

**MILLBROOK CENTRAL SCHOOL DISTRICT
MILLBROOK, NEW YORK 12545**

**MILLBROOK HIGH SCHOOL COURSE & CURRICULUM GUIDE
2023-2024**



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HIGH SCHOOL CURRICULA

Millbrook High School strives to meet the general and individual needs of its students and of the community which it serves. It offers preparation for those who expect to further their education beyond high school. Through its curricula, its extracurricular activities, and its special services, our school assists each student to become a better person and citizen.

A most important decision for a high school student is the choice of curriculum and the pattern or subjects the student follows in that area each year. School counselors, teachers, and parents will assist each individual in selecting those subjects which best fit the student's capacities, needs and interests. Each student must choose specific subjects with great care and must complete a four-year plan for his or her high school years. Students are required to take a minimum of five and one-half credits each year.

2023-2024 Course Catalog

VISUAL ARTS

STUDIO ART 1 credit

This course is a prerequisite for any other High School Visual Art courses offered in the curriculum guide.

Studio Art is the High School basic Visual Art Course. The class is open to all students and satisfies the State Mandate for the Arts. It is one period every day for the entire school year. The Studio Art student explores the Principles and Elements of Design while creating a variety of artwork from an assortment of media. The course is 'process' not 'product' oriented and is designed for all motivated students to succeed in both the planning stage and the creation of artwork. Lessons in drawing, painting, printmaking, graphic design and sculpture are completed while incorporating some individual choice in design and subject. Art history will be incorporated to inspire students to create their own original work. A 'Showcase Portfolio,' which includes all work created during the course is sent home at the end of the school year. Several displays and exhibitions are planned for each year.

INDEPENDENT STUDY 1 credit

Prerequisite- 3 credits, in any combination, of Drawing/Painting & Mixed Media/Graphic Design/Sculpture/ Ceramics & Functional Art and teacher approval based on a portfolio review.

This course is for the serious, experienced art student who is interested in pursuing art as a lifelong interest or career. Independent Study involves collegiate level challenges that will complete the art student's experience and preparation for continuing education in the Visual Arts. Students will be given the freedom to choose their own projects, usually stemming from a certain idea, theme or material. With this freedom comes more responsibility as well. Students will be required to meticulously design and self-assess their own projects. Lessons are closely monitored to further build up artistic direction and personal vision. By improving weaker areas of knowledge and broadening experience, students are helped to prepare for college. A sketchbook will be very important throughout this process, and should serve as a visual record of the students' process. This will include all planning, intentions, experimentations and reflections. Part of the curriculum will be dedicated to developing an art portfolio, possibly with college admissions in mind.

GRAPHIC DESIGN I 1 credit

Prerequisite- Studio Art or PLTW Design & Drawing for Production

Graphic Design is a full year course that meets every day in the mac lab. Students will use various programs on the mac as well as the Adobe Creative Cloud Suite such as Photoshop, Illustrator, and After Effects. This class will give the students the knowledge and hands on experience they need in order to create meaningful, well designed projects and learn about graphic design as a potential career. Students will study trends in graphic design, influential designers and create artwork both commercial and creative inspired by these influences. Students have access to all photography, videography equipment as well as drawing tablets and iPads for creation. A digital portfolio is created throughout the course.

GRAPHIC DESIGN II 1 credit

Prerequisite- Graphic Design I

Graphic Design II is a full year elective course that meets every day in the mac lab. In this course students will go beyond project completion and learn how to work as a true graphic designer. The course will deepen knowledge of Adobe programs such as Photoshop, Illustrator and in Design. Students will also learn animation techniques using After Effects and video editing in Premiere Pro. Students will work within a design team, creating design briefs and sketches to present to a client.

Throughout the course students will expand upon their digital portfolio, complete a personal branding project and explore options for internships or college programs in graphic design.

MEDIA DESIGN & PRODUCTION I 1 credit

Prerequisite- Studio Art or PLTW Design & Drawing for Production

Media design is a course that introduces the tools, techniques, and concepts behind the production of digital media with a focus on video. Students will learn how to use digital photography and videography film equipment as well as film history, theory and film production. Students create both individual film projects as well as complete films within a group. Students explore how to plan, record, edit and produce a news video for the school, taking on different production roles. Students work with real life assignments, and the projects may vary depending on the needs and wants of the district.

MEDIA DESIGN & PRODUCTION II 1 credit

Prerequisite- Media Design & Production I

This course expands upon the basics of video production learned in Media I and allows students to explore the more advanced roles of production. Students will take a more active role in the acting and post-production work being completed in the film studio. Students will also act as mentors to the students in Media I, helping them become more comfortable with the equipment and completion of assignments. Students will complete a film reel portfolio and explore options for internships or college programs in media production.

SCULPTURE .5 credit

Offered in the Fall

This course is designed for the imaginative and innovative student, looking to broaden their high school visual art experience. Exposure to Contemporary Art and Artists will inspire creative, out-of-the-ordinary artworks produced during this course. Students will learn mold-making techniques, as well as using materials such as chipboard, wire, plaster, styrofoam and 3D-printing pen. Some nontraditional materials, such as recycled objects, will be incorporated into individually designed lessons. Collaborative works of art will also be part of this course. Students will study and research a variety of contemporary artwork, which will be reflected in students' personal art. Although this class has a sculptural focus, drawing will be an important aspect of the course! All projects must be investigated, planned and drawn in a sketchbook prior to beginning the 3D process.

This course is a prerequisite for the Ceramics & Functional Art course.

CERAMICS & FUNCTIONAL ART .5 credit

Offered in the Spring

Prerequisite- Sculpture

This course is designed for the imaginative and innovative student who wants to develop their sculpture skills. Students will be using earthenware and will learn a range of different hand-building, throwing and glazing techniques. Focus will also be placed on creating functional artwork, either out of ceramic or another medium, such as fiber art and mosaic. A sketchbook will be very important throughout this process, and should serve as a visual record of the students' process. All experiments, drawings, ideas, inspiration, intentions, reflections and research should be recorded in a journal on a daily basis, as well as researching art history to gain expertise.

DRAWING .5 credit

Offered in the Fall

Prerequisite- Studio Art

This class is for the enthusiastic art student and focuses on developing drawing skills. It meets every day for one semester. Although a focus will be placed on pencil, students will also use charcoal, colored pencils, conte, pastels and ink. A variety of styles will be explored while completing long-term, quality art projects. With some freedom of choice in planning projects, students will begin to develop personal style and direction while improving their technical skills.

A sketch book will be completed with work reflecting personal interests outside of the class artwork. Students will be responsible for exploring original ideas that will be the basis for certain projects, as well as researching art history to gain expertise and develop their theme.

Part of the curriculum will be dedicated to developing an art portfolio, possibly with college admissions in mind.

This course is a prerequisite for the Painting & Mixed Media course.

PAINTING & MIXED MEDIA .5 credit

Offered in the Spring

Prerequisite- Drawing

This class is for the enthusiastic art student and focuses on the development of skills through a range of materials and concepts. It meets every day for one semester. Students will create unique, original and nontraditional works of art by using familiar materials to create mixed media artwork. Many printmaking skills such as relief, reduction, mono-printing and etching will be implemented. The class will also investigate various painting techniques, such as watercolor, acrylic, gouache, and oil. With some freedom of choice in planning projects, students will begin to develop personal style and direction while improving their technical skills. A sketchbook will be very important throughout this process and should be a visual record of your journey in the class. All experiments, drawings, ideas, inspiration and research should be recorded in a journal, as well as researching art history to gain expertise. Part of the curriculum will be dedicated to developing an art portfolio, possibly with college admissions in mind.

BUSINESS EDUCATION

ENTREPRENEURSHIP .5 credit

You will discover the world of the entrepreneurship, and learn the skills to succeed as a small business owner. Student will learn about all aspects of business ownership, including human resources, financial management, business ethics, social responsibilities, communications, marketing, and management concepts. Students will study the development of business plan. Technology will be integrated throughout the course.

*****THIS IS A TWO-PART COURSE, MUST TAKE SOCIOLOGY OF SPORTS 2ND SEMESTER***

SOCIOLOGY OF SPORTS .5 credit

This course focuses on sports as social and cultural phenomena. Students will learn to use sociological concepts and critical thinking to discover how sports affect multiple spheres of our social life. The main focus will be on sports in the United States. Sports in other societies will be explored to help us better understand United States sports through comparison and contrast. Students will be encouraged to reflect on their own experiences as participants and spectators, and to connect these with larger social issues

BUSINESS OF PROFESSIONAL SPORTS 1 credit

This course will examine the sports of Major League Baseball, the National Football League, the National Basketball Association, and the National Hockey League from their inception to the present. We will look at things like the explosion in salaries and the introduction of salary caps, the introduction and use of agents to negotiate contracts, the advent of free agency, the players' unions and the power they wield, the promotion of teams, the difficulties that small market teams face, and other topics.

We will use appropriate films to illuminate and reinforce some of the topics and Sports Illustrated articles to identify other topics.

FINANCIAL MATH 1 credit

A practical look at information needed by all citizens who want to be successful in the real world, financial math will look at topics like gross and net income, budgeting, checking and savings accounts, credit and debit card use, car purchases and leases, house purchases and apartment rentals, life/auto/health insurance, and other important pieces of information.

BUSINESS MANAGEMENT 1 credit

Business management is a very comprehensive course that examines the global economy and the knowledge necessary to succeed in that environment. The student will be exposed to the business organization, human resource management, finance and accounts, marketing, and operations management.

ENGLISH

ENGLISH 9 REGENTS 1 credit

This course is designed for all 9th grade students. Expository writing expectations are reviewed and a variety of essay types are introduced. Development of vocabulary and appreciation of literature in various genres is analyzed, compared, contrasted and critiqued to promote critical thinking skills assessed by the revised NYS Regents.

Titles that may be read in English 9 Regents or HONORS are, but not limited to: To Kill a Mockingbird, Romeo and Juliet, Animal Farm, Princess Bride, The Crucible, Flowers for Algernon, They Cage the Animals at Night, Looking for Alaska, Monster, The Things They Carried. Students will also be required to complete independent self-selected reading.

Text: Patterns in Literature

****Students may contract with their teacher in English 9 and English 10 for Honors level work and credit/weighting. Credit is awarded only after successful completion of contract assignments.**

ENGLISH 10 REGENTS 1 credit

Prerequisite-English 9

English 10 is a one-year course which allows students to explore language for expressive, explanatory, critical, argumentative, and literary purposes. It fosters communication skills through writing in the form of journals, various personal and critical essays, and literary analysis. Verbal communication skills will be enhanced through class discussion, debate, and oral presentations.

Students will be given the opportunity to identify with others from the study of literature: short stories, novels, plays and poetry.

Weekly assignments, stressing critical thinking and writing skills based on fiction and non-fiction selections are essential elements of the course.

Titles that will be read in English 10 Regents include:

Text: Literature and the Language Arts

ENGLISH 11 REGENTS 1 credit

Prerequisite-English 10

This course is a survey of American Literature that stresses literary and cultural themes. This course includes a variety of literary genres. A thematic approach is used. There is a strong emphasis on writing, speaking, and discussion. The final assessment of student achievement is based upon the Comprehensive Regents Examination given at the end of the year.

Text: Literature: Reading Fiction, Poetry & Drama

ENGLISH 12 1 credit

Prerequisite-English 11

Students study an assortment of short stories, novels, and non-fiction literature. In addition, they will enrich their knowledge of the elements of theme, non-fiction, setting, plot, characterization, tone, mood, point of view and connecting issues in literature with the world today. These ideas are substantiated in the writing assignments and projects. In addition, students will participate in an extensive media unit designed to help them to deal effectively with our ever-changing society.

AP ENGLISH LITERATURE 1 credit (Grade 11)

Prerequisite-Teacher recommendation based on the AP/HONORS Recommendation Guide.

Students selected for this course will be involved in an extensive study of all literary genres with compositions following the MLA guidelines. One of the objectives is to prepare students to take the Advanced Placement examination offered by the College Board. Students are required to sit for the AP Examination in May.

DCC ENGLISH 101/102 1 credit (Grade 12)

Prerequisite-Teacher recommendation based on the AP/Honors Recommendation Guide, 85 or better on English 11 Regents exam

This course will address the major principles of college writing, which are meant to serve students in all the disciplines across the curriculum. The course concentrates primarily on expository and argumentative writing; traditional rhetorical modes; and effective composing, revising, and editing strategies. This class covers MLA conventions, and a research paper is required. Critical thinking and reading skills are also stressed. Emphasis will be placed upon well-organized written composition, factually-supported conclusions, and awareness of language variety.

Effectiveness of expression and validity of judgment in the student's writing are stressed. Genre reading will include fiction, poetry, and drama. Students will earn English 101 and English 102 credits from DCC.

Text: Literature: Reading Fiction, Poetry & Drama

FAMILY & CONSUMER SCIENCE

CHILD DEVELOPMENT & PSYCHOLOGY .5 credit

This course is designed to explore human development from the time of conception through adolescence. Students will explore developmental and psychological stages of individuals across the lifespan. This course will also discuss effective parenting theory and allow students to gain skills to relate and educate young people.

SOCIAL PSYCHOLOGY .5 credit

This introduction to psychology is designed to help the student appreciate the complexity of human behavior and personality development. The course focuses on supported learning and application and makes the connection between the scientific principles of psychology and the lives of today's student population. Topics include human development, personality theory, psychological disorders, states of consciousness, and current theoretical approaches to psychology. The focus of this course is to understand how and why our society functions the way it does.

LIFE ON YOUR OWN 1 credit

Topics for this class include: Where does your food come from? What are my options regarding energy? Planning for the future. Mock job interviews. Understanding your purchases and if you can afford them. Buying a car/deciding new, used or lease. Banking online and at the physical bank. Understanding options for after High School. 401ks and other retirement accounts. (Please contact Mrs. Petrosino for additional information if you have specific questions regarding this course)

CULINARY 1 credit

This course is for the beginner to intermediate and designed to learn basic food preparation skills and build on any existing knowledge the student might already have. Topics include food safety, proper knife skills, recipe reading and writing, proper equipment use, microwave cooking, cooking with milk, eggs, and cheese, baking techniques, sauces and many seasonal activities throughout the year. This class is an everyday class so do not assume you will be cooking/baking every day but labs are on a weekly basis.

MATHEMATICS

INTEGRATED ALGEBRA I CC 1 credit

This course is the first senior high school course in mathematics. The scope and content of this course is algebra, problem solving, the rectangular coordinate system, basic geometry, basic trigonometry, basic statistics and probability.

Scientific or graphing calculator required. All students will take the Integrated Algebra Regents exam at the end of the year.

GEOMETRY CC 1 credit

Prerequisite- Integrated Algebra I CC

This course is the second high school course in mathematics. The main focus of the course is geometry. The scope and content is geometry, analytic geometry, transformational geometry, and problem solving.

GEOMETRY CONCEPTS AND SKILLS 1 credit

Prerequisite- Integrated Algebra I and a passing score on the algebra regents

This is a second high school mathematics course that explores geometry topics through hands on manipulation and technology. The Integrated Geometry regents exam will not be taken at the end of this class. Geometry Concepts and Skills will cover topics such as lines, angles, polygons, circle geometry and coordinate geometry.

The use of technology; in the form of graphing calculators, GeoMeter's Sketchpad, excel and various Java applets will be utilized in the course.

ALGEBRA II CC 1 credit

Prerequisite- Geometry CC

This is a course in advanced algebra. Integrated Algebra includes topics such as exponential and logarithmic functions, trigonometric functions, conic sections, sequences and series, matrices, probability and statistics.

Integrated Algebra II/Trigonometry is designed for those students wishing to pursue mathematics and or science. The use of technology will be apparent in all aspects of this course and all students will be required to have a graphical calculator. This course will not have the Regents exam in Algebra II/Trigonometry as a requirement.

ALGEBRA II CONCEPTS AND SKILLS 1 credit

Prerequisite - Algebra I and Geometry CC

This course follows the NYS Math Standards and builds upon the concepts developed in Algebra 1 and Geometry. It explores radical, rational, polynomial, exponential, logarithmic, trigonometric functions, probability, and statistics with an emphasis on word problems and advanced algebra.

STATISTICS & PROBABILITY .5 credit

This is a course for college bound seniors that feel math isn't their strongest area of study. In this course we will cover material that will reinforce algebra concepts, take a look at statistics and probability, explore matrices, logarithms and exponential functions, and dabble in beginning calculus. During this year we will explore and reinforce mathematics that will help you fill in the gaps so you will be ready for college.

PRE-COLLEGE ALGEBRA .5 credit

Prerequisite - 3 high school credits in mathematics

Students will demonstrate an ability to graph functions such as lines, quadratics, and higher degree polynomial as well as relations such as circles and inequalities. They will extend graphing to solve equations and systems. Students will use algebra to solve equations and systems of equations. Extensive attention will be placed on factoring polynomials. Owning a graphing calculator is helpful but not required.

AP PRE CALCULUS / MARIST COLLEGE CONNECTION COURSE 1 credit

Precalculus is an introduction to the basic mathematical skills necessary for the study of calculus. The topics studied include rational expressions, analytic geometry, and the elementary properties of functions including exponential, logarithmic, and trigonometric functions. This course is intended for students who plan to enroll in MATH 241 but lack the necessary background. Appropriate technology will be selected by the instructor. This course is offered every fall. NOTE: This course may not be taken for credit by students who have completed MATH 241 or higher courses or their equivalents.

Prerequisite: Two years of high school algebra or MATH 108

Students are required to sit for the AP Examination in May.

AP CALCULUS (AB) / MARIST COLLEGE CONNECTION COURSE 1 credit

This advanced placement course includes analytic geometry, functions, limits, differentiation, integration, and their application in problem solving. Students are required to take the Advanced Placement examination. Successful completion of the course requirements will result in Marist College credits for Math 241 (4 credit hours).

PREREQUISITE: Pre-calculus or Algebra II/Trigonometry and teacher recommendation based on the AP/HONORS Recommendation Guide

Students are required to sit for the AP Examination in May.

AP CALCULUS (BC) / MARIST COLLEGE CONNECTION COURSE 1 credit

Calculus BC is an extension of Calculus AB rather than an enhancement: common topics require a similar depth of understanding. Both courses are intended to be challenging and demanding. The topics covered in BC Calculus include all the topics from AB Calculus and also the following: Parametric polar and vector functions, and the analysis of these functions using derivatives and integrals, Euler's Method and L'Hospital's Rule, Integration by parts, by partial fractions and indefinite integrals, logistic growth and decay problems, work with series and sequences including convergence, divergence and Taylor series. Students are required to take the Advanced Placement examination. Successful completion of the course requirements will result in Marist College credits for Math 242 (4 credit hours).

PREREQUISITE: AP Calculus AB and teacher recommendation based on the AP/HONORS Recommendation Guide.

Students are required to sit for the AP Examination in May.

MUSIC

BAND .5 credit

Prerequisite- Students were to have been involved with the MCSD band program with passing grades, or another similar school program if they are entering our school district. If a student wants to enter the HS Band without the prerequisite, they must get permission from the instructor after demonstrating a proficiency level appropriate for the HS Band.

The High School Band is a brass, wind and percussion ensemble that rehearses every other day in the school schedule. Students are also required to attend weekly sectional lessons which are set in a rotating class period schedule. Also, each student is required to practice at home. The HS Band performs at the Homecoming Football

Game, school concerts, and the Spring Arts Festival, among other concert events. Students must attend the performances.

Additionally, all band members will also perform at the Memorial Day Service and High School Graduation. The Band may also attend a music festival that may include an overnight stay. In addition, students will be given the opportunity to perform solos, in small ensembles and county and NYSSMA festivals. Students will be evaluated via performance ability, practice and participation.

CHORUS .5 credit

Prerequisite- Middle School Chorus or permission of instructor.

Chorus is a performing ensemble that meets as a class every other day. Other opportunities for select singers also exist on an individual basis. Students study, learn, and perform many different types of vocal literature, as well as rhythmic and melodic sight-reading. Attendance at all concerts is mandatory unless an excuse is provided to the instructor in advance.

Each student is also required to attend vocal lessons which are set in a rotating class period schedule.

Students are evaluated through rehearsal participation, written class work, tests/quizzes, concert/lesson attendance, homework, and group/individual vocal tests.

Students in the choral program are expected to demonstrate commitment and dedication to vocal/choral music through outstanding attitude, effort, and achievement.

HEALTH & PHYSICAL EDUCATION

HEALTH EDUCATION .5 credit

This course attempts to develop sensible and lasting attitudes and behavior regarding many areas of life impacting personal wellness. The three major components of health are physical, mental/emotional and social health. The units of study under these components include: drug, alcohol, tobacco, nutrition, fitness, stress management, reproduction, families and relationships, diseases and disorders as well as environmental health. Some of the skills acquired through these units are goal setting, decision making, and communication and refusal skills. Efforts to ensure competence in these areas of health should assist our young people in leading more well balanced and healthier lives. This course is usually offered to the 10th grade student and is a New York State mandated requirement for high school graduation.

PHYSICAL EDUCATION (grades 9-12) .5 credit

The purpose of the Senior High Physical Education is to lead healthier and more physically active adult lives. The activity-based program provides opportunities to attain concepts and learn skills in depth, for fitness, development, team, individual and dual lifetime sports, outdoor activities, and personal living by learning about the roles played in developing healthful behaviors. In addition, students will understand and be able to manage their personal and community resources so they can continue to be physically active beyond school. The goals of the program reflect the New York State learning standards for Physical Education, and the district mission.

SCIENCE

EARTH SCIENCE REGENTS 1 credit

Earth Science is a Regents course where students will study meteorology, astronomy, oceanography, and the geology of the Earth. It is a demanding course that requires the student to study a minimum of 30 minutes each night. Students are also required to complete a minimum of 20 laboratory hours as required by the New York State Board of Regents. Students completing the necessary lab hours will sit for the Earth Science Regents exam in June. Lab periods are scheduled every other day for 1 period where students will conduct investigations that are hands-on; a written lab report will be required for each investigation. Amsco's Earth Science Review book is a required part of the course.

LIVING ENVIRONMENT REGENTS 1 credit

Regents Biology is a 40-week course that culminates in a state Regents Living Environment exam in June. The course requires a minimum of 20 minutes a night for study in order to be prepared for the end of the year assessment.

There is also a minimum of 20 lab hours (1200 minutes) of laboratory activities or their equivalent required by the state. As part of the 20-lab hour requirement, this lab section must include the successful completion of 4 state required labs. Lab periods are scheduled every other day for 2 periods. Written documentation is required for all labs and many more lab activities are completed than required by the state.

This course covers topics, which include; diversity, structure, and chemistry of living things, reproduction and development in plants and animals, genetics, homeostasis in organisms, evolution, and ecology.

The course gives students an understanding of their bodies and life processes as well as showing them that they are part of life and have a relationship with other living things in addition to their physical environment.

CHEMISTRY REGENTS 1 credit

Prerequisite- Passing score on Living Env, and/or the Earth Science & Integrated Geometry Regents Exam

Chemistry is an advanced Regents science course that requires each student in the course to complete a minimum of 1200 minutes of laboratory activities. The course includes the study of matter and its interactions. Units include Phases of Matter, Atomic Structure, Periodic Table, Formulas and Nomenclature, Bonding, Chemical Reactions, Energy and Kinetics, Equilibrium, Acids and Bases, Organic Chemistry, Electrochemistry, and Nuclear Chemistry. The Regents Examination will be given at the end of the year.

PHYSICS REGENTS 1 credit

Prerequisite- Successful completion or co-enrollment in Algebra II

Physics is an advanced Regents course that requires students to complete 1200 minutes of laboratory activities and sit for the Regents Examination at the end of the year. In this course we study the physical laws that govern how matter and energy interact. Students will develop problem solving skills to analyze physical situations and apply physical laws to make predictions. Units of study include: Kinematics, Forces and Newton's Laws, Momentum, Energy, Circular Motion and Gravitation, Waves and Sound, Light, Electrostatics, Electrical Circuits, and Modern Physics.

AP PHYSICS 1 credit

Prerequisite – Algebra CC

This course is an Algebra-based, introductory, college level physics course. Topics Covered: Kinematics, Dynamics, Circular Motion and Gravitation, Energy, Momentum, Simple Harmonic Motion, Torque and Rotational Motion. No prior course in Physics required.

NOT Required: Regents Physics, knowledge of Calculus

AP COMPUTER SCIENCE 1 credit

Introductory, college-level computer science course. Students will learn to design, program, test, and document computer programs in Java. Project-based and hands on. No prior knowledge needed. Topics covered: Classes and Objects, Inheritance and Polymorphism, Program Design and Analysis, Arrays, Recursion and Iteration, Sorting Algorithms

FORENSICS / ENVIRONMENTAL SCIENCE 1 credit

This course will provide students with an introduction to the theoretical understanding and practical application of forensic science techniques while learning basic concepts in Earth Science, Chemistry and Physics. Topics include: crime scene investigations, evidence collection and examination, interaction of physical conditions with evidence, careers in forensics, bloodstain pattern analysis, soil analysis, forensic toxicology, forensic anthropology, and ballistics.

SUPA FORENSICS 1 credit

Prerequisite – Mastery on both Living Environment and Chemistry regents

SUPA Forensics: Chemistry 113, Introduction to Forensic Science, is focused upon the application of scientific methods and techniques to crime and law. Recent advances in scientific methods and principles have had an enormous impact upon science, law enforcement and the entire criminal justice system. In this course, scientific methods specifically relevant to crime detection and analysis will be presented. Emphasis is placed upon understanding the science underlying the techniques used in evaluating physical evidence. Topics included are blood analysis, organic and inorganic evidence analysis, fingerprints, hair analysis, DNA, drug chemistry, forensic medicine, forensic anthropology, toxicology, fiber comparisons, soil comparisons, and fire and engineering investigations, among others. Four credits from Syracuse University can be earned with successful completion of the course.

BIOLOGY / DCC COLLEGE CONNECTION 105 .5 credit

Prerequisite- Chemistry knowledge, Math Placement level 3 (Algebra 2 Trig)

4 credit hours – An interdisciplinary study of basic biological concepts, including the nature of science, matter, the cell, characteristics of living matter, a brief survey of the living world, and ecology. **BIO 105 and BIO 106** are recommended for students who wish to pursue studies in the Biological and Life Sciences.

BIOLOGY / DCC COLLEGE CONNECTION 106 .5 credit

Prerequisite: BIO 105 with a grade C or better.

4 credit hours – A continuation of **BIO 105**, including homeostasis in organisms, genetics, evolution and a consideration of the structure and function of tissues, organs and organ systems.

SECOND LANGUAGE

FRENCH II 1 credit

Prerequisite- Successful completion of the NYS Proficiency exam in French

This course is designed for advancement and broadening of the skills of listening, speaking, reading, and writing, as well as, essential grammatical structures. Further development of student understanding of the French way of life is pursued. French II is designed to fulfill one half of the NYS syllabus Checkpoint B requirements.

FRENCH III 1 credit

Prerequisite- French II and teacher recommendation

As the continuation of French II, extensive practice toward the mastery of the four skills of listening, speaking, reading, and writing is maintained. Class is predominantly conducted in the target language and emphasizes the vocabulary, grammar and cultural topics in accordance with Checkpoint B requirements. Students are expected to actively participate in class. At the end of the course, students will take a final assessment.

French IV/V HONORS 1 credit

Prerequisite: A grade of 80 or better in French III and teacher recommendation

This is a combined course for French IV and V students to develop a greater degree of mastery of the French language and culture through French literature, film, music, art, journal writing, internet research projects and class presentations, students will increase vocabulary, refine grammatical structures and verbs, and further develop the

four skills of listening, speaking, reading and writing. Thematic units from the textbook, Discovering French, Rouge and Imaginez will also enhance students' knowledge of real-world vocabulary and increase opportunities for communication in the classroom. This class is for motivated students who wish to actively participate in the target language.

SPANISH II 1 credit

Prerequisite- Successful completion of the local exam in Spanish

In this course students will advance and broaden the skills of listening, speaking, reading, and writing, blending essential grammatical structures. Further development of student understanding of the Spanish way of life is pursued. Spanish II is designed to fulfill one half of the NYS Syllabus Checkpoint B requirements.

SPANISH III 1 credit

Prerequisite- Spanish II

As the continuation of Spanish II, extensive practice toward the mastery of the four skills of listening, speaking, reading, and writing is maintained.

Class is conducted in the target language emphasizing cultural and grammatical topics in accordance with Checkpoint B requirements. Students will take a final assessment at the end of this course.

SPANISH IV HONORS 1 credit

Prerequisite- Recommendation is contingent upon successful completion of timed assessment at the end of Spanish III and teacher recommendation based on the AP/HONORS Recommendation Guide

Spanish IV Honors provides advanced students the opportunity to review all grammatical concepts, improve speaking skills and pronunciation, expand reading comprehension, enhance writing ability and refine listening comprehension.

This course is preparation for AP Spanish.

The objectives for the course are as follows:

- Students will comprehend formal and informal spoken Spanish.
- Students will acquire sufficient vocabulary and knowledge of structure to allow easy,
- Accurate reading of news and magazine articles as well as Spanish literature.
- Students will compose persuasive and expository passages.
- Students will express ideas orally with reasonable accuracy and fluency.

Select readings of Spanish authors, history, geography, art, music, life, and people, taken from a variety of online sources, texts, magazines, and newspapers are used to enhance vocabulary and perfect major grammatical structures.

SPANISH V HONORS (INTERMEDIATE SPANISH I & II / DCC COLLEGE CONNECTION COURSE) 1 credit

This course will expand on improving the listening, reading, writing and speaking skills, as well as culture in the Spanish-speaking world. It provides an overall grammar review with the introduction of more advanced structures which will include an introduction to the subjunctive tense. Ninety-percent of this class will be conducted in Spanish.

SOCIAL STUDIES

GLOBAL HISTORY & GEOGRAPHY I (Grade 9) 1 credit

This course begins a two-year program in global history with a chronological approach to the study of Africa, The Middle East, South Asia, East Asia, Southeast Asia, Latin America and Europe. It is designed to cultivate in students the knowledge, skills, and attitudes needed to function within a global perspective marked by cultural diversity and diffusion. Students will start with the Early Civilizations of the World and end this year with The Age of Exploration.

Within these areas the students will study geography, history, political science, economics, the fine arts and issues that illustrate the dynamics of change. Each student is required to maintain a well-organized notebook and to complete all assigned work.

GLOBAL HISTORY & GEOGRAPHY II (Grade 10) 1 credit

Prerequisite- Global History & Geography I

Global History II includes the study of Africa, the Middle East, South Asia, East Asia, Southeast Asia, Latin America and Europe from 1800 to present. It is designed to cultivate in students the knowledge, skills, and attitudes needed to function within a global perspective marked by cultural diversity.

Students will study geography, history, political science, economics, the fine arts, and contemporary issues that illustrate the dynamics of change. Each student is required to maintain a well-organized notebook and to complete all assigned work.

Topics to be covered include geography, history, dynamics of change, economic developments and contemporary issues.

Requirements include textbook and selected reading materials, outside research, oral reports and examinations. All students must successfully pass the Regents examination in order to graduate.

AP HUMAN GEOGRAPHY 1 credit

Prerequisite- Teacher recommendation based on the AP/Honors Recommendation Guide

This full-year course mirrors a semester-course in college level Human Geography. Areas of study include Physical Geography, Culture, Politics, Economics, Agriculture, and Urban Land Use.

This course is primarily open to junior and senior students. Sophomores may be placed in the course at teacher discretion.

Students are required to sit for the AP examination in May.

AP EUROPEAN HISTORY 1 credit

Prerequisite- Global History I and Teacher recommendation based on the AP/HONORS Recommendation Guide

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. In addition to providing a basic narrative of events and movements, the goals of the AP program in European History are to develop (a) an understanding of some of the principal themes in modern European History, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing. In June, students will also take the New York State Regents exam in Global History and Geography.

The course is for students in the 10th grade and fulfills the Global History II requirement. A limited number of spots may be open for junior and senior students at teacher discretion. Students are required to sit for the AP examination in May.

UNITED STATES HISTORY & GOVERNMENT 1 credit

Prerequisite- Global History I & II

The history of the United States is the history of a great experiment in democracy. Knowledge and function of American government, learning about the basic principles and cultural heritage upon which our nation is founded, plus a core program of Thirteen Enduring Constitutional issues are highlights in this course. At the completion of the 11th grade course, all students take the Regents Examination in United States Government.

ECONOMICS & PARTICIPATION IN GOVERNMENT 1 credit

Prerequisite- Global History I & II and US History and Government

The ECONOMICS section focuses on the study of the distribution of resources, economic theory and the American Economic System. Assessments and assignments stress analysis and writing skills. In addition, each student completes a long-term project and a research paper. GOVERNMENT surveys how our government works. In PARTICIPATION IN

GOVERNMENT students will study the various functions and types of government. Students will also explore several national issues. Assessments and assignments stress analysis and writing skills. In addition, each student completes a long-term project and a research paper.

AP GOVERNMENT / DCC COLLEGE CONNECTION COURSE 1 credit

Prerequisite- Teacher recommendation based on the AP/HONORS Recommendation Guide

In this course, students will understand some of the world's diverse political structures and practices. Six countries are studied in detail: Great Britain, China, Russia, Iran, Nigeria and Mexico.

US: This course gives students an analytical perspective on government and politics in the US. It includes study of the general concepts and analysis of specific examples. It also studies institutions, groups, beliefs and ideas that constitute US politics. Students will earn 3 credits in Gov 121. *ECONOMICS:* The Economics Section focuses on the study of the distribution of resources, economic theory and the American Economic System. Assessments and assignments stress analysis and writing skills. In addition, each student completes a long-term project and a research paper. Students are required to sit for the AP exam in May.

AP UNITED STATES HISTORY 1 credit

Prerequisite- Global I, Global II/AP Euro & teacher recommendation based on the AP/HONORS Recommendation Guide.

AP US History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and challenges in US history. The course prepares students for advanced college courses in history by making demands upon them equivalent to those made by full-year introductory courses.

Students learn to assess historical materials – their relevance to a given problem, reliability, and importance - and to weigh the evidence and interpretations presented in historical scholarship.

Students will prepare to take the AP exam in May by reviewing objective questions as well as writing free response and document based essays. In June, students will also take the New York State Regents exam in US History and Government. Students are required to sit for the AP examination in May.

PROJECT LEAD THE WAY

INTRODUCTION TO ENGINEERING AND DESIGN / DESIGN AND DRAWING FOR PRODUCTION RIT COLLEGE CONNECTION COURSE 1 credit

Prerequisite- Recommendation from the 8th grade team

This is a one-unit course which emphasizes creative problem, designing, and computer-aided drawing. The course reflects the approach used in business and industry to develop new products. Students will develop solutions to various design or product problems and proposed solutions are researched, sketched, refined, and rendered as drawings. Basic elements of design and technical drawings are covered. This course may be used to satisfy the art requirement. Students must take and pass a required examination from RIT to receive 3 college credits. Please see page 11 for specific registration procedures to receive credit from RIT.

PRINCIPLES OF ENGINEERING/ RIT COLLEGE CONNECTION COURSE 1 credit

Prerequisite- Design & Draw and teacher recommendation based on the AP/HONORS Recommendation Guide

This course provides an overview of engineering and engineering technology. It explores the different specialties of engineering, the design process, and the principles of different engineering systems including: mechanisms; thermodynamics; fluid systems; electrical systems and control systems; the strength of materials and how they relate to the manufacturing process, engineering for reliability, and kinematics.

Students must take and pass a required examination from PLTW to receive 3 college credits.

CIVIL ENGINEERING/ARCHITECTURE **RIT COLLEGE CONNECTION COURSE 1 credit**

Prerequisite- Design & Draw, Principles of Engineering, Digital Electronics & teacher recommendation based on the AP/HONORS Recommendation Guide

The major focus of the Civil Engineering and Architecture (CEA) course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. The CEA course is intended to serve as a specialization course within the Project Lead The Way sequence. The course is structured to enable all students to have a variety of experiences that will provide an overview of both fields; civil engineering and architecture. Students work in teams, exploring hands-on projects and activities to learn the characteristics of these two fields.

In addition, students use Rivet, which is a state of the art computer-aided design software package from AutoDesk, to help them design solutions to solve their major course project. Students learn about documenting their project, solving problems, and communicating their solutions.

The course of study includes: the roles of civil engineers and architects; project planning; site planning; building design; project documentation and presentation.

Students must take and pass a required examination from PLTW to receive 3 college credits.

DIGITAL ELECTRONICS 1 credit

Prerequisite- Principles of Engineering, Design and Draw, Civil Engineering

This course is the study of electronic circuits that are used to process and control digital signals. Digital electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras, and high-definition televisions. The major focus of the DE course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation.

STUDENT SUPPORT CLASSES

ENGLISH AS A SECOND LANGUAGE 1 credit

Courses in English as a Second Language provide speakers of other languages instruction in listening, speaking, reading, and writing with the purpose of developing cognitive academic language proficiency. The ESL program endeavors to prepare students for academic coursework in English in all content areas. Additionally, the ESL program provides students opportunities to access scholastic and extracurricular programs at the Millbrook High School in an effort to maintain students' native cultural identity and to encourage their participation in a range of academic and social experiences.

The ESL program seeks to create a safe, nurturing environment for English language learners (ELLs) throughout their high school career. In order to help build connections between ELLs and their new community, the ESL program provides structured opportunities for ELLs to interact with other high school students, faculty, social workers, and counselors during and after the school day.

WIN (What I Need)

The Learning Center supports students who are struggling with the core curriculum. Students may be assigned to the Learning Center based on their academic needs as determined by members of the Response to Intervention Committee. Students receive individualized or small group instruction designed to maximize their learning.

Individual learning styles and differentiation are taken in to consideration when planning intervention strategies for students.

SPECIAL EDUCATION SERVICES

RESOURCE ROOM

Resource Room is designed to support students in successfully achieving individualized goals. Instruction is targeted to meet the specific needs of each student and can be administered one to one or in a small group setting.

LEARNING CENTER

The Learning Center supports students who are struggling with the core curriculum. Students may be assigned to the Learning Center based on their academic needs as determined by members of the Response to Intervention Committee. Students receive individualized or small group instruction designed to maximize their learning. Individual learning styles and differentiation are taken in to consideration when planning intervention strategies for students.

DUTCHESS BOCES CAREER & TECHNICAL INSTITUTE 2023-2024 COURSE OFFERINGS

All of our programs offer students the opportunity to gain basic entry level career skills as well as the skills necessary to enter a College or Technical school.

*Please note that CTI Courses are not currently National Collegiate Athletic Association (NCAA) approved.

Career Exploration ✓

Career Exploratory Program

This course is geared for students in 10th and/or 11th grade who are classified with disabilities pursuing a Regents Diploma or CDOS Credential. Students will be given a foundation in career skills and will explore a number of career options. Students will have hands-on learning opportunities in a variety of trade areas to prepare them for future study. Additional services include career counseling, career research and work based learning opportunities. Upon successful completion, students may enter CTE programming.

Agriculture✓

Small Engine Technology I - Students will explore the theory and operation of two and four cycle engines including basic Carburetion, Lubrication, Ignition, Cooling, and Fuel Supply, Air induction, and Emissions. Students will have the opportunity to dive into real life scenarios in the small engine shop using specialty diagnostic tools and skills they have developed.

Small Engine Technology II - Students will dive deeper into two and four cycle engine operation, focusing on engine systems and engine service. Students will explore trade specific tools used by the industry to diagnose and service various engines and vehicles related to power equipment, power sports and marine sports.

Careers in Animal & Plant Sciences I - Students cultivate an understanding of the diverse and profitable fields of Agriculture. A wide variety of topics are covered including plant and animal biology and technology, leadership skills, college and career exploration, and career skills development. The program emphasizes hands-on, heads-on and hearts-on learning with on-site projects, public speaking events, work placements, and guest

speakers. Field trips to businesses, organizations, colleges, and industry events are also included within the class. In the first year, students focus on five animal science and five plant science careers including Veterinary Technician, Wildlife Manager, Animal and Plant Producer, Floral Designer, Arborist/Tree Climber, Animal and Plant Research Scientist, Landscape Architect, Agriculture Business Manager, and Animal Trainer.

Careers in Animal & Plant Sciences II - In the second year, students focus on application of knowledge gained in year one. By applying to college, designing and running a year long research project, and working at off-site placements, students experience their interests in a real-world context. All students become FFA members which connects young agriculturalists to others like them and to industry professionals. Opportunities in leadership, competitions, awards and travel are available to members.

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Architecture & Construction ✓

Construction Trades I & II - This two-year program is designed to provide 11th and 12th grade students with training in jobsite and shop safety, knowledge of personal protective equipment and OSHA regulations. Students will gain experience working with various hand tools, power tools and construction materials. In addition to the theory and practical experience the student will receive working in and around the CTI campus; field trips, internships and guest speakers will supplement the course. Within an atmosphere of discipline and attention to detail, rigorous academics will integrate construction practices and job readiness instruction with Career literacy, Trade related mathematics, and hands-on skill building activities. Students complete their high school education while being exposed to the various aspects of a career in the construction trades and receive training to apply for, interview for and retain employment. An emphasis is placed on customer service, communication skills and work ethic, helping students become better prepared to approach their future as critical thinkers and responsible citizens.

Trade Electricity I & II - This program provides students entry level skills in construction electricity. Courses emphasize job safety, electrical theory, electrical calculations, work ethic, proper tool use and exposure to professional opportunities within the trade. First year focus is on residential installations, followed by second year directed at commercial and industrial installations and include electrical theory, safety/OSHA job-site regulations, commercial/industrial wiring methods, circuit loading calculations, hand & power tool usage, service entrance installation/calculations, and introduction to electric motors/controllers. Students must provide hand tools and code book.

***Heating, Ventilation, and Air Conditioning I & II** - This introductory program will cover the basics of the HVAC trade. It will include basic HVAC/R principles, safety, tools, and professionalism. Students will learn the basics of HVAC electrical wiring, hydronic heat, forced air heat, air conditioning and refrigeration. Students will learn how to install, repair and maintain residential and commercial heating and cooling systems; this includes: proper usage of tools, proper protocol for annual preventative maintenance, and how to properly identify and diagnose issues/malfunctions within HVAC systems.

Welding & Fabrication I - This course is the first year of a two year program that is geared toward entry level welding and fabrication using various welding techniques on carbon, stainless steel, and aluminum. The first year welding program will provide the students with all of the safety knowledge and basic skills to work in a shop environment both safely and efficiently preparing them for the second year and completion of the program.

Welding & Fabrication II - This second year program is geared toward advanced level welding and fabrication using various welding techniques on carbon, stainless steel, and aluminum. It will provide students with all of the advanced skills and confidence needed to

join the welding workforce including resume writing and job interview preparation

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Arts, Technology & Communication ✓

***Fashion Design & Merchandising I & II** - Fashion Design & Merchandising is a twoyear program which offers instruction and practical experience in the skills and theory necessary to be employed within the fashion design and merchandising industry. Students will have the opportunity to learn and practice different functions of the merchandising process, including the development of buying plans, promotional materials, events and sales strategies for multiple retail channels. Students will develop visual research skills through applied design principles, and creativity to select appropriate fabrics for the construction of garments by editing and balancing a ready-to-wear collection. They will develop their skills through visual, technical, digital and verbal presentations.

Graphic Design I - Students will be given the opportunity to explore the exciting world of Graphic Arts, Graphic Design, and Multimedia Arts. Students will develop skills and workplace competencies while exploring the many facets of communication careers. Students use a hands-on learning approach using the ADOBE SUITE of creative software where the emphasis is placed on problem solving skills, and communication techniques. As part of the graduation requirement, all students develop and create projects that will be part of a portfolio used in seeking employment or college acceptance. The majority of the work done is project-based. In year one, students will be introduced to design terms and concepts where they will learn and use Adobe Illustrator, Photoshop and InDesign to make projects that utilize these concepts.

Graphic Design II - In year two, students will build upon what they learned in year one with an emphasis on solving more complicated design tasks. They will learn to use digital tools on drawing pads and develop advanced photography skills.

TV/Film Production I & II - This course introduces students to the basics of film production and will help students develop a solid foundation in the three phases of production (Pre-Production...scripts, storyboards etc...Production..."Action"...and Post Production...editing, voice overs etc.). In addition, students will develop skill and workplace competencies while exploring the production job market. TV/Film students will gain an understanding of how films and television shows are constructed, technically as well as thematically. Students will be introduced to the basic "building blocks" and formal elements of production (narrative, lighting, cinematography, sound, editing) that make up the film as well as some fundamental principles of analysis, genre, style, performance and storytelling.

Education✓

Early Childhood Education I - Students will explore the physical, cognitive, and socialemotional development of children ages birth to eight. Learners will develop and build teaching and guidance skills and will have the opportunity to write lesson plans and a children's book. Students will design a classroom environment based on developmentally appropriate practices and current state licensing standards.

Early Childhood Education II - During the second year of this program students will explore teaching the individual subject areas and will develop practical strategies for guiding children in their daily routines grounded in educational theory. Students will have the opportunity to study a children's author and an educational theorist, and will put their previous study into practice by working off-site in a local early childhood setting.

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Health Sciences✓

Introduction to Health Occupations - IHOC is a one year introductory course into the health occupations. We explore many health related careers. Topics such as: professionalism, legal and ethical issues, infection control, growth and development, cultural

competence and nutrition will be covered. This course is foundational in nature and a solid starting point for continuing in a variety of health care career options. Introduction to Health Occupations is strongly recommended before taking the Nursing Assistant (CNA) course. The second year option is the Nursing Assistant program.

Nursing Assistant - This one-year course for seniors introduces the student to the foundation skills necessary for the study of Nursing. Successful students qualify to take the CNA exam. Successful completion satisfies the health requirement for high school graduation. Important Note: Intro to Health Occupations is strongly recommended before taking Nursing Assistant. Work maturity skills and professionalism is essential to success in the Nursing Assistant program

Hospitality & Tourism✓

Culinary Arts /Restaurant Management I & II - Come and explore the art of food! The program explores Culinary Arts, Baking and Pastry and Restaurant Management. We have two full production kitchens that support our forty seat restaurant and catering. As a student in this program, you will learn the real techniques that are needed to be successful in the food service industry. Our Culinary program does not just include culinary theory; it also provides practical knowledge and skills you can apply to your first job and throughout your professional career. You will cover many units of study including sanitation and safety, nutrition and food science, and, of course, culinary and baking techniques. Keep your interest alive and your love for food and cooking fresh by trying new foods and running a real restaurant. Come taste and flavor what we have to offer you!

Human Services✓

Cosmetology I - Cosmetology I is the first year of a 2 year program in which students have the opportunity to achieve 500 hours. This part of the course provides foundational training necessary for the development of basic Hand manipulative skills, safety judgements, proper work habits, and professional attributes necessary to achieve competency in entry-level job skills. Good attendance is essential to this course.

Cosmetology II - Cosmetology II is the second year of a 2 year program in which students have the opportunity to achieve 500+ hours. This part of the course builds off of the foundational training necessary to continue to develop hand manipulative skills, safety judgements, increase proper work habits, and professional attributes necessary to achieve competency for achieving and acquiring an entry-level position. The students will more thoroughly develop their foundational skills through practical drill experience and project based learning. Good attendance is essential to this course. At the end of this year, students who successfully complete the program, with at least 1000 hours, will be eligible to apply for the New York State Cosmetology Licensing Exam in order to obtain their license.

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Information Technology✓

Computer Networking & Cybersecurity - This 1 year program in Networking+ Computer Training is designed to provide the student with the technical knowledge and skills required for an entry-level position in the information and computer technology career field. The program will participate in the NYS Career Exploration and Internship Program [CEIP]. The course will prepare you to take the TestOut Network Pro and CompTIA Networking+ Certification Examination.

Computer Hardware Technology – (Formerly called A+ Computer Repair.) This 1-year program in Computer Hardware Technology Technician is designed to provide the student with the technical knowledge and skills required for an entry-level position in the information and computer technology career field. The program will participate in the NYS Career Exploration and Internship Program [CEIP]. The course will prepare you to take the TestOut PC Pro and CompTIA A+ Certification Examinations. Prerequisite: Math Course A

Law and Public Safety✓

Security & Law Enforcement I - The first year of the program is designed as an introduction to the field of criminal justice, covering the components of the criminal justice system (police, courts, corrections), the interactions of these components through the steps in the criminal justice process, as well as the constitutional requirements of due process of law. Students will become familiar with the law, specifically the New York State Penal Law, the Criminal Procedure Law, and the Vehicle and Traffic Law. Students will also be exposed to controversial topics, such as search and seizure, use of force and police defensive tactics. Students will receive a realistic introduction to the popular subject of crime scene investigation. Students will finish the year by demonstrating their knowledge and skills through realistic scenario-based training.

Security & Law Enforcement II - The second year of the program begins with an introduction to criminology, including crime reporting, theories of crime and crime causation. After a brief examination of juvenile delinquency, the focus of the program shifts heavily to the investigation of various types of crimes. Finally, the emphasis of the second year leads to the field of security, including terrorism, threat assessment, as well as crime prevention. Students will have the opportunity to complete training and obtain certifications in CPR and First Aid, an Introduction to the National Incident Management System, an Introduction to the Incident Command System, and both the Pre-Service (8-hour) and In-Service (16-hour) New York State Security Guard Training. Students who complete two years of the Security & Law Program are eligible for 1 unit of English, 1 unit of Science, and 1 unit of PE.

Transportation✓

Automotive Technology I - In this program students work with skilled instructors to learn repair techniques on foreign and domestic cars and light trucks using the latest techniques and computerized diagnostic equipment. Throughout the rigorous two-year program, students will learn to diagnose and repair various vehicle systems and work on real cars with state-of-the-art electronic testing equipment. While working in a modern service and repair facility, students gain daily practical experience repairing vehicles provided by Dutchess BOCES, students, and faculty. Completion of this program ensures your readiness

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for entry-level employment in the automotive industry. Year 1 Topics Include: Lubrication & Cooling Systems, Brakes, Steering, Suspension

Automotive Technology II - Students dive deeper into the topic of Automotive in Year 2. Topics include: Electrical System, Engine performance, Manual Drive Train, and Automatic Transmission. Selected students may be eligible for internship experience at local repair facilities during the second year of this program.

Related Academics✓

Career Literacy (CTE English) - All programs offer .5 credit per year in high school English, with the exception of Career Exploratory.

***MST** - This Math-Science-Technology class fulfills the requirement for a third unit of Math or Science credit. ***This class will no longer be offered starting next school year.**

Integrated/Specialized Science and Math - Please refer to the CTI Academic Reference Guide.

For more details on our programs, please visit our website www.dcboces.org/CTI or call

DEFINITION OF TERMS USED IN THIS COURSE GUIDE

Credit	<ul style="list-style-type: none">• The value given to a high school subject taken daily for a minimum of 180 minutes per week (excluding laboratory periods) for 40 weeks.• Courses that meet every other day will be awarded .5 credits• Courses that meet for a semester will be awarded .5 credits
Elective	A subject which is chosen by the student to complete the total number of units required or to enrich the instructional program.
Regents Credit	Credit granted by the NYS Board of Regents upon successful completion of course requirements and the passing of a NYS Regents exam.

INSTRUCTIONAL LEVELS

Millbrook High School offers a diversified curriculum for students who are distinguished by wide individual differences in ability, achievement, effort and interest. The goal is to enable students to achieve and to realize their highest potential. Teacher and counselor recommendations for placement are based on the following criteria:

- A. Standardized test data
- B. Academic achievements
- C. Observations of a student's work habits, interest, attitude, and motivation

The school staff considers the recommendation of instructional level a major professional responsibility. Should a parent or guardian have a question or concern about the placements, they are invited to schedule an appointment with the counselor and teacher to review it.

COLLEGE PREPARATION

Every student should be concerned not only with meeting graduation requirements, but with meeting college and other post-secondary education requirements as well. Students need to consult college catalogs and to keep up-to-date on admissions. The School Counseling Office maintains a current collection of catalogs as well as SAT, ACT, FAFSA, PSAT applications, and other information needed by students contemplating post-secondary studies. In addition, regular visitations from college representatives are scheduled. The School Counseling Office is a valuable asset for students to utilize as they begin planning what they'll do after graduation. Students should visit the Naviance program accessed by MCSD.

It is never too early to begin this planning. Students are encouraged to utilize these services early in their high school careers and on a regular basis during their career at Millbrook High School.

CRITERIA FOR CLASS STANDARDS

Education is a progressive experience and is measured in terms of progress toward a goal. Students are classified according to the number of credits which they have earned toward graduation:

SOPHOMORE	5.5 credits, one unit of each English and Social Studies
JUNIOR	11 credits, two units of each English and Social Studies
SENIOR	16.5 credits, three units of each English and Social Studies or can be enrolled in sufficient courses to be eligible for graduation

Although a student will not be denied senior status for a deficiency in Physical Education, no student may graduate in the state of New York unless he/she has at least 2 credits in Physical Education.

SCHEDULE CHANGES

Schedule changes and drops will be made only when needs are clearly indicated. The deadline for such schedule changes must be made a week after progress reports are available (the end of the 6th week of school). After this date all requests to drop/change courses may require a parent conference with the teacher, counselor, student and principal. Requests for such changes must be in writing on the appropriate form available in the School Counseling Office. The request will not receive final approval until the appropriate form is returned.

HONOR ROLL

High Honor Roll – reserved for students with a weighted average of 90.0 or above using all subjects, with no weighted grade below 80.0, as well as no incomplete grades.

Honor Roll – reserved for students with a weighted average of 85.0 or above, using all subjects, and no weighted grade below 75.0, as well as no incomplete grades.

Honorable Mention – reserved for students with a weighted average of 80.0 or above, using all subjects and no weighted grade below 70.0, as well as no incomplete grades.

* Overall averages are not rounded up.

GRADING AND RANKING

Report cards are issued four times a year: mid-November, early February, mid-April, and late June. Parents should be aware of these dates for the purpose of reviewing academic progress, and should direct all questions concerning grades to the teacher responsible for issuing them. The passing mark is 65%. In February of their senior year, official class rank is determined, taking into account grades from 1st semester.

Final ranking is completed at the end of the second quarter. Rank in class is determined by weighted average. Grades on a transcript are not weighted. Weighting is used to calculate rank in class only. Alpha conversion of grades is as follows:

A+= 97-100	B+=87-89	C+=77-79	D+=67-69	F=64 and below
A = 93-96	B = 83-86	C =73-76	D = 65-66	
A- = 90-92	B- = 80-82	C- = 70-72		

Association of Secondary School Principal's Recommended Formula

Weighting	Average	
AP/College	X	1.06
Honors	X	1.04
Regents	X	1.02
School	X	1.00

Effective July 1, 2011, transfer students who enter Millbrook High School after the completion of one or more years at another institution may participate in a transcript review. The principal will be able to weight transfer classes based on curricular expectations and difficulty level. It is the responsibility of the student to provide information requested by the principal deemed necessary to complete this process within 70 calendar days from the date of enrollment. If a student fails to provide the requested materials, the principal will weight the courses by using the Regents or School formula. No transfer student's courses in a given year will be permitted to exceed the maximum weight any given Millbrook High School student in the same grade may achieve based on the Millbrook High School course offerings. In the instance where a transfer student's grades are based on a letter system, the highest numeric value will be selected from the appropriate numeric range to determine the student's ranking.

COMPUTATION OF FINAL GRADE

FULL YEAR COURSE

	Marking Period				Mid Exam	Final Exam	Final Grade
	1	2	3	4			
	20%	20%	20%	20%	10%	10%	100%
Percent Example	80	90	70	90	80	80	82

SEMESTER COURSE

	Marking Periods		Final Exam	Final Grade
	1 (3)	2 (4)		
	40%	40%	20%	100%
Percent Example	90	80	90	86

All quarter averages are weighted (based on the type of class i.e. regents level, etc.) but the final average is unweighted. Both weighted and unweighted GPA's will appear on the final transcript.

Students receiving grades of INC (Incomplete) are to complete all missing work. Failure of a student to

complete missing work, without a legal excuse and special arrangements being made, will lead to a grade of zero (0) for the incomplete work. The zero (0) will be incorporated into the grade to determine the reported grade for the marking period. There are to be no grades of INC for any marking period without special permission from the principal.

Progress reports are issued during the fifth week of each marking period. Their purpose is to alert you and your parents concerning unsatisfactory progress, or commend you for exemplary effort and achievement. The intent of the formal type of progress report is to offer specific suggestions for improvement of your work. The maximum benefit from these reports comes only when (1) parents contact the teacher to arrange a conference, and (2) students confer with the subject teacher for specific suggestions for work improvement. Both steps should be taken immediately.

Parents may view students' grades through the Parent Portal System. Parents must first register in the High School office for access.

ACADEMIC COMPETENCY

All students will be required to take the corresponding Regents examination, or a more challenging examination approved by the Commissioner of Education in order to be granted a high school diploma.

GRADUATION REQUIREMENTS

Awarding of diplomas and local certificates and participation in graduation ceremony:

In order to participate in the graduation ceremony, the principal must certify that the student has met one of the following requirements:

Required ("Core") Subjects	Regents Requirements	Advance Regents Requirements
English	4	4
Social Studies	4	4
Mathematics	3	3
Science	3	3
Second Language	1	3
Health Education	$\frac{1}{2}$	$\frac{1}{2}$
Art and/or Music	1	1
Physical Education	2	2
Electives	$3 \frac{1}{2}$	$1 \frac{1}{2}$
	<hr/>	<hr/>
Total	22	22

Regent Exam Requirements (5)
English

Advanced Regents (8)
English

U.S. Hist./Govt.
Global History
1 Science
Integrated Algebra
or see 4+1 pathway

U.S. Hist./Govt
Global History
2 Science (life & physical)
Integrated Algebra
Integrated Geometry
Integrated Alg II/Trig

Students must complete at least one unit of study in a second language. If students pass the Local examination in a second language at the completion of 8th grade, this will fulfill this requirement. A student identified as having a disability may be exempt from these requirements if the student's IEP states that such requirements are not appropriate.

Students who complete a 5 unit sequence in Career & Technical Education or the Arts are not required to complete the two additional units of credit in Foreign Language in order to earn an advanced regents diploma

In addition to the above, the Board establishes a minimum course enrollment of 5.5 credits per year for each student. Exception to this requirement may be made by the principal for students with disabilities whose IEP states that less credits are appropriate, seniors who can complete all graduation requirements with less than 5.5 credits in their senior year, and those students without a disability but whose educational program and special circumstances may require less than 5.5 credits per year. Failure to maintain full time status as a “bonafied student” may affect participation in sports.

Students with disabilities will be required to take each Regents course and examination as required for their entering class.

An official school diploma will only be issued based upon the completion of the Regents, local diploma, or Skills and Achievement Commencement Credential.

A high school diploma will represent termination of the district’s responsibility to provide additional educational training opportunities as part of the regular day program. Any student earning a Certificate of Attained Skills & Experience will be informed in writing of his or her right to attend the public schools of the district until one of the following occurs:

1. The student earns a high school diploma; or
2. The student attains the age of 21 prior to September first of a school year.

DIPLOMA TYPES

Awarding of diplomas and participation in graduation ceremony

There are 5 types of diplomas or certificates:

1. Advanced Regents diploma
2. Regents diploma (5 Regents exams passed or 4 + 1 Pathway)
3. State high school equivalency diploma (GED)
4. Career Development and Occupational Studies Credential
5. Local diploma for students with disabilities.

EARNING A REGENTS DIPLOMA

Students shall meet the commencement level New York State learning standards by successfully completing twenty-two units of credit and a minimum of five New York State assessments distributed as specified in (a) through (k) below. After passing the required New York State assessment or approved alternative in Mathematics, Science, and English Language Arts, the remaining units of credit required in that discipline may be in specialized courses. A specialized course is a course that meets the requirements of a unit of credit as defined in section 100.1 (a) of the Commissioner's Regulations and the New York State commencement learning standards as established by the commissioner. A specialized course develops the subject in greater depth and/or breadth and/or may be interdisciplinary. Successful completion of one unit of study in an interdisciplinary specialized course may be awarded only one unit of credit but may be used to meet the distribution requirements in more than one subject. In a public high school, an interdisciplinary specialized course shall be taught by a teacher certified in at least one of the subjects.

- a. English, four units of credit and the Regents comprehensive examination in English or an approved alternative pursuant to section 100.2 (f) of the Commissioner's Regulations.
- b. Social Studies, four units of credit including one unit of credit in American History, the Regents examination in United States History and Government or an approved alternative pursuant to section 100.2 (f), the Regents examination in Global History and Geography or an approved alternative pursuant to section 100.2 (f)**, and a half unit of credit in Economics and a half unit of credit in Participation in Government or their equivalent as approved by the local public school superintendent or his or her designee.

** For further information on Pathway Assessment options, please refer to: NYSED website @ p12nysed.gov

- c. Mathematics, three units of credit and the Regents examinations in mathematics designated by the commissioner or an approved alternative pursuant to section 100.2 (f). Students must pass either the examination titled Algebra I Common Core, Geometry Common Core or Algebra II Common Core.
- d. Science, three units of credit and one of the Regents examinations in science or an approved alternative pursuant to section 100.2 (f). In order to qualify to take a Regents examination in any of the sciences a student must complete **1200** minutes of actual hands-on (not simulated) laboratory experience with satisfactory documented laboratory reports. The 1200 minutes of laboratory experience must be in addition to the required classroom instruction associated with earning a unit of credit. There may, in some cases, be required New York State labs that must be completed.
- e. The Arts (including visual arts, music, dance and theatre), one unit of credit, which may be a specialized course that meets the arts standards at the commencement level as established by the commissioner. Any arts course for which credit will be awarded to meet the one unit of credit requirement for graduation must be taught by a certified teacher and must follow a State-developed or State-adopted syllabus or a locally-developed or locally-adopted syllabus approved by the commissioner.
- f. Health, one half unit of credit which may be a specialized course which meets the health standards at the commencement level as established by the commissioner. Any health course for which credit will be awarded to meet the one half unit of credit requirement for graduation must be taught by a certified teacher and must follow a State-developed or State-adopted syllabus or a locally-developed or locally-adopted syllabus approved by the commissioner.
- g. Languages other than English, one unit of commencement-level credit which can be earned by passing the local second language examination or an approved alternative pursuant to section 100.2 (d). A student identified as having a disability which adversely affects the ability to learn a language may be excused from the language other than English requirement set forth in this subparagraph if such student's individualized education program indicates

that such requirement is not appropriate to the student's special education needs. Such a student need not have a sequence in a language other than English but must meet the requirements for the total number of credits required for a diploma.

- h. Physical Education, two units of credit, except that a student who has completed the diploma requirements in fewer than eight semesters shall not be required to continue enrollment in high school for the sole purpose of completing the physical education requirements.
- i. Additional units in English language arts, mathematics, social studies, science, the arts, languages other than English, career and technical education, or any other subject area approved by the commissioner to a total of twenty-two units of credit.
- j. The State learning standards in technology may be met either through a course in technology education or through an integrated course combining technology with mathematics and/or science. A commencement-level course in technology education may be used as the third unit of credit in science or mathematics but not both.
- k. The learning standards for parenting may be met either through a separate course in parenting or through integration in a course in health or family and consumer sciences.
- l. Special educational needs. Such a student need not have a sequence in a language other than English but must meet the requirements for the total number of credits required for a diploma. Students completing a five-unit sequence in career and technical education or the arts (visual arts, music, dance, and theatre) are not required to complete the additional two units of the language other than English requirement for the Regents diploma with advanced designation but must still meet the requirements for the total number of units of credit.

Earning a Regents or local high school diploma shall be deemed to be equivalent to receipt of a high school diploma pursuant to Education Law section 3202 (1) and shall terminate a student's entitlement to a free public education pursuant to such statute. Earning a high school equivalency diploma shall not be deemed to be equivalent to receipt of a high school diploma pursuant to Education Law section 3202(1) and shall not terminate a student's entitlement to a free public education pursuant to such statute.

COLLEGE CONNECTION COURSES / ADVANCED PLACEMENT (AP)

Students who are in an advance placement course are required to sit for the AP test in May. The cost per test is approximately \$97.00, subject to change by College Board. Students are required to submit this payment in September.

****If we do not receive your payment by this date, your student will be removed from this course and placed in a non-advanced placement course.** This fee is non refundable.

Students having difficulty securing funding for their AP examination(s) should see their school counselor.

Marist college connection courses are taught at MHS by our faculty and have a per credit fee associated with them. The estimated fee for 2022-2023 is \$100 per credit (this is subject to adjustment by the college in the summer). All classes are three to six credits depending on the subject area. Students who are enrolled in the Marist college connection classes have the OPTION OF NOT enrolling in Marist. All students in these classes will be required to take the AP Examination in May. The administration process for enrolling in Marist and paying for the credits will take place at MHS in September. Students, who enroll in Marist, pay the credit fee and pass the course, will be awarded the appropriate number of credits on a Marist college transcript. Marist also may institute a credit limit per student of 6 per semester. This decision is subject to change by the university.

Rochester Institute of Technology college connection course through Project Lead the Way are taught at MHS by our faculty. Upon successful completion of the end of the year exam, students have the option to pay a \$200 tuition fee (subject to change by the University) to receive 3 undergraduate non-quality credits on a RIT college transcript. These credits ARE transferable to many other post-secondary institutions. Students are responsible for requesting transcripts.

DUTCHESS COMMUNITY AND MARIST COLLEGE BRIDGE PROGRAMS

During their senior year, students have the option of completing all or some of their final courses at Dutchess Community College in Poughkeepsie, NY and/or Marist College in Poughkeepsie, NY. *Students interested in exploring these options should speak to their guidance counselor. Students are responsible for the financial costs associated with this option. * Students doing a total Bridge to DCC must have a minimum GPA of 85%.

SYRACUSE UNIVERSITY PROGRAM ADVANCE

SUPA is one of the nation's leading concurrent enrollment programs. With over 200 partner schools in seven states and four other countries, SUPA has over 800 certified high school instructors offering Syracuse University courses in their high schools. Over 12,000 students took an SU course through Project Advance last year, in disciplines from forensic science, to sport management to writing. Students who succeed have the opportunity to earn college credits, which can result in a savings for college through the significantly reduced tuition rate.

Request for High School Credit for College Courses Outside of DCC/Marist/RIT

Students who enroll in college programs that offer credit must have these classes pre-approved by the school principal in order for them to count towards graduation requirements. Only pre-approved classes that count towards graduation requirements will be placed on official MHS transcripts.