

# 2016-2017 PROGRAM OF STUDIES



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**Dr. Nicholas J. Spera**  
*Principal*

**Christopher Contos**  
*School Counselor*

**Anna Calano**  
*School Counselor*

February 18, 2016

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.

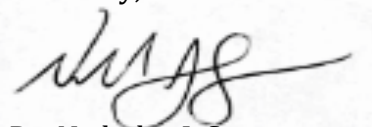
The high school curriculum is based on our school's unique theme and mission. Specific 21<sup>st</sup> century learning expectations are required and embedded into course assessments; these expectations and the importance of the Common Core State Standards are integral in the success of your next endeavor 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 of Southeastern Connecticut**

### **CORE VALUES, BELIEFS, AND LEARNING EXPECTATIONS**

The Marine Science Magnet High School of Southeastern Connecticut is a safe, respectful and nurturing environment. Our professional learning community is committed to 21st century instruction that promotes effort and ensures academic rigor through a challenging curriculum responsive to the diverse interests of a broad spectrum of students. Furthermore, MSMHS collaborates with all stakeholders to prepare students for higher education and/or marine-related employment by supporting the personal, academic and career goals of every student. We believe that effort creates ability and that all students will succeed. We provide students with the opportunities to develop the skills and character needed to be active and responsible citizens in a global community.

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

#### **Academic Competencies**

1. Read and write effectively for a variety of purposes;
2. Speak effectively with a variety of audiences in an accountable manner;
3. Employ mathematical problem-solving skills effectively;
4. Apply scientific knowledge and concepts to a variety of investigative tasks;
5. Demonstrate an understanding of the essential concepts within the field of marine science;
6. Use technology responsibly to create, research, synthesize, and communicate information fluently;
7. Make decisions and solve problems in independent and collaborative settings;













#### **Civic and Social Competencies**

8. Take responsibility for his/her own learning and behavior;
9. Value human, cultural, and natural diversity;
10. Meet their civic responsibilities to society and the natural environment.

## MSMHS Rubric 1: Communication

*Student reads and writes effectively for a variety of purposes.*











8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Fluency</b>	<ul style="list-style-type: none"> <li>Reads challenging material with exceptional speed, accuracy and confidence</li> </ul>		<ul style="list-style-type: none"> <li>Reads adequately at a deliberate pace, re-reading challenging material</li> </ul>		<ul style="list-style-type: none"> <li>Reads haltingly</li> <li>Resists reading assignments</li> </ul>
<b>Comprehension</b>	<ul style="list-style-type: none"> <li>Understands purpose, main ideas, supporting details, context clues</li> <li>Uses prior knowledge to make connections</li> </ul>		<ul style="list-style-type: none"> <li>Understands general purpose, key ideas, some supporting details</li> <li>Needs assistance with context clues and making connections</li> </ul>		<ul style="list-style-type: none"> <li>Lacks understanding of main purpose and main ideas</li> <li>Lacks ability to retain details</li> <li>No evidence of reading strategies, context clues</li> </ul>
<b>Interpretation</b>	<ul style="list-style-type: none"> <li>Differentiates with precision: fact, opinion, cause, effect</li> <li>Makes insightful interpretations and inferences</li> </ul>		<ul style="list-style-type: none"> <li>Differentiates most fact from opinion and cause from effect</li> <li>Conclusions and interpretations plausible</li> </ul>		<ul style="list-style-type: none"> <li>Confuses fact and opinion, cause and effect</li> <li>Conclusions and interpretations lacking or inaccurate</li> </ul>
<b>Purpose, Thesis, Point of View</b>	<ul style="list-style-type: none"> <li>Powerful development of purpose, thesis, main idea in a complex context</li> <li>Skillfully addresses audience with appropriate tone and communication strategy</li> </ul>		<ul style="list-style-type: none"> <li>Establishes purpose with adequate development of thesis, main ideas</li> <li>Generally addresses audience with appropriate tone and communication strategy</li> </ul>		<ul style="list-style-type: none"> <li>Purpose, thesis, point of view mostly absent</li> <li>Ideas undeveloped</li> <li>No evidence of communication strategy or audience awareness</li> </ul>
<b>Content, Support, Evidence</b>	<ul style="list-style-type: none"> <li>Ample content to support thesis, main idea, reasoning, critical thought, evidence</li> <li>Insightful reasoning; addresses counterviews</li> </ul>		<ul style="list-style-type: none"> <li>Sufficient content to support thesis, main idea</li> <li>Consistent use of appropriate reasoning and relevant evidence</li> </ul>		<ul style="list-style-type: none"> <li>Virtually no content or evidence to support thesis or main idea</li> <li>No relevant evidence</li> <li>Lacks critical thought</li> </ul>
<b>Revising and Editing</b>	<ul style="list-style-type: none"> <li>Strong evidence of change from draft review</li> <li>Skillful use of transitions and organizational components</li> <li>Fluent, coherent and unified structure</li> <li>Error-free use of convention and mechanics</li> </ul>		<ul style="list-style-type: none"> <li>Evident change from draft review</li> <li>Consistent use of transitions and organizational components</li> <li>Few errors in grammar, spelling, syntax, punctuation, usage vocabulary</li> </ul>		<ul style="list-style-type: none"> <li>No evidence of change from draft review</li> <li>Errors in grammar, spelling, syntax, punctuation, usage vocabulary are common throughout</li> <li>Ideas unclear with no linkage or progression</li> </ul>

## MSMHS Rubric 2: Accountable Talk

*Student speaks effectively with a variety of audiences in an accountable manner.*









8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Purpose</b>	<ul style="list-style-type: none"> <li>• Captures and maintains high level of audience attention</li> <li>• Establishes purpose</li> <li>• Stays on topic, relevant to task</li> </ul>		<ul style="list-style-type: none"> <li>• Purpose mostly clear</li> <li>• Lack some audience awareness</li> <li>• Generally on topic and relevant to task</li> </ul>		<ul style="list-style-type: none"> <li>• Lacks purpose</li> <li>• May be reluctant to speak or present views</li> <li>• May resist assistance</li> </ul>
<b>Accountability</b>	<ul style="list-style-type: none"> <li>• Includes evidence and examples that strongly support the presentation</li> <li>• Incorporates knowledge from multiple resources</li> <li>• Addresses multiple points of views and beliefs about the topic</li> </ul>		<ul style="list-style-type: none"> <li>• Adequate details to support topic and main points</li> <li>• Incorporates some knowledge from limited resources</li> <li>• Provides some different points of view about the topic</li> </ul>		<ul style="list-style-type: none"> <li>• Little, if any, useful content or examples</li> <li>• Fails to provide other points of view about the topic</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>• Highly organized, coherent, easy- to-follow message in all respects: introduction, smooth transitions, progression, conclusion</li> </ul>		<ul style="list-style-type: none"> <li>• Message mostly coherent</li> <li>• Adequate introduction and conclusion</li> <li>• May need help with transitions, progression of ideas</li> </ul>		<ul style="list-style-type: none"> <li>• Incoherent message</li> <li>• Introduction and conclusion weak or missing</li> <li>• Little or no progression of ideas</li> </ul>
<b>Grammar Usage</b>	<ul style="list-style-type: none"> <li>• Uses well-chosen vocabulary and grammar</li> <li>• Avoids slang and simplistic expression</li> <li>• Excellent enunciation</li> </ul>		<ul style="list-style-type: none"> <li>• Slang and inappropriate vocabulary in places</li> <li>• Needs help with grammar usage and enunciation</li> </ul>		<ul style="list-style-type: none"> <li>• Slang, poor vocabulary</li> <li>• Poor grammar usage throughout</li> </ul>
<b>Presentation</b>	<ul style="list-style-type: none"> <li>• Relaxed confidence and enthusiasm are evident</li> <li>• Obvious audience rapport</li> <li>• Excellent presentation skills</li> </ul>		<ul style="list-style-type: none"> <li>• Mostly satisfactory appearance</li> <li>• Speaks clearly with adequate pacing</li> <li>• Lacking some elements of posture, eye contact, physical expression</li> </ul>		<ul style="list-style-type: none"> <li>• Reluctant delivery</li> <li>• Poor presentation elements</li> </ul>

### MSMHS Rubric 3: Mathematics

*Student employs mathematical problem-solving skills effectively.*











8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Problem Definition</b>	<ul style="list-style-type: none"><li>• Creatively defines, restates complex problem using the most applicable concepts</li><li>• Recognizes sophisticated patterns and relationships</li></ul>		<ul style="list-style-type: none"><li>• Defines the essential problem</li><li>• Some patterns, relationships recognized</li><li>• Errors do not affect comprehension</li></ul>		<ul style="list-style-type: none"><li>• Little or no understanding of the problem, patterns, relationships</li><li>• Work attempt error prone</li></ul>
<b>Data Interpretation</b>	<ul style="list-style-type: none"><li>• Rapidly identifies and creatively uses all information critical to the problem</li><li>• Precise and complete data interpretation</li></ul>		<ul style="list-style-type: none"><li>• Needs some assistance identifying critical information</li><li>• Mostly accurate data interpretation.</li></ul>		<ul style="list-style-type: none"><li>• Little or no effort to study information or interpret data</li><li>• Resists assistance</li></ul>
<b>Strategies Solutions</b>	<ul style="list-style-type: none"><li>• Uses mathematically sound strategies and formulas</li><li>• Thorough and flawless solutions</li><li>• Assists others in problem-solving</li></ul>		<ul style="list-style-type: none"><li>• Uses mathematically sound strategies, formulas, with some guidance</li><li>• Solution process may include minor errors</li></ul>		<ul style="list-style-type: none"><li>• Little or no attempt to develop a strategy or formula</li><li>• Any solutions error-prone</li></ul>
<b>Justification</b>	<ul style="list-style-type: none"><li>• Displays all steps in complex work</li><li>• Precisely explains all strategies and justifies solutions using precise mathematical terms and symbols</li></ul>		<ul style="list-style-type: none"><li>• Some steps in work process unclear or missing</li><li>• Explains basic strategy and solutions using mathematical terms and symbols with some assistance</li></ul>		<ul style="list-style-type: none"><li>• Does not complete steps in work process</li><li>• Explanation lacks clarity</li></ul>

## MSMHS Rubric 4: Scientific Research

*Student applies scientific knowledge and concepts to a variety of investigative tasks.*











10/14 edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Identify Problem and Develop Hypothesis (Introduction)</b>	<ul style="list-style-type: none"> <li>Clearly explains the problem using evidence and prior knowledge and citing sources as needed</li> <li>Selects the appropriate independent and dependent variables</li> <li>Develops a hypothesis using scientific concepts and principles citing sources as needed</li> </ul>		<ul style="list-style-type: none"> <li>Identifies the problem citing sources as needed</li> <li>Identifies independent and dependent variables</li> <li>Develops a hypothesis citing sources as needed</li> </ul>		<ul style="list-style-type: none"> <li>Does not identify the problem</li> <li>Does not identify independent and dependent variables</li> <li>Does not develop a hypothesis</li> </ul>
<b>Design and Perform Experiment (Method)</b>	<ul style="list-style-type: none"> <li>Selects and develops an appropriate strategy that matches the stated problem, or, follows and communicates the given procedure clearly and concisely</li> <li>Applies and understands all safety precautions</li> </ul>		<ul style="list-style-type: none"> <li>Develops a strategy that matches the stated problem, or, follows and communicates a strategy that matches the stated problem</li> <li>Applies and understands all safety precautions</li> </ul>		<ul style="list-style-type: none"> <li>Strategy does not match the problem, or, does not follow or communicate the strategy</li> <li>Does not apply safety precautions</li> </ul>
<b>Collect and Organize Data (Results)</b>	<ul style="list-style-type: none"> <li>Synthesizes raw data into analyzed data without interpreting what it means</li> <li>Appropriately organizes data into data tables, graphs, and/ or diagrams</li> <li>Concisely describes/ summarizes qualitative data (when applicable)</li> </ul>		<ul style="list-style-type: none"> <li>Accurately presents all measured and analyzed data without interpreting what it means</li> <li>Organizes data into data tables, graphs, and/ or diagrams</li> <li>Adequately describes/ summarizes qualitative data (when applicable)</li> </ul>		<ul style="list-style-type: none"> <li>Inaccurately measures, records and labels data</li> <li>Lacks skills to organize data into data tables, graphs, and diagrams</li> <li>No summary of qualitative data (when applicable)</li> </ul>
<b>Draw Conclusions (Discussion)</b>	<ul style="list-style-type: none"> <li>Accurately makes a claim with specific evidence from the results with connections to the hypothesis</li> <li>Explain results drawing connections to cited sources</li> </ul>		<ul style="list-style-type: none"> <li>Makes a claim using evidence referencing hypothesis</li> <li>Explain the results</li> </ul>		<ul style="list-style-type: none"> <li>Does not make a claim</li> <li>Does not explain results</li> </ul>
<b>Discuss Validity (Discussion)</b>	<ul style="list-style-type: none"> <li>Reliability of data and validity of experiment is thoroughly discussed</li> <li>Identifies possible experimental errors and develops procedural improvements</li> <li>Proposes additional experiments or research</li> </ul>		<ul style="list-style-type: none"> <li>Reliability of data and validity of experiment is generally discussed</li> <li>Identifies some possible experimental errors</li> </ul>		<ul style="list-style-type: none"> <li>Reliability of data and validity of experiment is not discussed</li> <li>Experimental errors are not identified</li> </ul>

## MSMHS Rubric 5: Marine Science

*Demonstrate an understanding of the essential concepts within the field of marine science.*

3/14 Edition









Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Content</b>	<ul style="list-style-type: none"> <li>Displays a comprehensive understanding of the main ideas and supporting content</li> <li>Demonstrates a complex understanding of ideas related to the marine sciences</li> </ul>		<ul style="list-style-type: none"> <li>Identifies the main ideas and some supporting content</li> <li>Demonstrates a basic understanding of ideas related to the marine sciences</li> </ul>		<ul style="list-style-type: none"> <li>Does not identify the main ideas</li> <li>Little or no demonstration of understanding ideas related to the marine sciences</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>Captures and maintains audience, attention with appropriate tone and communication strategies</li> <li>Conveys concepts clearly, thoroughly and accurately</li> <li>Highly organized, coherent, easy to follow message</li> </ul>		<ul style="list-style-type: none"> <li>Maintains audience attention</li> <li>Organized, coherent, somewhat easy to follow message</li> <li>Generally addresses audience with appropriate tone and communication strategy</li> </ul>		<ul style="list-style-type: none"> <li>No attempt to maintain audience attention</li> <li>Incoherent and difficult to follow message</li> <li>No evidence of communication strategy or audience awareness</li> </ul>
<b>Connections to Ocean Literacy</b>	<ul style="list-style-type: none"> <li>Clearly makes connections to at least two <i>Essential Principles of Ocean Literacy</i></li> <li>Demonstrates a complex understanding of the <i>Fundamental Concepts of Ocean Literacy</i></li> </ul>		<ul style="list-style-type: none"> <li>Clearly makes a connection to one of the <i>Essential Principles of Ocean Literacy</i></li> <li>Demonstrates a basic understanding of the <i>Fundamental Concepts of Ocean Literacy</i></li> </ul>		<ul style="list-style-type: none"> <li>Connections to ocean literacy are unclear or absent</li> <li><i>Fundamental Concepts of Ocean Literacy</i> are not referenced or contain major misconceptions</li> </ul>
<b>Application of Evidence</b>	<ul style="list-style-type: none"> <li>Forms valid conclusions by synthesizing multiple arguments, each based on multiple sources of evidence</li> </ul>		<ul style="list-style-type: none"> <li>Forms valid conclusions based on multiple sources of evidence, which may include specific events, data, textual support, or circumstances</li> <li>Uses a single argument based on evidence</li> </ul>		<ul style="list-style-type: none"> <li>Does not form valid conclusions based on evidence</li> <li>Sources of evidence are not appropriate to support ideas</li> </ul>
<b>Use of Scientific Instrumentation</b>	<ul style="list-style-type: none"> <li>Independently selects appropriate instrumentation</li> <li>Demonstrates advanced skill using equipment</li> <li>Skilfully collects and records sufficient data</li> </ul>		<ul style="list-style-type: none"> <li>Selects appropriate instrumentation</li> <li>Demonstrates skill using equipment, with assistance</li> <li>Collects and records sufficient data</li> </ul>		<ul style="list-style-type: none"> <li>Does not select appropriate instrumentation</li> <li>Inappropriate or no use of equipment</li> <li>Does not collect or record data</li> </ul>



## MSMHS Rubric 6: Technology

*Student uses technology responsibly to create, research, synthesize, and communicate information fluently.*













8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Planning</b>	<ul style="list-style-type: none"> <li>Independently uses technology to apply existing knowledge to create well developed questions for investigation and make predictions</li> <li>Constructs a clear, insightful thesis statement</li> </ul>		<ul style="list-style-type: none"> <li>With assistance, uses technology to apply existing knowledge to create well developed questions for investigation and make predictions</li> <li>Constructs a basic thesis statement</li> </ul>		<ul style="list-style-type: none"> <li>Unable to use technology to apply existing knowledge to create well developed questions for investigation and make predictions</li> </ul>
<b>Researching</b>	<ul style="list-style-type: none"> <li>Applies digital tools to locate information responsibly from a variety of sources and media; including evaluating and selecting information sources</li> <li>Research includes primary and secondary sources</li> </ul>		<ul style="list-style-type: none"> <li>With minimal support, applies digital tools to locate information responsibly from a variety of sources and media; including evaluating and selecting information sources.</li> </ul>		<ul style="list-style-type: none"> <li>Unable to apply digital tools to locate information responsibly from a variety of sources and media; including evaluating and selecting information sources.</li> <li>Displays minimal effort</li> </ul>
<b>Synthesizing</b>	<ul style="list-style-type: none"> <li>Uses digital tools to organize data with a coherent and clear focus</li> <li>Uses highly relevant information effectively</li> <li>Interprets and evaluates information with insight and accuracy</li> <li>Brings closure to thesis or research questions</li> </ul>		<ul style="list-style-type: none"> <li>Uses digital tools to sort data; organizes, synthesizes information with assistance</li> <li>May use irrelevant information</li> <li>Interprets, evaluates data with assistance</li> <li>May not address all research questions</li> </ul>		<ul style="list-style-type: none"> <li>Unable to organize data using digital tools</li> <li>Displays minimal effort</li> <li>Minimally addresses research questions</li> </ul>
<b>Communicating</b>	<ul style="list-style-type: none"> <li>Demonstrates advanced skill in using technology to communicate research results clearly, thoroughly and accurately</li> <li>Excellent written expression and source citation (MLA)</li> </ul>		<ul style="list-style-type: none"> <li>Uses technology to communicate research results adequately, with some mechanical, grammatical errors</li> <li>May struggle with proper citation (MLA)</li> </ul>		<ul style="list-style-type: none"> <li>Little or no communication of research results</li> <li>Errors in grammar and mechanics</li> <li>Lacks proper citation of others' contributions</li> </ul>

## MSMHS Rubric 7: Problem Solving

*Student makes decisions and solves problems in independent and collaborative settings.*











8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Problem Definition</b>	<ul style="list-style-type: none"> <li>Understands, accurately defines complex problem, related issues and factors</li> <li>Generates hypotheses, makes predictions</li> </ul>		<ul style="list-style-type: none"> <li>With guidance understands, defines the problem or essential issue</li> <li>Forms hypothesis or makes predictions</li> </ul>		<ul style="list-style-type: none"> <li>Little if any understanding of the problem or issue</li> <li>Reluctant to address the work</li> </ul>
<b>Thinking Strategies</b>	<ul style="list-style-type: none"> <li>Independent critical thinker</li> <li>Considers alternatives</li> <li>Chooses best strategy and implements skillfully</li> </ul>		<ul style="list-style-type: none"> <li>With guidance considers alternatives, chooses a strategy</li> <li>Implements strategy adequately</li> </ul>		<ul style="list-style-type: none"> <li>Does not understand concept of alternatives, strategies</li> <li>No implementation</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>Skillfully locates and uses all relevant resources, information</li> <li>Assesses credibility accurately</li> </ul>		<ul style="list-style-type: none"> <li>Locates/uses mostly relevant information &amp; resources</li> <li>Needs assistance with assessing credibility</li> </ul>		<ul style="list-style-type: none"> <li>Cannot locate and use relevant resources and information</li> </ul>
<b>Conclusions/Decisions</b>	<ul style="list-style-type: none"> <li>Draws accurate and insightful conclusions</li> <li>Makes excellent decisions with ample evidence</li> <li>Forms strong action plan, if relevant</li> </ul>		<ul style="list-style-type: none"> <li>With guidance draws accurate conclusions</li> <li>Makes adequate decisions with sufficient supporting evidence</li> </ul>		<ul style="list-style-type: none"> <li>Avoids critical thinking and problem-solving activities</li> <li>Conclusions, if any, are wrong</li> <li>Evidence is lacking</li> </ul>
<b>Reflection</b>	<ul style="list-style-type: none"> <li>Reviews the problem-solving experience and evaluates methods</li> <li>Considers relevant ethical, social, technical issues, etc.</li> </ul>		<ul style="list-style-type: none"> <li>Reflects meaningfully on the problem-solving experience and methods without assistance</li> </ul>		<ul style="list-style-type: none"> <li>Avoids reflective thinking, resists assistance in self-critiquing</li> <li>Shows lack of interest</li> </ul>
<b>Collaborative Setting (Optional)</b>	<ul style="list-style-type: none"> <li>Active team leadership role</li> <li>Aware of key group dynamics</li> <li>Motivates others, promotes participation</li> <li>Offers valuable input</li> </ul>		<ul style="list-style-type: none"> <li>Adequate participant in group setting</li> <li>Offers some input, some responsibility-sharing</li> <li>No evidence of leadership</li> </ul>		<ul style="list-style-type: none"> <li>Actively resists constructive participation in group setting</li> <li>May jeopardize group success</li> </ul>

## MSMHS Rubric 8: Student Ownership

*Student takes responsibility for own learning and behavior.*

8/12 Edition













Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Self-Regulation</b>	<ul style="list-style-type: none"> <li>Emotionally mature and well balanced</li> <li>Reflective about actions</li> <li>Respects, assists, responds to authority</li> </ul>		<ul style="list-style-type: none"> <li>Manages own emotions adequately, responds adequately to authority most of the time.</li> <li>Some impulsivity, but responds flexibly to most situations</li> </ul>		<ul style="list-style-type: none"> <li>Serious emotional management issues across the board, lacks proper responsiveness to staff, authority</li> <li>Tends to 'make matters worse'</li> </ul>
<b>Commitment To Learning</b>	<ul style="list-style-type: none"> <li>Accountable and reliable to the learning environment</li> <li>Takes initiative and relishes new experience</li> <li>Pursues excellence in all endeavors</li> </ul>		<ul style="list-style-type: none"> <li>Generally attentive and responsive to the learning environment</li> <li>Adequate perseverance</li> <li>Satisfactory completion of tasks</li> </ul>		<ul style="list-style-type: none"> <li>Lacks commitment to learning</li> <li>Rejects task-orientation, resists accepting responsibility for own learning</li> </ul>
<b>Goal Orientation</b>	<ul style="list-style-type: none"> <li>Sets challenging personal and academic goals</li> <li>Pursues goals vigorously, measures progress.</li> <li>Reflects on results</li> </ul>		<ul style="list-style-type: none"> <li>Sets appropriate personal, academic goals and pursues with assistance</li> <li>Measures progress with assistance.</li> <li>Some goal reflection</li> </ul>		<ul style="list-style-type: none"> <li>Does not set or pursue learning goals</li> <li>May even resist goal-setting and achievement process</li> </ul>
<b>Self-Assessment</b>	<ul style="list-style-type: none"> <li>Excels at accepting input, responsibility for actions</li> <li>Takes responsibility for own learning</li> <li>Realistic self-assessment</li> </ul>		<ul style="list-style-type: none"> <li>Usually accepts basic responsibility for actions</li> <li>Most times takes responsibility for own learning</li> <li>Realistic self-assessment</li> </ul>		<ul style="list-style-type: none"> <li>Does not take responsibility for own behavior or learning</li> <li>No attempt to self-assess</li> </ul>
<b>Collaborative Setting</b>	<ul style="list-style-type: none"> <li>Takes positive, constructive leadership role in group settings; models for others.</li> <li>Takes initiative to help others, share knowledge</li> </ul>		<ul style="list-style-type: none"> <li>Generally positive and constructive, but may need assistance to perform productively in group settings</li> <li>Somewhat unassertive</li> </ul>		<ul style="list-style-type: none"> <li>Behaves negatively</li> <li>Does not accept responsibility for group participation</li> <li>Jeopardizes group success</li> </ul>

## MSMHS Rubric 9: Responsibility and Stewardship

*Student values human, cultural and natural diversity.*

*Student meets civic responsibilities to society and the natural environment.*

8/12 Edition

Criteria	Exemplary	Approaching Exemplary	Proficient	Approaching Proficient	Beginning
<b>Respect</b>	<ul style="list-style-type: none"> <li>Usually respects self, others, school</li> <li>Responds well to authority and intervention</li> </ul>		<ul style="list-style-type: none"> <li>Usually respects self, others, school</li> <li>Responds well to authority and intervention</li> </ul>		<ul style="list-style-type: none"> <li>General disrespect</li> <li>Frequent incidents and referrals</li> <li>Responds poorly to intervention</li> </ul>
<b>Participation</b>	<ul style="list-style-type: none"> <li>Participates satisfactorily in classes, labs and entire school program most of the time</li> </ul>		<ul style="list-style-type: none"> <li>Participates satisfactorily in classes, labs and entire school program most of the time</li> </ul>		<ul style="list-style-type: none"> <li>Nearly a non-participant</li> <li>Lacks interest and commitment to the school program</li> </ul>
<b>Responsibility</b>	<ul style="list-style-type: none"> <li>Usually adheres to school policies, ethical citizenship</li> <li>Usually honest, punctual</li> <li>Needs improvement in preparation, organization</li> <li>Responds well to intervention</li> </ul>		<ul style="list-style-type: none"> <li>Usually adheres to school policies, ethical citizenship</li> <li>Usually honest, punctual</li> <li>Needs improvement in preparation, organization</li> <li>Responds well to intervention</li> </ul>		<ul style="list-style-type: none"> <li>Poor citizenship behavior predominates in many areas of behavior</li> <li>Significant pattern of misconduct and disciplinary referrals</li> <li>Resists intervention</li> </ul>
<b>Social Interaction</b>	<ul style="list-style-type: none"> <li>Sensitive to feelings of others, sometimes to needs of others</li> <li>Adequate interpersonal and collaborative skills</li> </ul>		<ul style="list-style-type: none"> <li>Sensitive to feelings of others, sometimes to needs of others</li> <li>Adequate interpersonal and collaborative skills</li> </ul>		<ul style="list-style-type: none"> <li>Pattern of insensitivity to feelings, needs of others</li> <li>Lacks interpersonal and collaborative skills</li> <li>Harms school climate</li> </ul>
<b>Diversity</b>	<ul style="list-style-type: none"> <li>Shows tolerance for human and cultural differences</li> <li>Values natural diversity</li> </ul>		<ul style="list-style-type: none"> <li>Shows tolerance for human and cultural differences</li> <li>Values natural diversity</li> </ul>		<ul style="list-style-type: none"> <li>Shows active, intolerant behavioral pattern</li> <li>Displays ignorance of diversity values</li> </ul>
<b>Environmental Stewardship</b>	<ul style="list-style-type: none"> <li>Usually respects life species and the environment</li> <li>Adequate participation in related community service projects</li> </ul>		<ul style="list-style-type: none"> <li>Usually respects life species and the environment</li> <li>Adequate participation in related community service projects</li> </ul>		<ul style="list-style-type: none"> <li>Behavior shows pattern of disrespect for life species and the environment</li> <li>No community service involvement</li> </ul>

### 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 1<sup>st</sup>.** 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-----

Veronica La Vista, *Smith College*  
Juliana Bassett, *Fairfield University*  
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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk, Technology
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## **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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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## **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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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## **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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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## **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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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## **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.

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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**AP/ECE English Literature and Composition (2016-2017, 2018-2019)****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.***

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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**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.***

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk
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**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.***

<b>MSMHS Graduation Competencies:</b> Communication, Accountable Talk, Responsibility & Stewardship
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# -----MATHEMATICS DEPARTMENT-----

Jill Andruskiewicz, *University of Connecticut*  
Melissa Barnes, *State University of New York at Oswego*  
Elizabeth Ayala, *Scared Heart University*

## **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.

<b>MSMHS Graduation Competencies:</b> Mathematics, Problem Solving
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## **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.

<b>MSMHS Graduation Competencies:</b> Mathematics, Problem Solving
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## **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.

<b>MSMHS Graduation Competencies:</b> Mathematics, Problem Solving
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**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:** Mathematics, 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:** Mathematics, 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:** Mathematics, 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:** Mathematics, 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:** Mathematics, 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:** Mathematics, 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.***

<b>MSMHS Graduation Competencies:</b> Mathematics, Problem Solving
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**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.***

<b>MSMHS Graduation Competencies:</b> Mathematics, Problem Solving, Technology
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# -----SCIENCE DEPARTMENT-----

Amy Ferland, *University of Connecticut*  
Katherine Howard, *University of Rhode Island*  
Eric Litvinoff, *University of Rhode Island*  
Sergey Medvedev, *Roger Williams University*

William O'Leary, *University of Rhode Island*  
Mary Turano, *Eastern Connecticut*  
Ben Wildeboer, *Calvin College*



## **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:** Marine Science, Technology



## **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, Technology

### **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:** Marine Science, Technology



### **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, Technology



**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, Marine Science, Technology**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 Honors Integrated Science II 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, Marine Science, Technology**AP Chemistry****SCI0749****Full Year****2 credits***Junior Year*

**Prerequisite:** *A- or better in Integrated Science II, or a B- or better Honors Integrated Science II, B or better 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, Technology

**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.

<b>MSMHS Graduation Competencies:</b> Marine Science, Technology
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**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.

<b>MSMHS Graduation Competencies:</b> Marine Science, Technology
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**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.

<b>MSMHS Graduation Competencies:</b> Marine Science, Technology, Problem Solving
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**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 Integrated Science Honors 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.***

<b>MSMHS Graduation Competencies:</b> Scientific Research, Technology
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**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 or a B- or better Honors Integrated Science II, 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.***

<b>MSMHS Graduation Competencies:</b> Scientific Research, Problem Solving, Responsibility & Stewardship
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*New Course for the 2016-2017 School Year***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.***

<b>MSMHS Graduation Competencies:</b> Mathematics, Scientific Research
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## **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, Technology, 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, Technology, Problem Solving

*New Course for the 2016-2017 School Year*



## **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:** Technology, Problem Solving

**ECE Marine Biotechnology**

**SCI0899**

**Full Year**

**1 credit/3 UConn credits**

*Junior or 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.***

<b>MSMHS Graduation Competencies:</b> Marine Science, Technology, Problem Solving
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**ECE Horticulture & Design**

**SCI0889**

**Full Year**

**1 credit/5 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 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.***

<b>MSMHS Graduation Competencies:</b> Scientific Research, Technology, Problem Solving
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**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.

<b>MSMHS Graduation Competencies:</b> Marine Science, Technology, Problem Solving
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# -----SOCIAL STUDIES DEPARTMENT-----

Colleen Hardison, *Western Connecticut State University*  
Diana Nasser, *University of Connecticut*  
Alison Schroeder, *Clarkson University*



## **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:** Communication, Accountable Talk, Responsibility & Stewardship



## **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:** Communication, 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 22-26 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:** Communication, 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:** Communication, Accountable Talk**AP 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 21<sup>st</sup> 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, for students taking this course.***

**MSMHS Graduation Competencies:** Communication, 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:** Communication, Accountable Talk, Responsibility & Stewardship



**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.***

<b>MSMHS Graduation Competencies:</b> Accountable Talk, Responsibility & Stewardship
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-----**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.

<b>MSMHS Graduation Competencies:</b> Student Ownership, Responsibility & Stewardship
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**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.

<b>MSMHS Graduation Competencies:</b> Student Ownership, Responsibility & Stewardship
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# -----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:** Communication, Accountable Talk, Responsibility & Stewardship



## **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:** Communication, Accountable Talk, Responsibility & Stewardship



## **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:** Communication, Accountable Talk, Responsibility & Stewardship



## **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:** Communication, Accountable Talk, Responsibility & Stewardship

**ECE Spanish****WLA0459***Senior Year***Full Year****1 credit/6 UConn credits*****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:** Communication, Accountable Talk, Responsibility & Stewardship

**-----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:** Communication, Student Ownership, Responsibility & Stewardship

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

## **LANGUAGE ARTS**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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 – 2016-2017	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**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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	2.0	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)	11-12
ECE Horticulture & Design	1.0 (5.0 UConn)	11-12
Aquarium Science	1.0	11-12

## **WORLD LANGUAGE**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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**

<b>COURSE TITLE</b>	<b>MSMHS CREDIT</b>	<b>GRADES</b>
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 2016-2017)**

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

Please fill in the requested course information below.

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

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Student Signature	Date	Parent Signature	Date

Marine Science Magnet High School  
Course Selection Worksheet  
**Grade 10 (SY 2016-2017)**

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

Please fill in the requested course information below.

<b>English II</b>	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation

<b>World Maritime History</b>	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation

<b>Mathematics</b>	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation

<b>Spanish</b>	<hr/>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation

- OR -

<b>Seminar in Academic Methods:</b>	<hr/>	<hr/>	<hr/>
(by recommendation only)	Course #	Course Title	Teacher Recommendation

<b>Chemistry</b>	<u><b>SCI0740</b></u>	<u><b>CHEMISTRY</b></u>	
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<b>Int. Sci. II</b>	<hr/>	<hr/>	
	Course #	Course Title	
<b>-OR-</b>			

<b>ECE/AP Env. Sci.</b>	<u><b>SCI0828</b></u>	<hr/>	<hr/>
	Course #	Course Title	Teacher Recommendation

<b>Marine St. II</b>	<u><b>SCI0640</b></u>	<u><b>MARINE STUDIES II</b></u>	
	Course #	Course Title	

<b>Study Hall</b>	<u><b>STH1000</b></u>	<u><b>STUDY HALL</b></u>	
	Course #	Course Title	

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

Marine Science Magnet High School  
Course Selection Worksheet  
**Grade 11 (SY 2016-2017)**

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

Please fill in the requested course information below.

<b>English III</b>			
	Course #	Course Title	Teacher Recommendation

<b>Social Studies</b>			
	Course #	Course Title	Teacher Recommendation

<b>Mathematics</b>			
	Course #	Course Title	Teacher Recommendation

<b>Spanish</b>			
	Course #	Course Title	Teacher Recommendation

- OR -

<b>Seminar in Academic Methods:</b>			
(by recommendation only)	Course #	Course Title	Teacher Recommendation

<b>Marine Science</b>			
	Course #	Course Title	Teacher Recommendation

<b>Science Elective Preference 1</b>			
	Course #	Course Title	Teacher Recommendation

<b>Science Elective Preference 2</b>			
	Course #	Course Title	Teacher Recommendation

<b>Science Elective Preference 3</b>			
	Course #	Course Title	Teacher Recommendation

<b>Science Elective Preference 4</b>			
	Course #	Course Title	Teacher Recommendation

Student Signature	Date	Parent Signature	Date

Marine Science Magnet High School  
Course Selection Worksheet  
**Grade 12 (SY 2016-2017)**

<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.

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

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