



MOT CHARTER

K-12 • Arts, Science & Technology

Curriculum Guide

2018-2019

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Students will create meaningful connections between literature and the world through critical thinking and analyzing all forms of writing.

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Develop students cognitive capacities & critical thinking to enable both technical & creative skills which lead to new ideas and inventive solutions.

16 DUAL ENROLLMENT PROGRAMS

Integrated into our high school courses, students are taught by adjunct instructors in order to allow them to earn college credits.

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Students expand their elective opportunities while taking the next steps in independent learning by taking online college courses on our campus.

18 COUNSELING

Counseling services for developmental needs of students in the areas of social growth, academic performance, and post-secondary planning.

19 GRADUATION REQUIREMENTS

More than just a transition to the next phase of life; graduation is a testament to each student's diligence to mature from child to young adult.

Please note that all class offerings are subject to change based on interest and faculty availability. If you have questions about a particular course, please contact the Counseling Office.

Letter from the Head of School

Dear Parents and Students,

This Curriculum Guide is provided to allow existing and prospective members of the MOT Charter High School community to make informed academic decisions. It is important to note that this information is **subject to change** at any time based on the needs of students and the school.

MOT Charter High School Academic Philosophy: High Standards, Individual Support

The faculty and staff at MOT Charter strive to provide an environment which allows our students to reach their full academic and personal potential. The college preparatory program is designed to be rigorous and thought provoking. We understand that for students to succeed in post-secondary education and/or their career they need to have the skill set to be problem-solvers, strong communicators and find the value and joy of being a lifelong learner. Our faculty understands there are many ways in which students can learn and are trained to provide enrichment and support to all students. Extracurricular activities are offered to students to expose themselves to a variety of interests which allow them to discover or deepen their individual talents and interests.

Comprehensive Schedule

Our schedule is designed to provide students with a consistent learning environment by structuring the courses to run through the full academic year. Days are structured using an alternate block schedule, in which Monday-Thursday classes consists of four 90 minute periods, and all classes meet for 45 minutes on Fridays. Benefits of this schedule are:

- Faculty see fewer students during the day, giving more time for instruction
- The increased span of teaching time allows for intensive learning activities to be completed during each class
- Students have more time for in-depth exploration, discussion and engagement over the course of a school day
- Preparing students to transition to post-secondary education with a schedule similar to many colleges

College Preparatory Focus

Over the four year high school experience, our Counseling office works with each student and their parents, to develop an individualized course of study which takes into account both MOT Charter graduation requirements and the student's particular interests and needs.

Students have the option to take honors, AP and dual-enrollment courses, and every grade level prepares to take the appropriate PSAT, SAT or Advanced Placement exam(s) each year.

MOT Charter High School works to allow students to explore their interests in order to help them find their passion, see the value in asking questions and taking risks and to learn to see themselves as an important member of the larger community, where their willingness to get involved leads to making a positive impact.

Please do not hesitate to contact us with any questions or concerns.

Sincerely,



Edward B., Southworth, IV
Head of School

English Department

English content will emphasize analysis of nonfictional and fictional writing, including poetry, informational text and other literary works, and encourage critical thinking displayed through oral presentations and persuasive essays.

Integrated World Literature

This introductory course focuses on literary texts that represent diverse cultures and perspectives. Students will explore literature by reading and writing about fictional and non-fictional texts. Major assignments include argumentative essays, modern translations of classic literature, and the creation of lessons analyzing poetry. Additionally, students will be expected to give oral presentations and work in collaborative groups. *1 Credit*

British Literature and Composition

This course focuses on British texts that represent a variety of genres from both classic and modern sources. Classwork includes collaborative assignments, research, and literary analysis. 1 Credit

American Literature

(Wesley College – EN100, 3 Credits)

This course focuses on a variety of American writers. Students read a wide variety of texts with universal themes and further develop analytical thinking skills and expand their writing skills. Major assignments include an MLA style research paper and literary arguments. *1 Credit*

AP Literature and Composition

Students are exposed to the art of rhetoric as they annotate and analyze a variety of complex texts. Students will write analytical essays in various forms including narrative, expository, and argumentative. Major assignments include critical thinking activities and practice tests that prepare students to excel on the AP Language and Composition Exam. *1 Credit*

World Literature

(Wesley College – EN101, 3 Credits)

Course exposes students to a variety of literature written throughout the world including African, Asian, European, Latin American and the Middle Eastern texts. These texts, as well as essays, will challenge students to think critically about commonalities and differences among geographic regions, cultures and historical developments. Major assignments include research-based projects and literary analyses. *1 Credit*

AP Language and Composition

Students write on a variety of topics from personal experiences to public policies from imaginative literature to popular culture, while writing in a variety of forms: narrative, expository, exploratory, and argumentative. As in the college course it models, the course's purpose is to enable students to read complex texts with understanding and to write with sufficient richness and complexity to communicate effectively with mature readers. *1 Credit*

**The answers
you get from
literature
depend on the
questions you
pose.**

- Margaret Atwood

Social Studies Department

History courses provide students with exposure to both past and present social, economic, and political ideas and occurrences. Students are encouraged to analyze these events to help form their personal conclusions and become informed and involved citizens.

Civics & Geography

During the first half of the course, students will investigate and analyze the historical roots of our political system and examine how the public institutions and laws evolved throughout the generations. The second half of the course is dedicated to geography where students will apply analytical tools of mapping, human geography, and physical geography to study how humans interact based on location and available resources. *1 Credit*

AP U.S. History

This course focuses on the development of historical thinking skills and an understanding of content learning objectives organized around seven themes, such as identity, peopling, and America in the world. In line with college and university U.S. history survey courses' increased focus on early and recent American history and decreased emphasis on other areas, the AP U.S. History course expands on the history of the Americas. *1 Credit*



**JUST LIKE MY COUNTRY,
I AM YOUNG SCRAPPY & HUNGRY
I WILL NOT THROW AWAY MY SHOT”**

Lin Manuel

Economics & Personal Finance

Students will receive a foundation in financial planning including money management, budgeting, filing taxes, saving and investing, and risk protection. In the second half of the course, students will explore how economics systems work and how quality of life is impacted by broad social goals. Areas of focus will include economic systems, microeconomics, macroeconomics, and international trade. 1 Credit

U.S. History

(Wilmington University - HIS316, 3 Credits)

This course will begin with the Industrial Revolution in the United States. Students will build on their historical analysis skills including data analysis, research, interpretation and historical perspective. Students will integrate civics, economics, and geography disciplines along with their exploration of major political, economic, social and cultural developments in U.S. History since the Industrial Revolution. *1 Credit*

World History

(Wilmington University - HIS204, 3 Credits)

World History examines the roots of modern global society through the study of social, political, cultural, economic, and environmental developments through time in a thematic approach to history. Major topics of study will range from the development of the earliest Homo sapiens society to the modern era. Students will use primary and secondary sources to explore the development of World History with focus on the connection between various civilizations across time and space and their impact on one another. *1 Credit*

AP World History

AP World History focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the present and apply historical thinking skills as they learn about the past. Five themes of equal importance - focusing on the environment, cultures, state-building, economic systems, and social environment - provide areas of historical inquiry for investigation throughout the course. *1 Credit*

Math Department

The study of mathematics goes beyond memorization of formulas and tables, it involves the ability to apply logical thinking and test approaches to prove a solution. MOT Charter uses the Interactive Mathematics Program (IMP) curriculum which integrates traditional material with statistics, probability, curve fitting, and matrix algebra. Units are generally structured around a complex central problem with a specific mathematical focus. Other topics are brought in as needed to solve the central problem, rather than narrowly restricting the mathematical content.

IMP 1

Throughout this course, students will apply algebraic and geometric techniques to solve real life problems and create mathematical models. Topics include, but are not limited to function building, linear graphing, similarity, informal proofs, and development of trigonometric functions. Students are placed in IMP 1 unless placement test shows evidence of previous skill acquisition. *1 Credit*

IMP 2

Throughout this course, students will build on and apply advanced algebraic, geometric and statistical techniques to solve real life problems and create mathematical models. Topics include but are not limited to, systems of linear equations and inequalities, linear programming, geometric proofs, triangle congruencies, quadratic functions, normal distributions, standard deviation and spread of data. *1 Credit*

IMP 3

Throughout this course, students will apply geometric, pre-calculus, and probability techniques to solve real life problems and create mathematical models. Topics include, but are not limited to derivatives, logarithms, binomial distribution, three dimensional graphing, trigonometry, matrices and area of complex figures. *1 Credit*

IMP 4

Throughout this course students will apply concepts of geometry, pre-calculus and calculus to solve real life and problems and create mathematical models. This course is designed to culminate all mathematical ideas and concepts that have been previewed in IMP 1, 2 and 3. Topics include, but are not limited to, unit circle, graphing of trigonometric functions, physics of falling objects, polar coordinates, projectile motion, algebraic proofs, composite functions, regression lines, asymptotes, limits, geometric proofs, circles, rationalization, area under curves, and the Fundamental Theorem of Calculus. 1 Credit

Statistics

(Wilmington University – MAT308, 3 Credits)

The purpose of this course in Statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will be exposed to four broad conceptual themes: exploring data, planning a study, anticipating patterns, and statistical inference. *1 Credit*

Differential Calculus

Differential Calculus will cover the topics of trigonometric identities, limits. Derivatives, and tangent lines. Students will be able to calculate and understand the concept of limits graphically and using algebra. Students will gain a deep understanding of derivatives and be able to calculate derivatives algebraically. Students will be using trigonometric identities and rationalization techniques to simplify all functions. Students will learn how to fit a curve to an equation using their knowledge of limits and derivatives. *1 Credit*

AP Calculus AB

AP Calculus AB is similar in content to a first semester introductory college course in calculus. Topics include the study of functions, limits, continuity, differential calculus with its applications, and integral calculus with its applications. *1 Credit*

AP Calculus BC

AP Calculus BC is the equivalent of a second semester college calculus course. This course presumes that students have successfully completed AP Calculus AB. Topics covered include a rigorous approach to limits, parametric functions, vectors, improper integrals, sequences, and series. *1 Credit*

I think math is a hugely creative field, because there are some very well-defined operations that you have to work within. You are, in a sense, straightjacketed by the rules of the mathematics. But within that constrained environment, it's up to you what you do with the symbols.

- Brian Greene

Physics & Mathematics Professor, Columbia University

Physical Education, Health, Drivers' Education, Test Prep.

The Health and Physical Education Department offers students the opportunity to participate in physical activity and classroom related courses. Instruction is provided in sports and fitness-related activities which can become a part of one's life today and continue into the adult years. Students enrolled in physical education are permitted to change for class. Appropriate attire includes sneakers and the approved MOT Charter School athletic shorts and school spirit t-shirt.

Physical Education

Fitness for life, working towards personal best and collaborative team work will be the focus for Physical Education. Lifetime activities may include tennis, golf, badminton, jogging, walking, dance, yoga and Frisbee golf. Skills, strategies and teamwork will be emphasized for each sport and lifetime activity. Interaction among peers, specifically sportsmanship, team work and self-discipline, are highlighted. Physical fitness activities will also be included as part of the daily routine. *1 Credit*

Health

Physical, social and emotional wellness is the focus for health class. The following topics will be discussed: mental and emotional health; healthy versus unhealthy relationships; family life and human sexuality; diseases and disorders, which include STD's, HIV and AIDS; tobacco, alcohol and other drugs; nutrition, physical activity and fitness for life, which will include the development of a personal health plan; and injury prevention and basic first aid. Students will be expected to identify the barriers which can hinder healthy decision-making and the factors that influence the formation of a healthy lifestyle. The utilization of expert guest speakers and focus on timely topics affecting adolescents helps students apply their learning to their own decision making process. *½ Credit*

Drivers' Education

Driver Education is a course designed to provide students with a detailed understanding of the fundamentals of driving. The course promotes responsible attitudes and behaviors. This course is not a requirement for graduation but is a privilege provided by the State of Delaware. Students will complete the classroom portion of instruction early in the year and will be scheduled to driver in priority of their birthdate. Driver Education teaches safe driving skills through both the in-class and in-car phase of practical instruction. *¼ Credit*
Prerequisite: Student MUST BE ASSIGNED TO GRADE 10

PSAT/SAT Test Preparation

Students have the opportunity for individually paced review and practice of skills necessary for success on standardized testing. *¼ Credit*

mind, body & spirit



Science Department

The Science curriculum is designed to expose students to the intricacies of science and exploration. Strong emphasis is placed on research and creation of student-developed lab experiments to solve problems. Students are encouraged to question, challenge and test scientific processes. Courses integrate ethics, politics, and social responsibility into traditional science concepts.

Integrated Science

Through a strong focus on the nature and process of science, students will explore fundamental topics in biology, chemistry, physics, Earth science, and environmental sciences situated in real-world issues. Applying an integrated approach, students will use, hone, or learn knowledge from biology, chemistry, physics, Earth science, and environmental science to explore large problems facing scientists and society through an inquiry-based and student-centered approach. *1 Credit*

Integrated Science: Biology Focus

Integrated Science Biology applies concepts from chemistry, physics, earth, and environmental science to major concepts within biology. Through an inquiry based and student centered approach, students will investigate the major themes of Ecology, Evolution, Physiology/Cellular biology, and Genetic/Molecular Biology. *1 Credit*

AP Biology

Advanced Placement Biology is based around four Big Ideas - applying concepts from chemistry, physics, Earth science and environmental science to major biology concepts. Through an inquiry-based and student-centered approach, students will study major concepts in biology, including in-depth studies of relationships within ecosystems, inheritance and variation of traits, structure and function of cells, and basic biochemistry. *2 Credits*

Integrated Science: Chemistry Focus

Integrated Science Chemistry applies concepts from biology, physics, Earth science and environmental science to major chemistry concepts. Through an inquiry-based and student-centered approach, students will study major concepts in chemistry, including studies of atoms and their interactions, properties of materials, and changes in matter. There will be a focus on connection observable phenomena to underlying particle actions or interactions and to symbolic ways of representing the phenomena, including mathematical modeling of chemical systems. *1 Credit*

AP Chemistry

Advanced Placement Chemistry applies concepts from biology, physics, Earth science and environmental science to major chemistry concepts. Through an inquiry-based and student-centered approach, students will study major concepts in chemistry, including in-depth studies of atoms and their interactions, properties of materials, and changes in matter. There will be a focus on connection observable phenomena to underlying particle actions or interactions and to symbolic ways of representing the phenomena, including a heavy reliance on mathematical modeling of chemical systems. *2 Credits*

Integrated Science: Physics Focus

Integrated Science Physics applies concepts from biology, chemistry, Earth science and environmental science to major physics concepts. Through an inquiry-based and student-centered approach, students will study major concepts in physics, including forces, energy, waves, electromagnetic radiation, and space systems. There will be a focus on connecting observable phenomena to invisible forces and to symbolic ways of representing the phenomena, including mathematical modeling using algebra. *1 Credit*

AP Physics

Advanced Placement Physics applies concepts from biology, chemistry, Earth science and environmental science to major physics concepts. Through an inquiry-based and student-centered approach, students will study major concepts in physics, including kinematics, Newton's laws of motion, circular motion, and gravitation. There will be a focus on connection observable phenomena to invisible forces and to symbolic ways of representing the phenomena, including a heavy reliance on mathematical modeling utilizing algebra and calculus. *2 Credits*

World Languages Department

Courses expose the literature, culture, and history of various countries where these languages are spoken. Students will learn the skills required to listen, read, speak, and write in the language they choose to study.

Spanish I

Spanish I is an introduction to the Spanish language and cultures with the use of stories. The course focuses on meaningful communication on topics familiar to high school students - school, friends, family, hobbies, etc. Over the course of the year, students will learn about cultural practices and make comparisons between their own culture and those studied. The class is student centered and conducted in both Spanish and English. At the end of the course, students can expect to speak and understand very simple sentences on familiar topics in the target language. 1 Credit

Spanish II

(Wesley College – SP100, 3 Credits)

Spanish II continues the development of proficiency in Spanish. Pronunciation, vocabulary, idioms and grammar are expanded to support oral and written communication and reading comprehension. Students write short paragraphs and engage in conversation on a regular basis. The class is student centered and primarily conducted in the target language. Teacher and student use of the target language is emphasized with a goal toward developing total immersion. 1 Credit

Spanish III

(Wesley College – SP101, 3 Credits)

Spanish III furthers the development of communicative skills in the target language with the practice of expanded, sustained oral and written communication. Students engage the language in realistic, authentic situations in order to connect with the language while developing cultural perspectives. The class is student centered and conducted entirely in the target language. 1 Credit

Spanish IV

(Wesley College – SP200, 3 Credits)

Spanish IV increases the fluency and comprehension of the target language. Students interpret the practices, products, and perspective of Spanish-speaking cultures. Advanced vocabulary, use of idioms, and advanced grammatical constructions are expanded and reinforced. The class is student centered and entirely conducted in the target language. 1 Credit

Spanish V

(Wesley College – SP201, 3 Credits)

Spanish V is an in depth review of the Hispanic culture through the study of literature, music, art, cinema, and history. Spanning the ages and the world, the class takes a thematic approach to understand how the products of yesterday maintain their relevance in the world of today. From the fantastic or unusual to the dark or fanciful, this course tackles topics such as poverty, culture, tradition, and religion. The class is student centered and conducted entirely in the target language. 1 Credit

Italian I

(Wesley College – IT100, 3 Credits)

Italian I is a comprehensive introduction emphasizing meaningful, authentic communication, through the introduction of vocabulary, grammar, pronunciation, and Italian cultures. Over the course of the year, students will learn to understand, speak, read, and write simple questions and sentences on a variety of topics, including self-introductions, family, friends, school, interests, and hobbies. Students will also learn about cultural practices and perspectives to make comparisons between their own culture and other cultures. 1 Credit

Italian II

(Wesley College – IT101, 3 Credits)

Italian II continues the development of proficiency in Italian. Pronunciation, vocabulary, idioms and grammar are expanded to support oral and written communication and reading comprehension. Students write short paragraphs and engage in conversation on a regular basis. The class is student centered and primarily conducted in the target language using thematic units. Teacher and student use of the target language is emphasized with a goal toward developing total immersion. 1 Credit

Italian III

(Wesley College – IT200, 3 Credits)

Italian III develops language proficiency in expanded, sustained oral and written communication. Art, literature, and cinema are introduced through authentic materials and texts. Students write paragraphs and engage in conversation on a daily basis, and present projects and presentations in the target language. The class is student centered and entirely conducted in the target language. Students will communicate with the teacher and classmates entirely in Italian. 1 Credit

Italian IV

(Wesley College – IT201, 3 Credits)

Students enrolled in Italian IV work to increase fluency and comprehension of the language. They interpret the practices, products, and perspectives of Italian-speaking cultures. Advanced vocabulary, use of idioms, and advanced grammatical constructions are expanded. This class is student centered and entirely conducted in the target language. Students will communicate with the teacher and classmates entirely in Italian. 1 Credit

Academy of Science & Technology Pathways

The Academy of Science & Technology programs are designed to expose students to the intricacies of science and exploration. Students are encouraged to question, challenge, and test scientific processes. Since failure is simply another way to learn and become more resilient, we look to provide an environment that is supportive of exploration and breaking down assumptions. Courses integrate ethics, politics, and social responsibility into traditional science and technology concepts.

Biotechnology I

This course is designed to introduce students to the science of biotechnology and examine the social impact of current biotechnology issues. Topics will include standard lab operating procedures, lab techniques, organisms used in labs, genetics and DNA, as well as the ethical, economic, environmental, political and historical impact of biotechnology on our society. This course is open to ALL students interested in science and biotechnology, and it also serves as the first course in the Biotechnology Career Pathway. Students taking biotechnology are automatically local members of the MOT FFA Chapter, and students will be encouraged to participate as state and national members. Any research conducted during class time may be used in state competitions for Agriscience Fair or State Fair competitions. *1 Credit*

Biotechnology II

This course is a continuation of Biotechnology 1 and geared for the sincere interest in science and biotechnology. Greater focus on how biotechnology is used in Agriscience by using plants to represent different types of propagation techniques and comparing DNA isolation techniques. The course will also introduce students to the use of plants and microbes in alternative fuel sources. The ethical, economic, and political impact of biotechnology will be included throughout. It will continue to focus on students centered learning to prepare and conduct their own research including how to manage and run a lab. Students taking biotechnology are automatically local members of the MOT FFA Chapter, and students will be encouraged to participate as state and national members. Any research conducted during class time may be used in state competitions for Agriscience Fair or State Fair competitions. *1 Credit*

Biotechnology III Capstone

Biotechnology III is an independent study that will be designed by the participating student and the instructor. It will be the responsibility of the participating students to establish a working relationship in the field of research with college professors or the local industry. The objective is for the student to begin or maintain a biotechnological research project. The student will collect the data as well as analyze and report the found information from the research to the professor or scientist that the student is currently working with. Past collaborations have included the University of Delaware, Delaware State University, and DuPont. The lab work and research may be used as a continuation or as the development of the FFA project to be used in the State competition. 1 Credit

Prerequisite: Biotechnology II & Instructor Approval

Introduction to Computer Programming

(Wilmington University – CTA206 & SDD100, 3 Credits each)

The first computer science course includes an Introduction Computer Applications, a Wilmington University Dual Enrollment course, Exploring Computer Science© to introduce computer science concepts and computational practices; and Basic to Intermediate Web Design, a Wilmington University Dual Enrollment course. Programming languages include Scratch, and CSS3 with HTML5. *1 Credit*

AP Computer Science Principles

(Wilmington University – SEC290, 3 Credits each)

Students further explore the seven key concepts in computer science with the AP College Board approved curriculum, Code.org. Students also complete Introduction to Computer Programming with Python, a Wilmington University Dual Enrollment course. This course will prepare students for the end-of-course AP Exam. *1 Credit*

AP Computer Science A

(Wilmington University – SDD240, 3 Credits each)

Students learn object-oriented programming using Java. The emphasis is on problem solving and algorithm development with hands-on activities. This course will prepare students for the end-of-course AP Exam. *1 Credit*

Computer Science IV

(Wilmington University – SEC100 & SEC210, 3 Credits each)

Students learn about the internal operations of personal computers along with troubleshooting, customer service skills and safety practices. This study then expands into learning the latest tips and techniques for computer security best practices to prepare for CompTIA certification. *1 Credit*

***I hated science in high school.
Technology? Engineering? Math?
Why would I ever need this?***

***Little did I realize that music was also
about science, technology, engineering
and mathematics, all rolled into one.***

- MICKEY HART, Drummer, Grateful Dead

Engineering & Design I

Engineering and Design is an introductory course for all STEM majors and the 1st of 3 required Engineering pathway courses. The course introduces the student to a problem solving process (the Engineering Design Process) that can be also used by all STEM majors. Through a project based learning approach, students are introduced to various Engineering fields such as Civil Engineering, Mechanical Engineering, Electrical/Electronic Engineering, Computer/Robotics Engineering, and Alternative Energy. Throughout the course students also become familiar with various concepts such as project management, the effects of technology on society, the history of technology, patents, and other concepts that provide on solid foundation for students progressing to any STEM related major. *1 Credit*

Engineering & Design II

The second year Engineering course is an extension of the 1st year Engineering course that requires a student to delve more deeply into the concepts learned during the 1st year of Engineering. Utilizing numerous projects and simulations, the courses focuses much of the content on Engineering Design including units such as, Structural Design, Elements of Design, and Foundations of Engineering Design. Additionally, students complete a 3D Modeling course with an introduction to 3D Printing, and learn the skills and knowledge principles involved with Project Management. *1 Credit*

Engineering & Design III

Engineering III focuses on advanced design applications which are intended for upper-level high school students with the goal of providing an engineering or technical base for high school students who plan to continue their education in technical or engineering programs at the community college or university level. Through a project based learning approach, the course includes an in depth look into various Engineering technologies such as Manufacturing Technologies, Energy and Power Technologies, Construction Technologies, and Transportation Technologies. The course also includes a major project where students conduct research into Ocean Engineering and underwater technologies concluding with teams of students building an unmanned underwater robotic vehicle. Students complete a mini-capstone engineering project at the end of the course. *1 Credit*

Engineering & Design IV

The Engineering IV course provides the student with advanced college and industry level coursework that helps prepare the student for entry into a rigorous college level Engineering program. All students complete courses typically required in college level Engineering curricula such as an industry level Computer Aided Design course, a Robotics curriculum with programming, an advanced Mathematical Analysis modeling program, and also complete a major team project that applies all the knowledge and skills learned in the previous 3 years of Engineering. Students have the opportunity to earn college level credits, industry certifications, and technical certificates of completion. Working with industry or subject matter experts, students choose and complete a real-life major engineering or technical project, simulating the process industry professionals use to manage major projects. *1 Credit*



Academy of the Arts Pathways

The Academy of the Arts programs are designed to explore and develop the creative potential of students interested in performing and/or visual arts. Students will showcase their talents through portfolios, gallery exhibits, plays, shows, and club activities. In addition to honing in on a student's artistic talents, by requiring ALL Arts Academy students complete a minor concentration in Digital Business, MOT Charter emphasizes learning the skills artists will need to successfully market and showcase their talents for college preparation and in the professional world.

Performing Arts Department

Dance 1

The course is designed to introduce the dance student to the fundamentals of ballet and other dance style techniques. Understanding of proper movement skills and building core strength through floor and barre techniques. The Dance I course is designed with specific exercises to enhance proper body placement, strength, flexibility, balance, musicality and movement coordination. Students will gain an understanding and an appreciation for dance as an expressive art form through a focus on the Elements of Dance. While the foundation of dance is in ballet, lyrical, jazz and modern dance are also explored. *1 Credit*

Dance II

This course is designed for the intermediate dancer and focuses on executing dance with more proficiency, strength and graceful qualities. Increased technique, personal growth in musicality and coordination. A focus on dance history and vocabulary are goals for this course. Exposure to additional dance styles and increased improvisation will be added to performance opportunities. Dancers will also have opportunities for master classes and dance workshops. Curriculum will cover all aspects of dance history, progression and artist interpretation of many genres. 1 Credit

Dance III

Dance III is designed to build artistry in the intermediate/advanced student. Once an established knowledge of history and technique is presented, students will begin to focus on self-exploration as a performing artist, while continuing to build a dance vocabulary. Stylings of noted choreographers and ballet variations will be a core focus in class. Students will begin to develop dance portfolios and resumes including auditions for college application. *1 Credit*

Dance IV

The curriculum is focused on building a performance opportunity from classroom study and exercises continued into a student run showcase. Portfolios will continue to be refined. *1 Credit*

Dance Elective

Dance Elective is designed with a focus on tap, turns, tricks and leaps for the advanced dancer. Students in this class will focus on musicality, developing rhythmic patterns and Broadway style tapping. Proper technique application will allow for more complex turning combinations including fouëttes and a la secondè turns. Jumps and leaps will be executed at high proficiency. It is recommended that students have at least one year of dance technique in classic styling before selecting this course. *1 Credit*



Wind Ensemble

Wind ensemble will focus on developing practice techniques and ensemble skills in a chamber ensemble setting. Students will learn varied repertoire while preparing music culminating in school and public performances. Students will develop musical techniques by rehearsing with the ensemble, sight reading, performing with and without a conductor, and studying written and aural theory. Students will also have the opportunity to perform as a larger instrumental ensemble by performing with the string orchestra students. *1 Credit*

Orchestral String Ensemble

Orchestral strings will focus on developing practice techniques and ensemble skills in a chamber ensemble setting. Students will learn varied repertoire while preparing music culminating in school and public performances. Students will develop musical techniques by rehearsing with the ensemble, sight reading, performing with and without a conductor, and studying written and aural theory. Students will also have the opportunity to perform as a larger instrumental ensemble by performing with the wind ensemble students. *1 Credit*

Piano Level 1

Level 1 piano students will learn fundamentals of music theory, music history and composition. Students will work independently on piano solos and collaborate in small groups on history and composition assignments. Students will perform solos periodically for the class. *1 Credit*

Piano Level 2

Level 2 piano students will build on skills learned in Piano level 1. Students will work independently at their own pace, perform and compose at a higher caliber and regularly critique each other as well as perform self-assessments. Students will perform solos during in school recitals for their classmates. *1 Credit*

Choral Ensembles

The Choral pathway will focus on building individual and ensemble skills through performance in a vocal ensemble. Students will learn the basics of healthy singing through varied repertoire culminating in school and public performances. Musical elements such as vocal techniques, following a conductor, musicality, sight-singing and fundamentals of music theory will be incorporated throughout the class. Students have the opportunity to perform with other ensembles in the Arts department. *1 Credit*

Theatre 1

Focuses on the foundations of theatre and acting as well as ensemble building. Units taught include Playwriting (in conjunction with the Delaware Theatre Company's Young Playwrights Festival), introduction to theatre games and improvisation, stage movement, pantomime, script analysis, theatre history, and an introduction to technical theatre. A Major unit on Shakespeare, focusing on "A Midsummer Night's Dream" will also occur. All students must learn to be critical viewers of theatre, both in live and film forms, and will complete reviews each marking period, critiquing the effectiveness of all the elements of theatre as well as how the performance impacted the audience's "willing suspension of disbelief." A final project, performing in a One Act Play, provides students the opportunity to incorporate what they have learned through the year. *1 Credit*

Theatre 2

Units include Character Analysis, Monologues, Performing Shakespeare (with an extension unit focusing on "Twelfth Night"), Design (costume, set, etc), Playwriting (in conjunction with the Delaware Theatre Company's Young Playwrights Festival), and a continued study of theatre games and improvisation. All students must learn to be critical viewers of theatre, both in live and film forms, and will complete reviews each marking period, critiquing the effectiveness of all the elements of theatre as well as how the performance impacted the audience's "willing suspension of disbelief." A study of various acting techniques (Stanislavski, Meisner, Hagan, Adler, etc.) will take place, preparing students for further character development studies. The year will culminate in a one-act play production, encompassing acting and technical theatre skills. *1 Credit*

Theatre 3

Focuses on preparation for college auditions. Units include monologue preparation, character analysis, monologue and scene writing, performing Shakespeare, and theatre design. Students are required to read one play each marking period and present it to the class, along with a performance element requirement, with the intent of introducing their classmates to a wide realm of plays, styles, and time periods. A continued study of Theatre History will take place, including focusing on various theatre styles including Realistic Theatre, Theatre of the Absurd, and more. *1 Credit*

Theatre 4

Theatre 4 allows the student to delve into the world of Musical Theatre! Beginning with a study of Gilbert and Sullivan, moving through Vaudeville, and seeing the change in theatrical styles both pre- and post-"Showboat", students will learn of the history of musical theatre and learn different performance pieces along the historical timeline. Singing and dancing, as well as acting and scene study will be based in the musical theatre format. Students will reflect upon the change in technology, world events, various cultural influences, and societal changes, and seeing how these impact and continue to impact the theatre of yesterday and today. *1 Credit*

A picture book is a small door to the enormous world of the

Visual Arts, and they're often the first art a young person sees.

- Tomie DiPaola

Visual Arts Department

Digital Media Design I

Digital Media Design I introduces the student to the elements of design in a digital media realm as well as the creation and manipulation of electronic imagery. Students learn to import digital images; scan film, prints, and artwork; create and manipulate images; prepare images for use in web documents; and make archival inkjet prints with Adobe Photoshop. Visual thinking and communication are emphasized. Students learn to make composite artwork by working with masks and layers and to create a Web photo gallery and animated GIF's in Photoshop. Adobe InDesign is introduced along with basic graphic design concepts. Students complete weekly lab assignments and produce a final portfolio of electronic and printed images. *1 Credit*

Digital Media Design II

Digital Media Design II advances the student's digital design capabilities by using Adobe Illustrator and Adobe InDesign, two professional graphic design programs. Digital Media Design II advances student understanding and skill levels to include more in-depth use of design elements and increased technical and aesthetic skills. As students become increasingly skilled at media design, their eye for detail and the use of applications such as Adobe Illustrator, Dreamweaver and InDesign allows them to publish works which are growing to meet industry standard. Students combine words and images on the printed page in order to provide real-world skills essential for graphic design and media manipulation careers. Students will create and manipulate images, combine graphics and text, build page layouts and working website designs. *1 Credit*

Digital Media Design III

Digital Media Design III focuses on the application of attained digital media design skills as well as the use of Flash and Edge Animate as students create, present and display their capstone portfolio project highlighting their cumulative body of digital arts work. Used for entry level job applications, college applications and required portfolios, final student work will be evaluated by a panel of career experts, teachers and peers. *1 Credit*

Digital Media Design IV

This course will be the culmination of the foundations developed in the visual communication and storytelling skills needed for a career in the growing fields of photography, photo editing and retouching, and graphic, web, video, and motion design. Students will focus their last year on two specific projects within the art of Digital Media Design for collegiate and professional showcasing. Along with the projects, students will focus on four major research projects which directly relate to the two major projects. These research papers will help students prepare for collegiate level classes, as well as help build upon complex reading and writing skills. This course culminates by having a finished version of their web portfolio, which includes the projects created this year and exploring the visual design career options that interest them. *1 Credit*

Film & Video Production

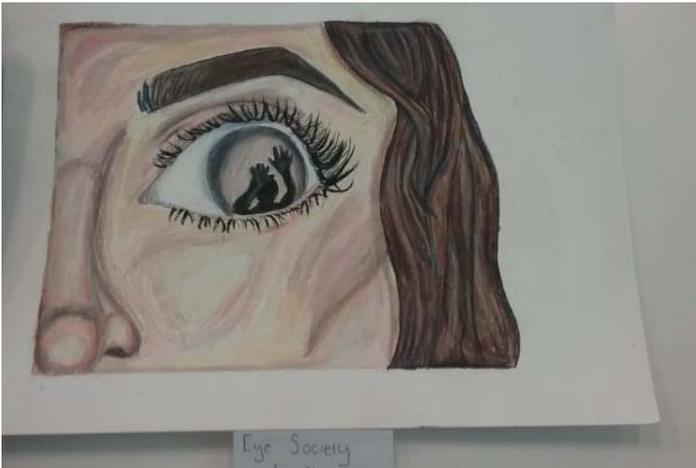
This course helps students to develop the use of digital technology to create content for marketing and artists endeavors. Students will be exploring the history of film, from the very early days of cinema through the development of the current business and artistic standards within the filmmaking industry. Students will also be learning and developing film projects such as how to create and direct actors in a scene, write film scripts, create original short documentary and a narrative films. *1 Credit*

Visual Arts I

This course introduces students to the Elements of Art and Principles of Design while developing drawing skills and painting techniques. Studio experiences in the classroom will give students opportunities to experience a variety of media while developing student's individual style and creative problem solving skills. Students will demonstrate their ability to respond, to analyze and to interpret their own artwork and the work of others through discussions, critiques, and writings. *1 Credit*

Visual Arts II

Students are expected to become independent thinkers and to apply their knowledge of the elements and principles to their work in a variety of media (clay, wire, papier-mâché, found objects...) in order to demonstrate mastery of two and three-dimensional design skills and concepts. Students will demonstrate their ability to respond, to analyze and to interpret their own artwork and the work of others through discussions, critiques, and writings. *1 Credit*



Visual Arts III

This course is meant for third level advanced art students who have completed Visual Art 1 and Visual Art 2. Skills learned in Art 1 and Art 2 are incorporated and enhanced through this course. Each student will use their prior knowledge in the previous courses to investigate more thoroughly two-dimensional and three-dimensional projects. Students must show initiative and good work habits in addition to being interested in art. *1 Credit*

Visual Arts IV

Through more individualized instruction, greater independence, and an increased knowledge of media and techniques, students will continue to develop artwork that reflects a personal style and interpretation and build a portfolio. Further study of art criticism and aesthetics will continue to be part of the curriculum. *1 Credit*

Digital Business I

(Wilmington University – CTA206 & SDD100, 3 Credits each)

Whether a student's interest lies in owning his/her own business, running a business, or participating in administration, this course provides students with a broad introduction to business that will include elements of business administration, entrepreneurship, financial analysis, and marketing. Students will study various business aspects, such as, business law, basic economic principles, ethics, entrepreneurship, financial analysis, marketing operations, and strategic management plans. Computer technology will help students fine tune their technical reading skills in the first part of the year by learning and applying Microsoft Applications. In the second semester, students will learn basic html programming for web design application. Students will also explore career planning, and professional development. Communication skills, customer relations, leadership skills, and teamwork will be emphasized within this class. This introduction will provide a basis for life-long practical business knowledge for personal or academic applications. Upon completion of this course students will be able to determine the business pathway that best fits their individual interests. Students will have the opportunity to participate in Business Professionals of America. *1 Credit*

Digital Business II

(Wilmington University – BMK305, 3 Credits)

Marketing Communications continues to prepare students for successful post-secondary education and/or career opportunities that facilitate business operations through a basic understanding of the role of marketing in our free enterprise economy. Students will also focus on such areas as Sports Marketing, Fashion Marketing, and Global Marketing. Emphasis is placed on the nine marketing functions; selling, distribution, financing, marketing/information management, pricing, product/service planning, promotion, purchasing and risk management. In this course students will also develop a comprehensive marketing plan. This course will utilize computer technology to research, store, analyze and present information. Students will have the opportunity to participate in BPA. *1 Credit*

Digital Business III

Students will focus on completing their Capstone project in their major or area of interest for college, as well as the college audition/portfolio process. Students will have the opportunity to complete units on entrepreneurship. *1 Credit*

Drawing & Painting

Structured for beginner to intermediate artists this class begins with basic drawing exercises along with explaining drawing materials and how to use to maximum benefit. Students draw basic forms from a still life set up using direct lighting to more complex objects in order to help understand value. Instruction includes proper proportions, relationships, eye level and foundation perspective, line and values, direct lighting and cast shadows as well as soft and hard edges. Painting covers color mixing, paint application, selection and use of brushes and other painting tools, as well as painting composition. Students will use a limited color palette in order to learn how to mix a variety of colors. *1 Credit*

Dual-Enrollment Program

Starting in their Freshman year, students have the opportunity to earn college credits through our regular curriculum courses. Our partnerships with Wilmington University and Wesley College allow us to continue to expand the opportunities available to all grade levels. Dual enrollment courses are taught in our school, by our certified faculty who are approved college adjuncts. Families can choose to pay for college credit at the discounted cost offered through MOT Charter.

Wilmington University

Introduction to Computer Programming - CTA206 & SDD100

AP Computer Science Principles - SEC290

AP Computer Science A - SDD240

Computer Science IV - SEC100 & SEC210

Digital Business I - CTA206

Digital Business II (Marketing) - BMK305

Inferential Statistics - MAT308

World History - HIS204

U.S. History - HIS316

Wesley College

American Literature - EN100

World Literature - EN101

Spanish II - SP100

Spanish III - SP101

Spanish IV - SP200

Spanish V - SP201

Italian I - IT100

Italian II - IT101

Italian III - IT200

Italian IV - IT201



Early College Independent Study

MOT Charter students who elect to independently study Early College courses take one course during the first half of the school year and a second course during the second half of the year. Successful completion of each Early College course earns students a half credit toward their high school requirements at MOT Charter. Students work independently, but use a senior class elective period to fulfill the requirements of these West Virginia University and Wilmington University courses. Families can choose to pay for these online, elective courses at the cost offered through MOT Charter.

West Virginia University

Public Communications, COMM104

Introduction to principles of communication in the one-to-many context. Emphasis is given to the creation and refutation of arguments. *½ Credit*

Engineering in History, ENGR140

Impact of engineering on society throughout history. Developments in warfare, architecture, agriculture, manufacturing, communication, transportation. *½ Credit*

Introductions to Forensic Science, FIS201

A survey course in forensic science including the overview of the history and components of fingerprint classification systems, crime scene analysis, and death investigation. FIS201 is the prerequisite for FIS 202. *½ Credit*

Crime Scene Investigation Overview, FIS202

Overview of the crime scene investigation process for the non-examiner. Course topics include: safety, evidence collection, processing, and documentation. Virtual scenarios will serve as teaching aids. PRE-REQUISITE: FIS 201. Students must take FIS 201 to be eligible to take FIS 202. *½ Credit*

Current Moral Problems, PHIL130

An examination of current moral problems. Topics include: abortion, euthanasia, sexism and sexual equality, preferential treatment, animal rights, sexual morality, pornography, economic justice, paternalism, punishment. *½ Credit*

Engineering Problem Solving, ENGR101

Engineering problem solving methodologies and analysis. Use of computers in problem solving, technical report writing, team-based project work, and presentations. CO-/PRE-REQUISITE: Students must be taking or completed AP Calculus. *½ Credit*

Wilmington University

Introduction to Psychology, PSY101

Offers an overview of the principles of human behavior. Developmental theories, psychophysiology, thinking, learning, personality theories, abnormal, and deviant psychology are introduced. Methods of assessment and research principles are discussed. *½ Credit*

World and Regional Geographym HIS300

Focuses on the interactions between people and their regional environments and how those interactions produce distinctive places to live. *½ Credit*

Environmental Science, SCI310

Course identifies the causes of environmental degradation and examines current efforts toward correcting a variety of complex environmental situations. Emphasis is placed on the role of humans using science and technology to find solutions to the problems facing earth. *½ Credit*

Introduction to Sociology, PSY101

Introduces students to the fundamental concepts and methods of the scientific study of group behavior in terms of social interactions and processes. *½ Credit*

American Politics, POL 300

Course surveys the political institutions of the federal republic of the U.S.A. and their interaction, strengths, and weaknesses. *½ Credit*

Climate Dynamics, SCI303

Course is a study of the earth and atmospheric phenomena that result in weather. Weather theories, forecasting, dissemination, and applications of weather principles. Developments resulting from pollution of the atmosphere are examined. *½ Credit*



THE FUTURE DEPENDS

ON WHAT YOU DO TODAY”

Mahatma Gandhi

Counseling Resources

The MOT Charter School counseling program provides all students with a comprehensive school counseling curriculum with a focus on preparing students for post-secondary education. Students in all grades are encouraged and supported to take an active role in planning for their post-secondary goals. In addition to academic and college advising, MOT Charter High School counselors also provide counseling and support related to social and emotional needs.

Freshman Year

Beginning in freshman year, counselors work with students to ensure a smooth transition from middle school to high school. Ninth graders explore topics related to time management, successful study habits, communication skills, online responsibility and school expectations on citizenship and community. In addition, students are encouraged to begin thinking about post-secondary pursuits through academic counseling and Naviance. Within the Naviance platform, students begin exploring their interests and researching college and career options. Freshmen may meet with their counselors for academic advisement or to address personal concerns.

Sophomore Year

Building on the foundation set in freshman year, counselors continue to work with students to encourage college preparation through academic opportunities and through the Naviance platform. Sophomores using Naviance Student continue to explore areas of interest related to majors, careers, and post-secondary options. Students dive into exploring college options and learning how to begin the college search process. Students begin preparation for the SAT beginning in their sophomore year. Students take the PSAT/NMSQT in the fall and the PSAT 10 in the spring. Students will also use Naviance Test Prep during their PSAT/SAT Prep course. Sophomores may meet with their counselor for academic advisement or to address personal concerns.

Junior Year

Juniors continue to build on the foundational groundwork that was laid down for them in their freshman and sophomore years. Students continue to identify and match colleges with their interests and post-secondary goals. Juniors utilize Naviance Student in their college and career exploration process and are encouraged to engage with college admissions counselors through college field trips and in-house college admissions presentations. In the spring, all juniors take the school wide SAT. Parent/Student workshops and presentations related to the college process and the Naviance platform are provided. Juniors may meet with their counselor for academic advisement and/or personal concerns.

Senior Year

Beginning in the summer prior to senior year, students are encouraged to update all information in Naviance Student as preparation for submitting applications for college. Senior workshops and presentations are provided for students and parents to offer guidance and support through the college, scholarships and financial aid application process. Several community and state based organizations are brought in to provide additional support to students and families. Seniors have several check-ins throughout the year surrounding their application status.

Naviance Student

Naviance Student is a web-based tool that helps students discover, explore and plan their college and career goals and options, and allows parents to be engaged in that process. Parents and students can use Naviance Student to:

- ∞ **Engage in the planning and advising process** – Build a resume, complete online surveys, and manage timelines and deadlines for making decisions about colleges and careers
- ∞ **Research colleges** – Students identify their college preferences in terms of size, location, major, etc., to generate a “match list” which shows how closely each match fits your student’s wants and needs. Easily compare admissions data, tuition, GPA, standardized test scores, etc.
- ∞ **Research careers** – Research hundreds of careers and career clusters, and take career assessments. Students complete career assessments to help them discover more about their personality. They review results to help find the different types of career options, including job descriptions, task and activities performed in that career and expected wages.
- ∞ **Create plans for the future** – Create goals and to-dos, and complete tasks assigned to you by the school to better prepare yourself for your future college and career goals.

Graduation Requirements

A student must earn a minimum of 28 credits, three of which must be in the student's declared major pathway, to fulfill the requirements for graduation. The Academy Principal, as necessary, may resolve any discrepancies in these requirements.

Credits for graduation must be distributed as follows:

- ∞ Four years of English
- ∞ Four years of Mathematics
- ∞ Four years of Social Studies
- ∞ Four years of a Science
- ∞ Three years of World Language
- ∞ Three years of Major Pathway
- ∞ One year of Physical Education
- ∞ One-half year of Health

***The Class of 2018
achieved
100% acceptance to
a college or university***

MOT Charter High School requirements are set to exceed minimum state requirements while meeting college-preparatory requirements as outlined below:

State Requirements

- 4 English
- 4 Mathematics
- 4 Social Studies
- 3 Science
- 2 World Language
- 1 Physical Education
- ½ Health
- 3 Career Pathways
- 2.5 Electives

Commitment to Delawareans' Program

- 4 English
- 4 Mathematics
- 4 Social Studies
- 3-4 Science (2 labs)
- 3-4 World Language

At least 18 core class (English, Math, Science, Social Studies & World Language) credits





MOT CHARTER

K-12 • Arts, Science & Technology

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