

2025-2026

PROGRAM OF STUDIES



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Marine Science Magnet High School
Core Values, Beliefs About Learning, and Vision of the Graduate

<p><u>Core Values</u></p> <p><i>Environmental Stewardship</i></p> <ul style="list-style-type: none"> - We lead efforts to ensure the sustainability of our physical and social environment. <p><i>Growth</i></p> <ul style="list-style-type: none"> - We understand that both success and struggle are part of the learning process. We persist through challenges and seek feedback to support our growth. <p><i>Equity</i></p> <ul style="list-style-type: none"> - We advocate and actively work to ensure equitable opportunities and outcomes for every member of our diverse community. <p><i>Community</i></p> <ul style="list-style-type: none"> - We take action and build relationships that strengthen our school, local, and global communities. <p><i>Responsibility</i></p> <ul style="list-style-type: none"> - We are responsible and accountable to ourselves and one another for maintaining a respectful, productive, safe, and supportive learning environment 	<p><u>Beliefs About Learning – We believe:</u></p> <ul style="list-style-type: none"> - A <u>growth mindset</u> allows us to learn from our mistakes through feedback, support, and new learning; - <u>Strong relationships and a supportive school culture</u> are foundational to successful teaching and learning; - When we are <u>accountable to the learning environment</u>, we engage deeply with our learning and one another; - <u>Individual ownership</u> of our growth motivates us to lead our own learning; - <u>Responsive instruction</u> meets the academic, social-emotional, and cultural needs of each individual in the learning community; - Learning accelerates through <u>relevant opportunities</u> that build on personal interests and fuel creativity through wonder, curiosity, and inquiry.
<p><u>Vision of the MSMHS Graduate –</u> <i>MSMHS graduates will employ the following skills to ensure sustainability and equity for themselves, their communities, and the environment.</i></p>	
<p><u>Problem Solving</u></p> <p>MSMHS graduates will design and implement solutions to complex problems through:</p> <ul style="list-style-type: none"> - Thoughtful questioning - Critical analysis of relevant and reliable evidence - Flexible, creative, and strategic thinking - Collaboration and interdependence 	<p><u>Communication</u></p> <p>MSMHS graduates will communicate effectively by:</p> <ul style="list-style-type: none"> - Speaking and writing clearly, meaningfully, and with an understanding of audience and purpose - Listening actively and openly - Supporting claims with relevant and reliable evidence - Conveying empathy, compassion, and understanding - Using literacy skills to understand and navigate our world
<p><u>Self-Directed Learning</u></p> <p>MSMHS graduates will guide their own lifelong learning by:</p> <ul style="list-style-type: none"> - Persisting through challenges - Taking risks that enhance experience - Accepting feedback and seeking support - Appreciating challenges as opportunities for growth - Cultivating curiosity, exploration, and wonder - Building understanding of their own thinking through metacognition - Actively seeking diverse perspectives and experiences - Advocating for self and others 	<p><u>Community Engagement</u></p> <p>MSMHS graduates will be leaders in equity, justice, and environmental stewardship:</p> <ul style="list-style-type: none"> - Maintaining awareness of the assets and challenges that shape communities - Applying knowledge and skills to positively impact the real world - Taking responsibility to advocate and act with integrity and conviction - Modeling kindness, inclusion, and respect for all

Graduation and Promotion

The Connecticut State Board of Education and the LEARN Board of Directors require all graduates to have successfully completed a minimum of 25 course credits or their equivalents, including:

Class of 2027 and Beyond*

Graduation Requirements	Subjects	Min. Credits	Mandatory Courses or Equivalents
Humanities (9 credits)	English	4	<i>1 English credit each year for four years</i>
	Social Studies	3	<i>Civics, US History</i>
	Fine Arts	1	<i>Mastery Based Portfolio Credit</i>
	World Language	1	<i>Spanish I or Spanish Language and Culture at MSMHS or 1 credit transferred as indicated on transcript</i>
STEM (12 credits)	Mathematics	4	-
	Marine Studies & Aquaculture	4	<i>Marine Studies I, Marine Studies II, Marine Science, & an Aquaculture Related Course</i>
	Science	4	<i>Integrated Science, Biology, Environmental Science, and one science elective</i>
Elective (.5 credit)	Across Subject Areas	.5	<i>A minimum of .5 additional credit from across subject areas. (Since MSMHS offers full year classes, this will typically result in awarding 1.0 elective credit.)</i>
Self-Wellness (2 credits)	Health & Physical Education	1	-
	Personal Wellness & Safety Education	1	<i>Four Years of Advisory: Healthy & Balanced Living (.25 credits each year)</i>
Financial Literacy (0.5 credit)	Personal Financial Management and Financial Literacy	0.5	<i>.5 mastery-based credit in Financial Literacy awarded through demonstration of mastery in an identified course aligned to approved Financial Literacy Standards.</i>
Mastery Based Diploma (1 credit)	Graduation Portfolio	1	<i>Portfolio and Capstone Exhibition</i>
25 credits		25	

*Pending LEARN Board Approval

Class of 2026

Graduation Requirements	Subjects	Min. Credits	Mandatory Courses or Equivalents
Humanities (9 credits)	English	4	<i>1 English credit each year for four years</i>
	Social Studies	3	<i>Civics, US History</i>
	Fine Arts	1	<i>.5 embedded into Environmental Science, .5 met through Graduation Portfolio</i>
	Elective	1	<i>One humanities elective in the subject areas of Social Studies, English or Spanish</i>
STEM (12 credits)	Mathematics	4	-
	Marine Studies & Aquaculture	3	<i>Marine Studies I (.75), Marine Studies II, Marine Science, & an Aquaculture Related Course</i>

	Science	5	<i>Biology & Environmental Science (.5 each), Integrated Science, and three science electives</i>
World Language (1 credit)	Spanish	1	<i>Spanish I or Spanish Language and Culture at MSMHS or 1 credit transferred as indicated on transcript</i>
Self-Wellness (2 credits)	Health & Physical Education	1	<i>Embedded into Marine Studies I (.25 Physical Education) Embedded into Biology (.5 Health) and Health and Physical Education (1 credit)</i>
	Personal Wellness & Safety Education	1	<i>Four Years of Advisory (.25 credits each year)</i>
Mastery Based Diploma (1 credit)	Graduation Portfolio	1	<i>Portfolio and Capstone Exhibition</i>
25 credits		25	

Class of 2025 Only

****Freshman year: .5 credit of Physical Education is embedded in the Marine Studies I curriculum***

****Sophomore Year: .25 credit of Physical Education is embedded in the Marine Studies II curriculum. .5 credit of Fine Arts is embedded in the Environmental Science curriculum***

****Senior Year: .5 credit of Health met through Master Based Project (Wellness Fair). .5 credit of Fine Arts met through Graduation Portfolio.***

Financial Literacy Credit Requirement

Connecticut law requires local and regional boards of education to provide learning opportunities for all students to accumulate one-half credit in personal financial management and financial literacy courses, commencing with the graduating class of 2027. Critically applying financial literacy competencies prepares students for success in college, career, and civic life. Understanding how to navigate the complex consumer economy of the 21st century is a transferable skill that positions students for an evolving workplace and marketplace.

At MSMHS, the financial literacy credit requirement is obtained by demonstrating mastery in courses and/or specific units that align with the Financial Literacy standards adopted by the State Board of Education. All MSMHS students graduating in 2027 or later must plan to enroll in at least one of the courses designated to meet the requirement. In each course, the student will earn 1.0 credit for the primary course as well as .5 credit in financial literacy upon demonstration of mastering the aligned financial literacy standards.

At this time, MSMHS offers the following opportunities to earn this mastery-based credit:

- Real World Math
- Aquaculture Business
- UConn ECE Horticulture and Flower Design
- AP Microeconomics
- Senior Internship

Course Load Requirements

<u>Grade</u>	<u>Minimum Number of Classes</u>
9	7.25
10	7.25
11	6.25
12	6.25

Beginning the Scheduling Process – Program of Studies

The scheduling process begins in the spring. The Program of Studies is made available to students and is reviewed during their advisory where they will discuss their overall educational plans and schedule for the coming year. Middle school students participate in scheduling programs at the MSMHS Accepted Students and consult directly with MSMHS administration and counselors. During individual group meetings, incoming students and families learn about specific courses and opportunities, and are advised about their selections for the coming year.

Prerequisites, Course Recommendations, and Administrative Review Process

Certain courses are sequential in nature and have prerequisites. These courses are noted in the course description in this guide. At MSMHS, students have access to a variety of Honors, UConn ECE, and AP courses. We believe in supporting students to select a balanced course load that will allow them to rise to the challenge of rigorous learning opportunities without being overwhelmed by the academic skills and workload required for these courses. While teachers do not formally recommend students for course levels, they do review student selections and notify administrators and school counselors if they are concerned about a student's ability to succeed in a course they have selected. MSMHS administration makes the final decision in these cases after engaging students, parents, teachers, and counselors to determine the student's ultimate course selection.

Advanced Placement (AP) and Early College Experience (ECE) UConn Courses

Taking an AP or ECE course is a collaborative effort among the student, the parent/guardian, and Marine Science Magnet High School. Each party plays a role and must make the commitment to expectations of the rigorous program.

To meet expectations of our AP and ECE courses, the student must take the AP or ECE exam on its scheduled date and time as determined by the College Board and the University of Connecticut. Exceptions to this will be considered by Administration on a case by case basis. All students must pay all fees set by the College Board and the University of Connecticut. **Fees are non-refundable after October 1st**. Any student who has financial hardships may contact the main office and/or administration for financial assistance.

Please see Page 4 for a list of AP and ECE fees associated with each course.

***ADMINISTRATION STRONGLY BELIEVES THAT NO STUDENT SHOULD AVOID
TAKING AN AP OR ECE COURSE DUE TO FINANCIAL DIFFICULTIES.***

The Scheduling Process

During the scheduling process, students will indicate their course requests using a course selection form. In addition to listing all courses they wish to take, students should also list alternate elective choices if applicable. A document listing the student's selected courses will be printed for the student to review with their parent or caregiver and obtain their signature noting their agreement. Students will then enter their selections into PowerSchool. Failure to return the signed course request form and select courses in PowerSchool on time will limit opportunities for choice and flexibility in scheduling.

Master Schedule

Based on students' preliminary course selections, a master schedule is developed. The school master schedule is built in the spring based upon student needs, student requests, teacher and counselor recommendations, and parent participation. The schedule is constructed so that students are enrolled in the courses they must have, and every effort is made to schedule the electives they would like to have. If a course is not offered or is over-enrolled, or if a conflict occurs due to classes meeting at the same time, or if a placement recommendation is changed, the student will conference with the advisor and/or counselor to make the necessary adjustments in their course selections. Other than these exceptions, the courses for which a student pre-registers will be his/her course of studies for the next school year, whenever possible. Prior to the end of school, each student will receive their list of courses for the next school year. It may not be possible to provide names of teachers or specific periods until the first day of school.

Student Responsibilities in the Scheduling Process

1. Carefully consider course options after hearing about them from your teachers and reviewing course descriptions in the Program of Studies.
2. Review the Program of Studies and your preliminary course selections with parents or caregivers.
3. When making course selections, consider an appropriate balance of challenge across your course load based on your individual strengths, interests, and areas for growth. Consult your teachers, counselors, and advisor if you are unsure of which courses are best for you.
4. After completing a course selection form, share your selections with your parent or caregiver, and have them sign off on your selections.
5. Return the signed course selection form to your Advisor by the assigned due date.
6. During the designated time period input your course selections into PowerSchool.
7. After receiving confirmation of your course selections, report any errors immediately to your advisor and/or counselor.
8. Understand that the courses selected at this time will be the schedule of courses for the following year.

ADD/DROP

MSMHS does not encourage students to drop courses during the school year. Dropping courses to accommodate a personal schedule cannot be accommodated. All schedule changes must be officially approved by administration in collaboration with the School Counseling office.

However, MSMHS does understand that extraordinary situations may arise that result in the need to add classes or drop classes.

If a student wishes to withdraw from a course **in order to add a different course** in its place, the following procedures must occur **by October 1st** of that school year:

- Students must discuss the possibility and advisability of the drop with their counselor and with the teacher of the class. Teacher recommendations will be considered. Parent approval is required.

If a student wishes to drop a high level class (AP, ECE, Honors) to move to a college prep course in the same area the following must occur **before October 1st**:

- Students must discuss the possibility and advisability of the level change with their counselor and with the teacher of the class. Teacher recommendations will be considered. Parent approval is required.
- The grades will be weighted according to the appropriate level.

If a student wishes to drop a class after the two week window, the following procedures must occur:

- Students must discuss the possibility and advisability of the drop with their counselor and with the teacher of the class. Teacher recommendations will be considered. Parent approval is required.
- **If the drop occurs before October 1st, the course and grade will not appear on the student's transcript.** However, if the drop occurs after October 1st, the course name and a WP (withdraw passing) or WF (withdraw failing) will appear accordingly.

Some schedule changes may be **required** under certain conditions. These conditions are:

- unanticipated failures;
- successful completion of principal approved, summer school courses;
- technical errors;
- approved academic level change.

**MSMHS 2025-2026
ECE and AP Course Fees**

MSMHS Course Name	UConn Course Name	# of UConn Credits	*ECE Fee \$50/credit	*College Board AP Exam Fee
ECE FEE ONLY:				
ECE English Composition	ENGL1007: Seminar and Studio in Academic Writing and Multimodal Composition <i>(FY: Fall & Spring)</i>	4	\$200	-
ECE World Maritime History	MAST1200: Introduction to Maritime Culture <i>(FY: Fall & Spring)</i>	3	\$150	-
ECE Urban Advocacy and Education	EDLR1160: Health and Education in Urban Communities	1	\$50	-
ECE Environmental Science	NRE1000E: Environmental Science <i>(FY: Fall & Spring)</i>	3	\$150	-
ECE Horticulture & Design	SPSS1110: Fundamentals of Horticulture <i>(FY)</i> SPSS2520: Floral Art <i>(Fall)</i> SPSS3530: Advanced Floral Design <i>(Spring)</i>	7	\$350	-
ECE Marine Science: Introduction to Oceanography	MARN1003E: Introduction to Oceanography with Lab <i>(FY: Fall & Spring)</i>	4	\$200	-
ECE The Sea Around Us	MARN1001E: The Sea Around Us <i>(FY: Fall & Spring)</i>	3	\$150	-
ECE Spanish	SPAN3178: Intermediate Spanish Composition <i>(Fall)</i> SPAN3179: Spanish Conversation: Cultural Topics <i>(Spring)</i>	6	\$300	-

All *College Board AP Exam fees are \$98 as set by the College Board for the following AP courses offered:

AP Literature & Composition	AP United States History	AP Statistics
AP Language & Composition	AP Microeconomics	AP Chemistry
AP Art History	AP Calculus AB	AP Biology
AP Psychology	AP Calculus BC	AP Computer Science Principles

**These fees are subject to change by the University of Connecticut and College Board*

****MSMHS strongly believes that no student should avoid taking an AP or ECE course due to financial difficulties.** Students who qualify for Federally Subsidized Meal Programs as determined by the Connecticut State Department of Education (CSDE)) are eligible for a full program fee waiver. Students should contact their counselor. Any student with financial hardships may meet confidentially with the principal for financial assistance.

LANGUAGE ARTS DEPARTMENT

English I

ENG0210

Full Year

1 credit

Freshman Year

**NCAA Approved*

This course promotes literacy and academic achievement in English Language Arts through enriched experiences in literature, writing, speaking, and listening. The content explores the major concepts of Humanity, Archetypes, Conflict, and Perception through the close reading and analysis of selected novels, short stories, nonfiction, and poetry. Students gain perspectives and communicate their understanding and ideas through classroom discussion, oral presentations, and formal and informal writing experiences. Composition instruction focuses on using the writing process in creative, logical, and critical modes, as well as frequent practice in all aspects of the writing process. Preparation for the SAT is embedded.

English II or English II Honors

ENG0220/ENG0229

Full Year

1 credit

Sophomore Year

**NCAA Approved*

English II is designed to allow students to further develop their reading, writing, speaking, and listening skills. Texts include novels, nonfiction, poetry, and short stories, all of which are of a higher level of complexity than the texts used in English I. The course includes instruction in critical analysis with an emphasis on the creative, logical, and critical aspects of reading, literary analysis, and composition. Students should expect to read challenging material, write for a variety of purposes, and engage in discussions. Preparation for the SAT is embedded. At the start of the school year, all 10th grade students will be enrolled in English II (ENG0220). Students who wish to earn Honors credit in English II (ENG0229) must meet honors level expectations and complete embedded honors level assignments.

American Literature

ENG0230

Full Year

1 credit

Junior Year

**NCAA Approved*

This course explores the major concepts of Cause and Effect, Migration, Social Inequality, Innovation, Change, Prosperity, Patterns, Conflict, and Community as evident in both nonfiction and fiction published at various times in American history. Through a variety of activities, close readings and informal as well as formal analyses, students develop a comprehensive understanding of the evolution of our national cultural identity against the background of world events. Composition instruction includes frequent practice in writing multi-paragraph essays in a variety of types, including documented papers. Preparation for SAT is embedded.

AP English Language and Composition

ENG0258

Full Year

1 credit

Junior Year

**NCAA Approved*

In this college level course, students will develop and hone their reading, thinking, writing, and discussion skills through a study of rhetoric and argument. Written assignments will include essays that are analytical and persuasive, as well as personal and reflective. Students will read some of the works taught in the American Literature course. Class will be conducted in seminar format, and students will be expected to participate actively in daily discussions. Students taking this course must take the corresponding national Advanced Placement Exam in May. Preparation for SAT is embedded.

Please note that there is a fee set by the College Board for students taking this course.

Contemporary Literature**ENG0240****Full Year****1 credit***Senior Year***NCAA Approved*

This course refines the students' ability to compose personal and academic essays connecting to and analyzing readings of contemporary literature. Students specifically focus on the composition and completion of their college admissions essay, analysis of nonfiction/ fiction contemporary literature, and the close reading of contemporary poetry and song lyrics. The course provides the opportunity for students to refine and build off of their composition skills in order to prepare themselves for their future inside and outside of higher education. Through feedback cycles of editing, revising, and submission, students are provided multiple opportunities to reflect on their work, improve it, and progress throughout the course.

ECE English Composition**ENG0239****Full Year****1 credit/4 UConn credits****UConn Course Name: ENGL1007: Seminar and Studio in Academic Writing and Multimodal Composition***Senior Year***NCAA Approved*

This First Year Writing course (required of all students at UConn and many other colleges), will focus on college composition through multiple forms of literacy, including rhetorical, digital, and information literacies necessary for twenty-first-century contexts. Working collaboratively, students will develop creative and intellectual inquiries through sustained engagement with texts, ideas, and problems. The course will emphasize the transfer of writing and rhetorical skills to academic and daily life. Students will spend 25% of class time in studio work, exploring and working collaboratively to produce multimodal compositions (may include podcasts, videos, etc.). Peer review and feedback will be an important element of the course. Students will design a digital portfolio that curates creations and skill-based micro-credentials they earn in coursework. Specific summer reading with a corollary written assignment is required. Preparation for SAT is embedded.

Please note that there is a fee set by UConn for students taking this course.

AP English Literature and Composition**ENG0278****Full Year****1 credit***Senior Year***NCAA Approved*

In this college level literature course, students will hone their analytical thinking and writing skills through deep study of poetry and fiction. Class will be conducted in seminar format, and students will be expected to participate actively in daily discussions. Students will read challenging material and write frequently, both AP style in-class essays and more sustained revised papers. Specific summer reading with a corollary written assignment is required. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

MATHEMATICS DEPARTMENT

Algebra I

MTH0110

Full Year

1 credit

Freshman Year

**NCAA Approved*

This course will enable the student to reach an understanding and appreciation of some of the algebraic structures exhibited by the real number system. Importance is placed on the development of manipulative skills and on the use of variables in problem solving situations. Students are introduced to the techniques for solving linear, quadratic and systems of equations, solving inequalities, manipulating radicals, graphing, and manipulating polynomial expressions. Throughout the course there will be an emphasis on problem solving, the use of technology, and real-world applications. Common Core State Standards are followed. Preparation for SAT is embedded.

Applied Algebra and Geometry

MTH0115

Full Year

1 credit

Freshman, Sophomore or Junior Year

Prerequisite: *Algebra 1*

This course is designed to strengthen core algebra skills while introducing key concepts of applied geometry. Students will deepen their understanding of fundamental algebraic operations, equations, and functions, while exploring geometric principles and their real-world applications. Through engaging activities and practical examples, students will build a solid foundation for future academic achievement in mathematics.

Geometry

MTH0120

Full Year

1 credit

Freshman or Sophomore Year

Prerequisite: *Algebra I*

**NCAA Approved*

This course will enable the student to gain an understanding of the basic structure of Euclidean geometry and to develop powers of spatial visualization and reasoning, while building knowledge of the relationship among geometric elements. Topics covered include congruence, polygons, triangle relationships, trigonometry, properties of circles, three-dimensional shapes and probability. Algebraic skills will be constantly developed, used and strengthened. The methods of coordinate geometry will be emphasized and the presentation will integrate the important concepts and skills of algebra and geometry. Common Core State Standards are followed. Preparation for SAT is embedded.

Algebra II

MTH0130

Full Year

1 credit

Sophomore or Junior Year

Prerequisite: *Algebra 1 and Geometry*

**NCAA Approved*

This course will enable the student to gain a richer understanding of the algebraic structure of the real number system. While the emphasis of the course is on manipulative skills, considerable attention is given to mathematical structure and logic. The content of the course includes first degree, linear, and quadratic equations and inequalities, system of equations, polynomial and fractional expressions, exponents, radicals, and complex numbers. Mathematical modeling, problem solving and multiple representations are stressed. Common Core State Standards are followed. Preparation for SAT is embedded.

Algebra II Honors

MTH0135

Full Year

1 credit

Freshman, Sophomore or Junior Year

Prerequisite: Algebra 1 and Geometry

**NCAA Approved*

Honors Algebra II is an in-depth course that examines the concepts and techniques of advanced algebra. It is recommended for students with a very strong background in Algebra I. The emphasis in the course's development is on the logic and structure of algebra operations and manipulations and on the concept of a function. It relies heavily on the skills and concepts learned in previous courses and connecting concepts between curriculum topics. Linear, quadratic, polynomial, rational, exponential, logarithmic and radical functions are discussed with regard to their relationship to algebraic operations and manipulative skills. Technology is integrated throughout the course. The goals of Honors Algebra II are the development of competent algebra technicians, thinkers, and problem solvers. Common Core State Standards are followed. Preparation for SAT is embedded.

Pre-College Algebra and Trigonometry

MTH0144

Full Year

1 credit

Sophomore, Junior or Senior Year

Prerequisite: Algebra II Honors or Algebra II

**NCAA Approved*

This course extends Algebra II topics and introduces major topics of trigonometry. It serves as a bridge between Algebra II and Pre-Calculus Honors and is designed to prepare students for post-secondary mathematics. Topics covered include rational equations, radical equations, right triangle trigonometry, the unit circle, graphs of trigonometric functions and their transformations, trigonometric identities, equation solving and applications of trigonometric functions (including inverse trigonometric functions). The use of the graphing calculator is an integral component of the course and helps to build a deeper understanding of the concepts. Preparation for SAT is embedded.

Pre-Calculus Honors

MTH0145

Full Year

1 credit

Freshman, Sophomore, Junior or Senior Year

Prerequisite: Algebra 2 or Algebra 2 Honors

**NCAA Approved*

Honors Pre-Calculus is designed to prepare students for a rigorous college level calculus course and/or Advanced Placement Calculus offered at the high school level. Students are expected to demonstrate individual initiative, independent study, and a high level of commitment to the study of mathematics. The study of trigonometry includes right triangle trigonometry, trigonometric and circular functions, graphing, identities, equations and an introduction to limits. Technology is an integral component of the course and helps to build a deeper understanding of the concepts of trigonometry and functions. In addition, technology allows the course to focus on exploration, problem solving, and multiple representations to build a deeper understanding of algebraic techniques. Preparation for SAT is embedded.

**A graphing calculator is required for this course.*

AP Calculus AB

MTH0158

Full Year

1 credit

Sophomore, Junior, or Senior Year

Prerequisite: Pre-Calculus Honors

**NCAA Approved*

This course is rigorous and requires students to understand an abstract approach to the theorems and applications of calculus. Calculus AB follows the AB syllabus of the Advanced Placement program. The goals of the AP Calculus sequence is to provide students with a rigorous course in differential and integral calculus prior to their entrance to college and to provide students with an opportunity to earn college credit in mathematics. Students taking this course must take the corresponding national Advanced Placement exam given in May. Preparation for SAT is embedded.

**A graphing calculator is required for this course.*

Please note that there is a fee set by the College Board for students taking this course.

AP Calculus BC

MTH0179

Full Year

1 credit

Junior or Senior Year

Prerequisite: Completion of AP Calculus AB

****NCAA Approved***

This course includes all topics covered in Calculus AB plus additional topics focusing on the calculus of functions of a single variable. AP Calculus BC is the study of limits, derivatives, definite and indefinite integrals, polynomial approximations and (infinite) series. Though this is considered a study of single-variable calculus, parametric, polar, and vector functions will be studied. Consistent with AP philosophy, concepts will be expressed and analyzed geometrically, numerically, analytically, and verbally. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

AP Statistics

MTH0169

Full Year

1 credit

Junior or Senior Year

Prerequisite: Completion of Algebra II

****NCAA Approved***

This course is rigorous and requires students to think about designs of the studies which produced the data they are analyzing and to consider the possible effect of outlying observations on their conclusions. This course follows the national AP Statistics curriculum. The goal of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data and to provide students with an opportunity to earn advanced placement and/or college credit in mathematics. Students taking this course must take the corresponding national Advanced Placement exam given in May. Preparation for SAT is embedded.

**A graphing calculator is required for this course.*

Please note that there is a fee set by the College Board for students taking this course.

Real World Math

MTH0170

Full Year

1 credit

Junior or Senior Year

****Counts towards Financial Literacy graduation requirement (embedded .5 mastery based credit)***

This course focuses on mathematics applied to solving practical problems in the world around us. Mathematical topics include but are not limited to banking and investing, managing credit, insurance, taxes, and budgeting. Students will use calculation and problem solving skills to help make informed decisions about real world mathematical issues. A solid understanding of math including algebra and basic geometry provides the necessary foundation for students interested in careers in business and skilled trade areas.

SCIENCE DEPARTMENT

Integrated Science

SCI0610

Full Year

1 credit

Freshman Year

**NCAA Approved*

This college prep course will offer students learning opportunities across the physical, & earth sciences by providing engaging, authentic experiences in the interdisciplinary connections which bridge science and society. Integrated Science is rich with inquiry-oriented laboratory activities, where students collect, analyze, and share data with each other. Topics include force and motion, energy transformations, fundamentals of the periodic table, electricity and magnetism, mechanical and electromagnetic waves and the development of technology for studying outer space. Students will develop and apply problem solving strategies to gather and interpret data and to then communicate their findings. Assessments will include problem-based learning activities where students will be exploring rigorous science concepts as they relate to their everyday lives.

Marine Studies I

SCI0620

Full Year

1 credit

Freshman Year

Introducing Ocean Literacy Principle #6 “The ocean and humans are inextricably interconnected,” this course focuses on our dependence on the ocean as a source of valuable products. Through a variety of classroom design projects, lab dissections and water quality experiments, enhanced by field trip programs with Project Oceanology, students explore commercial fishing strategies, science research and analysis, and aquaculture production methods. Access to the MSMHS aquaculture facility helps understand the complexity of fish farming using closed system aquaculture. This introductory course prepares students for electives in advanced aquaculture and marine science courses.

Biology

SCI0810

Full Year

1 credit

Freshman Year

**NCAA Approved*

This course has been designed to prepare students for college biology courses. Students will be expected to apply effective strategies for problem solving by gathering information, analyzing and interpreting data, thinking critically, and communicating solutions. The topics will include the most recent discoveries in biology including bio-molecules, cell structure, energy conversion and utilization in cells, cell reproduction, movement of bio-molecules in cells, the structure of nucleic acids, protein synthesis, and genetics. This is a laboratory science course; lab techniques will be taught and learned as students complete laboratory investigations in each major topic studied. Students will be expected to employ technology appropriately to facilitate learning, research, and communication.

Environmental Science

SCI0820

Full Year

1 total credit

Sophomore Year

**NCAA Approved*

This college prep course will offer students learning opportunities across the curriculum in the field of science. Furthermore, students will develop an understanding and appreciation for living systems (including themselves) and the skills and knowledge needed to address biological issues that are important and relative to their lives and the society in which they live. Such issues include, but are not limited to, the origin of biodiversity, ecology, biogeochemical cycles, scientific ethics, climate change, air pollution, water pollution, urbanization, impacts of human population on the environment, environmental problems and sociobiology.

ECE Environmental Science

SCI0828

Full Year

1 credit/3 UConn credits

UConn Course Name: NRE:1000E Environmental Science

Sophomore, Junior or Senior Year

Sophomore Prerequisite: *Completion of or concurrent enrollment in Biology*

**NCAA Approved*

The purpose of this course is to explore human interaction with the environment. Content includes, but is not limited to, forms of pollution, conservation, environmental policy, land use, population dynamics, and major forms of energy. Laboratory investigations of selected topics in the content also include the scientific method, measurement, lab safety, and dimensional analysis.

Please note that there is a fee set by UConn for students taking this course.

Marine Studies II

SCI0640

Full Year

1 credit

Sophomore Year

In this full-year course, students will engage in an exploration of boating skills and safety to engage in ocean exploration or pursue a maritime career. Students will learn to become competent navigators through a study of tides, currents, small boat handling, and aids to navigation. Practical navigational skills such as identification and interpretation of lights and buoys, chart reading, completion of tide and current tables, and voyage planning will be practiced in both the classroom and through the use of our state of the art boat simulator. The class also includes field trips to New England Science and Sailing for hands-on boat handling training. Project based learning will be involved to explore the impact of boats on our national waterways to investigate connections between our use of the environment and our impact on it.

Chemistry Honors

SCI0715

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Completion of or concurrent enrollment in Algebra II*

**NCAA Approved*

Chemistry Honors is for students interested in exploring science and engineering pathways. This course will investigate interactions around different energy and matter, incorporating higher level mathematical relationships and reasoning. The necessary math skills include algebraic manipulation, graphing, and data analysis. This fast paced, college prep, laboratory-oriented course helps grow student skills in science literacy and develop a lifelong awareness of the potential limitations of science and technology. Students will develop understanding and skills in fundamental concepts, practical applications, laboratory techniques and mathematical applications. Topics include atomic structure, chemical reactions, chemical quantities, kinetic theory, and thermodynamics. This course will prepare students to take AP Chemistry.

AP Chemistry

SCI0719

Full Year

2 credits

Senior Year

Prerequisite: *Completion of Chemistry Honors*

**NCAA Approved*

This is a college-level course designed to conform to the Advanced Placement Chemistry Program. Appropriate lab experiences are used which emphasize qualitative, quantitative, and instrumental methods of analysis. Students taking this course are expected to take the corresponding national Advanced Placement exam in May.

Please note that there is a fee set by the College Board for students taking this course.

Marine Science

SCI0730

Full Year

1 credit

Junior Year

**NCAA Approved*

The purpose of this course is to provide students with a survey of the world's oceans. Students will explore ocean features, marine organisms and their habitats, environmental issues in ocean chemistry, and the ocean's influence on our weather and current events. This course will incorporate laboratory investigations and use student generated questions to problem solve as active citizens in a coastal community.

ECE Marine Science: Introduction to Oceanography

SCI0738

Full Year

1 credit/4 UConn credits

UConn Course Name: MARN1003: Introduction to Oceanography with Laboratory

Junior or Senior Year

Prerequisite for Juniors: *Concurrent enrollment in Chemistry Honors*

**NCAA Approved*

This course covers the geology, chemistry, physics and biological processes of the world's oceans. The first half of the course will focus on the formation of the Earth, beach erosion and ocean chemistry. The second half of the course will focus on ocean circulation, waves and biological productivity. Students will examine marine conservation issues as well as impacts the ocean has on their lives.

Please note that there is a fee set by UConn for students taking this course.

Aquaculture and Resource Management

SCI0750

Full Year

1 credit

Junior or Senior Year

**Sophomores may request with teacher and admin approval*

****Counts toward Aquaculture Related Course graduation requirement.***

In this course, students will be introduced to advanced aquaculture topics revolving around the idea of resource management. Topics will include sustainability, natural resource conservation, marine ecology, and food management. Students will investigate the seafood business through work with local farmers, seafood wholesalers, and area restaurants. Exposure to coastal industries, local exports, and international imports will guide students in becoming aware of local resources.

Aquaculture Business and Entrepreneurship

SCI0755

Full Year

1 credit

Junior or Senior Year

****Counts toward Aquaculture Related Course graduation requirement.***

****Counts towards Financial Literacy graduation requirement (embedded .5 mastery based credit)***

This course offers students an immersive introductory experience in the world of aquaculture business. It explores the entrepreneurial characteristics needed in opening and maintaining a sustainable aquaculture business. Students will develop their own industry-specific product or service in order to identify challenges and opportunities in the aquaculture market. Students will lead the management of the MSMHS coral growing operation and gain hands-on experience in product financing, marketing, and sales. This course allows students to lead activities that will provide them with applicable skills necessary to succeed in a constantly changing aquaculture workplace.

Aquarium Science

SCI0870

Full Year

1 credit

Junior or Senior Year

**Sophomores may request with teacher and admin approval*

***Counts toward Aquaculture Related Course graduation requirement.**

This course examines the present-day aquatic animal husbandry industries. In collaboration with Mystic Aquarium, students will explore the physical, chemical and biological processes occurring in the aquarium environment. Students will be responsible for the ownership of their own aquarium and will master the proper set-up and maintenance of home aquaria. Furthermore, students will examine the relationship between a variety of organisms in a balanced coral reef aquarium and make comparisons to the natural environment.

Advanced Aquarium Research Honors

SCI0875

Full Year

1 credit

Junior or Senior Year

***Counts toward Aquaculture Related Course graduation requirement.**

This course will allow students the opportunity to experience authentic and relevant research on the coral reef ecosystem. Students will investigate the impacts that humans have on coral reefs by analyzing current research, conducting experiments on coral growth and breeding marine ornamental fish. In addition, students will explore the aquarium industry and will take an in depth look at the public and private sector by visiting these unique facilities. Furthermore, students will be intimately involved in the ornamental fish aquaculture research being conducted in the MSMHS/Mystic Aquarium Joint Aquaculture Research Lab.

AP Biology

SCI0819

Full Year

2 credits

Junior or Senior Year

Prerequisite: *Successful completion of Biology and completion of or concurrent enrollment in Honors Chemistry*

**NCAA Approved*

This course will prepare students to take the National Advanced Placement Biology Exam. Students will be expected to apply effective strategies for problem solving by gathering information, analyzing and interpreting data, thinking critically, and communicating solutions. Students will be expected to employ technology appropriately to facilitate learning, research, and communication. A significant portion of the course will include laboratory investigations recommended by the College Board, which directly relate to the topics being studied with an emphasis on the Four Big Ideas. Students taking this course are expected to take the corresponding national Advanced Placement exam in May.

Please note that there is a fee set by the College Board for students taking this course.

Human Anatomy and Physiology

SCI0770

Full Year

1 credit

Junior or Senior Year

Prerequisite: *successful completion of Biology*

**NCAA Approved*

This course will enable students to develop an understanding of the relationships between the structures and functions of the human body systems. Students will engage in many topics and competencies related to truly understanding the structure and function of the human body. Students will complete investigations to understand and explain the behavior of the human body in a variety of scenarios that incorporate scientific reasoning, analysis, communication skills and real world applications. Activities completed throughout the school year include dissections of the heart and brain, creating rehabilitation

plans for individuals with muscle strains, completing a urinalysis of patients and investigating various diseases and disorders that impact the human body.

Physics Honors

SCI0780

Full Year

1 credit

Sophomore, Junior or Senior Year

Prerequisite: Successful completion of Algebra II or Algebra II Honors

**NCAA Approved*

This course will be conducted using laboratory-based instructional strategies to develop conceptual understandings of physics principles. Honors Physics will stress both the qualitative and quantitative aspects of forces and motion, the conservation laws, the properties of matter, oscillations and waves, electricity and magnetism, and modern physics. Given the quantitative nature of solving problems and interpreting data a strong mathematics background is essential for success in this honors level endeavor.

ECE The Sea Around Us

SCI0919

Full Year

1 credit/3 UConn credits

UConn Course Name: MARN1001E The Sea Around Us

Junior or Senior Year

***Counts toward Aquaculture Related Course graduation requirement.**

**NCAA Approved*

Taking it to the next level of understanding, this course explores how “The ocean and humans are inextricably interconnected.” (Ocean Literacy Principle #6) Through frequent trips to local coastal environments, a variety of inquiry labs, and activities that mimic finding resolutions to complex challenges, students better understand the integration of the environment, economy, and society. The Sea Around Us reinforces and applies understanding of content from a variety of science and humanities courses, including Environmental Science, World Maritime History, Marine Science, and Real World Math. This course prepares students for college level courses and entry level employment in ocean science, advocacy, and policy careers.

Please note that there is a fee set by UConn for students taking this course.

AP Computer Science Principles

SCI0909

Full Year

1 credit

Junior or Senior Year

**NCAA Approved*

AP Computer Science Principles introduces students to the central ideas of computer science, fostering computational thinking and inviting students to understand how computing changes the world. Students are encouraged to apply creative processes when developing computational artifacts and while using simulations to explore questions of interest. There is a focus on using technology and programming as a means to solve problems. This course highlights the relevance of computer science by emphasizing the vital impact advances in computing have on people and society. Students taking this course are expected to take the corresponding national Advanced Placement exam in May.

Please note that there is a fee set by the College Board for students taking this course

ECE Horticulture & Design

SCI0889

Full Year

1 credit/7 UConn credits

UConn Course Name: SPSS1110/SPSS3530: Fundamentals of Horticulture/Floral Art/Advanced Floral Design

Junior or Senior Year

****Counts toward Aquaculture Related Course graduation requirement***

****Counts towards Financial Literacy graduation requirement (embedded .5 mastery based credit)***

This course introduces students to the science and practice of propagating and maintaining plants; basic concepts of plant structure, growth, and function; integrated pest management; horticulture effects on the environment; landscape design and careers in the horticulture field. Embedded throughout the year will be floral design techniques and business skills connected to the floral industry.

Please note that there is a fee set by UConn for students taking this course

Environmental Forensics

SCI0980

Full Year

1 credit

Junior or Senior Year

****NCAA Approved***

Environmental Forensics is a thematic interdisciplinary course for students passionate about investigating environmental issues with a focus on sustainability, equity, and positive social change. Students will trace pollution sources, analyze environmental impacts, and address environmental crimes such as pollution, wildlife trafficking, and worker endangerment. Hands-on activities like chemical analysis, soil and water testing, and air monitoring allow students to apply their learning to real-world case studies, emphasizing equitable solutions for vulnerable communities. Through self-directed research, project management, and community engagement, students will develop leadership and advocacy skills. Ideal for those pursuing careers in environmental science, sustainability, law, or public policy, this course equips students with the tools to become informed problem-solvers and leaders for a sustainable future.

SOCIAL STUDIES DEPARTMENT

Civics and Environmental Stewardship

SOC0310

Full Year

1 credit

Freshman Year

**NCAA Approved*

This course will focus on the need, purpose, and structure of government, the law-making process, an understanding of the rights and responsibilities of citizenship, and current events. Emphasis is placed on the roles of the government at the federal, state, and local levels. Each major unit of study will also highlight the roles of government and citizens in maintaining the environment and solving environmental problems. Students will work to develop skills in reading, writing, and accountable talk through argumentative writing assignments and class discussion.

World Maritime History

SOC0320

Full Year

1 credit

Sophomore Year

**NCAA Approved*

Throughout history the sea has served as a barrier, a highway, a source of commerce, an arena for warfare, and stage for discovery and exploration. This course will explore topics in World History to understand the international maritime culture that links peoples, nations, economies, environments, and cultural aesthetics. The following topics will be explored: world geography and early exploration; life at sea and the evolution of ocean-going vessels; transportation and commerce across the sea; conflict and the struggle for power on the oceans; and finally, an intensive examination of the history, economics, and impacts of whaling. Throughout each unit, students will gain an understanding of how the history of the world has been shaped by interactions with the sea.

ECE World Maritime History

SOC0328

Full Year

1 credit/3 UConn Credits

UConn Course Name: MAST1200: Introduction to Maritime Culture

Sophomore Year

Prerequisite: *A- avg in 9th grade Social Studies, English, and Marine Studies I*

**NCAA Approved*

This course provides students who are ready and prepared for the demands and rigor of a college course with an opportunity to earn college credit during their sophomore year. This is a reading and writing intensive course. Throughout history the sea has served as a barrier, a highway, a source of commerce, an arena for warfare, and stage for discovery and exploration. This course will explore topics in World History to understand the international maritime culture that links peoples, nations, economies, environments, and cultural aesthetics. The following topics will be explored: world geography and early exploration; life at sea and the evolution of ocean-going vessels; transportation and commerce across the sea; conflict and the struggle for power on the oceans; and finally, an intensive examination of the history, economics, and impacts of whaling. Throughout each unit, students will gain an understanding of how the history of the world has been shaped by interactions with the sea.

Please note that there is a fee set by UConn for students taking this course.

United States History**SOC0330****Full Year****1 credit***Junior Year***NCAA Approved*

This course is designed to give students a general overview of U.S. History. Students will explore the major historical events in the history of the U.S. from the colonial antebellum period to modern times. Through readings, writing and critical thinking assignments, video/film, projects and simulations, students will gain an understanding of major historical figures and events, and the causes and consequences that have shaped our nation's history, and particularly its role in the world. Preparation for the SAT is embedded.

AP United States History**SOC0338****Full Year****1 credit***Junior Year***NCAA Approved*

This course provides a challenging, accelerated approach to exploring U.S. History from the pre-colonial period through the beginning of the 21st century. It simulates a true college experience with diversified readings and discussion material, in-depth writing activities, and analysis and synthesis of information. All enrolled students must take the Advanced Placement examination in May. Preparation for the SAT is embedded.

Please note that there is a fee set by the College Board for students taking this course.

AP Psychology**SOC0359****Full Year****1 credit***Junior or Senior Year***NCAA Approved*

This course is intended to expose students to the social science of psychology. Through this rigorous course, students gain a better understanding of human behavior and mental process. Students become acquainted with the breadth of the field and obtain practical, useful, information, as well as a wealth of knowledge that will hopefully excite their curiosity and increase their understanding of peoples' thoughts and actions. This course exposes the students to psychology and its methods, biological influences within psychology, social psychology, cognitive psychology, and clinical psychology. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

AP Microeconomics**SOC0369****Full Year****1 credit***Junior or Senior Year***NCAA Approved*

****Counts towards Financial Literacy graduation requirement (embedded .5 mastery based credit)***

This Advanced Placement course provides students with an understanding of economic principles to analyze and predict the decisions of producers and consumers in allocating their resources for optimal production and consumption. In addition to learning the basic principles of economic study, students will learn to examine different economic systems through the use of common models such as the supply and demand graph. AP microeconomics will give students tools to understand decisions of businesses and also themselves as consumers. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

AP Art History

ART0929

Full Year

1 credit

Junior or Senior Year

**NCAA Approved*

In this rigorous, college level course, students will investigate the diverse artistic traditions of cultures from prehistory to the present and will develop an in-depth and holistic understanding of the history of the world through art. Students will learn and apply skills of visual, contextual, and comparative analysis to engage with a variety of art forms, processes, and products. The course will offer unique interactions with art professionals through guest lectures and field trips to museums, including a tour of the Metropolitan Museum of Art in New York City. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

African American/Black and Puerto Rican/Latino Studies

SOC0399

Full Year

1 credit

Sophomore, Junior or Senior Year

**NCAA Approved*

The course is an opportunity for students to explore accomplishments, struggles, intersections, perspectives, and collaborations of African American/Black and Puerto Rican/Latino people in the U.S. Students will examine how historical movements, legislation, and wars affected the citizenship rights of these groups and how they, both separately and together, worked to build U.S. cultural and economic wealth and create more just societies in local, national, and international contexts. Coursework will provide students with tools to identify historic and contemporary tensions around race and difference; map economic and racial disparities over time; strengthen their own identity development; and address bias in their communities.

ECE Urban Advocacy and Education

SOC0388

Full Year

1 credit/1 UConn Credit

UConn Course Name: EDLR 1160: ECE Health and Education in Urban Communities

Junior or Senior Year

**NCAA Approved*

In this course, students will engage with complex social issues including poverty, culture, and identity. The course examines how these forces affect children's education, health, nutrition, and opportunities for success in urban communities, specifically in Connecticut. Through readings, films, discussion, reflection and service-learning opportunities, students will analyze and challenge policies, norms and beliefs in our society. Students will consider how these trends may lead us to a more just society or perpetuate injustice. Throughout the course, students will develop self-directed learning skills by researching these topics and applying their findings to real-world challenges. The course will emphasize the importance of effective communication and advocacy, empowering students to lead efforts that drive positive change in their communities and beyond. A required component of this course is completion of 12-15 hours of service learning outside of the classroom with a teacher-approved community organization.

SPANISH DEPARTMENT

Spanish Language and Culture

WLA0400

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

**NCAA Approved*

This course allows students to explore the many different Hispanic cultures and countries that make up the Spanish speaking world. Students will participate in project and inquiry based learning, allowing them to examine and analyze differences between American and a wide variety of Latino cultures. The highly interactive approach to instruction will lead the students to a level of competency that will enable them to successfully apply Spanish language to describe and understand Hispanic culture. This course may be taken as an elective or to meet the Foreign Language graduation requirement with a teacher recommendation. This course does not meet the prerequisite to enter Spanish II the following year.

Spanish I

WLA0410

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

**NCAA Approved*

This course will introduce students to the Spanish language and its culture. Basic Spanish grammar and vocabulary, as well as listening, speaking, reading and writing skills will develop during this course. In addition, the study of Spanish speaking cultures will be emphasized.

Spanish II

WLA0420

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

Prerequisite: *Spanish I Final Grade C or better*

**NCAA Approved*

At the beginning of this course there is a review of the topics covered in Spanish I. Spanish II builds on the foundation of Spanish I and continues to develop the four language skills begun in Spanish I. There is more emphasis on reading and writing skills as well as the study of the differences and similarities of Spanish speaking cultures.

Spanish III

WLA0430

Full Year

1 credit

Sophomore, Junior, Senior Year

Prerequisite: *Spanish II Final Grade C or better*

**NCAA Approved*

Spanish III presents the more complex structures of basic Spanish and expands the cultural themes as well as emphasizes the development of the four language skills. This course is an extension of Spanish II expanding on what the students have learned and adding vocabulary, more advanced grammar structure, and more in-depth cultural experiences. This class will be conducted primarily in Spanish.

ECE Spanish

WLA0459

Full Year

1 credit/6 UConn credits

UConn Course Name: *SPAN3178 Intermediate Spanish Composition (Fall)*

SPAN3179 Spanish Conversation: Cultural Topics (Spring)

Sophomore, Junior, Senior Year

Prerequisite: *Spanish III Final Grade C or better*

**NCAA Approved*

ECE Spanish is designed to prepare students who have chosen to develop their proficiency in Spanish at the college level and have demonstrated a high level of competence in the four communicative skills. The content will include but not be limited to that determined by UConn. This course stresses active use of contemporary Spanish and literary analysis.

Please note that there is a fee set by UConn for students taking this course.

HEALTH AND PHYSICAL EDUCATION

Health and Physical Education

HPE0110

Full Year

1 credit

Sophomore Year

This is a full year course aligned with the Healthy and Balanced Living Framework. Half of the year is dedicated to Physical Education and half of the year is dedicated to Health. Activities in the Physical Education curriculum are designed to promote an active lifestyle beyond high school by emphasizing a positive environment for students to be themselves. Skills promoted in Physical Education can include the following: the benefits of physical fitness, teamwork, cooperation, good sportsmanship, and the importance of an active lifestyle. Health and Wellness helps students examine their lifestyles, select goals, and make plans to achieve and maintain overall wellness. Health units may include the following: health literacy, nutrition, social media, tobacco and vaping, alcohol, drugs (including opioids), diseases, mental health and suicide prevention, safety and CPR, sex education, STDs and AIDS.

Health/PE Facilitator

HPE0900

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Health/PE teacher recommendation*

This course provides 11th and 12th grade students the opportunity to apply leadership skills in a student leader role within 10th grade Health and P.E. classes. Students are selected to assist the teacher in both instruction and class management for the entire school year. Students should display a positive attitude, kindness towards others, good character, responsibility and the ability to act as a role model. This is a Pass/Fail course and will not count towards calculating GPA or Honor Roll.

ADDITIONAL SUPPORT COURSES

Seminar

SAM0518

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

Prerequisite: *Recommendation by a member of the student's school team*

This course focuses on learning styles, time management, executive functioning skills, and test-taking strategies, while simultaneously supporting each student's academic programs. This course also focuses on skill building in identified specific areas. Each student's class will be personalized depending on the student's grade level and specific skills in need of improvement. This course will assist students in becoming active, independent learners. This is a Pass/Fail course and will not count towards calculating GPA or Honor Roll.

OTHER ELECTIVES

Senior Internship

SCI0900

Full Year

1 credit

Senior Year

Prerequisite: Approval from Administration

****Counts towards Financial Literacy graduation requirement (embedded .5 mastery based credit) with administrative approval***

This course provides seniors with an opportunity to apply technical skills and competencies to real life processes and settings. Students will work three or more hours per week in nonpaying jobs related to their career interests in the marine related field or any other field that the student is interested in studying at the post-secondary level. Mentors will evaluate the student's job performance. All Senior Internship placements must be secured by the student, have approval from administration, and written commitment from the placement. This is a Pass/Fail course and will not count towards calculating GPA or Honor Roll.

INDEX OF COURSES OFFERED 2025-2026

LANGUAGE ARTS

COURSE TITLE	MSMHS CREDIT	GRADES
English I	1.0	9
English II	1.0	10
American Literature	1.0	11
AP Language and Composition	1.0	11
Contemporary Literature	1.0	12
ECE English Composition	1.0 (4.0 UConn)	12
AP Literature and Composition	1.0	12

MATHEMATICS

COURSE TITLE	MSMHS CREDIT	GRADES
Algebra I	1.0	9
Applied Algebra and Geometry	1.0	9-11
Geometry	1.0	9-10
Algebra II	1.0	10-11
Algebra II Honors	1.0	9-11
Pre-College Algebra and Trigonometry	1.0	See Prerequisites
Pre-Calculus Honors	1.0	See Prerequisites
AP Calculus AB	1.0	See Prerequisites
AP Statistics	1.0	See Prerequisites
AP Calculus BC	1.0	See Prerequisites
Real World Math	1.0	11-12

SOCIAL STUDIES

COURSE TITLE	MSMHS CREDIT	GRADES
Civics and Environmental Stewardship	1.0	9
World Maritime History	1.0	10
ECE World Maritime History	1.0 (3.0 UConn)	10
United States History	1.0	11
AP United States History	1.0	11
AP Psychology	1.0	11-12
AP Microeconomics	1.0	11-12
AP Art History	1.0	11-12
African American/Black and Puerto Rican/Latino Studies	1.0	10-12
ECE Urban Advocacy and Education	1.0 (1.0 UConn)	11-12

SCIENCE

COURSE TITLE	MSMHS CREDIT	GRADES
Integrated Science	1.0	9
Marine Studies I	1.0	9
Biology	1.0	9
Environmental Science	1.0	10
Marine Studies II	1.0	10
Chemistry Honors	1.0	11-12
AP Chemistry	2.0	12
Marine Science	1.0	11
ECE Marine Science	1.0 (4.0 UConn)	11-12
Aquaculture and Resource Management	1.0	11-12
Aquaculture Business and Entrepreneurship	1.0	11-12
Aquarium Science	1.0	11-12
Advanced Aquarium Research Honors	1.0	11-12
AP Biology	2.0	11-12
ECE Environmental Science	1.0 (3.0 UConn)	10-12
Physics Honors	1.0	10-12
Human Anatomy and Physiology	1.0	11-12
ECE The Sea Around Us	1.0 (3.0 UConn)	11-12
AP Computer Science Principles	1.0	11-12
ECE Horticulture & Design	1.0 (7.0 UConn)	11-12
Environmental Forensics	1.0	11-12

SPANISH

COURSE TITLE	MSMHS CREDIT	GRADES
Spanish Language and Culture	1.0	9-12
Spanish I	1.0	9-12
Spanish II	1.0	9-12
Spanish III	1.0	9-12
ECE Spanish	1.0 (6.0 UConn)	10-12

ADDITIONAL COURSES

COURSE TITLE	MSMHS CREDIT	GRADES
Health and Physical Education	1.0	10
Health/PE Facilitator	1.0	11-12
Seminar	1.0	9-12
Senior Internship	1.0	12

THE FOLLOWING COURSES ARE NOT CURRENTLY OFFERED (2025-2026)

English II Honors (not offered 2024-2025, 2025-2026)

ENG0229 *Full Year* **1 credit**

Sophomore Year

Prerequisite: *Teacher recommendation*

**NCAA Approved*

English II Honors is designed to further hone the reading, writing, speaking, and listening skills of sophomores who have been identified as Honors level students. Students will read widely across a range of genres (novels, nonfiction, poetry, short stories, and drama) and write frequently in a variety of modes (analytical, creative, persuasive, expository, narrative, and personal). Students should expect to read challenging material, think critically, write for a variety of purposes, and engage in daily student-centered discussions. Students should be prepared for rigor in all aspects of the course. Preparation for the SAT is embedded.

English III (not offered 2024-2025, 2025-2026)

ENG0230 *Full Year* **1 credit**

Junior Year

**NCAA Approved*

This course explores the major concepts of Cause and Effect, Migration, Social Inequality, Innovation, Change, Prosperity, Patterns, Conflict, and Community as evident in both nonfiction and fiction published at various times in American history. Through a variety of activities, close readings and informal as well as formal analyses, students develop a comprehensive understanding of the evolution of our national cultural identity against the background of world events. Composition instruction includes frequent practice in writing multi-paragraph essays in a variety of types, including documented papers. Preparation for SAT is embedded.

English IV (not offered 2024-2025, 2025-2026)

ENG0240 *Full Year* **1 credit**

Senior Year

**NCAA Approved*

This course refines the students' ability to compose personal and academic essays connecting to and analyzing readings of contemporary literature. Students specifically focus on the composition and completion of their college admissions essay, analysis of nonfiction/ fiction contemporary literature, and the close reading of contemporary poetry and plays. The course provides the opportunity for students to refine and build off of their composition skills in order to prepare themselves for their future in higher education. Through feedback cycles of editing, revising, and submission, students are provided multiple opportunities to reflect on their work, improve it, and progress throughout the course.

AP/ECE English Language and Composition (not offered 2023-24, 2024-2025, 2025-2026)

ENG0259 *Full Year* **1 credit/4 UConn credits**

Junior or Senior Year

Prerequisite: *A- or better in English II or B- or better in ECE Advanced Writing and Discourse or AP Seminar, examples of proficiency on the Literacy and Accountable Talk rubrics, and teacher recommendation*

**NCAA Approved*

In this college level course, students will develop and hone their reading, thinking, writing, and discussion skills through a study of rhetoric and argument. Written assignments will include essays that

are analytical and persuasive, as well as personal and reflective. Class will be conducted in seminar format at a Harkness table, and students will be expected to participate actively in daily discussions. Completion of a summer reading assignment with a corollary written assessment, is required to enter the course. Students taking this course must take the corresponding national Advanced Placement Exam in May. Preparation for SAT is embedded.

Please note that there is a fee set by the College Board and UConn for students taking this course.

AP/ECE English Literature and Composition (not offered 2023-24, 2024-2025, 2025-2026)

ENG0279

Full Year

1 credit/4 UConn credits

Senior Year

Prerequisite: B- or better in Junior year English class, an example of proficiency on the Literacy and Accountable Talk rubrics, and teacher recommendation

**NCAA Approved*

In this college level literature course, students will hone their analytical thinking and writing skills through deep study of poetry and fiction. Class will be conducted in seminar format at a Harkness table, and students will be expected to participate actively in daily discussions. Students will read challenging material and write frequently, both AP style in-class essays and more sustained revised papers. Specific summer reading with a corollary written assignment is required to prepare for the course, and must be completed for entrance to the course in the fall. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board and UConn for students taking this course.

ECE American Studies (not offered 2023-24, 2024-2025, 2025-2026)

ENG0269

Full Year

1 credit/3 UConn credits

Senior Year

Prerequisite: B- in AP Seminar or AP Language and Composition and teacher recommendation

**NCAA Approved*

This course introduces students to the interdisciplinary field of American Studies. Course materials will explore case studies through which to gain an introduction to key theoretical and methodological approaches used in American Studies. Employing literature, essays, law, film, history, visual culture, philosophy, and politics, the class will examine the concept and idea of “America” in its global, national, and community variations. The two major themes in this course will be oppression and power and how both have impacted the American identity. The goal of the course is to expose students to intellectual and creative possibilities in the field of American Studies. Emphasis will be placed on students’ analytical skills, close reading of primary and secondary sources, verbal articulations of interdisciplinary scholarship, and critical thinking. Preparation for SAT is embedded.

Algebra Prep/Algebra I (not offered 2024-2025, 2025-2026)

MTH0110

Full Year

2 credits

Freshman Year

Prerequisite: Recommendation only

This course is designed for students who have mastered basic skills, but require additional experience with algebraic concepts in preparation for Algebra I. This course will introduce pre-algebra topics and will develop various geometric principles. Topics include variables, factors and exponents, equations, problem solving, formulas, organizing data, statistics, ratio and proportions, integers, polynomials, and geometry. This class will meet every day.

Pre-Calculus (not offered 2023-24, 2024-2025, 2025-2026)

MTH0140

Full Year

1 credit

Junior or Senior Year

Prerequisite: Algebra II Honors or Algebra II

**NCAA Approved*

Topics covered in Pre-Calculus include a reinforcement of Algebra II Skills, rational equations, radical expressions on rational exponents, functions, exponential and logarithmic functions, circles, right triangle trigonometry, the unit circle, and trigonometric functions. The use of the graphing calculator is an integral component of the course and helps to build a deeper understanding of the concepts. This course places students on a track to be successful in AP Statistics or Real World Math at MSMHS or at the post-secondary level. Preparation for SAT is embedded.

Trigonometry Honors (not offered 2023-24, 2024-2025, 2025-2026)

MAT0175

Full Year

1 credit

Junior or Senior Year

Prerequisite: Algebra II Honors or Algebra II

**NCAA Approved*

Trigonometry, with a functional approach, is designed for students who will continue to Pre-Calculus or will continue mathematics in college. Topics covered include right triangle trigonometry, the unit circle, graphs of trigonometric functions and their transformations, trigonometric identities, equation solving and applications of trigonometric functions (including inverse trigonometric functions), vectors, and polar equations. The use of the graphing calculator is an integral component of the course and helps to build a deeper understanding of the concepts. This course places students on a track to be successful in AP Statistics at MSMHS or at the post-secondary level. Preparation for SAT is embedded.

AP/ECE Calculus AB (not offered 2023-24, 2024-2025, 2025-2026)

MTH0158

Full Year

1 credit/4 UConn

credits

UConn Course Name: MATH1131Q: Calculus

Sophomore, Junior, or Senior Year

Prerequisite: B+ or better in Pre-Calculus Honors and teacher recommendation

**NCAA Approved*

This course is rigorous and requires students to understand an abstract approach to the theorems and applications of calculus. Calculus AB follows the AB syllabus of the Advanced Placement program. The goals of the AP Calculus sequence is to provide students with a rigorous course in differential and integral calculus prior to their entrance to college and to provide students with an opportunity to earn college credit in mathematics. Students taking this course must take the corresponding national Advanced Placement exam given in May. Preparation for SAT is embedded.

**A graphing calculator is required for this course.*

Please note that there is a fee set by the College Board and UConn for students taking this course.

Conceptual Chemistry (not offered 2023-24, 2024-2025, 2025-2026)

SCI0711

Full Year

1 credit

Sophomore Year

Prerequisite: Teacher recommendation

**NCAA Approved*

Conceptual Chemistry is a laboratory-oriented course, which focuses on the basics of chemistry. In this course, students will dive into the structure, function, and interactions of different matter. Students will perform laboratory activities to practice and see how chemical reactions occur. This course will help students understand the process of science and apply it to both science related and everyday situations. Students in this class are not eligible to take AP Chemistry.

Aquatic Husbandry (Aquaculture IV) (not offered 2023-2024, 2024-2025, 2025-2026)

SCI0800

Full Year

1 credit

Junior or Senior Year

In this course, students will be responsible for the operation and management of a closed recirculating aquaculture system (RAS). Topics will include lab maintenance, monitoring of water quality and organisms, breeding strategies, seafood management, aquaculture business, and life support construction. Students will be responsible for the ownership of the MSMHS Aquaculture Lab and all of the organisms that are being cultured. Students will also work with local industry leaders.

**Counts toward Aquaculture Related Course graduation requirement.*

Marine Biology (not offered 2023-24, 2024-2025, 2025-2026)

SCI0760

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Successful Completion of Biology and Environmental Science*

**NCAA Approved*

In this course, students will discover the diversity of ocean life from the smallest microbe to the largest whale. They will explore the unique ecosystems including local habitats and the adaptations the organisms have to survive. Labs will include observing live animals and dissection of preserved specimens. In addition, students will investigate the threats and conservation measures for particular species. Class discussion will include current events.

Forensics (not offered 2025-2026)

SCI0850

Full Year

1 credit

Sophomore, Junior or Senior Year

**NCAA Approved*

This course focuses on the skills and concepts behind crime scene investigations and forensic science. Students explore the different types of physical evidence such as fingerprints, digital evidence, forensic serology, DNA, and hairs, fibers, and blood splatter. This course analyzes the significance of each piece of evidence and how it plays in processing a crime scene. Activities completed throughout the school year include investigations of case studies, blood analysis, famous crimes podcast, and analysis of cases related to the Innocence Project.

AP/ECE United States History (not offered 2023-2024, 2024-2025, 2025-2026)

SOC0338

Full Year

1 credit/6 UConn

Credits

UConn Course Name: *HIST5501: US History to 1877 and HIST1502: US History since 1877*

Junior Year

Prerequisite: *Teacher recommendation*

**NCAA Approved*

This course provides a challenging, accelerated approach to exploring U.S. History from the pre-colonial period through the beginning of the 21st century. It simulates a true college experience with diversified readings and discussion material, in-depth writing activities, and analysis and synthesis of information. All enrolled students must take the Advanced Placement examination in May. Preparation for the SAT is embedded.

Please note that there is a fee set by the College Board and UConn for students taking this course.

AP US Government & Politics (not offered 2023-2024, 2024-2025, 2025-2026)

SOC0379

Full Year

1 credit

Freshman Year and Other Grades by Special Request

Prerequisite: Proficiency in a Timed Essay Administered at MSMHS and an Interview with MSMHS Staff to Determine Verbal Proficiency

**NCAA Approved*

This course is designed to help students develop a working knowledge of the important concepts, theories, and facts of American government and politics. Coursework is calculated to prepare students for the Advanced Placement examination and includes the study of public policy, government institutions, political parties, interest groups, public opinion, mass media, and civil rights. Political theory, and political beliefs, attitudes, and actions will also be addressed. Students will interpret classic and contemporary political writings and apply pertinent Supreme Court rulings to enduring social and political issues in this country. Students will be required to complete the rigorous reading and writing expected in any Advanced Placement course in history or the social studies. This course meets the Civics requirement. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Introduction to Psychology and Sociology (not offered 2023-2024, 2024-2025, 2025-2026)

SOC0353

Full Year

1 credit

Junior or Senior Year

This course is intended to act as an introduction to the social sciences of psychology and sociology. The course will be split into half-year sections; with the beginning of the year learning about the basics of psychology, before moving into the second half of the year focusing on sociology. During the psychology portion of the course, students will be exposed to the foundational elements of the field, learning about the history of the science, the way biology impacts our behaviors, the different ways humans develop mentally, and ending with social psychology and how individuals behave in group settings. This will serve as a natural transition into sociology and the study of human society at a larger level. By the end of the course, students will have explored the human brain and how individual people think, feel, and act, and then take that information to apply it to sociological understandings of the society and culture around us.

AP Human Geography (not offered 2023-2024, 2024-2025, 2025-2026)

SOC0349

Full Year

1 credit

Junior or Senior Year

Prerequisite: Teacher recommendation

**NCAA Approved*

Advanced Placement Human Geography is a college-level course offered to motivated 11th and 12th grade students. This is a highly engaging and eye-opening course that examines the complexities of human-environment interaction with regards to population, sustainability, cultural patterns and processes, human rights, ethnic conflict, political organization of space, urban and rural land use, industrialization, and economic development. AP Human Geography examines the modern world and a curriculum that is responsive to our continuously changing world, embedding present day examples of phenomena and concepts. Great emphasis is placed on discussions and presentations while demonstrating use of accountable talk, and on examination of a variety of data and texts to solve real-world problems. Students leave this course with a deepened understanding of and appreciation for the complex relations between and amongst people and the environment globally. Students taking this course must take the corresponding national Advanced Placement Exam in May.

Please note that there is a fee set by the College Board for students taking this course.

ECE American Studies (not offered 2023-24, 2024-2025, 2025-2026)

SOC0389

Full Year

1 credit/3 UConn credits

UConn Course Name: AMST1201: Introduction to American Studies

Junior or Senior Year

Prerequisite: *Teacher recommendation*

**NCAA Approved*

This course introduces students to the interdisciplinary field of American Studies. Through the use of literature, essays, law, film, history, visual culture, philosophy, and politics, the class will examine the concept and idea of "America" from the viewpoint of groups who have faced injustice. Course materials will explore case studies on groups in America who have faced oppression, such as African Americans/Blacks, Native Americans, and Japanese. This course also includes a student choice research project on a marginalized group within the U.S. Topics might include: LGBTQ+ population, Spanish speakers, Muslim-Americans, refugees, women, the poor, undocumented immigrants, etc. The goal of the course is to expose students to intellectual and creative possibilities in the field of American Studies. Emphasis will be placed on students' analytical skills, close reading of primary and secondary sources, verbal articulations of interdisciplinary scholarship, and critical thinking.

Please note that there is a fee set by UConn for students taking this course.

Spanish Language and Culture (not offered 2024-2025, 2025-2026)

WLA0400

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

**NCAA Approved*

This course allows students to explore the many different Hispanic cultures and countries that make up the Spanish speaking world. Students will participate in project and inquiry based learning, allowing them to examine and analyze differences between American and a wide variety of Latino cultures. The highly interactive approach to instruction will lead the students to a level of competency that will enable them to successfully apply Spanish language to describe and understand Hispanic culture. This course may be taken as an elective or to meet the Foreign Language graduation requirement with a teacher recommendation. This course does not meet the prerequisite to enter Spanish II the following year.

Independent Study (not offered 2023-24, 2024-2025, 2025-2026)

IDS0901

Junior or Senior Year

Full Year

1 Credit

Prerequisite: *Approval from Administration*

MSMHS students may work with school administrators and staff to develop a project for independent study. Proposed projects must be based on specific learning goals identified by the student with support and advisement from school staff. Independent study projects may explore areas of interest and specialty outside of our typical course offerings. These projects may or may not include off-campus learning in areas of the greater MSMHS community. Grades and credit will be awarded based on the mastery of specific learning targets identified at the start of the project. Independent study projects may be revised with administrative approval based on the evolving needs and interests of the student. Students with an approved independent study project will have one school period designated for associated work and guidance from school staff. This is a Pass/Fail course and will not count towards calculating GPA or Honor Roll.

English Language for Multilingual Learners (not offered 2025-2026)

ELD0100

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

Prerequisite: Spanish teacher recommendation

This course promotes academic and social linguistic development in English listening, speaking, reading and writing. Through the integrated and interactive study of sheltered academic content, students learn to apply their English language skills to all content courses in the Science, English, Social Studies and Math departments. This course aims to linguistically challenge each student as they progress through the levels of language proficiency.