

2019-2020

PROGRAM OF STUDIES



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February 2019

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 as described in each Student Success Plan (SSP) that students update quarterly in advisory. 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 SSP 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 and AP course expectations are significantly greater than those in the college prep program. In fact, taking multiple higher level courses may require you to re-examine your after-school commitments in order to have the time to meet the demanding honors standards.

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:

CT Graduation Requirements	Subjects	Credits	Mandatory Courses or Equivalents
Humanities (9 credits)	English	4	<i>English I, II, III, IV or other advanced English courses</i>
	Social Studies	3	<i>Civics or AP US Government & Politics, US History</i>
	Fine Arts	1	*
	Elective	1	<i>One humanities elective in the subject areas of Social Studies, English or Spanish</i>
STEM (12 credits)	Mathematics	4	<i>Consecutive courses beginning with Algebra I, Geometry, Algebra II, and beyond</i>
	Marine Studies & Aquaculture	3	<i>Marine Studies I and II (.5 each), Marine Science, & an Aquaculture Related Course</i>
	Science	5	<i>Integrated Science I & Environmental Science (.5 each), Biology, Chemistry, and two science electives</i>
World Language (1 credit)	Spanish	1	<i>Spanish I at MSMHS or 1 credit transferred from sending district or private high school as indicated on transcript</i>
Self-Wellness (2 credits)	Physical Education & Health	1	**
	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

Grade	Minimum Number of Classes
9	7.25
10	7.25
11	7.25*
12	7.25*

*Juniors and seniors who take 4 or more AP and/or ECE courses (not credits) can take a reduced course load of 6.25 courses for the school year.

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.

Therefore, 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 personal schedule cannot be accommodated. All schedule changes must be initiated and officially approved by the Principal in collaboration with the School Counseling office. **Courses dropped after October 1st will result in the appropriate labeling on the student's transcript.**

- I. 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.
- II. If a schedule change is requested in order to accommodate a **sequence or order** issue, the following guidelines apply:
 - a. Such a request will be denied if it is simply to meet the personal concern or preference of the student (i.e. teacher selection).
 - b. Requests for changes must be for:
 1. substantive academic reasons or;
 2. conflicting responsibilities or;
 3. hardship situations.
 - c. Requests will be shared with and reviewed by the counselor on a case-by-case basis, with final approval by the principal.
- III. If a schedule change is requested in order to take the **same course from another teacher**, the following process will be followed. Throughout this process, the goal shall be to resolve in a positive manner whatever issue is the root cause for the request.
 - a. The issue shall be first discussed with the counselor.
 - b. If the student still wishes to request the change, he/she will meet with the teacher to discuss the request.
 - c. If the request remains, the respective advisor will assist in coming to a resolution at the request of either or both parties.
 - d. The advisor and school counselor will make a recommendation to the Administration based on his/her discussions, perspective, and up-to-date class size information.

- e. If either party is not content with the resolution, a written request to the Administration detailing the reason(s) and the efforts made to solve the problems shall be made. A hearing will be held on request and the principal will make the final decision.
- f. Changes that adversely impact the overall schedule or class size cannot be approved.

Such teacher changes are highly unusual and are only considered for documented, specific and legitimate educational purposes.

Beginning the Process – Program of Studies

The scheduling process begins in the spring. Program of Studies booklets are distributed to high school students in their advisory periods 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, and these criteria are also listed below and in this book. If students and parents disagree with the recommendation of the placement, they should share their concerns with their advisor and school counselor.

The first step in the appeals process is for the student to write a letter of appeal, addressed to their counselor, stating why they believe they will be successful taking the desired course and what they are committed to do in order to be successful if approved. A follow-up meeting will occur with the student, counselor, and advisor to discuss the appeal. After the counselor and advisor meet with the recommending teacher, a decision will be made and communicated with the parent and students. Final appeal meetings with the MSMHS Principal may be requested by the student and parent. The MSMHS Principal 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 determined by the College Board and the University of Connecticut. Moreover, all students must pay for the AP exam and ECE course fees prior to the first day of school. **This fee is non-refundable after October 1st**. Any student who has financial hardships may meet with the principal 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 on or before the 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 1:**

- 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.

-----LANGUAGE ARTS DEPARTMENT-----

Juliana Bassett, *Fairfield University*
Danté Gonzales, *University of New Haven*
Amanda Mann, *Wesleyan University*

Kimberly Pesarik, *Eastern CT State University*
Nicholas Tague, *University of Connecticut*



English I **ENG0210**

Full Year

1 credit

Freshman Year

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 *Family, 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk



English II **ENG0220**

Full Year

1 credit

Sophomore Year

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. A majority of the texts focus on the field of maritime literature, including 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. SAT preparation (reading comprehension and grammar) is embedded.

MSMHS Graduation Competencies: Literacy, Accountable Talk



ECE Advanced Writing and Discourse **ENG0229**

Full Year

1 credit/4 UConn credits

Sophomore Year

Prerequisite: Accepted in ECE World Maritime History course, freshmen must provide a portfolio including: report card showing A- or better in Civics and English I, teacher recommendations, overall 3.7 GPA, one sample of proficient writing scored with the literacy rubric, successful completion of August 19-23 summer course. **Student must be enrolled in ECE World Maritime History.**

ECE Advanced Writing and Discourse is designed to further hone the reading, writing, speaking, and listening skills of sophomores who have been identified as Honors level students. All students are cross-enrolled in ECE World Maritime History. Students will read widely across a range of genres, including novels, nonfiction, poetry, short stories, and drama. Close reading, critical thinking, and analytical writing will be at the center of the course, which will be conducted at a Harkness table in seminar mode. Students should expect to read challenging material, write for a variety of purposes, and engage in critical discussions. SAT preparation (reading comprehension and grammar) will be embedded.

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

MSMHS Graduation Competencies: Literacy, Accountable Talk

**AP Seminar****ENG0289****Full Year****1 credit***Junior or Senior Year****Prerequisite:*** *Completion of English II*

This course allows students to investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments. AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Students will research and contemplate topics that have relevance in their lives as citizens in a global community. The course will provide avenues of success, students new to the AP environment scaffolding framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; they also listen to and view speeches, broadcasts, and personal accounts; and they experience artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. 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 this course.

MSMHS Graduation Competencies: Literacy, Accountable Talk

**AP Research (beginning 2020-2021)****ENG0299****Full Year****1 credit***Senior Year****Prerequisite:*** *Completion of AP Seminar*

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan and conduct a yearlong research based investigation to address a research question. In the AP Research course, students further develop the skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of approximately 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense. There is no Advanced Placement Exam in May. Students who successfully complete the AP Seminar and AP Research courses will receive a AP Seminar and Research Certificate at the end of the year awards ceremony. Students who qualify for the AP Capstone Diploma (prior to the scoring of the AP test scores taken senior year), will be recognized at the MSMHS Commencement Ceremony.

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

MSMHS Graduation Competencies: Literacy, Accountable Talk

**AP/ECE English Literature and Composition (2020-2021, 2022-2023)****ENG0279****Full Year****1 credit/4 UConn credits***Junior or Senior Year****Prerequisite:*** A- or better in English II or English III or a B- in English II Honors, an example of proficiency in the Literacy rubric and Accountable Talk rubric, and teacher recommendation

This eleventh and twelfth grade college level course is based primarily on intensive critical reading, discussion and writing about classic literature, and as such, it demands exceptional rigor. 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. Preparation for SAT is embedded.

Please note that there is a fee set by the College Board and UConn for students taking this course.**MSMHS Graduation Competencies:** Literacy, Accountable Talk**AP/ECE English Language and Composition (2019-2020, 2021-2022)****ENG0259****Full Year****1 credit/4 UConn credits***Junior or Senior Year****Prerequisite:*** A- or better in English II or English III or a B- in English II Honors, an example of proficiency in the Literacy rubric and Accountable Talk rubric, and teacher recommendation

This course engages students in the practice of examining a variety of texts for the purpose of writing rhetorical and argumentative analysis. This full year course uses the seminal works in American literature, fiction and nonfiction, to identify significant aspects of our national identity. Students will find depicted the themes and characteristics that make up a dynamic and sometimes contradictory republic. Using these readings, students will practice for the three aspects of AP exam while honing skills to develop as analytical readers and cogent writers. A summer reading assignment, with a corollary written assessment, is required to prepare for 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.**MSMHS Graduation Competencies:** Literacy, Accountable Talk**ECE American Studies****ENG0269****Full Year****1 credit/3 UConn credits***Senior Year****Prerequisite:*** A- or better in English III or a B- in AP English course and teacher recommendation

This course introduces students to the interdisciplinary field of American Studies. Rather than providing a comprehensive survey of US history, 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.

Please note that there is a fee set by UConn for students taking this course.**MSMHS Graduation Competencies:** Literacy, Accountable Talk, Civic and Social Responsibility

**AP Art History****ART0929****Full Year****1 credit***Junior or Senior Year***Prerequisite:** *Teacher Recommendation*

This rigorous course will be an investigation of diverse artistic traditions of cultures from prehistory to the present and will foster an in-depth and holistic understanding of the history of art from a global perspective. 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, including a tour of the Metropolitan Museum of Art in New York City given by the Michel David-Weill Curator in Charge of the Medieval Collections and the Cloisters. 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility

Seminar in Literacy**SAM0512****Full Year****1 credit***Freshman, Sophomore, Junior, Senior Year***Prerequisite:** *Recommendation by a member of the student's school team*

This course focuses on skill building in reading and writing, while simultaneously supporting each student's academic goals and objectives. 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Problem Solving

-----MATHEMATICS DEPARTMENT-----

Jill Andruskiewicz, *University of Connecticut*
 Elizabeth Ayala, *Sacred Heart University*
 Samantha Delldonna, *University of Connecticut*
 Kate Hespeler, *University of Connecticut*
 Taylor Hudak, *University of Connecticut*

Algebra Prep/Algebra I

MAT0110

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.

MSMHS Graduation Competencies: Problem Solving



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.

MSMHS Graduation Competencies: Problem Solving



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.

MSMHS Graduation Competencies: Problem Solving

**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.

MSMHS Graduation Competencies: Problem Solving**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.

MSMHS Graduation Competencies: Problem Solving**Trigonometry Honors****MAT0175****Full Year****1 credit***Junior or Senior Year***Prerequisite:** Algebra II Honors or Algebra II

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.

MSMHS Graduation Competencies: Problem Solving

**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. Emphasis is placed upon the applications of trigonometric concepts and techniques to physical situations. 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.*MSMHS Graduation Competencies:** Problem Solving**AP/ECE Calculus AB****MTH0159****Full Year****1 credit***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.*****MSMHS Graduation Competencies:** Problem Solving**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.*****MSMHS Graduation Competencies:** Problem Solving

**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.

MSMHS Graduation Competencies: Problem Solving

Seminar in Mathematics**SAM0514****Full Year****1 credit***Freshman, Sophomore, Junior, Senior Year****Prerequisite:*** Recommendation by a member of the student's school team

This course focuses on skill building in mathematics, while simultaneously supporting each student's academic goals and objectives. 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.

MSMHS Graduation Competencies: Problem Solving

-----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*

Samantha Cregger, *Eastern CT State University*

Jennifer Paulk, *Central CT State University*

Michael Guyot, *University of Connecticut*



Integrated Science

with embedded PE, Health, & Safety and Fine Arts (1/2 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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

Marine Studies I

with embedded PE, Health, & Safety and Fine Arts (1/2 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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving



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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**Environmental Science***with embedded PE, Health, & Safety and Fine Arts (1/2 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, advances in reproductive technology, genetic engineering, scientific ethics, advances in the treatment of disease and genetic disorders, environmental problems and sociobiology.

MSMHS Graduation Competencies: Scientific Research, Problem Solving
**AP/ECE Environmental Science****SCI0828****Full Year****1.5 credits/3 UConn credits***Sophomore Year: plus PE/Health***1 credit/3 UConn credits***Junior or Senior Year*

Prerequisite: A- or better in Environmental Science and department recommendation. Sophomores: Recommendations from both the mathematics and science departments and A- or better in all freshman sciences: Integrated Science, Marine Studies I, 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. 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 and UConn for students taking this course.

MSMHS Graduation Competencies: Scientific Research, Problem Solving, Civic and Social Responsibility
Marine Studies II*with embedded PE, Health, & Safety and Fine Arts (1/2 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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**Chemistry****SCI0710****Full Year****1 credit***Sophomore Year*

This college prep, laboratory-oriented course is designed for students to study the inter-relationships among chemistry, the consumer, and the environment. 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, radioactivity, and conservation of mass. These concepts help students understand the chemistry behind important social issues. Furthermore, students will increase their science literacy and develop a lifelong awareness of the potential limitations of science and technology.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**Marine Science****SCI0730****Full Year****1 credit***Junior Year*

The purpose of this course is to provide the student with a survey of the marine biome. The content should include, but not be limited to, the origin of the oceans, the nature of the marine habitat including chemical, physical and geological aspects, ecology of the sea, zonation, common marine communities, classification, taxonomy, characteristics of major marine phyla/divisions, and man's interrelationship with the oceans. Laboratory investigations of selected topics in the content that also include the use of scientific method, measurement, laboratory apparatus and safety are an integral part of the course.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**ECE Marine Science: Introduction to Oceanography****SCI0738****Full Year****1 credit/4 UConn credits***Junior or Senior Year*

Prerequisite: A- or better in Environmental Science or a B- or better in AP/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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**AP Chemistry****SCI0719****Full Year****2 credits***Junior or Senior Year*

Prerequisite: A- or better in Chemistry, 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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

Aquaculture and Resource Management (Aquaculture III)**SCI0750****Full Year****1 credit***Junior or Senior Year*

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. Students will also work closely with the shellfish industry and be an integral part in managing our school owned shellfish beds on Pine Island.

MSMHS Graduation Competencies: Scientific Research, Problem Solving**Aquatic Husbandry (Aquaculture IV)****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, HACCP training, 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 farmers and seafood wholesalers.

MSMHS Graduation Competencies: Scientific Research, Problem Solving**Aquarium Science****SCI0870****Full Year****1 credit***Junior or Senior Year*

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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving**Advanced Aquarium Research Honors****SCI0875****Full Year****1 credit***Senior Year*

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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**AP Biology****SCI0819****Full Year****2 credits***Junior or Senior Year*

Prerequisite: A- or better in Environmental Science or a B- or better in AP/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.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**AP Physics 1: Algebra-Based****SCI0839****Full Year****1 credit***Senior Year*

Prerequisite: B+ or better in Algebra II Honors, Science department recommendation, and Math department recommendation

This course is conducted using inquiry-based instructional strategies that focus on experimentation to develop students' conceptual understanding of physics principles. The students study topics by making observations, discovering patterns of natural phenomena, and then developing, testing, and applying models to describe natural systems. The content should include, but not be limited to, kinematics, linear dynamics, circular motion and gravitation, energy, momentum, harmonic motion, rotational motion, mechanical waves, electrostatics, and DC circuits. 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.

MSMHS Graduation Competencies: Problem Solving, Scientific Research

ECE The Sea Around Us**SCI0919****Full Year****1 credit/3 UConn credits***Junior or Senior Year*

Students will design and implement strategies to monitor local shallow water estuaries, including areas near the MSMHS shellfish beds. This requires students to determine which parameters to monitor, create schedules, choose and use appropriate tools, collect data regularly, and maintain records through the school year. Sample collection and analysis strategies that use standard operating procedures emphasize the need for effective communication, consistent quality control, and stamina in long-term research commitments. Students will be an integral part in managing the MSMHS shellfish grow-out effort beds. The skills practiced throughout this course prepare students for college-level science pursuits and entry-level employment in science-related careers.

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

MSMHS Graduation Competencies: Scientific Research, Problem Solving

**Forensics****SCI0850****Full Year****1 credit***Junior or Senior Year*

This course answers the question, “What is Forensic Science?” through an inquiry-based experience. Students explore the different types of physical evidence such as glass, soil and impressions, finger prints, forensic serology, DNA, and hairs, fibers and paint and learn the significance that each piece of evidence plays in processing a crime scene. Students become familiar with microscopic and gel electrophoresis techniques as used in the context of forensic science. Furthermore, students will conduct a mock boat crash investigation in collaboration with the Connecticut Department of Energy & Environmental Protection.

MSMHS Graduation Competencies: Scientific Research, Problem Solving**AP Computer Science Principles****SCI0909****Full Year****1 credit***Junior or Senior Year*

Prerequisite: Evidence of proficiency in Problem Solving rubric and Math department recommendation

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.

MSMHS Graduation Competencies: Problem Solving**ECE Horticulture & Design****SCI0889****Full Year****1 credit/7 UConn credits***Junior or Senior Year*

Prerequisite: Science department recommendation

This course will allow students the opportunity to utilize MSMHS’ state of the art facilities to study 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. The spring semester focuses on design and business skills involved in the floral industry.

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

MSMHS Graduation Competencies: Scientific Research, Problem Solving

-----SOCIAL STUDIES DEPARTMENT-----

Daniel Bradley, *Eastern Connecticut State University*
 Sarah Frick, *University of Maine at Farmington*
 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



AP US Government & Politics

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

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.

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

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



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 maritime history and will address the following topics: technology and the effects of technological change; nautical language, archetypes and superstition; social history: the role of class, race, and gender in maritime history; naval strategy, policy, and action; exploration and imperialism; the balance of recreation and work; the experience of seafarers; and ethics of survival.

MSMHS Graduation Competencies: Literacy, Accountable Talk



ECE World Maritime History

SOC0328

Full Year

1 credit/3 UConn Credits

Sophomore Year

Prerequisite: Freshmen must provide a portfolio including: report card showing A- or better in Civics and English I, teacher recommendations, overall 3.7 GPA, one sample of proficient writing scored with the literacy rubric, successful completion of August 19-23 summer course. **Student must be enrolled in ECE Advanced Writing & Discourse.**

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. The curriculum will be a thematic approach to exploration of the sea and the literature that has arisen from people's relationship to it. 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 maritime history with attention to the international linkages afforded by the ocean, the distinctive cosmopolitan maritime culture created at sea, and the literature that resulted as humans interacted with the ocean.

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

MSMHS Graduation Competencies: Literacy, Accountable Talk



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.

MSMHS Graduation Competencies: Literacy, Accountable Talk



AP/ECE United States History

SOC0338

Full Year

1 credit/6 UConn Credits

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.

MSMHS Graduation Competencies: Literacy, Accountable Talk



AP Human Geography

SOC0349

Full Year

1 credit

Senior Year

Prerequisite: *Teacher recommendation and evidence of proficiency in Accountable Talk rubric*

Advanced Placement Human Geography is a college-level course offered to qualified and motivated seniors. Adhering to the essential outlines offered by the College Board, the course is structured and delivered as an undergraduate university class. The purpose of Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Geography topics will be covered in depth and will include perspectives of human geography, population, cultural patterns and processes, political organization of space, urban and rural land use, industrialization and economic development. All enrolled students are required to take the Advanced Placement examination in May.

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

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



AP Psychology

SOC0359

Full Year

1 credit

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.

MSMHS Graduation Competencies: Accountable Talk, Civic and Social Responsibility



AP Microeconomics

SOC0369

Full Year

1 credit

Senior Year

Prerequisite: *Teacher recommendation*

This Senior level Advanced Placement course provides students with an understanding of economic principles that apply to small economic units such as individuals, firms, and industries. The content of the course will address microeconomics more in-depth, including opportunity costs and trade-offs, production possibilities, differentiation of economic systems, absolute and comparative advantage, property rights, incentives and marginal analysis. Students are required to take the AP Microeconomics exam in May. 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk

-----SENIOR COURSES ONLY-----

Graduation Requirement

Capstone Project: Graduation Portfolio

1 credit

MSMHS999

Senior Year

MSMHS school-wide rubrics incorporate 21st century learning expectations addressing academic, social and civic competencies. Teachers assess students using the rubrics as a guideline to determine their particular level of achievement: beginning, approaching proficient, proficient, approaching exemplary, and exemplary. Students must be proficient in all ten competencies before graduation. In May of an MSMHS student's senior year, a Portfolio will be presented to a committee which will determine the student's overall level of competencies according to the school-wide rubrics and completion of community service hours. The completed portfolio is a graduation requirement for all MSMHS students.

MSMHS Graduation Competencies: Civic and Social Responsibility

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 for the 2019-2020 year must have approval from administration and commitment from the placement.

MSMHS Graduation Competencies: Civic and Social Responsibility

-----ADDITIONAL SUPPORT COURSES-----

Seminar in Organizational Methods

SAM0516

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. This course will assist students in becoming active, independent learners.

MSMHS Graduation Competencies: Literacy, Civic and Social Responsibility

-----WORLD LANGUAGE DEPARTMENT-----

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



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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility



AP/ECE Spanish **WLA0459**

Full Year

1 credit/6 UConn credits

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. 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.

MSMHS Graduation Competencies: Literacy, Accountable Talk, Civic and Social Responsibility

-----INDEX OF COURSES-----

LANGUAGE ARTS

COURSE TITLE	MSMHS CREDIT	GRADES
Seminar in Literacy	1.0	9-12
English I	1.0	9
English II	1.0	10
ECE Advanced Writing & Discourse	1.0 (4.0 UConn)	10
AP Seminar	1.0	11, 12
AP Research (<i>available 2020-2021</i>)	1.0	12
AP/ECE Literature and Composition – 2020-2021	1.0 (4.0 UConn)	11-12
AP/ECE Language and Composition – 2019-2020	1.0 (4.0 UConn)	11-12
ECE American Studies	1.0 (3.0 UConn)	12
AP Art History	1.0	11-12

MATHEMATICS

COURSE TITLE	MSMHS CREDIT	GRADES
Seminar in Mathematics	1.0	9-12
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
Trigonometry Honors	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

SOCIAL STUDIES

COURSE TITLE	MSMHS CREDIT	GRADES
Civics and Environmental Stewardship	1.0	9
AP United States Government and Politics	1.0	9; special request
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 Human Geography	1.0	12
AP Psychology	1.0	12
AP Microeconomics	1.0	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	1.0	10
Marine Science	1.0	11
ECE Marine Science	1.0 (4.0 UConn)	11-12
AP Chemistry	2.0	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	12
AP Biology	2.0	11-12
AP/ECE Environmental Science	1.0 (3.0 UConn)	10-11-12
AP Physics 1	1.0	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

WORLD LANGUAGE

COURSE TITLE	MSMHS CREDIT	GRADES
Spanish I	1.0	9-12
Spanish II	1.0	9-12
Spanish III	1.0	9-12
AP/ECE Spanish	1.0 (6.0 UConn)	11-12

ADDITIONAL COURSES

COURSE TITLE	MSMHS CREDIT	GRADES
Seminar in Organizational Methods	1.0	9-12
Senior Internship	1.0	12
Capstone Project: Graduation Portfolio	1.0	12

Marine Science Magnet High School
Course Selection Worksheet
Grade 9 (AY 2019-2020)

Last Name (please print)	First Name	Advisor	Student email address

Please fill in the requested course information below.

English I	<u>ENG0210</u> Course #	<u>ENGLISH I</u> Course Title
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CIRCLE ONE:

Social Studies	<u>SOC0310</u> Course #	<u>CIVICS & ENVIRONMENTAL STEWARDSHIP</u> Course Title	
-OR-			
Social Studies <small>(by recommendation only)</small>	<u>SOC0379</u> Course #	<u>AP US GOVERNMENT & POLITICS</u> Course Title	<u>Teacher Recommendation</u>

Mathematics	<u>Course #</u>	<u>Course Title</u>
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Spanish	<u>Course #</u>	<u>Course Title</u>
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-OR -

Seminar in Academic Methods:	<u>Course #</u>	<u>Course Title</u>
<small>(by recommendation only)</small>		

Int. Science	<u>SCI0610</u> Course #	<u>INTEGRATED SCIENCE</u> Course Title
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Marine Studies I	<u>SCI0620</u> Course #	<u>MARINE STUDIES I</u> Course Title
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Biology	<u>SCI0810</u> Course #	<u>BIOLOGY</u> Course Title
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Study Hall	<u>STH1000</u> Course #	<u>STUDY HALL</u> Course Title
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Student Signature	Date	Parent Signature
		Date

Marine Science Magnet High School
Course Selection Worksheet
Grade 10 (AY 2019-2020)

<hr/>	<hr/>	<hr/>	<hr/>
Last Name (please print)	First Name	Advisor	Student email address

Please fill in the requested course information below.

English	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation
World Maritime History	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation
Mathematics	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation
Spanish	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation
- OR -			
Seminar in Academic Methods:	<hr/>	<hr/>	<hr/>
(by recommendation only)	Course #	Course Title	Teacher Recommendation
Chemistry	<u>SCI0740</u>	<u>CHEMISTRY</u>	
Env. Sci.	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation
Marine St. II	<u>SCI0640</u>	<u>MARINE STUDIES II</u>	
	Course #	Course Title	
Study Hall	<u>STH1000</u>	<u>STUDY HALL</u>	
	Course #	Course Title	

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Student Signature	Date	Parent Signature
		Date

Marine Science Magnet High School
Course Selection Worksheet
Grade 11 (AY 2019-2020)

Last Name (please print)	First Name	Advisor	Student email address

Please fill in the requested course information below.

English			
	Course #	Course Title	Teacher Recommendation
US History			
	Course #	Course Title	Teacher Recommendation
Mathematics			
	Course #	Course Title	Teacher Recommendation
Spanish			
	Course #	Course Title	Teacher Recommendation
- OR -			
Seminar in Academic Methods:			
(by recommendation only)	Course #	Course Title	Teacher Recommendation
Marine Science			
	Course #	Course Title	Teacher Recommendation
Course Elective Preference 1			
	Course #	Course Title	Teacher Recommendation
Course Elective Preference 2			
	Course #	Course Title	Teacher Recommendation
Course Elective Preference 3			
	Course #	Course Title	Teacher Recommendation
Course Elective Preference 4			
	Course #	Course Title	Teacher Recommendation

Student Signature	Date	Parent Signature	Date

Marine Science Magnet High School
Course Selection Worksheet
Grade 12 (AY 2019-2020)

<hr/> Last Name <i>(please print)</i>	<hr/> First Name	<hr/> Advisor	<hr/> Student email address
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Please fill in the requested course information below.

English	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Mathematics	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Seminar in Academic Methods: <small>(by recommendation only)</small>	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 1	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 2	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 3	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 4	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 5	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 6	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 7	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation
Course Elective Preference 8	<hr/> Course #	<hr/> Course Title	<hr/> Teacher Recommendation

<hr/> Student Signature	<hr/> Date	<hr/> Parent Signature	<hr/> Date
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