



# METUCHEN PUBLIC SCHOOLS

School Counseling Department  
400 Grove Avenue, Metuchen, NJ 08840

Metuchen High School  
(732) 321-8700 ext. 5020

## MHS ELECTIVE OFFERINGS FOR RISING 9<sup>TH</sup> GRADERS

*2021-2022 School*

|   |                              |
|---|------------------------------|
| <b>Band</b>   | <b>Full Year / 5 credits</b> |
| <b>Orchestra</b>  | <b>Full Year / 5 credits</b> |
| <b>Concert Choir</b>  | <b>Full Year / 5 credits</b> |
| <b>Music Technology</b>   | <b>Full Year / 5 credits</b> |
| This course is designed for the student interested in creating music on computer. Students should have a strong interest and some background in music. Students will arrange and compose music, and learn the latest recording techniques. Students will maintain a digital portfolio and collaborate with other students for performance. This course will fulfill the graduation requirement for one year of visual and performing arts. This course is open to students in Grades 9-12.  |                              |
| <b>Music in American History</b>  | <b>½ Year / 2.5 credits</b>  |
| <i>(Offered in alternating years – WILL be available for 2021-22)</i><br>This course provides students with a non-performance based music option. This course will cover the beginnings of American music from colonization through the end of World War I. Through listening and reflection exercises, students will be exposed to the rich diversity of styles and cultural influences that founded American music. Topics range from but are not limited to African American music, American Indian music, gospel music, folk songs, and the beginnings of popular music, theater, and dance. Students will be challenged to take historic and literary perspectives being taught in other disciplines at the high school and make relevant connections. This course satisfies 2.5 credits of the 5-credit visual & performing arts requirement. This course is open to students in Grades 9-12. |                              |
| <b>Music in Modern America</b>  | <b>½ Year / 2.5 credits</b>  |
| <i>(Offered in alternating years – WILL be available for 2021-22)</i><br>This course also provides students with a non-performance based music option. This course will cover music from World War II through present day. Through listening and reflection exercises, students will be exposed to an even more diverse range of styles and cultural influences that continue to impact our nation and promote growth and development. Topics range from but are not limited to jazz, blues, swing and big band music, rock throughout the 60s/70s/80s, Broadway, pop, hip-hop, and the digital revolution. This course satisfies 2.5 credits of the 5-credit visual & performing arts requirement. This course is open to students in Grades 9-12.   |                              |
| <b>Art I-Introduction to Art</b>  | <b>Full Year / 5 credits</b> |
| This course is an introduction to materials and techniques commonly found in the world of fine art. As an elective subject, it is meant to give students an opportunity for creative self-expression while developing skills and learning the language of art. Students will gain an understanding of the relationship of art to society by actual participation in its creation. Themes will include drawing from observation, live figure drawing, painting, printmaking, and sculpture. This course is a prerequisite to Art II and Art III. Each student will be assigned a sketchbook in which to create and submit assignments. This course will fulfill the graduation requirement for one year of visual and performing arts. This course is open to students in Grades 9-12.   |                              |
| <b>Photography/ Digital Media 1</b>   | <b>½ Year / 2.5 credits</b>  |
| In this course, students will be introduced to photography as an art form and become familiar with compositional choices of photography through the artist's eye. Students will use Photoshop to digitally manipulate images for both artistic and graphic design purposes. They will use the elements and principles of design to create original works of art on the computer and learn the various tools available to the photographer for art and business. The applications to career paths make this course eligible for Practical Arts credit. Applicable careers include: Graphic Designer, Web Design, Photographer, Photojournalist, Fashion Design, Advertising, Marketing, and Artist. This course satisfies 2.5 credits of the 5-credit visual practical arts requirement. This course is open to students in Grades 9-12.   |                              |
| <b>Photography/ Digital Media 2</b>   | <b>½ Year / 2.5 credits</b>  |
| <b>Prerequisite:</b> <i>Photography/ Digital Media 1</i><br>In this course, students will expand on the skills learned in Photography/Digital Media 1 and become a master of compositional choices and editing through the medium of photography. This course takes a student centered, choice driven approach in order to maximize engagement and deeper understanding. Students will sharpen their digital editing skills through the use of independent projects and then be encouraged to share their knowledge and skills with their peers. The applications to career paths make this course eligible for Practical Arts credit. Applicable careers include: Graphic Designer, Web Design, Photographer, Photojournalist, Fashion Design, Advertising, Marketing, and   |                              |

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| <p>Artist. This course satisfies 2.5 credits of the 5-credit practical arts requirement. This course is open to students in grades 9-12.</p>   |
| <p><b>Drafting 1</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> This course is designed for students desiring skills and knowledge in the areas of drafting as it applies to engineering, industry, design and art. Skills are developed in lettering, two, three, four and five view drawings as well as three dimensional drawings using equal and unequal angles, graphic solutions, spacing and dimensioning. Students will also be introduced to computer aided drafting skills and concepts. This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in grades 9-12.</p>   |
| <p><b>Woodworking</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> This course is designed to provide students with a thorough background in furniture design and construction. Students develop key mathematical concepts for wood construction and hands-on skills necessary for improving their competencies in the area of design and cost analysis. This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in grades 9-12.</p>   |
| <p><b>Foods/Nutrition</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> This course is designed to introduce students to basic food concepts, nutritional and meal planning. Students learn the basics of kitchen management, food preparation techniques, and food service with a dietary context of the preparation based on sound management of budget, time, skill level, and nutritional content. Students complete multiple hands-on assignments involving full meal preparation (soups, salads, appetizer, garnishes, main dishes, and desserts). This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in grades 9-12.</p>  |
| <p><b>Engineering &amp; Technology</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> <b>Co-requisite or Prerequisite:</b> <i>Algebra 1</i> - This course is designed to help students understand and apply technology presented in an engineering context. It describes the engineering design process and how it is used to solve technological challenges. Units of study include Communication Engineering and Design, Energy and Power, Construction, Transportation and Bio-Related Engineering and Design. This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in grades 9-12 who are enrolled or have completed Algebra I.</p>   |
| <p><b>Web Programming and Visual Basic</b> <span style="float: right;"><b>½ Year / 2.5 credits</b></span><br/> <b>Prerequisite:</b> <i>Algebra 1 or Exploring Computer Science</i> - This course is useful for students interested in computer careers, as well as those interested in careers in engineering, science and mathematics. It should be interesting for anyone who wants to go beyond using already-written software and write some software of his/her own. During the fall semester, students create web pages with HTML. Students then add interactivity to their web pages with JavaScript. Finally, students learn to create web graphics, animated GIFs and image maps using GIMP. Students will have some latitude in choosing which areas they focus on. During the spring semester, students learn to do visual programming using the Visual Basic language, which is especially popular in the business world. Students write programs that solve math problems, simulate real-world situations, decipher encrypted text, and play visual games. This course satisfies 2.5 credits of the 5-credit practical arts requirement. This course is open to students in Grades 9-12 who have completed Algebra I.</p> |
| <p><b>Python</b> <span style="float: right;"><b>½ Year / 2.5 credits</b></span><br/> <b>Prerequisite:</b> <i>Algebra 1 or Exploring Computer Science</i>- This course is useful for students interested in computer careers, as well as those interested in careers in engineering, science and mathematics. It should be interesting for anyone who wants to go beyond using already-written software and write some software of his/her own. Python is a popular, easy to learn, computer programming language used for web development, robotics, Cyber Security, and artificial intelligence. This course will introduce students to fundamental computer science concepts while offering interesting and fun programming challenges. Programming concepts used will include sequences, decisions, iteration, graphics (including Turtle graphics), graphical user interface elements (e.g. buttons), and simulations. This course satisfies 2.5 credits of the 5-credit practical arts requirement. This course is open to students in Grades 9-12 who have completed Algebra 1.</p>  |
| <p><b>Computer Programming in Java</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> <b>Prerequisite:</b> <i>Algebra 1 or Exploring Computer Science</i> - This course is useful for students interested in computer careers, as well as those interested in careers in engineering, science and mathematics. It should be interesting for everyone who wants to go beyond using already-written software, and write some software of his/her own. This course offers a full-year introduction to problem solving on the computer using the popular Java language. Students will write a variety of programs including problem solving, analysis of data, simulations of real-world situations and games. This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in Grades 9-12 who have completed Algebra 1.</p>  |
| <p><b>Robotics</b> <span style="float: right;"><b>Full Year / 5 credits</b></span><br/> In this course students will collaboratively use the engineering design process to build robots capable of completing specific tasks. Tasks will require students to creatively design robots, construct them, program them, test them and then refine them in an iterative cycle of design. Students will learn about various technologies used in robotics design</p>  |

including electronics, electric circuits, motors, pneumatics, mechanical systems, communication systems, etc. They will also learn about the various ways robots and robotics are used in manufacturing, medicine, adaptive support, emergency services and other applications. This course will fulfill the graduation requirement for one year of practical arts. This course is open to students in Grades 9-12.

**Entrepreneurship**

**Full Year / 5 credits**

*Prerequisite: Algebra 1*

This course will address a variety of topics relevant to business, including identifying market needs, developing a business plan, implementing strategies for production of goods or services, financing, accounting, financial statements, marketing, etc. Opportunities for application will be provided, and may include business competitions or small business development. This course may satisfy the 2.5 credit Financial, Literacy requirement or the practical arts requirement. This course is open to students in Grades 9-12 who have completed Algebra 1.

**Business Information Management**

**½ Year / 2.5 credits**

This course will address a variety of topics relevant to the technology aspects of business, including use of spreadsheets (beyond beginner level), marketing software (advanced uses of Word and other similar software) and data management. Opportunities for application will be included. This course satisfies 2.5 credits of the 5-credit practical arts requirement. This course is open to students in Grades 9-12.

**Digital Marketing**

**½ Year / 2.5 credits**

This course will address a variety of topics relevant to the technology aspects of business marketing, including website design, desktop publishing, blogging and use of a variety of social media. Authentic application opportunities will be an integral part of the course. Ethical use of intellectual property will also be addressed. This course satisfies 2.5 credits of the 5-credit practical arts requirement. This course is open to students in Grades 9-12.