2017-2018
PROGRAM OF STUDIES

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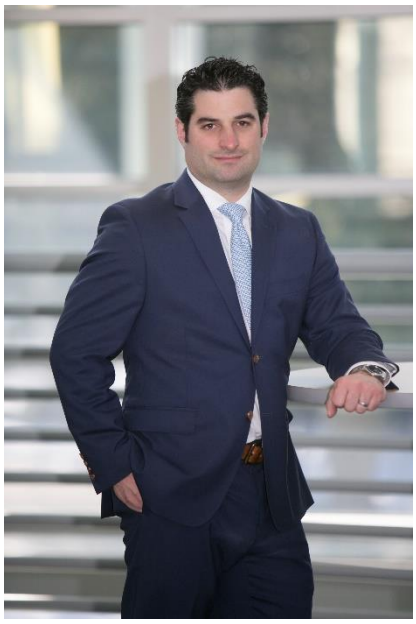

Dear MSMHS Family,

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 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. Specific 21st century learning expectations are 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!

Sincerely,

Dr. Nicholas J. Spera
Principal

Marine Science Magnet High School

CORE VALUES, BELIEFS, AND LEARNING EXPECTATIONS

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 Marine Science Magnet High School community has identified the following learning expectations for all students:

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.

MSMHS Rubric 1: Literacy

Student writes effectively for a variety of purposes. *6/2016 Edition*

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
Purpose	• Demonstrates understanding and exceeds expectations of assignment • Articulates an original and powerful thesis/claim • Thoughtful selection of background information enhances purpose • Skillfully addresses audience and anticipates reaction		• Demonstrates understanding of assignment • Articulates a clear thesis/claim • Establishes purpose with relevant background information • Addresses audience with appropriate tone and communication strategy		• May misinterpret elements of assignment • Thesis/claim may be missing or unclear • Background information is lacking or irrelevant and may not establish purpose • Little evidence of audience awareness or communication strategy
Evidence	• Ample evidence to support thesis/claim • Well selected, seamlessly integrated evidence • Correct citations used throughout		• Sufficient evidence to support thesis/claim • Consistent use of relevant evidence • Minimal errors in citations		• Insufficient evidence to support thesis/claim • May include irrelevant evidence • Several errors in or absence of citations
Analysis	• Seamlessly integrates fact and opinion to support thesis/claim • Makes insightful conclusions and interpretations of evidence that consistently support thesis/claim • Synthesizes prior knowledge with provided evidence to demonstrate critical thinking		• Integrates fact and opinion appropriately • Reasonable conclusions and interpretations of evidence consistently support thesis/claim • Appropriately uses prior knowledge to make connections		• May confuse fact and opinion • Conclusions and interpretations of evidence are lacking or irrelevant to thesis/claim • Lacks connections made to prior knowledge
Revising and Editing	• Skillful use of transitions resulting in a fluent, coherent and unified structure • Error-free use of convention and mechanics • Strong evidence of change from draft to final product based on reflection/feedback		• Consistent use of transitions and organizational components • Minimal errors in grammar, spelling, syntax, punctuation, vocabulary, format • Some evidence of change from draft to final product based on reflection/feedback		• May lack transitions and/or contain unclear progression of ideas • Errors in grammar, spelling, syntax, punctuation, vocabulary, format are common throughout • No evidence of change from draft to final product

MSMHS Rubric 2: Accountable Talk

Student speaks effectively with a variety of audiences in an accountable manner. *6/2016 Edition*

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
Response to Others	• Commitment to active listening throughout task • Asks questions and encourages the participation of others; responds thoughtfully to questions • Demonstrates excellent interpersonal awareness and validates others		• Demonstrates most aspects of active listening • responds thoughtfully to questions • Participates actively and is considerate of others		• Lacks demonstration of active listening • Minimal or no interaction with others • Withdrawn from discussion and/or inconsiderate of other
Organization	• Consistently on topic, relevant to task • Highly organized, logical, and easy-to-follow message • Skillfully uses transition to organize and build upon ideas		• Generally on topic, and relevant to task • Message is clear and logical • Uses transition to organize ideas		• Content is irrelevant to task or absent • Unclear or illogical message • Little to no transition or organization of ideas
Delivery	• Relaxed Confidence and enthusiasm are evident • Captures and maintains high level of audience attention • All elements of presentation		• Mostly satisfactory appearance • Demonstrated audience awareness • Most elements of presentation; posture, eye contact, physical expression, volume, pace		• Reluctant delivery • Lacks audience awareness • Lacks several elements of presentation
Accountability	• Synthesizes evidence from credible resource(s) • Addresses and provides multiple perspectives about the topic		• Incorporates some evidence from credible resource(s) • Addresses some different points of view about the topic		• Limited or no evidence from credible resources • Fails to address other perspectives
Moves	• Seamlessly utilizes accountable talk moves throughout discussion • Uses well-chosen vocabulary and grammar		• Utilizes a variety of accountable talk moves • Uses appropriate vocabulary and grammar		• Inconsistently uses or does not demonstrate the use of accountable talk moves • Needs help with vocabulary and use of grammar

MSMHS Rubric 3: Problem Solving

Student will make decisions and solve problems independently and collaboratively. *6/2016 Edition*

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
Problem Analysis and Planning	• Uses existing knowledge to create well developed questions for investigation • Creates a plan without assistance • Locates and uses best resources available		• Uses existing knowledge to create appropriate questions for investigation • Creates a plan with minimal assistance • Locates and uses appropriate resources		• Does not create appropriate questions for investigation • Needs ample assistance to create a plan • Resources used are not appropriate
Data Modeling	• Arranges data in a format that is logical, appropriate, and accurately labeled • Defines all of the relationships between the important variables		• Arranges data in a format that is logical and appropriate • Defines the essential relationships between the important variables, but misses advanced connections		• Arrange data in a format that is not logical • Does not define any relationship between the important variables
Solving with Precision	• Clearly and accurately solves the problem without assistance • Solution and process is error free		• Accurately solves the problem with minimal assistance • Solution process may include minor errors		• Incorrectly solves the problem • Does not present a logical process for solving the problem
Justification and Clarity of Solution	• Describes methodology for the solutions, explains why and justifies reasoning with details • Demonstrates how underlying concepts relate to the problem and makes interdisciplinary connections (when applicable) • Presents solution and ideas coherently and precisely to appropriate audience		• Describes the process used to arrive at an answer, but provides only some reasoning with details • Demonstrates how underlying concepts relate to the problem, with minor errors • Presents solution and ideas to appropriate audience		• Displays limited or no knowledge of how to evaluate arguments • Does not demonstrate how underlying concepts relate to the problem • Does not present a solution
Reflection	• Reflects throughout the problem-solving process using specific evidence		• Reflects on the problem-solving process using specific evidence		• Needs assistance reflecting on the problem solving process

MSMHS Rubric 4: Scientific Research

Student applies scientific knowledge and concepts to a variety of investigative tasks. *6/2016 Edition*

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
Identify Problem and Develop Hypothesis (Introduction)	• Clearly explains the problem citing background knowledge and supporting content. • Identifies the correct independent and dependent variables and demonstrates a connection to the hypothesis. • Develops a hypothesis using background knowledge and supporting content appropriately		• Identifies the problem citing background knowledge or supporting content appropriately • Identifies all variables (independent, dependent, constant) • States an applicable hypothesis		• Does not correctly identity the problem • Does not correctly identify independent and dependent variables • Does not develop a hypothesis
Design and Perform Experiment (Method)	• Selects and develops a strategy that matches the stated problem including a controlled experiment if applicable, or, follows and communicates the given procedure clearly and concisely • Applies and understands all safety precautions		• Selects a strategy that matches the stated problem including a controlled experiment if applicable or, follows and communicates a strategy that matches the stated problem • Applies and understands all safety precautions		• Strategy does not match the problem, or, does not follow or communicate the strategy • Does not apply safety precautions
Collect and Organize Data (Results)	• Synthesizes raw data into analyzed data without interpreting what it means • Selects and appropriately titles data tables, graphs, and/ or diagrams including units • Concisely describes/ summarizes data		• Accurately presents all measured data without interpreting what it means • Organizes data into appropriate tables, graphs, and/ or diagrams including units • Adequately describes/ summarizes data		• Inaccurately measures, records and labels data • Lacks skills to organize data into data tables, graphs, and diagrams • No summary of data
Draw Conclusions (Discussion)	• Makes claim using scientific concepts with connections to the hypothesis • Uses specific evidence from the data to explain results supporting the claim • Uses appropriate reasoning to answer the research question citing background knowledge and supporting content.		• Makes a claim referring to the hypothesis • Uses evidence (data) to support the claim. • Use appropriate reasoning to answer the research question		• Makes an incorrect claim • Claim is not supported by data • Research question is not appropriately answered
Discuss Validity (Discussion)	• Reliability of data and validity of experiment is defined • Analyze the effect of experimental errors on the data • Develops procedural improvements or proposes alternatives or additions		• Reliability of data and validity of experiment is referenced • Identifies some possible experimental errors		• Reliability of data and validity of experiment is not discussed • Experimental errors are not identified

MSMHS Rubric 5: Civic and Social Responsibility

Student contributes to a positive learning environment with respect and responsibility. *6/2016 Edition*

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
Effort	• Actively promotes a positive learning environment • Always takes initiative and embraces new experiences • Demonstrates grit and a growth mindset in all endeavors		• Accountable and reliable to the learning environment • Always takes initiative • Demonstrates grit and a growth mindset in most endeavors		• Rarely or negatively contributes to the learning environment • Initiative is not observed • Lacks grit and a growth mindset
Respect	• Always models respect for self, adults, peers, school community, environment; and encourages others • Leads others in appreciation of human, cultural, and natural diversity • Responds positively to diverse viewpoints		• Always shows respect for self, adults, peers, school community, and environment • Demonstrates an appreciation of human, cultural, and natural diversity • Listens attentively to diverse viewpoints		• Lacks respect for self, adults, peers, school community, and environment • Appreciation of human, cultural, and natural diversity is absent • Indifferent to diverse viewpoints
Responsibility	• Promotes and models school policies and upholds classroom expectations • Models and encourages ethical behavior • Always uses class time appropriately and motivates others to work effectively • Always uses technology responsibly		• Honors school policies and classroom expectations • Demonstrates ethical behavior • Always uses class time appropriately • Uses technology responsibly		• Does not adhere to school policies and classroom expectations • Ethical behavior is not evident • Inappropriate use of class time • Inappropriately uses technology
Self-Assessment	• Sets realistic and challenging personal and academic goals • Continuously self reflects to revise goals for improvement • Actively seeks to improve skills and abilities • Independently seeks out appropriate adult for assistance		• Sets attainable personal and academic goals • Self reflects to establish goals for improvement • Accurately recognizes skills and abilities		• Does not set or pursue learning goals • May even resist goal setting and achievement process • Unaware of skills and abilities
Teamwork	• Assumes positive, constructive leadership role in group settings • Takes initiative to engage others in pursuit of a common goal		• Is always positive and constructive in a group settings • Contributes to the pursuit of a common goal		• Actively resists constructive participation in group setting • May jeopardize group success

Course/Selection Registration

In the spring (May), 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 in the School Counseling office.

I. Some schedule changes may be **required** under certain conditions. These conditions are:
   a. unanticipated failures;
   b. successful completion of 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/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 is 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 **on or before the deadline indicated on the course selection sheet to your advisor.**
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 the end of quarter 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 quarter 1 grade 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 the end of quarter 1, the course and grade will not appear on the student's transcript. However, if the drop occurs after quarter 1, the course name and a WP (withdraw passing) or WF (withdraw failing) will appear accordingly.

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

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

Seminar in Literacy
SAM0512 ***Full Year*** ***1 credit***
Freshman, Sophomore, Junior, Senior Year
Prerequisite*: Recommendation only*
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

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
This course explores the major concepts of *Change*, *Patterns*, *Conflict*, and *Power*. Close reading and analysis of selected literature deals with external and internal journeys and goals as portrayed in world literature. The content includes instruction in universal themes found in world literature, as well as critical analysis emphasizing the creative, logical, and critical aspects of the writing composition, including prewriting, drafting, and revising. Classroom discussions, oral presentations, and writing responses reflect student understanding. Preparation for the SAT is embedded.

MSMHS Graduation Competencies: Literacy, Accountable Talk

English II Honors

ENG0225 ***Full Year*** ***1 credit***

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, two samples of proficient writing, successful completion of August 22-26 summer course.* ***Student must be enrolled in ECE World Maritime History.***

The tenth grade concepts of *Change*, *Patterns*, *Conflict*, and *Power* are delved into through deep analytical ideas in some of the reading as well as additional novels and corollary materials. These analyses are communicated through extensive discussion, oral-mixed media presentations and extensive writing. Students develop perspectives on these concepts through close reading and analysis of selected novels, short stories, nonfiction, and poetry that explore external and internal journeys and goals as portrayed in world literature. These ideas are shared through whole-class and small-group discussions, as well as oral presentations and extensive writing. Preparation for SAT is embedded.

MSMHS Graduation Competencies: Literacy, Accountable Talk

English III

ENG0230 ***Full Year*** ***1 credit***

Junior Year

This course explores the major concepts of *Cause and Effect*, *Migration*, *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.

MSMHS Graduation Competencies: Literacy, Accountable Talk

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.

MSMHS Graduation Competencies: Literacy, Accountable Talk

AP/ECE English Literature and Composition (2018-2019, 2021-2022)

ENG0279 ***Full Year*** ***1 credit/4 UConn credits***

Junior or Senior Year

Prerequisite*: A- or better in English III or B- or better in English III Honors with 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. All enrolled students are required to take the AP Literature and Composition Examination in May, for which they may acquire college credit. 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. 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 (2017-2018, 2019-2020)

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

Junior or Senior Year

Prerequisite*: A- or better in English II or a B- in English II Honors 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. All enrolled students are expected to take the AP Language and Composition Examination in May, for which they may acquire college credit. A summer reading assignment, with a corollary written assessment, is required to prepare for the course. 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

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

Jill Andruskiewicz, *University of Connecticut*
Elizabeth Ayala, *Scared Heart University*
Samantha Delldonna, *University of Connecticut*

Seminar in Mathematics

SAM0514 ***Full Year*** ***1 credit***

Freshman, Sophomore, Junior, Senior Year

***Prerequisite**: Recommendation only*

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

Algebra Prep

MAT0110 ***Full Year*** ***1 credit***

Freshman, Sophomore, or Junior 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.

MSMHS Graduation Competencies: Problem Solving

Algebra I

MTH0110 ***Full Year*** ***1 credit***

Freshman, Sophomore, Junior, or Senior 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, Sophomore, Junior or Senior 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, Junior or Senior 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***

Freshmen, Sophomore, Junior or Senior 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***

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

Topics in Mathematics: Business and Personal Finance

MTH0151 ***Full Year*** ***1 credit***

Junior or Senior Year

Business Math is a business course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. 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 trades area. Preparation for SAT is embedded.

MSMHS Graduation Competencies: Problem Solving

AP Calculus AB

MTH0159 ***Full Year*** ***1 credit***

Senior Year

Prerequisite*: Completion of 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, for students taking this course.

MSMHS Graduation Competencies: Problem Solving

AP Statistics

MTH0169 ***Full Year*** ***1 credit***

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

----------SCIENCE DEPARTMENT----------

Amy Ferland, *University of Connecticut*
Brittany Forshaw, *Central CT State University*
Katherine Howard, *University of Rhode Island*
Eric Litvinoff, *University of Rhode Island*
William O'Leary, *University of Rhode Island*
Samantha Cregger, *Eastern Connecticut*
Chemistry TBD
Aquaculture TBD

Integrated Science I

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

Integrated Science II

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

SCI0630 ***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. Moreover, the course will include CAPT embedded labs and tasks.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

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

SCI0740 ***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 Integrated Science II or a B- or better in AP/ECE Environmental Science and department recommendation*

This course covers the processes governing the geology, circulation, chemistry, and biological productivity of the world's oceans. The first half of the course will focus on the formation, physical processes and chemical properties of the oceans. The second half will focus on organisms inhabiting major marine habitats. Emphasis is placed on the interactions and interrelationships between physical, chemical, biological and geological processes that contribute to both the stability and the variability of the marine environment.

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

MSMHS Graduation Competencies: Scientific Research, Problem Solving

AP Chemistry

SCI0749 ***Full Year*** ***1 credit***

Junior Year

Prerequisite*: A- or better in Integrated Science II, or a B- or better in AP/ECE Environmental Science, 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 the spring.

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

Marine Technology

SCI0760 ***Full Year*** ***1 credit***

Junior or Senior Year

The focus of this course is on advanced navigational techniques, underwater remote operated vehicles, and study of the individual design and construction of a student boat project. This course requires students to document their progress and to include reflective writing throughout the creative process. Class discussions will include the topics of manufacturing, boatbuilding materials, hull construction, and vessel design. Students will be taught advanced navigational techniques through the use of the bridge simulator, while gaining experience with a variety of vessels in local waterways. Furthermore, students will conduct research about current and historic vessels to achieve a better understanding of boat construction. Students will collaborate with the United States Coast Guard Academy in building and testing underwater ROVs. Students will learn the elements of three dimensional design using SketchUp which will play an integral role in the design of their student boat project.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

Aquatic Husbandry (Aquaculture IV)

SCI0800 ***Full Year*** ***1 credit***

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

AP/ECE Biology

SCI0818 ***Full Year*** ***2 credits/8 UConn credits***

Junior or Senior Year

Prerequisite*: A- or better in Integrated Science II 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. Dissection of an animal is included in this course; however, students may choose an alternate assignment in lieu of a dissection experience.

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

AP/ECE Environmental Science

SCI0828 ***Full Year*** ***1 credit/3 UConn credits***

Sophomore, Junior or Senior Year

Prerequisite*: A- or better in Integrated Science II and department recommendation. Sophomores: Recommendations from both the mathematics and science departments and A- or better in Integrated Science I and Marine Studies I.*

The purpose of this course is to provide the student with the study of man's interaction with the environment. The content should include, but not be limited to, forms of pollution, conservation, environmental planning and policy, public land usage, population dynamics, and major forms of energy. Laboratory investigations of selected topics in the content that also include the use of the scientific method, measurement, laboratory apparatus and safety are an integral part of the course. To fulfill the embedded PE, Health, and Arts credits in Integrated Science II, all sophomores taking this course will be required to complete an independent journal consisting of PE/Arts assignments that will be monitored throughout the school year.

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

AP Physics 1

SCI0839 ***Full Year*** ***1 credit***

Senior Year

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

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.

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

MSMHS Graduation Competencies: Problem Solving, Scientific Research

Field Research

SCI0840 ***Full Year*** ***1 credit***

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.

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

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.

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

MSMHS Graduation Competencies: Problem Solving

ECE Marine Biotechnology

SCI0899 ***Full Year*** ***1 credit/3 UConn credits***

Senior Year

Prerequisite*: Science department recommendation*

This course examines applications in the study of DNA and genetics such as genetically modified species, DNA barcoding, cloning and gene sequencing. Particular attention will be paid to how biotechnology can help solve conservation, ecological and taxonomic issues in marine biology. The overall goal of this course is to prepare students to understand the basic scientific principles, methodologies, and applications used in modern biotechnology. This course will also encourage discussion related to the impact and public perception of biotechnology, connection to students' lives such as personalized medicine, and consider ethical and otherwise controversial issues related to biotechnology.

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

MSMHS Graduation Competencies: Scientific Research, 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 areas including hydroponics, biotechnology, and landscape design. Students will have the opportunity to study: science and practice of horticultural plant propagation and culture; basic concepts of plant structure, growth, and function; integrated pest management; horticulture and the environment, and floral industry and design. Moreover, students will have the opportunity to collaborate with outside experts.

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

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 the MSMHS aquaria and will master the proper set-up and maintenance of home aquaria. Furthermore, students will be intimately involved in the ornamental fish aquaculture research being conducted in the MSMHS/Mystic Aquarium Collaboration Lab.

MSMHS Graduation Competencies: Scientific Research, Problem Solving

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

Colleen Hardison, *Western Connecticut State University*
Alison Knuijt, *Clarkson University*
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

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*: Sophomore must provide a portfolio including: report card showing A- or better in Civics and English I, teacher recommendations, overall 3.7 GPA, two samples of proficient or above writing, successful completion of August 21-25 summer course.* ***Student must be enrolled in English II Honors.***

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 which 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, from which they may acquire college credit. 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. UConn eligibility will be determined in Fall 2017.

MSMHS Graduation Competencies: Literacy, Accountable Talk

AP Human Geography

SOC0349 ***Full Year*** ***1 credit***

Senior Year

Prerequisite*: Teacher recommendation*

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, from which they may acquire college credit.

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

----------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 Expedition Report 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
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 2016-2017 year must have approval from administration and commitment from the placement. On campus placements will only occur with prior approval from administration upon request of the instructor.

MSMHS Graduation Competencies: 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 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

Spanish IV Honors

WLA0440 ***Full Year*** ***1 credit***

Junior, Senior Year

Prerequisite*: Spanish III Final Grade C or better and teacher recommendation*

Spanish IV further explores the formal grammatical concepts of the language by integrating Spanish and Hispanic literature, with emphasis on cultural awareness and historic knowledge of Spanish speaking people. This course focuses on oral fluency development, everyday conversations in real life, and use of the vocabulary and idiomatic expressions.

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

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.

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

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

Seminar in Organizational Methods
SAM0516 ***Full Year*** ***1 credit***
Freshman, Sophomore, Junior, Senior Year
Prerequisite*: Recommendation only*
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

----------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
English II Honors	1.0	10
English III	1.0	11
English IV	1.0	12
AP/ECE Literature and Composition – 2018-2019	1.0 (4.0 UConn)	11-12
AP/ECE Language and Composition – 2017-2018	1.0 (4.0 UConn)	11-12
ECE American Studies	1.0 (3.0 UConn)	12

MATHEMATICS

COURSE TITLE	MSMHS CREDIT	GRADES
Seminar in Mathematics	1.0	9-12
Algebra Prep	1.0	See Prerequisites
Algebra I	1.0	See Prerequisites
Geometry	1.0	See Prerequisites
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
Topics in Mathematics: Business & Personal Finance	1.0	See Prerequisites
AP Calculus AB	1.0	See Prerequisites
AP Statistics	1.0	See Prerequisites

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)	11-12
AP Human Geography	1.0	12
AP Psychology	1.0	12

SCIENCE

COURSE TITLE	MSMHS CREDIT	GRADES
Integrated Science I	1.0	9
Marine Studies I	1.0	9
Biology	1.0	9
Integrated Science II	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	1.0	11-12
Aquaculture and Resource Management (Aqua III)	1.0	11-12
Marine Technology	1.0	11-12
Aquatic Husbandry (Aqua IV)	1.0	11-12
AP/ECE Biology	2.0 (8.0 UConn)	11-12
AP/ECE Environmental Science	1.0 (3.0 UConn)	10-11-12
AP Physics 1	1.0	12
Field Research	1.0	11-12
Forensics	1.0	11-12
AP Computer Science Principles	1.0	11-12
ECE Marine Biotechnology	1.0 (3.0 UConn)	12
ECE Horticulture & Design	1.0 (7.0 UConn)	11-12
Aquarium Science	1.0	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
Spanish IV	1.0	9-12
ECE Spanish	1.0 (6.0 UConn)	12

ADDITIONAL COURSES

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

Marine Science Magnet High School
Course Selection Worksheet
Grade 9 (SY 2017-2018)

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

Please fill in the requested course information below.

	Course #	Course Title
English I	**ENG0210**	**ENGLISH I**
Social Studies	**SOC0310**	**CIVICS & ENVIRONMENTAL STEWARDSHIP**
Mathematics		
Spanish		
-OR -		
Seminar in Academic Methods: (by recommendation only)		
Int. Science I	**SCI0610**	**INTEGRATED SCIENCE I**
Marine Studies I	**SCI0620**	**MARINE STUDIES I**
Biology	**SCI0810**	**BIOLOGY**
Study Hall	**STH1000**	**STUDY HALL**

Student Signature	Date	Parent Signature	Date

Marine Science Magnet High School
Course Selection Worksheet
Grade 10 (SY 2017-2018)

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

Please fill in the requested course information below.

	Course #	Course Title	Teacher Recommendation
English II			
World Maritime History			
Mathematics			
Spanish			
- OR -			
Seminar in Academic Methods: (by recommendation only)			
Chemistry	**SCI0740**	**CHEMISTRY**	
Int. Sci. II			
-OR-			
ECE/AP Env. Sci.	**SCI0828**		
Marine St. II	**SCI0640**	**MARINE STUDIES II**	
Study Hall	**STH1000**	**STUDY HALL**	

Student Signature	Date	Parent Signature	Date

Marine Science Magnet High School
Course Selection Worksheet
Grade 11 (SY 2017-2018)

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

Please fill in the requested course information below.

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

Student Signature	Date	Parent Signature	Date
_____		_____	

Marine Science Magnet High School
Course Selection Worksheet
Grade 12 (SY 2017-2018)

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

Please fill in the requested course information below.

	Course #	Course Title	Teacher Recommendation
English IV			
Social Studies			
Mathematics			
Spanish			
- OR -			
Seminar in Academic Methods: (by recommendation only)			
Course Elective *Preference 1*			
Course Elective *Preference 2*			
Course Elective *Preference 3*			
Course Elective *Preference 4*			
Course Elective *Preference 5*			

Student Signature	Date	Parent Signature	Date