

2022-2023

PROGRAM OF STUDIES



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Dear MSMHS Family,

Our core values and beliefs at MSMHS are to prepare students for higher education and/or marine-related employment by supporting the personal, academic and career goals of every student. Toward that end, MSMHS offers a rich and rewarding academically rigorous program that requires you to plan and make decisions based on personal strengths, goals and interests.

The Program of Studies is compiled to assist our students and parents with the decision-making process. Effective planning requires both long-term and short-term goals and even though a student may select specific courses one year at a time, we encourage our families to consider course selections for future years. Please read the following information carefully as it describes the selection process, requirements, and program choices involved in developing your academic program.

The high school curriculum is based on our school's unique theme and mission. Proficiency in each of our academic, civic, and social competencies is required and embedded into course assessments; these expectations and the importance of the Common Core State Standards are integral in the success of your next endeavor after you leave MSMHS. MSMHS graduation requirements, your personal abilities and strengths, and your future plans that are illustrated in your COAST Plan should serve as the basic guide in the selection of your courses. You should realize that your future options are affected by the choices you make today.

Before making your selections we encourage you to carefully read the Program of Studies and consult with the appropriate individuals such as your advisor, teachers, parents, and others who know you well. Make yourself aware of the requirements of the various courses in order to determine how much time and effort you will need to satisfy those expectations.

MSMHS offers a number of honors, UConn Early College Experience (ECE), and Advanced Placement (AP) level courses. Honors, AP, and ECE course expectations are significantly greater than those in the college prep program.

We encourage you to design a program of study that is personally challenging and requires you to stretch and grow. Select one that will allow you to balance your academic priorities with the rest of your commitments. Most of all we urge you to take full advantage of the high-quality educational opportunities available to you. It is an investment in your future!



Marine Science Magnet High School
Groton, CT

CORE VALUES AND BELIEFS ABOUT LEARNING

The Marine Science Magnet High School is a safe, respectful, and nurturing environment. The MSMHS Family believes that effort creates ability and that all students can succeed. Our learning community is committed to innovative instruction that promotes effort and ensures academic rigor through a curriculum responsive to our diverse student body. Furthermore, the MSMHS community collaborates with all members to prepare students for post-secondary education by supporting the personal, academic, and career goals of every student. MSMHS inspires students to develop the mindset and character needed to be active stewards of the ocean and contributing citizens in a global community.

The vision of the Marine Science Magnet High School community is that all graduates will achieve proficiency in the following competencies:

Academic, Civic, and Social Competencies:

1. Read and write effectively for a variety of purposes;
2. Speak effectively with a variety of audiences in an accountable manner;
3. Make decisions and solve problems independently and collaboratively;
4. Apply scientific knowledge and concepts to a variety of investigative tasks;
5. Contribute to a positive learning environment with respect and responsibility.

Graduation and Promotion

Beginning with the Class of 2020, to graduate from MSMHS students must meet the requirements of the State of Connecticut (PA 10-111) and requirements unique to MSMHS. 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:

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 embedded into 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 and II (.75 each), Marine Science, & an Aquaculture Related Course</i>
	Science	5	<i>Integrated Science & Environmental Science (.5 each), Biology, Chemistry, and two 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)	Physical Education	.5	<i>Embedded into Marine Studies I and II (.25 each)</i>
	Health	.5	<i>Embedded into Integrated Science</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	

Course Load Requirements

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

Course/Selection Registration

In the spring the student will receive the list of courses he/she is registering for the following year. Courses which are electives or have low enrollment may not be offered. The only course changes that will be given consideration are those changes necessitated by the student's academic performance (i.e., failing a course, taking a course with department approval in summer school, necessary level changes, technical errors and elimination of requested course).

Schedule Changes – Introduction

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. The schedule also takes into account the staff and parameters that affect the schedule.

Students should regard the schedule they receive as a “contract.” The school has provided the courses and the student has an obligation to attend and participate in those classes. Consequently, schedule changes will be permitted only under the specific circumstances described below. 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. **Courses dropped after October 1st will result in the appropriate labeling on the student's transcript.**

Because we are a small school there are scheduling constraints that must be considered such as class size due to the size of the classrooms, staffing, etc., all of which affect the schedule. Please be aware that because of these parameters, changes are extremely difficult.

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

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

Any other requests for a schedule change will be heard by Administration on a case by case basis.

Beginning the 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 New Student Orientation Night 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, Admission Criteria, and Course Recommendation Appeals Process

Certain courses are sequential in nature and have prerequisites. These courses are noted in the course description in this guide. Certain criteria must also be met for enrollment in Honors and ECE/AP and select academic courses, which are also noted in this guide. If students and parents disagree with the recommendation of the placement, they should share their concerns with their advisor and school counselor.

If a student wishes to enroll in a course that they have not been recommended for, they may appeal. The first step in the appeals process is for the student to complete the MSMHS course appeal form which requires a parent signature. This form must be completed and turned into the main office by the deadline in order to be considered. Appeals will be reviewed by the teachers in that content area. Final appeal meetings with the MSMHS Administration may be requested by the student and parent. MSMHS Administration makes the final decision following this meeting.

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.

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 complete a course selection form. In addition to listing all courses they wish to take, students should also list alternate elective choices if applicable. Parents are asked to review and sign this form. **Failure to return this form on time will limit opportunities for choice and flexibility in scheduling.**

Master Schedule

Based on the student's preliminary course selections, a master schedule will be developed. 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 his/her 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 his/her 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. Discuss recommendations with your advisor, counselor, and academic teachers.
Moreover, inquire about the teachers' expectations in those classes.
2. Discuss the preliminary course selections with your parents.
3. Read and discuss the Program of Studies with your parents.
4. Have one of your parents sign the course selection form.
5. Return the course selection form with your signature and that of a parent **to your advisor** by the designated deadline.
6. After receiving confirmation of your course selections, report any errors immediately to your advisor and/or counselor.
7. 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. 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 within the **first 2 weeks of school**:

- 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.

**MSMHS 2022-2023
ECE and AP Course Fees**

MSMHS Course Name	UConn Course Name	# of UConn Credits	*ECE Fee	*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 Environmental Science	NRE1000: Environmental Science <i>(FY: Fall & Spring)</i>	3	\$150	-
ECE Horticulture & Design	SPSS1110: Fundamentals of Horticulture <i>(Fall)</i> SPSS2520: Floral Art <i>(Spring)</i> SPSS3530: Advanced Floral Design <i>(Spring)</i>	7	\$350	-
ECE Marine Science: Introduction to Oceanography	MARN1003: Introduction to Oceanography with Lab <i>(FY: Fall & Spring)</i>	4	\$200	-
ECE The Sea Around Us	MARN1001: 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	-
DUAL FEES: (ECE & AP)				
AP/ECE Calculus AB	MATH1131Q: Calculus I <i>(Fall)</i>	4	\$200	\$96
AP/ECE United States History	HIST1501: United States History to 1877 <i>(Fall)</i> HIST1502: United States History Since 1877 <i>(Spring)</i>	6	\$300	\$96

All *College Board AP Exam fees are \$96 as set by the College Board for the following AP courses offered at MSMHS:

AP Literature & Composition	AP Statistics	AP Chemistry
AP Art History	AP Microeconomics	AP Biology
AP Psychology	AP Calculus BC	AP Computer Science Principles
AP Human Geography		

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

MSMHS Administration strongly believes that no student should avoid taking an AP or ECE course due to financial difficulties.

Students who qualify for the National School Lunch Program (free or reduced meals) are eligible to have this fee waived and should contact their counselor. Any student with financial hardships may meet confidentially with the principal for financial assistance.

LANGUAGE ARTS DEPARTMENT

Amanda Mann, *Wesleyan University*
Michela Lavin, *Sacred Heart University*
Ryan Jones, *University of Bridgeport*



English I **ENG0210**

Freshman Year

Full Year

1 credit

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 **ENG0220**

Sophomore Year

Full Year

1 credit

English II is designed to allow students to further develop their reading, writing, speaking, and listening skills. All students are enrolled in World Maritime History, and the curricula of the two courses are designed to complement one another. Texts include novels, nonfiction, poetry, and short stories. The course includes instruction in critical analysis with an emphasis on the creative, logical, and critical aspects of composition. Students should expect to read challenging material, write for a variety of purposes, and engage in discussions. Preparation for the SAT is embedded.



English II Honors **ENG0229**

Sophomore Year

Full Year

1 credit

Prerequisite: *A- or better in English I and teacher recommendation*

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 **ENG0230**

Junior Year

Full Year

1 credit

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

ENG0240

Full Year

1 credit

Senior Year

This course examines the theme of The Individual’s Search for Meaning which includes the exploration of the concepts of Memoir and the Sense of Self, Human Resilience in the Struggle Against Evil, Future Visions and The Absurd. This text-based course is designed to prepare students for the reading, reflecting, discussing, and writing they will encounter on the college level. The course provides a survey approach to the traditional literary genres of novel, short story, poetry, drama, memoir, essay, and nonfiction. The core texts will provide a focus for students to engage in a broad range of literary study that reflects universal human values and struggles in both tragic and comic contexts and across cultures. This survey approach will allow for differentiation and encourage seniors to discover areas of interest they might wish to pursue in their college studies. Preparation for SAT is embedded.

ECE English Composition

ENG0239

Full Year

1 credit/4 UConn credits

UConn Course Name: ENGL1007: Seminar and Studio in Academic Writing and Multimodal Composition

Junior or Senior Year

Prerequisite: *A- or better in English II or III or B- or better in English II H, AP Language or AP Literature, and teacher recommendation*

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

Junior or Senior Year

Prerequisite: *A- or better in English III or B- or better in AP Language, and teacher recommendation*

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. Preparation for SAT is embedded.

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

MATHEMATICS DEPARTMENT

Elizabeth Ayala, *Sacred Heart University*
Samantha Delldonna, *University of Connecticut*
Jill DeRosa, *University of Connecticut*
Taylor Hudak, *University of Connecticut*

Algebra Prep/Algebra I

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.



Algebra I

MTH0110

Full Year

1 credit

Freshman Year

This course will enable the student to reach an understanding and appreciation of some of the algebraic structure 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 system 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.



Geometry

MTH0120

Full Year

1 credit

Freshman or Sophomore Year

Prerequisite: *Algebra I*

This course will enable the student to gain an understanding of the basic structure of Euclidian geometry and to develop powers of spatial visualization and reasoning, while building knowledge of the relationship among geometric elements. Topics covered include congruence, construction, polygons, trigonometry, conics, three-dimensional shapes and probability. Stress will be placed on the deductive role in the study of mathematics and the student will be led to discover and appreciate the need for precision of language in mathematics. 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: *Geometry*

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, data interpretations, matrices, polynomial and fractional expressions, exponents, radicals, complex numbers, conic sections, and inferential statistics. 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:** *A- or better in Geometry and teacher recommendation*

The Honors Algebra II course examines the concepts and techniques of advanced algebra and discrete mathematics. 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. Linear, quadratic, polynomial and rational functions are discussed with regard to their relationship to algebraic operations and manipulative skills. Topics discussed include equations, inequalities, inferential statistics, data interpretation, matrices and conic sections. 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-Calculus****MTH0140****Full Year****1 credit***Junior or Senior Year***Prerequisite:** *Algebra II Honors or Algebra II*

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.

**Pre-Calculus Honors****MTH0145****Full Year****1 credit***Freshman, Sophomore, Junior or Senior Year***Prerequisite:** *A- or better in Algebra II or B+ or better in Algebra II Honors and teacher recommendation*

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 and oblique triangle trigonometry, trigonometric and circular functions, graphing, identities, equations, vectors, and polar coordinates. 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/ECE Calculus AB****MTH0159****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*

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.***

**AP Statistics****MTH0169****Full Year****1 credit***Junior or Senior Year***Prerequisite:** *Completion of Pre-Calculus Honors, Trigonometry Honors, or Algebra II Honors, and teacher recommendation*

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.*****AP Calculus BC****MTH0179****Full Year****1 credit***Junior or Senior Year***Prerequisite:** *Completion of AP/ECE Calculus AB and teacher recommendation*

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.**Real World Math and Statistics****MTH0170****Full Year****1 credit***Senior Year***Prerequisite:** *Teacher recommendation*

This course focuses on mathematics applied to solving practical problems in a variety of disciplines in the world around us. Mathematical topics include but are not limited to probability, statistics, financial mathematics, linear programming, cryptography, problem solving and logic puzzles, and voting theory. Students will use problem solving skills to collect and analyze data to help make informed decisions about real world mathematical issues. A solid understanding of math including algebra, basic geometry, statistics, and probability provides the necessary foundation for students interested in careers in business and skilled trade areas.

SCIENCE DEPARTMENT

Dr. Richard Fritz, *University of Hartford*

Amy Ferland, *University of Connecticut*

Brittany Forshaw, *Central CT State University*

Katherine Howard, *University of Rhode Island*

Eric Litvinoff, *University of Rhode Island*

Maryjocelyn Sedensky, *University of Connecticut*

Michael Guyot, *University of Connecticut*

Veronica Rollinson, *University of Connecticut*

Bonnie Johnston, *Boston University*



Integrated Science

with embedded Health (.5 credit)

SCI0610

Full Year

1 total credit

Freshman Year

This college prep course will offer students learning opportunities across the life, 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. Students will develop and apply problem solving strategies to gather and interpret data and to then communicate their findings using different technologies. Assessments will include authentic, problem-based learning activities where students will be exploring rigorous science concepts as they relate to their everyday lives.

Marine Studies I

with embedded Physical Education (.25 credit)

SCI0620

Full Year

1 total credit

Freshman Year

In this full-year course, students will be introduced to the study of aquaculture. Topics will include raising marine wildlife in our facility's recirculating aquaculture system, offshore fishing, and fishing techniques. Through projects and class discussions, students will be able to discuss practices related to the fishing industry. Furthermore, this course will introduce students to basic navigation and seamanship through the use of our state-of-the-art boat simulator and field trips to Project Oceanology. Moreover, students will also be engaged in physical education activities.



Biology

SCI0810

Full Year

1 credit

Freshman Year

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

with embedded Fine Arts (.5 credit)

SCI0820

Full Year

1 total credit

Sophomore Year

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

UConn Course Name: NRE:1000E Environmental Science

Sophomore Year: plus Fine Arts

1.5 credits/3 UConn credits

Junior or Senior Year

1 credit/3 UConn credits

Prerequisite: *Sophomores: Recommendations from science department and A- or better in Integrated Science and Biology.*

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. To fulfill the embedded PE, Health, and Arts credits in Environmental Science, all sophomores taking this course will be required to complete an independent portfolio consisting of PE/Arts assignments that will be monitored throughout the school year.

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

Marine Studies II

with embedded Physical Education (.25 credit)

SCI0640

Full Year

1 total credit

Sophomore Year

In this full-year course, students will continue topics covered in Marine Studies I and will include a more in-depth exploration into aquaculture and boating skills. 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 and field trips to New England Science and Sailing. Furthermore, through a hands-on approach, students will discover techniques and learn skills to manage an aquaculture laboratory. Moreover, students will be engaged in physical education activities.



Conceptual Chemistry

SCI0711

Full Year

1 credit

Sophomore Year

Prerequisite: *Teacher recommendation*

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.



Chemistry Honors

SCI0715

Full Year

1 credit

Sophomore Year

Prerequisite: *Teacher recommendation*

This fast paced, college prep, laboratory-oriented course is designed for students to study the interactions of matter. This course focuses on greater depth and breadth of concepts than the Conceptual Chemistry course. Students will develop understanding and skills in four areas of chemistry: fundamental concepts, practical applications, laboratory techniques and mathematical applications. Topics include the gas laws, acids & bases, stoichiometry, and chemical reactions. Furthermore, students will increase their science literacy and develop a lifelong awareness of the potential limitations of science and technology. This course will prepare students to take AP Chemistry.



AP Chemistry

SCI0719

Full Year

2 credits

Junior or Senior Year

Prerequisite: *A- or better in Chemistry Honors, and B+ or better in Algebra II Honors or high mathematics skills based on math teacher recommendation, and science department recommendation*

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

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: *A- or better in Environmental Science or a B- or better in ECE Environmental Science and department recommendation*

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, plate tectonics 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 (Aquaculture III)

SCI0750

Full Year

1 credit

Junior or Senior Year

***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.

Aquatic Husbandry (Aquaculture IV)

SCI0800

Full Year

1 credit

Junior or Senior Year

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

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.

Aquarium Science

SCI0870

Full Year

1 credit

Junior or Senior Year

***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: *A- or better in Environmental Science or a B- or better in ECE Environmental Science and department recommendation*

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*

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

Junior or Senior Year

Prerequisite: *B or better in Algebra II or a C+ or better in Algebra II Honors*

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 force and motion, the conservation laws, the properties of matter, oscillations and waves, optics, 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.**

Taking it to the next level of understanding, this course explores how the “humans are inextricably interconnected with the oceans” (Ocean Literacy Principle #6). Through weekly sampling trips to local coastal environments, a variety of inquiry labs, and activities that mimic resolving complex challenges, students discover how integrated the environment, economy, and society truly are. 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, AP Human Geography. This course prepares students for college-level courses and entry-level employment in ocean science and policy careers.

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



Forensics

SCI0850

Full Year

1 credit

Junior or Senior Year

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 learn the significance that each piece of evidence plays in processing a crime scene. Students become familiar with the law and courtroom perspectives of forensic scientists, defense attorneys and prosecutors. Activities completed throughout the school year include creating a miniature crime scene, blood typing lab, famous crimes podcast, and an end of the year mock trial.



AP Computer Science Principles

SCI0909

Full Year

1 credit

Junior or Senior Year

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**

Prerequisite: Science department recommendation

This course introduces students to the science and practice of horticultural plant propagation and culture; basic concepts of plant structure, growth, and function; integrated pest management; horticulture effects on the environment; biotechnology 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.

SOCIAL STUDIES DEPARTMENT

Sarah Frick, *University of Maine at Farmington*

Michael Kuczenski, *Connecticut College*

Diana Nasser, *University of Connecticut*



Civics and Environmental Stewardship

SOC0310

Full Year

1 credit

Freshman Year

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

Throughout history, the sea has served as a highway, a source of food, and an arena for warfare and a stage for discovery. This course will explore topics in World History through the maritime lens. The following topics will be explored: worldwide exploration and expansion; the development and exchange of new ideas; naval warfare; the impact of technological advancements; and the impact of maritime modernization into the 20th century. Throughout the year students will gain an understanding that 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- or better in English I and Civics, teacher recommendations,*

This course provides students who are ready for the demands and rigor of a college course with an opportunity to earn college credit during their sophomore year. Throughout history, the sea has served as a highway, a source of food, and an arena for warfare and a stage for discovery. This course will explore topics in World History through the maritime lens. The following topics will be explored: worldwide exploration and expansion; the development and exchange of new ideas; naval warfare; the impact of technological advancements; and the impact of maritime modernization into the 20th century. Throughout the year students will gain an understanding that 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

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/ECE United States History

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: *A- or better in World Maritime History or a B- or better in ECE World Maritime History and teacher recommendation*

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.



Introduction to Psychology and Sociology (not offered 2022-2023)

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 Psychology

SOC0359

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Teacher recommendation*

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 abnormal 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

Prerequisite: *Teacher recommendation*

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.



ECE American Studies (not offered 2022-2023)

SOC0389

Full Year

1 credit/3 UConn credits

UConn Course Name: AMST1201: Introduction to American Studies

Junior or Senior Year

Prerequisite: *Teacher recommendation*

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 the College Board for students taking this course.



AP Art History

ART0929

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Teacher recommendation*

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.



AP Human Geography (not offered 2022-2023)

SOC0349

Full Year

1 credit

Junior or Senior Year

Prerequisite: *Teacher recommendation*

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.



African American/Black and Puerto Rican/Latino Studies

SOC0399

Full Year

1 credit

Junior or Senior Year

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.

SPANISH DEPARTMENT

Cheryl Dutrumble, *Colby College*
Vanessa Cronin, *Universidad de Pamplona*

Spanish Language and Culture

WLA0400

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

Prerequisite: *Teacher recommendation*

This course is designed to introduce students to the world of communicating in Spanish with integrated support for students who need additional assistance in second language acquisition. This course offers an inquiry based approach to learning different cultures of Spanish speaking countries. Students will explore the similarities and differences between Spanish and American culture by speaking and writing about holidays, food, music, and every day conversation. The highly interactive approach to instruction will lead the students to a level of competency that will enable them to successfully function aurally and orally in Spanish. This course does not meet the pre-requisite to enter Spanish II the following year.



Spanish I

WLA0410

Full Year

1 credit

Freshman, Sophomore, Junior, Senior Year

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 at MSMHS or other high school*

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 and teacher recommendation*

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 Conversion: Cultural Topics (Spring)

Senior Year

Prerequisite: *Spanish III Final Grade B- or better and/or teacher recommendation*

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.

ADDITIONAL SUPPORT COURSES

Robert Bridgman, *Plymouth State University*
Jennifer Cimmino, *Central Connecticut State University*

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

Independent Study

IDS0901

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.

Senior Internship

SCI0900

Full Year

1 credit

Senior Year

Prerequisite: *Approval from Administration*

This course provides seniors with an opportunity to apply technical skills and competencies to real life processes and settings. Students will work five 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 have approval from administration and commitment from the placement. This is a Pass/Fail course and will not count towards calculating GPA or Honor Roll.

INDEX OF COURSES

LANGUAGE ARTS

COURSE TITLE	MSMHS CREDIT	GRADES
English I	1.0	9
English II	1.0	10
English II Honors	1.0	10
English III	1.0	11
English IV	1.0	12
ECE English Composition	1.0 (4.0 UConn)	11-12
AP Literature and Composition	1.0	11-12

MATHEMATICS

COURSE TITLE	MSMHS CREDIT	GRADES
Algebra Prep/Algebra I	2.0	9
Algebra I	1.0	9
Geometry	1.0	9-10
Algebra II	1.0	See Prerequisites
Algebra II Honors	1.0	See Prerequisites
Pre-Calculus	1.0	See Prerequisites
Pre-Calculus Honors	1.0	See Prerequisites
AP/ECE Calculus AB	1.0 (4.0 UConn)	See Prerequisites
AP Statistics	1.0	See Prerequisites
AP Calculus BC	1.0	See Prerequisites
Real World Math and Statistics	1.0	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/ECE United States History	1.0 (6.0 UConn)	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	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
Conceptual Chemistry	1.0	10
Chemistry Honors	1.0	10
AP Chemistry	2.0	11-12
Marine Science	1.0	11
ECE Marine Science	1.5 (4.0 UConn)	11-12
Aquaculture and Resource Management (Aqua III)	1.0	11-12
Aquarium Science	1.0	11-12
Aquatic Husbandry (Aqua IV)	1.0	11-12
Advanced Aquarium Research Honors	1.0	11-12
AP Biology	2.0	11-12
ECE Environmental Science	1.5 (3.0 UConn)	10-12
Physics Honors	1.0	11-12
Human Anatomy and Physiology	1.0	11-12
ECE The Sea Around Us	1.0 (3.0 UConn)	11-12
Forensics	1.0	11-12
AP Computer Science Principles	1.0	11-12
ECE Horticulture & Design	1.0 (7.0 UConn)	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)	11-12

ADDITIONAL COURSES

COURSE TITLE	MSMHS CREDIT	GRADES
Seminar	1.0	9-12
Senior Internship	1.0	12
Independent Study	1.0	11-12