highlighted. Intelligent awareness of materials, processes and techniques will be stressed. The major objective of the course is to prepare portfolios for Advanced Placement evaluation. This course has a required Summer Assignment.

**ENGLISH**

**ADVANCED PLACEMENT LITERATURE & COMPOSITION (EN440)**

**Grade 11; 5 credits; One Year Elective for English Requirement; English 10 H or Department Approval**

A major objective of the course is to prepare the student to take the Advanced Placement Examination and to receive recognition for college-level achievement in English Literature and Composition. The course offers intensive study of representative works from several literary genres and periods. The focus of the course is on both the study and practice of writing and the study of literature. Critical analysis of poetry, drama, short stories, novels, and essays will be combined with the study of literature to emphasize the resources of language, including connotation, metaphor, irony, syntax and tone. Through the course, the student will develop critical standards for the appreciation of literature, ability to use the modes of discourse and understanding of the relationship of literary work to contemporary experience as well as to the times in which it was written. To enroll in this course, students should be recommended by the English Department. Students will also complete a mandatory summer reading assignment in preparation for the course of study throughout the school year. In addition, all English classes have a required District-wide Summer Reading Assignment.

**ADVANCED PLACEMENT LANGUAGE & COMPOSITION (EN431)**

**Grade 12; 5 credits; One Year Elective for English Requirement; Prerequisite: English 11 H, AP Literature & Composition, or Department Approval**

A major objective of the course is to prepare the student to take the Advanced Placement Examination and to receive recognition for college-level achievement in English Language and Composition. AP English Language and Composition focuses on the art of rhetoric and the effective use of language. Students study a number of writers of prose in a variety of genres including: novel, short story, autobiography, biography, satire, and the essay. AP Students examine how language works to evoke emotion through sophisticated reading and the analysis of words, patterns, and structures that create subtle effects of language. Students learn to write about language descriptively and demonstrate knowledge of grammar conventions including parts of speech and structural patterns as well as an awareness of connotation and shades of meaning in context. Students are prepared to sit for the AP Language and Composition exam which tests their ability to read critically and to write in the following modes: comparison and contrast, narration / description, definition, extended definition and academic argument. The content of the AP Language and Composition course combines a fairly traditional study of Literature with a more theory-based focus on the process of literary interpretation and analysis. To enroll in this course, students should be recommended by the English Department. Students will also complete a mandatory summer reading assignment in preparation for the course of study throughout the school year. In addition, all English classes have a required District-wide Summer Reading Assignment.

**MATHEMATICS**

**ADVANCED PLACEMENT CALCULUS AB  (MT440)**

**Grades 11, 12; 5 credits; One Year Elective**

**Prerequisites: Precalculus/Precalculus H or Academy Math Analysis 2 H and Department Approval**

Advanced Placement Calculus AB prepares students for the AB level examination of the College Board Advanced Placement Program. This course, which covers differential and integral calculus, parallels a first-year college course in calculus and is designed for students who have demonstrated high proficiency in previous college preparatory mathematics courses. Students can expect detailed work in both theoretical and practical aspects. This course has an optional Summer Assignment.

**ADVANCED PLACEMENT CALCULUS BC (MT441)**

**Grades 11, 12; 5 credits; One Year Elective**

**Prerequisites:  Precalculus H or Academy Math Analysis 2 H and Department Approval** **or AP Calculus AB**

Advanced Placement Calculus BC prepares students for the BC level examination of the College Board Advanced Placement Program. The course, which covers differential and integral calculus, plus the topics of series, polar graphs, and vectors, parallels as a first-year college course in calculus and is designed for students who have demonstrated high proficiency in previous college preparatory mathematics courses. Students can expect detailed work in both theoretical and practical aspects. This course has an optional Summer Assignment.

**ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES (MT421)**

**Grades 9, 10, 11, 12; 5 credits; One Year Elective**

**Prerequisite: Algebra 1 and Teacher Recommendation; ; Does not satisfy mathematics graduation requirement**

AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles will give students the opportunity to use technology to address real-world problems and build relevant solutions. This course prepares the student for the Advanced Placement Computer Science Principles exam offered by the College Board.

**ADVANCED PLACEMENT COMPUTER SCIENCE A  (MT420)**

**Grades 10, 11, 12; 5 credits; One Year Elective**

**Co- or Prerequisite: Algebra 2 CPA or Academy Math Analysis 2 H; Does not satisfy mathematics graduation requirement**

This course prepares the student for the Computer Science A Examination of the College Board Advanced Placement Program. The course parallels a first-year college level Computer Science course. Emphasis is placed on the development of programming methodology, algorithms, and data structures. Applications of computing provide the context in which these subjects are treated. The JAVA computer language constitutes the vehicle for implementing computer-based solutions to particular problems. Treatment of computer systems and the social implications of computing are also integrated into the course. Students can expect detailed work in both theoretical and practical aspects.

**ADVANCED PLACEMENT STATISTICS (MT450)**

**Grades 10, 11, 12; 5 credits; One Year Elective**

**Prerequisites: Algebra 2 CPA/H or Math Analysis 1 H and Department Approval**

Advanced Placement Statistics prepares students for the AP Statistics Examination of the College Board Advanced Placement Program.  This course provides college-level work in statistics and will include topics of data analysis, probability and inference.  Technology will be an integral part of the course.  Students can expect detailed work in both theoretical and practical applications.  To enroll in this course, students must be recommended by the Mathematics Department.

**MUSIC**

**ADVANCED PLACEMENT MUSIC THEORY (VP420)**

**Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisite: Music Theory/Composition or demonstration of success on the MHRD Music 1 Final Exam**

This course is designed as a continuation of Music Theory/Composition and includes the study of college entry-level musicianship, theory, musical materials and procedures.  Ultimately, the goal of the course is to develop a student’s ability to recognize, understand and describe the basic materials and processes of music that are heard or presented in a score.  The achievement of this goal is promoted by integrated approaches to the development of aural skills, sight singing skills, written skills, compositional skills and analytical skills through listening, performance, written, creative and analytical exercises.  Students will have the opportunity to take the Advanced Placement Exam given by the College Board in May of each year.

**SCIENCE**

**ADVANCED PLACEMENT BIOLOGY (SC430)**

**Grades 11, 12 (Exceptional Sophomores will be considered with Department Supervisor’s approval); 5 credits; One Year Elective; Prerequisites: Biology 1CPA or Biology 1H and Department Approval;  Pre- or Co-Requisite: Chemistry 1 CPA or Chemistry 1H**

Advanced Placement Biology prepares students for the Advanced Placement College Board Biology Examination. This is a laboratory science program equivalent to a first-year college biology course and is designed for the student intending to major in a biological field who has demonstrated a strong proficiency in science skills. Topics discussed include cell biology, biochemistry, metabolism, reproduction, genetics, animal physiology, histology, microbiology, and botany, which are prescribed by the College Entrance Examination Board Bulletin. To enroll in this course, students need to be recommended by the Science Department.

**ADVANCED PLACEMENT CHEMISTRY (SC431)**

**Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Chemistry 1 CPA or 1H (Chemistry 1 H preferred) and Algebra 2 CPA; Co or Prerequisites: Physics 1 CPA or Physics 1H,  Pre-Calculus and Department Approval**

This course is designed for those students who have exhibited a keen interest in chemistry and strong ability in science and mathematics. Laboratory work is utilized to train the student in careful experimentation and research skills and to build competence and confidence for the student who plans a scientific career. Independent study is encouraged. Emphasis is placed on chemical kinetics (the why and how chemical reactions occur). Topics include organic chemistry, qualitative analysis, chemical bonding and chemical thermodynamics. Students in this course are encouraged to take the College Board’s Advanced Placement Examination in the spring of the year or at the end of the course. To enroll in this course, students need to be recommended by the Science Department. This course has an optional Summer Assignment.

**ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE (SC432)**

**Grades 10\*, 11, 12; 5 credits; Full Year.  Counts toward science graduation requirement.  Prerequisite:  Biology 1 & Chemistry 1, honors preferred.  Co-requisite:  Algebra 2 CPA or higher (\*Grade 10: Prerequisite: Completion of Biology H, Algebra 1 and teacher recommendation; Grade 10 Co-requisite: Enrollment in Chemistry H and Geometry Honors or higher)**

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze both natural and human-made environmental problems, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. This course has a required Summer Assignment.

**ADVANCED PLACEMENT PHYSICS 1 (SC433)**

**Grades 11, 12; 5 credits; Full year counts toward science graduation requirement.  Prerequisite:  Biology 1 & Chemistry 1, honors preferred and recommended, exceptional students in CPA level science will be allowed to take the course with teacher approval.  Co-requisite: Precalculus or higher, honors preferred and recommended.**

This course presents the students with the first half of College Physics, which is generally geared towards the non-physics science major (i.e. Biology Major).  This course will concentrate on challenging students to solve problems using their algebra-based mathematical skills.  This course is designed for students who are interested in a career in a science or health related field.  Topics covered will include kinematics, Newton’s Law of Motion, gravitation, circular motion, work, energy, power, momentum, torque, simple harmonic motion, waves, sound electrostatic and simple electric circuits. This course has a required Summer Assignment.

**ADVANCED PLACEMENT PHYSICS C (SC440)**

**Grade 12; 5 credits; One Year Elective; Prerequisites: AP Physics 1 or Department Approval; Co or Prerequisite: Calculus (AP Calculus preferred)**

Advanced Placement Physics C prepares students for the Advanced Placement College Board “C” exams, in both Mechanics, and Electricity and Magnetism. This course is designed to be taught on the college level for students who have demonstrated strong proficiency in physical science skills. To enroll in this course, students need to be recommended by the Science Department. This course has a required Summer Assignment.

**ADVANCED PLACEMENT SEMINAR (SC631)**

**Grade 11; 5 credits; One Year Elective; Prerequisite: Successful completion of RBA I and enrollment in the Math and Science Magnet Program.**

AP Seminar is a course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework and Forensic Science Point of view, students will practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students will incorporate Biochemistry, Chemistry, and Physics into their investigations. Students will conduct case studies, laboratory activities, and field studies to develop support for their arguments and defend their hypotheses. Students will learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. In addition, students will be trained in critical reading and technical writing so that they will be able to communicate convincing arguments through research writing. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. A special emphasis will be given to the mathematical and scientific toolbox that the students learned in RBA I. Students in this course will be required to take the AP exam. This course has a required Summer Assignment.

**ADVANCED PLACEMENT RESEARCH (SC641)**

**Grade 12; 5 credits; One Year Required. Prerequisite: RBA I & AP Seminar, Co-requisite: Enrollment in the Math and Science Magnet Program.**

AP Research is the second course in the AP Capstone experience. This course allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students will incorporate Biology, Chemistry, & Physics into their investigations Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course will culminate in a 4,000 to 5,000 word academic thesis, presentation, and oral defense. Throughout the course, emphasis will be given to the mathematical, scientific, and critical thinking tools learned in RBA I and AP Seminar. Students who take this course will be required to take the AP assessment. This course has a required Summer Assignment.

**SOCIAL STUDIES**

**ADVANCED PLACEMENT ECONOMICS (SS420)**

**Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisite:  Department Approval**

The purpose of this AP course in economics is to give students a thorough understanding of the principles of both micro- and macro- economics.  This course will apply the functions of individual decision makers, both consumers and producers, within the economic system.  The course will also focus on the nature and functions of product markets, the role of government, national income, price-level determination, economic performance measures, the financial sector, stabilization policies, economic growth and international economics.  This program will prepare students for intermediate and advanced college courses through requirements equivalent to those found on the college level, and they will be prepared to take both the AP Microeconomics and AP Macroeconomics Exams.  To enroll in this course, students must be recommended by the Social Studies Department.  This course meets the New Jersey Personal and Financial Literacy requirement. This course has a required Summer Assignment.

**ADVANCED PLACEMENT HUMAN GEOGRAPHY (SS421)**

**Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisite: Departmental Approval**

The Advanced Placement Human Geography introduces students to the systematic study of patterns and processes that have shaped human understanding, and the use and alteration of the Earth’s surface. Students will  learn to employ spatial concepts and landscape analysis to analyze human socioeconomic organization and its environmental consequences. Students will also learn about the methods and tools geographers use in their research and applications. This course will prepare students for a college-level course through requirements equivalent to those found on the college level and students will be prepared to take the Advanced Placement Human Geography Exam. To enroll in this course, students must be recommended by the Social Studies Department.

**ADVANCED PLACEMENT EUROPEAN HISTORY (SS440)**

**Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Department Approval**

The Advanced Placement European History course is designed to provide selected students with the analytical skills and factual knowledge necessary to deal with problems and materials in European history. Students will be expected to examine closely a series of problems or topics through readings and college-level textbooks. After an intensive study of the Renaissance, Reformation, Rise of Constitutionalism and Absolutism, the Enlightenment and the French Revolution and Napoleon, students will closely examine the development of Modern European Society. Emphasis will be placed upon Liberalism and Conservatism, the Rise of Nationalism and International and Domestic Changes throughout the Nineteenth and Twentieth Centuries. Experiences will be provided that will develop students’ abilities to assess historical materials—including relevance to a given problem, reliability, and importance—and to evaluate the evidence and interpretations. This program will prepare students for intermediate and advanced college courses through requirements equivalent to those found on the college level and they will be prepared to take the AP European History Exam. To enroll in this course, students must be recommended by the Social Studies Department.

**ADVANCED PLACEMENT PSYCHOLOGY (SS431)**

**Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Department Approval**

Advanced Placement Psychology is a course designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals.  Students are exposed to psychological facts, principles, theories, and phenomena associated with each of the methods psychologists use in their science and practice.  Content areas include, but are not limited to, physiological, developmental, perceptual, abnormal, and social psychology.  Topics for discussion and evaluation include intelligence testing, parenting styles, personality, emotion, motivation, ethics of research, statistics, and more. Students will have the opportunity to take the Advanced Placement Examination given by the College Board in May of the school year.  To enroll in this course, students must be recommended by the Social Studies Department.

**ADVANCED PLACEMENT UNITED STATES GOVERNMENT AND POLITICS (SS422)**

**Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisite: Departmental Approval**

The Advanced Placement United States Government and Politics course will introduce students to key political ideas, institutions, policies, roles, and behaviors that characterize the political culture of the United States. This course examines politically significant concepts and themes, through which students will learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments. An integral part of the course includes analysis and interpretation of basic data relevant to United States government and politics, and the development of connections and application of relevant theories and concepts. This program will prepare students for intermediate and advanced college courses through requirements equivalent to those found on the college level, and they will be prepared to the Advanced Placement United States Government and Politics examination.  To enroll in this course, students must be recommended by the Social Studies Department.

**ADVANCED PLACEMENT UNITED STATES HISTORY   (SS430)**

**Grade 11; 5 credits; One Year Required; Prerequisite: United States History 1 and Department Approval**

The Advanced Placement United States History - course is designed to provide selected students with the analytical skills and factual knowledge necessary to deal with problems and materials in American history. Students will be expected to explore a series of problems or topics through readings and college-level textbooks. After an intensive survey of the Colonial Period, the American Revolution, the Jacksonian Period and the Civil War and Reconstruction, students will closely examine a series of problems related to 20th Century America. Emphasis will be placed upon Populism and Progressivism, the New Deal, and International Affairs and Domestic Change in the post-1945 Period. Classroom experiences will develop students’ abilities to assess historical materials—their relevance to a given problem, their reliability, and their importance—and to evaluate the evidence and interpretations. This program will prepare students for intermediate and advanced college courses by placing demands on them equivalent to those found on the college level. Students will be prepared to take the Advanced Placement United States History exam administered by the College Board. To enroll in this course, students must be recommended by their United States History 1 teacher or secure departmental approval. This course may have a required Summer Assignment.

**WORLD LANGUAGE**

**ADVANCED PLACEMENT FRENCH LANGUAGE (WL440)**

**Grade 12; 5 credits; One Year Elective; Prerequisites French 4H and Department Approval**

The curriculum for this course is aligned with the New Jersey Student Learning Standards for World Languages and will prepare students to communicate at the Intermediate High/Advanced-Low Learner Range.  The curriculum meets the standards set forth by the Advanced Placement College Board for the French Language Examination. Classroom activities are designed to meet the needs of students with diverse learning styles, including a variety of individual, pair, small group and large group activities which will better serve students.  All students must be involved and demonstrate self-management and responsibility.  Additionally, all students will use technology to enhance language acquisition, acquire current cultural information and become more familiar with language-related employment opportunities.  By the end of the course, students will gain a greater insight and appreciation of their own language and culture by exploring a new culture and comparing and contrasting it to their own. This course has a required Summer Assignment.

**ADVANCED PLACEMENT SPANISH LANGUAGE (WL442)**

**Grade 12; 5 credits; One Year Elective; Prerequisites: Spanish 4H and Department Approval**

This course seeks to develop language skills that can be applied to various activities and disciplines. The course stresses listening skills, oral skills, grammar structures, and extensive training in the organization and writing of compositions. It further broadens the students’ interest in the language and culture through a variety of reading materials (the arts, current events, literature, sports, etc.). Major literary works from Spanish and Latin American authors provide the basis for critical analysis both orally and in writing. This course continues to follow an individualized instruction approach. Students are given the opportunity to lead their classes. Creative projects are prevalent and research in the Spanish language is taught.  Activities prepare students to take the Spanish language advanced placement examination.  To enroll in this course, students must be recommended by the World Languages Department. This course has a required Summer Assignment.