

COURSE DESCRIPTIONS

FINE AND APPLIED ART

ADVANCED ART (PRE-REQUISITE: ART 2)

Grades 11-12, Credits 1.25-5.00

Students entering the Advanced Art level will continue to gain experiences and exposure to additional media in art. Included in this course is advanced sculpture, advanced painting, advanced design, portfolio preparation, when applicable, and independent study. The purpose of this course is to encourage a stronger interest in the aesthetic area, provide more individualization to meet the needs of each student as well as the group, and offer developmental learning process through critiques and hand on experiences.

ART 1

Grades 9-12, Credits 1.25-5.00

Art 1 is an introductory course in art design, fundamentals of drawing, color analysis, painting and sculpture. Emphasis is placed on "hands on" projects as well as the aesthetics and criticism of art. Included in this course is a brief overview of art history. The purpose of this course is to encourage the enjoyment of creating art, working with a variety of media, as well as gaining the skills and knowledge in this subject area.

ART 2 (PRE-REQUISITE: ART 1)

Grades 10-12, Credits 1.25-5.00

Art 2 continues a student's exploration with broader areas of art. The purpose of this course is to reinforce the basic concepts introduced in Art 1 and develop new media avenues of creative expression. Included will be an introduction to portfolio preparation, commercial values of art, and careers available in the various arts.

MATERIALS & DESIGN 1

Grades 9-12, Credits 1.25-5.00

Material & Design 1 is designed for those students who gain satisfaction and pleasure working to create products which are both utilitarian and decorative in concept and design. Material & Design 1 is recommended for students who desire a career in art or an art related field, or simply for personal pleasure. The areas covered in this class are: design, ceramics, printing, metals and textiles.

MATERIALS & DESIGN 2 (PRE-REQUISITE: MATERIALS & DESIGN 1)

Grades 10-12, Credits 1.25-5.00

Material & Design 2 is designed to expand the student's exposure to various materials in crafts and in the design field. Students will be provided with an opportunity to gain additional in-depth experiences in areas previously explored and to add new areas of discovery to their experiences.

ACCOUNTING 1

Grades 9-12, Credits 1.25-5.00

A skill level course of value to all students pursuing a strong background in business, marketing, and management. This course includes planned learning experiences that develop initial and basic skills used in systematical classifying, recording, verifying, and maintaining numerical data involved in financial and product control records including the paying and receiving of money. Accounting computer applications will be integrated throughout the course where applicable.

ACCOUNTING 2 (PRE-REQUISITE: ACCOUNTING 1)

Grades 10-12, Credits 1.25-5.00

Accounting 2 is designed to enhance skills learned in Accounting 1 by including special realistic business projects and simulations. This class is available to students desiring to further develop their accounting skills as applied to partnership and corporations.

COOPERATIVE EDUCATION

Grade 12, Credits 5.00 or 10.00

Cooperative Education is taken in conjunction with Marketing Education. It is a program designed to give the student an opportunity to work within the local business community while attending high school. The student will attend regular classes in the morning, and is supervised on-the-job in the afternoon. Students combine both academic and business experiences to gain perspective in career planning.

INTRODUCTION TO BUSINESS

Grades 9-12, Credits 1.25-5.00

An introductory course planned to introduce students to the functions and role of business in our economic system as well as to prepare students for a more meaningful and beneficial interaction with business as citizens and consumers. Basic methods and record keeping procedures of a business are emphasized as well as the role of the computer in carrying out the various aspects of a business.

MARKETING EDUCATION

Grade 12, Credits 1.25-5.00

Marketing Education is the required course to be taken to supplement Cooperative Education. The course will cover promotion, pricing, product planning, marketing management, and “marketing yourself”. In addition, the course will provide strategies for communication with customers, employers and co-workers and entrepreneurship as it relates to the current marketplace. The students have the opportunity to join DECA Marketing Club, a co-curricular club that lets students compete against various Marketing students throughout the state and country.

MICROSOFT OFFICE

Grades 9-12

Credits 5.00

Students will become proficient in the use of the Microsoft Office package. This proficiency will help prepare them for an entry-level job in the business world, and/or prepare them for college by giving experience with these commonly used programs. Included in the package are the following programs: Microsoft Word, Excel, PowerPoint and Publisher. Throughout the year, the implementation and combining of all Microsoft programs will come into effect to produce creative and innovative projects.

PERSONAL MONEY MANAGEMENT

Grades 9-12, Credits 1.25-5.00

Focuses on personal finance in areas of employment, money management, banking, investments, taxes, credit management, risk management, insurance and the stock market. Students will use electronic calculators, computer programs and the Internet.

SALES & ADVERTISING

Grades 9-12, Credits 1.25-5.00

The purpose of this course is to introduce the student to many skills needed to function in the business and advertising world as both a consumer and as a potential businessperson. He/she will develop an understanding of our business system and the economic setting in which it functions. The student will also learn how to reach potential consumers through many types of advertising and how it has rapidly expanded in the past 20 years. The student will see how the connection between sales and advertising works through the eyes of the businessperson and consumer.

SPORTS & ENTERTAINMENT MARKETING

Grade 10-12, Credits 1.25-5.00

Sports and Entertainment Marketing is a course that is designed for students interested in sports, entertainment and event marketing. Emphasis is placed on the following principles as they apply to the industry: branding, licensing and naming rights; business foundations; concessions and on-site merchandising; economic foundations; promotions; safety and security; and human relations. The industry is all around us; not just ballparks and theaters, but at schools, television, radio, in stores and on the Internet.

DRAMATIC ARTS

Grades 9-12, Credits 1.25-5.00

Dramatic Arts is an introductory course designed for those students interested in exploring the world of dramatic arts. Students will be introduced Drama as a genre, while experimenting with the skills needed to bring drama to life. Students will come to understand the basics of acting as well as develop skills such as speaking, characterization, movement, and improvisation in order to become effective performers.

ENGLISH AS A SECOND LANGUAGE (ESL) - BEGINNING, INTERMEDIATE AND ADVANCED

Grades 9 -12, Credits 5.00

In the English as a Second Language Program, the teacher provides individualized and group instruction with the aim of strengthening each student’s basic communication skills, improving his/her performance in content area classrooms. Instruction incorporates listening, speaking, reading and writing. Each student has an Individual Student Improvement Plan which contains daily work, tests, parent communication, etc.

ENGLISH 1

Grade 9, Credits 5.00

The ninth grade English coursework allows students an opportunity to build strong foundation in reading and writing skills. Critical reading, expository writing, persuasive writing, and objective writing are the anchor standard skills that are focused on. Furthermore, each English 1 student will complete a research/citation unit that will allow them to begin their path towards preparation for career and college readiness. The literature studied will be a blend of fiction and informational texts that introduce the students to classical texts as well as modern works.

HONORS ENGLISH 1 (PRE-REQUISITES: “B+” OR HIGHER IN LAL8, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grade 9, Credits 5.00

This course introduces students to the following genres via selections from World Literature: mythology, drama, novel, poetry, short story and non-fiction. Listening skills and oral presentations as well as vocabulary development and grammar usage are stressed. Expository writing as well as research techniques such as paraphrasing, summarizing, and note-taking are incorporated. Emphasis is also placed upon student orientation to high school and the development of study skills. Failure to complete all of the Summer Reading Assignments results in dismissal from the course.

ENGLISH 2

Grade 10, Credits 5.00

The tenth grade English coursework continues to augment the anchor standard skills taught in English 1 through a chronological exploration of European Literature. The evolution of the reader’s view of the protagonist will be explored through the works of Homer, Chaucer, Swift, Shakespeare, Dickens, Ibsen, and Austen. The course allows students to investigate the works of more recent European authors such as Camus, McCormick, Christie, and Haddon.

HONORS ENGLISH 2 (PRE-REQUISITES: “B+” OR HIGHER IN ENGLISH 1 OR HONORS ENGLISH 1, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grade 10, Credits 5.00

This accelerated course will introduce students to the in-depth study of literature in all the major genres (short story, novel, non-fiction, poetry and drama) as well as selections from the American colonial and revolutionary periods through the 20th Century. Other units of study include vocabulary development, which stresses the study of synonyms, antonyms, and analogies, and writing improvement, which stresses the writing process and culminates with preparation of a research paper. Failure to complete all of the Summer Reading Assignments results in dismissal from the course.

ENGLISH 3

Grade 11, Credits 5.00

The eleventh grade English course chronologically explores the emergence of individualism and identity in American history through the study of American literature. Fictional and non-fictional/informational texts will be used as students begin their quest in Massachusetts Colony, revisit the American Revolution, and dive into the brutality of slavery and the civil war. Themes such as the immigrant experience, western expansion, the women's rights movement, and the civil rights movement will be studied as we continue to augment anchor standards skills through the study of literature.

COMPOSITION 1 & 2 (PRE-REQUISITES: "B+" OR HIGHER IN ENGLISH 2 OR HONORS ENGLISH 2, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grade 11, Credits 5.00

This writing intensive course will prepare students for college level writing and research. A variety of challenging reading assignments, fiction and nonfiction, historic and contemporary, comprise the required reading. It incorporates continued refinement of communication skills with emphasis on process writing and literature-based writing assignments, oral presentations and class discussions. The students will write at least two major research papers during the school year. Failure to complete all of the Summer Reading Assignments results in dismissal from the course. Students can earn up to 6 college credits through PCCC. *Please note students are not required to take this class for college credit, and all students will receive regular marking period grades. This course is weighted as an honors class.*

ENGLISH 4

Grade 12, Credits 5.00

The twelfth grade English course first seeks to prepare students for the college application and job application process. Next, the course transitions into a study of global philosophies and lifestyles by reading a variety of texts from South America, Asia, and Eastern Europe. This course is intended to provide students with a broader scope of the world so that they will be best prepared for college and career readiness.

ADVANCED PLACEMENT LANGUAGE AND COMPOSITION (PRE-REQUISITES: "B+" OR HIGHER IN ENGLISH 3 OR COMPOSITION 1 & 2, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grade 12, Credits 5.00

Advanced Placement Language and Composition is a full-year course, exploring literature and composition at the college-level. In a seminar atmosphere, students study literary classics and contemporary fiction, considering each work's structure, style and theme. Special interest is placed on increased awareness of literary and poetic devices, such as connotation, syntax, symbolism, irony, metaphor and tone. Students concentrate on improving their writing skills; special emphasis is placed on structure, analysis, evaluation and synthesis. Failure to complete all of the Summer Reading Assignments results in dismissal from the course. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an A average.

JOURNALISM 1

Grades 9-12, Credits 1.25-5.00

Journalism is a full-year course that is divided into the following interrelated and integrated units: Introduction to Journalism, Writing the News, Beyond Page One, Gathering News, and Newspaper and Community. The purpose of this course is for students to explore the various elements that constitute "good" journalism. Students will improve their writing and will hone interviewing and research skills. Further, students will produce the school newspaper as part of the class requirements.

JOURNALISM 2

Grades 9-12, Credits 1.25-5.00

This course is a continuation of the Journalism 1 course. Students in Journalism 2 will focus on improving their skills as writers and reporters, while developing their skills as publishers, project managers, and leaders. They will focus more on the research and analysis stages of reporting by composing investigative, trend, interpretive, and analytical articles. These students will be the Lead Editors of the student newspaper, and will be responsible for creating schedules and deadlines for article submissions, revision, and publication. They will also make all layout and stylistic decisions for each issue.

PSAT LAL PREP/SAT LAL PREP

Grade 9, Credits 1.25/Grades 10-12, Credits 2.5

PSAT LAL Preparation is a quarter-year course, and SAT LAL PREP is a half-year course. They are divided into the following interrelated and integrated units: Overview of the Test, Vocabulary Workshop, Reading, Writing, Grammar and Usage. The purpose of these courses is to practice strategies and skills to increase achievement on the Preliminary Scholastic Aptitude Test (PSAT) and the Scholastic Aptitude Test (SAT). Activities will include building a larger vocabulary, building test-taking skills, practicing test-taking strategies, and improving critical reading analyses.

FINANCIAL LITERACY*Grade 9-12, Credits 2.5*

This mandatory half-year course offers the student an opportunity to learn life-long skills that are necessary in order to function in our society. The units to be covered include the following topics: understanding income, money management, financial security and risk, spending and credit, saving and investing. You will learn how to maintain a checking account, a savings account, and invest in stocks.

ALGEBRA 1*Grades 9-10, Credits 5.00*

The four basic operations will be applied to integers, monomials, polynomials, rational and irrational expressions and used to find solutions to one and two variable equations as well as verbal problems. Polynomial expressions and second-degree equations will be thoroughly covered. The coordinate plane, linear equations in two variables and systems of two linear equations will be heavily emphasized.

GEOMETRY (PRE-REQUISITE: ALGEBRA 1 OR HONORS ALGEBRA 1)*Grades 10-11, Credits 5.00*

This is a rigorous study of modern Euclidean Geometry presented as a mathematical system founded on definitions, axioms and postulates used in proving and applying theorems. The course will include congruence, similarity, polygons, circles, coordinate geometry and exploration of solid geometry.

HONORS GEOMETRY (PRE-REQUISITE: "B+" OR HIGHER IN HONORS ALGEBRA 1 AND TEACHER RECOMMENDATION)*Grades 9-10, Credits 5.00*

This accelerated course is for students who have demonstrated an exceptional ability in math. Emphasis is placed on geometry as a logical structure and on sustaining conclusions. Two and three-dimensional situations are studied. Analytic geometry will be integrated into the course and certain non-Euclidean geometrics will be investigated.

ALGEBRA 2 (PRE-REQUISITE: ALGEBRA 1 AND GEOMETRY)*Grades 10-12, Credits 5.00*

This course extends the knowledge, skills and understanding developed in Algebra 1. New topics include a study of the conic sections, quadratic functions and relations, the quadratic formula, properties of other special functions, solving-graphing-analyzing exponential functions, matrices and determinants, theory of logarithms, and complex numbers.

HONORS ALGEBRA 2 (PRE-REQUISITE: "B+" OR HIGHER IN HONORS GEOMETRY AND TEACHER RECOMMENDATION)*Grades 10-11, Credits 5.00*

This accelerated course is rigorous and challenging. It provides the student with the understanding and confidence necessary for success with higher mathematics. All the material of the regular Algebra 2 course and additional concepts will be developed including the binomial expansion and formula, matrices and determinants, logic, higher degree functions, abstract algebra and field axioms.

HONORS PRE-CALCULUS (PRE-REQUISITE: “B+” OR HIGHER IN ALGEBRA 2 AND TEACHER RECOMMENDATION)

Grades 11 – 12, Credits 5.00

This course is intended for students with above average interest and ability in math. This course starts with a review on the fundamental concepts of algebra. Students focus on all aspects of functions studying, in detail, linear and quadratic functions, their graphs, transformations, combinations and inverses, when defined. Functions used in mathematical analysis are investigated: polynomial, rational, exponential, and logarithmic functions. Trigonometry is introduced as a function and other analytic trigonometric topics are discussed like trigonometric identities, sum/difference, double-angle/half-angle, and product-to-sum/sum-to-product formulas. Part of the course emphasizes analytic geometry topics on conic sections: the ellipse, hyperbola and parabola. College credit may be earned through Passaic County Community College for this course.

PRE-CALCULUS (PRE-REQUISITE: ALGEBRA 2 OR HONORS ALGEBRA 2)

Grades 11-12, Credits 5.00

Basic principles from the disciplines of trigonometry and analytic and solid geometry are introduced and developed. Included among those principles are trigonometric ratios and equations, solutions of triangle radian measure, graphing of conic sections, and areas and volumes of geometric solids. The skills involved are useful in careers such as architecture, engineering, advanced sciences and a variety of math related fields.

CALCULUS (PRE-REQUISITE: PRE-CALCULUS OR HONORS PRE-CALCULUS)

Grade 12, Credits 5.00

Calculus provides a rigorous and robust curriculum that prepares students for future work or studies in mathematics. Students taking Calculus will use knowledge gained from all previous years of math to aid in the understanding of key course concepts. Students will be asked to complete work with emphasis on geometric, graphic, numerical, verbal, and visual techniques and understanding. Core ideas include derivatives, integrals, limits, approximations, applications, and modeling. Technology will be used regularly, including daily use of the TI-84 graphing calculator. All curriculum materials are the same as AP calculus, but are spread throughout the entire school year.

ADVANCED PLACEMENT STATISTICS (PRE-REQUISITE: “B+” OR HIGHER IN HONORS PRE-CALCULUS, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grades 11 – 12, Credits 5.00

The AP Statistics course centers on four broad topics: data exploration, sampling & experimentation, probability, and statistical inference. Emphasis is given on the generation, production and analysis of data whereby students learn the concepts and tools of statistics in much the same way as practiced by professionals. Students learn to use the statistical functions in a graphing calculator as well as use and interpret results from statistical software. They are required to prepare a project that will demonstrate the actual practice of statistics in real-world situations, and take the AP Statistics Exam by May. Credit may be earned through Passaic County Community College for this course. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an “A” average.

ADVANCED PLACEMENT CALCULUS AB (PRE-REQUISITE: “B+” OR HIGHER IN PRE-CALCULUS, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grade 12, Credits 5.00

AP Calculus AB prepares students for the Advanced Placement test through the College Board. Students taking AP Calculus will be challenged to use knowledge gained from all previous years of math to aid in the understanding of key course concepts. Students will be asked to complete work with emphasis on geometric, graphic, numerical, verbal, and visual techniques and understanding. Core ideas include derivatives, integrals, limits, approximations, applications and modeling. Technology will be used regularly, including daily use of the TI-84 graphing calculator. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an “A” average.

PSAT MATH PREP/SAT MATH PREP

Grade 9, Credits 1.25/Grades 10-12, Credits 2.5

PSAT Math Preparation is a quarter-year course which is paired with PSAT LAL Prep, and SAT Math PREP is a half-year course which is paired with SAT LAL Prep. The three sections' formats, answer keys and grading methods are reviewed. Math problems from SAT preparation workbooks and websites are used to practice the variety of Numerical Operations, Algebra, basic Geometry and basic Statistics standards.

BAND (PRE-REQUISITE: BEGINNING BAND AND A PERFORMANCE TEST)

Grades 9-12, Credits 1.25-5.00

The goal of the Band Program is to provide each student with a well-rounded musical education. This education focuses on building a solid foundation of musical knowledge upon which successful performances are built. In addition to providing a quality music education, the Band Program also recognizes the need to educate the whole child. By participating as a member of the band, each student will develop the character skills needed to attain his/her own personal best. Participation in performances is a requirement of this course.

BEGINNING BAND

Grades 9-11, Credits 1.25-5.00

Beginning Band is designed to introduce aspiring musicians to the rehearsal and performance requirements of a high school band. This course is open to any student who has an interest in developing the ability to play a musical instrument. An emphasis of instruction will be on reading and comprehending standard notation as well as improving performance techniques. Participation in performances is a requirement of this course.

BEGINNING BAND – KEYBOARD

Grades 9-11, Credits 1.25-5.00

Piano and Electronic Keyboard is based on the New Jersey Standards for High School Music. Students taking this course are offered keyboard classes in order to develop music proficiency and musicianship. Students perform with proper posture, hand position, fingering, rhythm, and articulation; compose and improvise melodic and harmonic material; create and perform simple accompaniments; listen to, analyze, sight-read, and study a variety of keyboard literature; study the elements of music as exemplified in a variety of styles; and make interpretive decisions. This course is for students with little or no experience on piano.

BEGINNING BAND – PERCUSSION

Grades 9-11, Credits 1.25-5.00

Beginning Band Percussion is designed for students who are interested in exploring concert percussion instruments. The course will focus on care of all instruments, correct posture, carriage of mallets and sticks, basic tone production, and rudiments. Students will study basic music theory and note reading, and will have the opportunity to experience playing keyboard, battery (drums), and auxiliary percussion instruments.

CONCERT CHOIR (PRE-REQUISITE: AUDITION AND TEACHER APPROVAL)

Grades 9-12, Credits 1.25-5.00

The basics of music fundamentals, advanced vocal technique, advanced harmonies; (3 to 4 parts) will be covered. Exposure to a wider scope of choral literature will broaden student knowledge. Character education will be achieved through the team-building exercises of school concerts and community events.

GENERAL CHORUS

Grades 9-12, Credits 1.25-5.00

Chorus is open to all students since no previous training is required. The course focus is on basic voice training, ear training, music fundamentals and music literature. Performance in concerts will depend on the level of vocal ability at the director's discretion. Character education will be achieved through the team-building exercises of school concerts and community events. The purpose of the course is to increase the ability of each student with regard to voice quality as well as the ability to lead and sing his/her part in a harmonic setting.

INSTRUMENTAL MUSIC LESSONS

Grades 9-11, Credits 1.00-5.00

Students in Manchester Regional High School have the opportunity to enroll in instrumental music lessons. Studies show that students who participate in instrumental music are both more engaged in school and perform better on standardized tests. They also display more self-confidence, are better able to express their ideas, and possess better memory skills than those who do not participate in music. This is a once-a-week pull-out program, generally aligned with a study hall for the remainder of the students' week.

MUSIC THEORY

Grades 9-11, Credits 1.25-5.00

Music Theory and Appreciation is a course designed to give students a comprehensive look at music from ancient Greek civilization through hip hop music of today. This course is open to all students, regardless of their past musical background. The goal of Music Theory and Appreciation is to help students understand the fundamentals of music and how the music of today is linked to the past. The course will begin with a review of music elements to provide a basic foundation for discussion. The first half of the course centers on the history of Western music, beginning with the music of the ancient Greeks and ending with current classical music. The second half of the course examines various types of popular music of the 20th century including jazz, rock and roll and pop. Music Theory and Appreciation is a full year course which meets every day.

PHYSICAL EDUCATION AND HEALTH

Each year all students are scheduled for Health and Physical Education. During the course of the year, each student is enrolled in a Health course for one marking period and Physical Education for three marking periods.

PHYSICAL EDUCATION

Grades 9 -12, Credits 3.75

These courses will introduce each student to a variety of activities in order to enable the student to choose activities that will allow them to lead a healthful and enjoyable life. The activities included develop cardiovascular and muscular systems through the use of our track and weight training facility. Team and individual sports are introduced and developed throughout the students' four years at Manchester. Project Adventure is an activity which allows each student to explore his/her individual level of taking risks and making choices, and uses a variety of trust-building activities that progress to a higher level of trust during our climbing unit. The students are instructed on climbing, belaying, back-up and encouragement skills.

Grade 9: Introduction to skills and basic knowledge of team and individual sports.

Grade 10: Development of skills and basic knowledge of team and individual sports.

Grade 11: Concentration on the development of team and individual sports.

Grade 12: Develop a mastery of team play and carry over activities.

HEALTH EDUCATION

Grades 9 -12, Credits 1.25

Health instruction has two principal aims. The first is to help the student appreciate the value of physical, mental and social health. The second is to help the student acquire and maintain a state of well-being. In addition to the minimum ten hours of drug and alcohol education taught each year, the course content for each grade include the following:

Grade 9: The study of the cardiovascular system, risk factors of cardiovascular disease, reproductive systems, birth control, sexually transmitted diseases, and steroid abuse.

Grade 10: The study of driver education theory.

Grade 11: The study of first aid procedures, personal safety, values and decision-making.

Grade 12: Family life education, including parenthood, reproductive systems, social diseases, and mental health.

ADAPTIVE PHYSICAL EDUCATION/HEALTH

Grades 9-12

Credits 1.25-5.00

This program enables those students who are multi-handicapped, as diagnosed through medical documentation, and are unable to be mainstreamed into a regular physical education course, the opportunity to engage in physical activities. Each individual is instructed according to their Individual Education Program.

GEOSCIENCE

Grades 9, Credits 5.00

Geoscience is a one-year science course that aims to develop basic scientific skills and attitudes that can be used in life. Topics from the disciplines of earth/space science, chemistry and physics are selected to help the student develop skills in measuring, recording and interpreting information and preparing and reading graphs. Development of critical thinking skills is emphasized along with reading in the science content areas.

BIOLOGY (PRE-REQUISITE: GEOSCIENCE)

Grades 10-12, Credits 5.00

This course is an exploration of life processes through the study of living things in the plant and animal worlds. The student is acquainted with the structures, functions and the natural relationships of plants and animals, their conservation and uses to man. Included are units on the problems of disease and inheritance. Laboratory experiences are provided whereby the physical and observational skills of the student are developed. **The state of New Jersey requires a standardized Biology Competency Test be given to all students taking a Biological science course.**

HONORS BIOLOGY (PRE-REQUISITE: MIDDLE SCHOOL PERFORMANCE AND TEACHER RECOMMENDATION)

Grade 9, Credits 5.00

This accelerated course is offered to students in grade 9 who have demonstrated excellence in science and mathematics. Because of the extensive reading requirements, the course is recommended for only those 9th graders who are advanced proficient in Reading Comprehension. The unity and diversity of living things are explored. Laboratory investigations will promote higher order thinking, scientific inquiry and critical thinking. Oral and written reports and projects will be required. There is a summer reading requirement for the course with a writing assignment due in September. The course requires extensive reading, writing and research during the year. **The state of New Jersey requires a standardized Biology Competency Test be given to all students taking a Biological science course.**

CHEMISTRY (PRE-REQUISITE/CO-REQUISITE: ALGEBRA 2)

Grades 10-12, Credits 5.00

Chemistry is a study of the nature and composition of the elements and some of the compounds they form. Experiments are used to introduce principles of chemical reactions and atomic structure, which are later emphasized in class discussion and in solving problems. Topics studied include gasses, liquids, solids, models of atomic structure, bonding, energy effects in chemical reactions, and acids and bases. Class time is roughly divided into four periods of lecture and/or discussion and one extended period per week in which laboratory experiences *may* engage.

HONORS CHEMISTRY (PRE-REQUISITE: "B+" IN BIOLOGY OR HONORS BIOLOGY AND TEACHER RECOMMENDATION)

Grades 10-11, Credits 5.00

This accelerated course is designed for students of high ability, to study chemistry in greater depth and speed than the college prep chemistry program. The topics are studied with the use of the Textbook, Lecture, Demonstrations, Supplemental Work sheets, Laboratory Inquiry and other appropriate means. Students are expected to be proficient in Algebra 1, Geometry, graphing, the use of a scientific calculator, report writing as well as independent and group study skills. There is a summer reading requirement for the course with a writing assignment due in September. The course requires extensive reading, writing and research during the year.

PHYSICS (PRE-REQUISITE/CO-REQUISITE: ALGEBRA 2 OR PRE-CALCULUS)

Grades 11-12, Credits 5.00

This course is an introductory program dealing with the concepts of velocity and acceleration graphing; vectors; Newton's three laws of motion; particle and wave motion; conservation of momentum and energy; light; sound; electro-magnetism and nuclear physics. The approach stresses physics from a mathematical point of view. Weekly laboratory experiences are provided to emphasize basic principles and to acquaint students with various measuring instruments. Skills in presenting, analyzing and interpreting experimental results are also emphasized. This course stresses physics from a conceptual point of view along with mathematics. There is a summer reading requirement for the course with a writing assignment due in September. The course requires extensive reading, writing and research during the year.

HONORS PHYSICS (PRE-REQUISITE/CO-REQUISITE: ALGEBRA 2 OR PRE-CALCULUS AND TEACHER RECOMMENDATION)

Grades 11-12, Credits 5.00

This course is an accelerated program dealing with the concepts of velocity and acceleration graphing; vectors; Newton's three laws of motion; particle and wave motion; conservation of momentum and energy; light; sound; electro-magnetism and nuclear physics. The approach stresses physics from a mathematical point of view. Weekly laboratory experiences are provided to emphasize basic principles and to acquaint students with various measuring instruments. Skills in presenting, analyzing and interpreting experimental results are also emphasized. There is a summer reading requirement for the course with a writing assignment due in September. The course requires extensive reading, writing and research during the year.

ASTRONOMY

Grades 10-12, Credits 1.25-5.00

This elective course covers the scope of the universe beginning with our solar system. Astronomical techniques, instruments, and modes of discovery will be taught. The influence of astronomical discoveries on the progress and development of scientific study will be stressed, as will the effects on the growth and history of western society and civilization. Mathematics will be utilized only when necessary for a firm understanding and will be limited to elementary algebra. Laboratory experiences will be provided on an occasional basis and will be such as can be performed in class or at home. Appropriate scientific concepts from other areas will be developed when they serve to illustrate our understanding of the universe.

ENVIRONMENTAL SCIENCE (PRE-REQUISITE: GEOSCIENCE)

Grades 10-12, Credits 5.00

Popular topics include ethics, law and policy, energy, and pollution of earth, air and water regarding environmental responsibility and global awareness. Most curricular materials are accessible on line and students will use tables, illustrations, animations, maps and interactive components from home for assignments and enrichment activities. As a laboratory course, it incorporates significant hands-on, cooperative learning activities while maintaining the integrity of individual responsibility in the group dynamic. Data collection, analysis, synthesis, higher order thinking and exposure to research technology are infused throughout the course. Performance assessments are more prominent in the grading practices than are traditional pen and paper tests. Regular attendance and participation in the class are of the utmost importance.

MEDICAL SCIENCE 1

Grade 10-12, Credits 1.25-5.00

Medical Science 1 is a full-year course offered to students in grades 10-12. The objective of this course is to provide students a basic understanding of the fundamental practice of medicine and its various disciplines. The student also receives a general background in the use of technology in medicine. Topics covered include: introduction to medical terminology, overview of basic anatomy and physiology, medico-legal issues, introduction to medical specialties, patient history taking, vital signs, causes of disease, general introduction to microbiology and diagnostic imaging. Student reports and projects will be required. The students will participate in field trips to health care facilities as well as listen to guest speakers.

MEDICAL SCIENCE 2 (PRE-REQUISITE: MEDICAL SCIENCE 1 AND TEACHER RECOMMENDATION)

Grades 11-12, Credits 8.00

Medical Science II is a one-year, two-period, laboratory science course offered to students in grades 11-12. The objective of this course is to provide the student a working knowledge of medical terminology, anatomy and physiology. The aim is to prepare the student for further study or employment in a variety of medical and paramedical office positions. Topics covered include: Medical Terminology, study of blood, heart, lymphatic system, respirator system, digestive system, urinary system, microbiology, disease and medical imaging. Student reports and projects will be required. Students will participate in a shadowing program at area hospitals.

ANATOMY & PHYSIOLOGY

Grades 11-12, Credits 6.00

This is an elective course designed for those students preparing to enter health-related professions or preparing to enter into a more advanced study in biology. Systems of the body and their specific parts will be studied. The dependency and coordination of these systems upon one another will be emphasized. The course will be taught through class discussions, specimen manipulation and dissection, laboratory experiences, field activities, computer simulations, and guest speakers. It is assumed that enrolled students will participate in all scheduled activities.

ADVANCED PLACEMENT BIOLOGY (PRE-REQUISITE: "B+" OR HIGHER IN BIOLOGY AND CHEMISTRY, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grades 11-12, Credits 8.00

The course content reflects the curriculum recommendations of the College Entrance Examination Board. Lectures and discussions are coupled with extensive laboratory preparations as a primary means of investigation. Material will include areas of cell and human physiology that are not covered in great detail in Biology. The course will meet 8 periods a week (double period three times a week). There is a summer reading requirement for the course with a writing assignment due during the summer. The course requires extensive reading, writing and research during the year. The curriculum and syllabus for this course have been approved by the College Board, which certifies the class as a true Advanced Placement level class. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an A average.

WORLD CULTURES

Grade 9, Credits 5.00

The World Cultures course is a basic social studies course for grade nine, designed as a survey of the world with emphasis on the following units of study; Cultural Terms, Early Man, Ancient Middle East, Middle East, China, Russia, Europe and Current Events. This course will include the geography, history and culture of each region. A major goal will be to help the student understand and appreciate the areas under study through critical thinking and historical interpretation.

HONORS WORLD CULTURES (PRE-REQUISITE: MIDDLE SCHOOL PERFORMANCE AND TEACHER RECOMMENDATION)

Grade 9, Credits 5.00

The Honors World Cultures course follows the World Cultures curriculum with extended activities and assignments. Activities include vocabulary, reading skills and map reading. It will also provide students with a framework, which will help them develop the skills of problem solving and decision making that will enable them to meet the challenges of a changing world creatively and intelligently. The instructor plans special projects and trips that enhance student participation in the course.

WORLD GEOGRAPHY AND HISTORY

Grade 11-12, Credits 5.00

In this course, students focus on major geographic configurations of the world and survey key cultural and economic areas. In addition, students study history and current strengths and problems of these areas. Climates, resources, ecosystems and land use are integrated within the curriculum. This class fulfills the state requirement for five credits in World History.

UNITED STATES HISTORY 1 (PRE-REQUISITE: WORLD CULTURES/HONORS WORLD CULTURES)

Grade 10-11, Credits 5.00

The approach in this required course is primarily chronological. Throughout, students are acquainted with basic concepts relative to how personalities in history have influenced culture and ideas, and how government has handled problems relative to democratic way of life. Units include: the Colonial Period, the Revolution and Early National Period, the Age of Civil War and Reconstruction. The major emphasis will be focused on Industrial America, Imperialism, and the Era of World War. In addition, the course will introduce the student to the history of New Jersey, the contributions of minorities, and the role of women during this period in American History.

HONORS UNITED STATES HISTORY 1 (PRE-REQUISITE: “B+” OR HIGHER IN WORLD CULTURES/HONORS WORLD CULTURES AND TEACHER RECOMMENDATION)

Grade 10, Credits 5.00

The United States History 1 Honors course is designed to give students an understanding of the democratic ideals on which the American political, social and economic systems are based. They evolved from the Colonial Period to the emergence of America as a world power, with the major emphasis on Industrial America, Imperialism, and the Era of World War. In addition, the course will introduce the student to the history of New Jersey and contributions of minorities and women during this period in American History. It will also provide students with a framework which will aid in the development of critical thinking skills, problem solving and decision-making that will enable them to meet the challenges of a changing world creatively and intelligently. The instructor plans special projects and trips that enhance the student’s participation in the course.

UNITED STATES HISTORY 2 (PRE-REQUISITE: UNITED STATES HISTORY 1 OR HONORS UNITED STATES HISTORY 1)

Grade 11, Credits 5.00

This required course stresses on the major events in our country's history from the late nineteenth century to the emergence of the U.S. as a world power in the twentieth century. Major units studied include the Cold War, the Nuclear Confrontation, the Vietnam Era, the Reagan Revolution, the Persian Gulf Crisis, the Clinton Presidency and the war on terrorism. In addition, the course will continue the student's study of the history of New Jersey and the contributions of minorities from the time America emerges as a world power to the present.

HONORS UNITED STATES HISTORY 2 (PRE-REQUISITE: "B+" OR HIGHER IN UNITED STATES HISTORY 1 OR HONORS UNITED STATES HISTORY 1 AND TEACHER RECOMMENDATION)

Grade 11, Credits 5.00

The purpose of the Honors United States History 2 course is to give the student a sense of our past and an understanding of the democratic ideas upon which American political, economic, and social developments have been based. Major units studied include: the Cold War, the Nuclear Confrontation, the Vietnam Era, the Conservative Revolution, the Persian Gulf Crisis, and the Clinton Administration. In addition, the course will continue the student's study of the History of New Jersey and the contributions of minorities from the time America emerged as a world power to the present. It will also provide students with a framework within which they can develop the skills of critical thinking, problem solving and decision-making that will enable them to meet the challenges of a changing world creatively and intelligently. The instructor plans special projects and trips that enhance the student's participation in the course.

SOCIOLOGY

Grades 11-12, Credits 2.5

Sociology, as a discipline, seeks to explain human behavior in groups. This one-semester, college-level course will examine, in depth, the study of basic concepts in social interaction, analyzing selected aspects of the immediate culture, defining and evaluating the individual personality in inter-group relations, social organization and processes, and elements of social control and deviance in a changing society. Credit may be earned through Passaic County Community College for this course.

CRIMINAL JUSTICE

Grades 11-12, Credits 2.5

This one-semester, college-level course is an introductory college level course designed to teach students the philosophy and history of law enforcement, including the police, the courts, the correction system, and the offender. Students in the course may participate in the state and county Mock Trial Team competitions. Credit may be earned through Passaic County Community College for this course.

ADVANCED PLACEMENT UNITED STATES HISTORY (PRE-REQUISITE: "B+" IN HONORS US HISTORY 1, "B+" IN ENGLISH, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS)

Grades 11-12, Credits 5.00

This full-year Advanced Placement program will help the student to take the Advanced Placement test in American History, which can be used for college credit. The course will cover American History from the Age of Discovery through the second half of the Twentieth Century. Emphasis will be placed on writing at levels of synthesis, analysis and evaluation. Summer reading is required. Approximately two chapters per week will be covered. At least one hour per night should be reserved for Advanced Placement United States History homework. A major research paper will be required each marking period. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an A average.

ADVANCED PLACEMENT GOVERNMENT AND POLITICS (PRE-REQUISITE: “B+” IN HONORS US HISTORY 1, “B+” IN ENGLISH, TEACHER RECOMMENDATION, AND COMPLETION OF SUMMER ASSIGNMENTS

Grades 11-12, Credits 5.00

The Advanced Placement Course in United States Government and Politics will provide and fashion students with an analytical perspective on government and politics as practiced in the U.S. from inception to the present day. Students will make use of a wide range of academic skills in keeping with the requisite demands of a college classroom environment. In addition, students will receive preparatory instruction as to content, format, and potential areas of focus for the Advanced Placement examination for United States Government and Politics. Students will be provided an array of apposite primary and secondary literature from a diverse range of political perspectives. Class readings are designed to reinforce the text, deepen critical thinking skills, teach students to understand and detect author bias and improve overall comprehension. Students are invited to take the AP Exam in the spring and the Board of Education will pay the fee for any student who maintains an A average.

CISCO NETWORKING ACADEMY DISCOVERY (Part 1)

Grades 10 – 12, Credits 1.25-5.00

The CCNA Discovery curriculum covers computer networking in four sequential parts as it applies to practical networks that a student may encounter – from simple small home or office networks to more complex enterprise models. Students will learn the technical and software-based skills necessary to succeed in entry-level networking professions (ex. network installer, help-desk technician, pre-sales support technician, or network technician). Additionally, CCNA Discovery teaches necessary skills for acquiring two Cisco industry certifications, CCENT (Cisco Certified Entry Networking Technician) and CCNA (Cisco Certified Network Associate). Both courses utilize actual Cisco hardware, as well as industry-specific simulation software to create an authentic workplace experience for motivated student technicians. Cisco Networking Academy Discovery Part 1 covers semesters 1 and 2 of the CCNA Discovery curricula, including networking for home and small business (setting up a personal computer and operating system, troubleshooting network and internet connectivity sharing resources on a network, and configuring a wireless access point and client) and working at a small-to-medium business (installing, configuring and troubleshooting Cisco IOS devices, planning a network infrastructure, implementing basic WAN connectivity, and demonstrating proper disaster recovery procedures).

CISCO NETWORKING ACADEMY DISCOVERY (Part 2) (PRE-REQUISITE: CISCO NETWORKING ACADEMY DISCOVERY (Part 1))

Grades 11 – 12, Credits 1.25-5.00

The CCNA Discovery curriculum covers computer networking in four sequential parts as it applies to practical networks that a student may encounter – from simple small home or office networks to more complex enterprise models. Students will learn the technical and software-based skills necessary to succeed in entry-level networking professions (ex. network installer, help-desk technician, pre-sales support technician, or network technician). Additionally, CCNA Discovery teaches necessary skills for acquiring two Cisco industry certifications, CCENT (Cisco Certified Entry Networking Technician) and CCNA (Cisco Certified Network Associate). Both courses utilize actual Cisco hardware, as well as industry-specific simulation software to create an authentic workplace experience for motivated student technicians. Cisco Networking Academy Discovery Part 2 covers semesters 3 and 4 of the CCNA Discovery curricula, including basic routing and switching in an enterprise business (configuring and troubleshooting switches, VLANs, WAN Links, and routing protocols – all utilizing the OSI model of network communications) and designing computer networks (gathering customer requirements, using those requirements to build custom networks catering to specific needs, implementing IP and resource-sharing in said networks, and upgrading Cisco IOS software in Cisco devices).

INTRODUCTION TO NETWORKING TECHNOLOGIES

Grades 9 – 12, Credits 1.25-5.00

This course teaches the student to install, configure, upgrade, troubleshoot and repair personal computers. Students will learn basic knowledge of desktop and portable computers, printers and basic networking concepts. This course covers knowledge of safety and common preventative maintenance procedures. Course content is general and includes both the study of the theoretical aspects of computer and network operation and lab activities, which include creation of physical network connections and establishing communication between computers and other computer networks. Study also includes an introduction to NOS (network operating systems), such as Novell, Windows NT, and Linux. The course content serves as a foundation for future studies in the Information Technology field. Students completing this course will be prepared to pursue study and certification in areas such as: Cisco CCNA, Microsoft MCP and MCSE, Novell CNA, A+ and Network+. This course is a must for anyone interested in pursuing a career in any area of Information and Computer Technologies. *(It is recommended that this course be taken prior to Cisco Networking Academy Discovery 1 or in conjunction with Cisco Networking Academy Discovery 2).*

PC GRAPHICS 1

Grades 9 – 12, Credits 1.25-5.00

This full year course will expose students to the world of computer graphics. The course will focus on the principles, equipment, and skills used in advertising and computer graphic industries through hands-on computer work. Students will utilize computer programs such as Adobe Photoshop and Illustrator to create artwork and illustrations that can be incorporated into desktop publishing documents, and websites. This course will address topics such as computer imaging, typography, and layout and design in order to assure that students acquire knowledge and understanding of the visual and graphic arts fields.

PC GRAPHICS 2 (PRE-REQUISITE: PC GRAPHICS 1)

Grades 10 – 12, Credits 1.25-5.00

This full year course is a continuation of PC Graphics 1. The course will focus on the principles of art and design, color theory, typography, editorial/advertising design, promotional design, package design and branding/logo identity. Students will utilize computer programs such as Adobe Photoshop and Illustrator to create artwork that will be setup for print production and web respectively. Students will be introduced to more complex concepts and techniques of graphic design, illustration and digitized photographic manipulation. This course will offer students a more sophisticated approach to computer generated design at both the technical and intellectual level. *(This course is highly recommended for students who may have an interest in careers in design such as: graphic design, interior design, editorial/publishing design, fashion design, package design, digital photography, illustration, and web design).*

PC GRAPHICS 3 (PRE-REQUISITE: PC GRAPHICS 1 AND 2)

Grades 11-12, Credits 5.00

Advanced PC Graphics 3 is a comprehensive graphic arts & multimedia design course that enables students to develop a solid foundation in design principles and digital art techniques through the intensive study of basic design elements, fine art composition creation, aesthetic judgments and conceptual art theory using contemporary digital tools and mediums. This course is project based and students will have the opportunity to practice and utilize these skills for the layout and production of documents used in school flyers, school newspaper, school and community newsletters, promotional pieces (flyers, posters, t-shirt designs) for clubs and school wide events. Students will be strongly encouraged to participate, submit work, and take advantage of design scholarships and digital art exhibitions available throughout the year. *(This course is highly recommended for students who may have an interest in careers in design such as: graphic design, interior design, editorial/publishing design, fashion design, package design, digital photography, illustration, and web design).*

TELEVISION & VIDEO PRODUCTION 1 (PRE-REQUISITE: PC GRAPHICS 1)

Grades 10-12, Credits 1.25-5.00

TV and Video Production introduces the student to the complete process of writing, filming, and editing a television or video program. The student will use computer-based non-linear editing software to create full-length, broadcast quality scenes, shows, and mini-movies. The student will also learn the process of creating a television program from idea to final product. Other topics included in this course will be scriptwriting, storyboarding, how to correctly operate a digital video camera, lighting techniques, directing talent and camera operators, editing video into sequences that are composites of different takes, and finalizing a product onto a professional-quality tape or DVD. Approximately one half of the year will be learning pre-production techniques, and how to safely (and carefully) operate equipment. The remainder of the year will be project-based learning consisting of working both as an individual and in a group. Resources and “studio time” are limited and will require lab usage before and after school hours. Filming of scenes and events may also require students to participate in class related activities outside of regular school hours.

TELEVISION & VIDEO PRODUCTION 2 AND 3 (PRE-REQUISITE: TELEVISION AND VIDEO PRODUCTION 1)

Grades 11-12, Credits 1.25-5.00

The focus is on creating original content for MRHS TV, Manchester's public, educational and government station. Class includes project-based learning, creating serialized television shows and short movies which spotlight community groups and organizations. Students will learn advanced editing techniques, use software to compliment non-linear based editing, utilize stop-motion techniques and special effects including green screen production.

FRENCH 1

Grades 9-12, Credits 5.00

The fundamental skills and concepts of the French language and the culture of people from French-speaking countries are introduced. Students begin to understand, speak, read and write in French.

FRENCH 2 (PRE-REQUISITE: FRENCH 1)

Grades 9-12, Credits 5.00

Students increase proficiency in communication skills. New vocabulary and language patterns are learned through listening, speaking, reading and writing. Readings are the basis for the study of attitudes and customs in French-speaking countries throughout the world.

HONORS FRENCH 3 (PRE-REQUISITE: FRENCH 2)

Grades 10-12, Credits 5.00

Students strengthen understanding, speaking, reading and writing skills. Culture is an intrinsic part of reading. Emphasis will be placed upon historical events and cultural contributions. Credit may be earned through Passaic County Community College for this course.

HONORS FRENCH 4 (PRE-REQUISITE: HONORS FRENCH 3)

Grades 11-12, Credits 5.00

Students continue to strengthen oral/aural and written comprehension and fluency. Readings and compositions are based on the literature and the history of French-speaking people throughout the world. Students' projects synthesize all information to provide an understanding of the French national character. Credit may be earned through Passaic County Community College for this course.

SPANISH 1

Grades 9-12, Credits 5.00

This course provides students with a basic foundation for the future study of Spanish. It includes the following components: vocabulary study, language syntax, and aural/oral skills. It also fosters an appreciation for the culture of the Spanish-speaking world.

SPANISH 2 (PRE-REQUISITE: SPANISH 1 AND/OR NATIVE PROFICIENCY)

Grades 9-12, Credits 5.00

This course fosters the continued development of skills needed for a complete understanding of Spanish through knowledge of new vocabulary and grammatical structures. It also offers cultural enrichment, the study of geography, and customs of the Spanish-speaking world.

HONORS SPANISH 3 (PRE-REQUISITE: SPANISH 2)

Grades 10-12, Credits 5.00

Students will strengthen and master speaking, comprehension, reading, and writing skills through individual and collaborative activities. Knowledge of Hispanic culture is gained through reading selections.

HONORS SPANISH 4 (PRE-REQUISITE: HONORS SPANISH 3)

Grades 11-12, Credits 5.00

Students will further develop the skills of reading, writing, speaking, and listening in the Spanish language in order to enjoy authentic texts on a variety of high-interest themes. Students will strengthen the previously studied grammatical structures as well as gain insight into the literature and history of Latin America and Spain. Students explore art, music and cinema in the target language.