AMSA will create an atmosphere of celebration of knowledge where children of all backgrounds and abilities excel in all subjects, especially in math, science and technology, empowering them to succeed in the workplace in our modern high-tech world.

**Core Value #1: Model Integrity**
We model integrity by being truthful in our work and caring in our relationships with people.

**Core Value #2: Pursue Your Excellence**
We pursue excellence by embracing the joy of learning, by being curious, by working hard, by persevering in the face of obstacles, by embracing creativity and innovation, and by constantly striving to improve. At AMSA, we reach for the stars!

**Core Value #3: Foster Community**
We foster community by being good citizens -- by helping others, by appreciating and celebrating diversity, and by collaborating kindly and supportively.

**COMMUNITY & ENROLLMENT FOR 2018-19**
The Advanced Math & Science Academy (AMSA) opened its doors in 2005 and is located about 35 miles west of Boston. AMSA is a seven year, comprehensive public charter school, educating students in grades 6-12.

While preference in admission is given to families from AMSA’s core towns of Clinton, Hudson, Marlborough, and Maynard, admittance to AMSA is based on a space-availability lottery. Students travel to AMSA from over 36 different communities.

**Grade 9:** 159  **Grade 10:** 154  **Grade 11:** 137  **Grade 12:** 119

**GRADUATION REQUIREMENTS: 28 CREDITS**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>4 Years</td>
<td>Courses that meet 7.5 times per week are worth 1.5 credits.</td>
</tr>
<tr>
<td>English</td>
<td>4 Years</td>
<td>Courses that meet 5 times per week are worth 1 credit. Courses that</td>
</tr>
<tr>
<td></td>
<td></td>
<td>meet 2.5 times are worth 0.5 credits.</td>
</tr>
<tr>
<td>Science</td>
<td>3 Years</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>3 Years</td>
<td></td>
</tr>
<tr>
<td>Foreign Language</td>
<td>2 Years</td>
<td></td>
</tr>
<tr>
<td>Computer Science</td>
<td>3 Years (1.5 Credits)</td>
<td></td>
</tr>
<tr>
<td>Art</td>
<td>2 Years (1 Credit)</td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>3 Years</td>
<td></td>
</tr>
<tr>
<td>Health/Wellness</td>
<td>1 Year</td>
<td></td>
</tr>
</tbody>
</table>

Students are required to pass the Massachusetts Comprehensive Assessment System exams.
GPA is cumulative and we report the weighted GPA, which is on a 5.0 scale.

GPA is calculated yearly, beginning at the end of 9th grade and midyear for 12th grade.

A GPA factor of 0.5 is added for Honors / Advanced level classes. A GPA factor of 1.0 is added for Advanced Placement / Accelerated courses.

AMSA does not disclose class rank.

COURSE LEVELS AT AMSA

Un-leveled Courses have no distinction between College Prep or Honors. These include art, computer science, physical education, health and wellness, and most elective courses.

College Preparatory (CP) Courses are designed to prepare students for success in college.

Honors (H) and Advanced (Adv) These classes cover more complex material, permit further in-depth study than a CP course and require independent learning and greater effort.

Advanced Placement (AP) A program created by the College Board to offer college-level curriculum and examinations to high school students. AP classes are recommended for students who have demonstrated exceptional academic achievement through a combination of motivation and the ability to learn independently at a college-level pace.

Accelerated Courses (Acc) These courses require an Advanced Placement course as a prerequisite. Accelerated courses are also weighted the same as Advanced Placement courses.

ADVANCED PLACEMENT COURSES OFFERED

<table>
<thead>
<tr>
<th>Biology</th>
<th>Government &amp; Politics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus AB/BC</td>
<td>Latin</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Macroeconomics</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Physics</td>
</tr>
<tr>
<td>English Language</td>
<td>Spanish</td>
</tr>
<tr>
<td>English Literature</td>
<td>Statistics</td>
</tr>
<tr>
<td>European History</td>
<td>Studio Art</td>
</tr>
<tr>
<td>French</td>
<td>U.S. History</td>
</tr>
</tbody>
</table>

A total of 106 students (89%) in the class of 2019 have taken at least one Advanced Placement exam in grades 10 – 12. Of the total 352 AP exams taken last year, 92% of students received a score of 3 or higher.

2018 AP Scholar Awards

<table>
<thead>
<tr>
<th>Award</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Scholar</td>
<td>32</td>
</tr>
<tr>
<td>AP Scholar with Honor</td>
<td>22</td>
</tr>
<tr>
<td>AP Scholar with Distinction</td>
<td>25</td>
</tr>
<tr>
<td>National AP Scholar</td>
<td>1</td>
</tr>
</tbody>
</table>

Class of 2019 National Merit Scholars

2 National Merit Semi-Finalists
9 Commended Students
AMSA’s curriculum is extremely rigorous, with a heavy focus on excellence in science, technology, and mathematics. Our classes are taught at a fast pace with significant emphasis on student initiative and independence, similar to college-level classes.

Drawing on the best international practices, AMSA’s curriculum is based on the belief that all children are able to learn abstract concepts at an early age and build on these concepts as they develop. Each subsequent year of learning builds upon the foundation laid in the prior years. The core of the educational model is highly structured, and each year consists of continuous, logically organized, and interconnected multi-year courses across all disciplines.

For a complete list of high school course offerings, you can view the Program of Studies from the AMSA website under the ‘Academics’ tab.

**MATH LEVELS**

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>College Prep I</th>
<th>College Prep II</th>
<th>Honors</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Algebra I and</td>
<td>Algebra II and</td>
<td>Algebra II (H) and</td>
<td>Algebra II / Trigonometry and</td>
</tr>
<tr>
<td></td>
<td>Geometry A</td>
<td>Geometry I (CP)</td>
<td>Geometry I (H)</td>
<td>Advanced Geometry</td>
</tr>
<tr>
<td>Grade 10</td>
<td>Algebra II and</td>
<td>Algebra III or</td>
<td>Precalculus (H) and</td>
<td>Advanced Precalculus / Beginning</td>
</tr>
<tr>
<td></td>
<td>Geometry B</td>
<td>Precalculus and</td>
<td>Geometry II (H)</td>
<td>Calculus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geometry II (CP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 11</td>
<td>Algebra III</td>
<td>Precalculus or</td>
<td>Calculus (H)</td>
<td>AP Calculus AB / BC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intro to Calculus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 12</td>
<td>Precalculus or</td>
<td>Intro to Calculus</td>
<td>AP Calculus AB / BC</td>
<td>Multivariable / Vector Calculus</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>or Statistics (H) or Accounting</td>
<td></td>
<td>and/or Linear Algebra</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or Accounting</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCIENCE RESEARCH OPPORTUNITITES**

AMSA’s science research classes are geared towards providing a student experience with the opportunity to engage in self-designed scientific research in a laboratory setting. Students will learn how to perform advanced laboratory techniques, as well as how to read and analyze primary scientific literature as they work towards fulfillment of a long-term project. Successful research students thrive with a hands-on approach and are not discouraged or intimidated by setbacks and failures. Students are required to give presentations of their progress regularly to their lab group and yearly to the AMSA community. Research students are often required to find time outside of their regularly scheduled class to prepare or monitor their experiments.

Possible research groups include: Engineering, Environmental Sustainability, Geochemistry, Molecular Biology, and Wildlife Population Studies.
Aberystwyth University
American University
Appalachian State Univ.*
Arizona State University*
Assumption College
Auburn Univ., Montgomery
Babson College*
Baylor University*
Becker College*
Bentley University*
Binghamton University
Boston College*
Boston University*
Brandeis University*
Bridgewater State Univ.*
Bryant University*
Butler University
California Institute of Technology*
Carnegie Mellon Univ.
Case Western Reserve University*
Champlain College
Chapman University*
Clark University*
Clarkson University
Coastal Carolina Univ.
Colorado State University
Columbia College Chicago*
Cornell University*
Curry College*
Dalhousie University
Drexel University
Eastern Nazarene College
Emerson College
Emmanuel College
Emory & Henry College
Endicott College*
Fairfield University
Fitchburg State University
Florida State University
Fordham University*
Framingham State Univ.*
Franklin Pierce Univ.*
George Mason University
George Washington Univ.*
Georgetown University
Georgia Institute of Technology*
Georgia State University
Gettysburg College
Gordon College
Hampshire College
Howard University
Indiana University at Bloomington
Johnson & Wales Univ.
Keene State College
Lake Forest College
Lassell College
Loyola Marymount Univ.
Loyola Univ. Maryland
Mary Baldwin University
Maryland Institute of Art
MA College of Art & Design
MCPHS
Merrimack College
Miami University, Oxford*
Montana State University, Bozeman
Morehouse College
New England College
New England Institute of Technology
New York University
North Carolina State Univ.
Northeastern University*
Ohio University
Olin College of Engineering
Otterbein University
Pennsylvania State Univ.
Pratt Institute*
Pratt MWP College of Art & Design
Providance College
Purdue College
Quinnipiac University
Quinsigamond Community College*
Regis College
Rensselaer Polytechnic Institute*
Rivier University
Rochester Institute of Technology*
Roger Williams University
Royal Holloway, University of London
Rutgers University
Saint Anselm College
Saint Joseph’s College
Saint Michael's College
Savannah College of Art & Design*
School of the Art Institute of Chicago
Seton Hill University
Siena College
Simmons College*
Southern Connecticut State University
Southern Vermont College
Springfield College
St. Francis Xavier Univ.*
St. John’s College
St. Lawrence University
Stonehill College
Stony Brook University*
Suffolk University*
SUNY Albany
Syracuse University*
Towson University
Tufts University*
Union College
Univ. of British Columbia*
Univ. of CA, Los Angeles
University of Cincinnati
Univ. of Colorado, Boulder*
University of Connecticut*
University of Denver
University of Florida
University of Hartford*
University of Hertforshire
University of Illinois at Urbana-Champaign
University of Kent
University of Kentucky
University of Louisville
University of Maine
University of Maryland
University of MA, Amherst*
University of MA, Boston*
Univ. of MA, Dartmouth*
University of MA, Lowell*
University of New England
Univ. of New Hampshire*
University of New Haven
University of North Carolina, Wilmington
University of Ottawa
University of Pennsylvania*
University of Rhode Island*
University of Rochester
University of San Francisco
University of South Carolina
Univ. of Southern Maine
University of Toronto
University of Vermont*
University of Washington
Vassar College
Virginia Commonwealth University
Virginia Tech
Wellesley College
Wentworth Institute of Technology
West Virginia University
Western New England Univ.
Westfield State University
Westmont College
Wheaton College in MA
Whitworth University
Williamette University
Worcester Polytechnic Institute*
Worcester State University*

* Indicates where students are attending.