MISSION & CORE VALUES

We 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. Our Core Values:

MODEL INTEGRITY - Model integrity by being truthful in our work and caring in our relationships with people.

PURSUE YOUR EXCELLENCE - 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!

FOSTER COMMUNITY - Foster community by being good citizens -- by helping others, by appreciating and celebrating diversity, and by collaborating kindly and supportively.

COMMUNITY & ENROLLMENT FOR 2022-2023

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 30 different communities.

CLASS SIZES:
- Grade 9 = 136
- Grade 10 = 131
- Grade 11 = 130
- Grade 12 = 143

IMPACT OF COVID-19 ON AMSA’S EDUCATIONAL PROGRAM

2021-2022 and 2022-2023 School Years -- AMSA students are learning in person, full-time and will receive standard AMSA grades as outlined on page 2.

2020-2021 School Year -- AMSA students learned remotely from September to April and then had the option of in-person classes. Students received standard AMSA grades as outlined on page 2.

2019-2020 School Year -- In March of 2020, students were released from in-person learning and engaged in remote learning for the remainder of the school year. In accordance with guidance issued by the Massachusetts Department of Elementary and Secondary Education, students were graded Satisfactory Plus or Satisfactory Minus during quarter 4 based on their engagement with remote learning. Final grades for the school year were an average of terms 1, 2, and 3 (standard A-F grading) and term 4 (S+ or S-). S+ grades were valued at 99, S– grades were valued at 50.

“Every student is held to a high standard, and they are accomplishing amazing things. There are so many opportunities here for the students that I haven’t seen in any other school.” - Emylia Little, Teacher
GRADING SYSTEM / CLASS RANK / GPA CALCULATION

GPA is cumulative and we report weighted GPA on a 5.0 scale. GPA is calculated annually, 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 rank.

<table>
<thead>
<tr>
<th>Alpha</th>
<th>Numeric</th>
<th>AP / Accelerated</th>
<th>Honors / Advanced</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>96.5 &amp; above</td>
<td>5.30</td>
<td>4.80</td>
<td>4.30</td>
</tr>
<tr>
<td>A</td>
<td>92.5 – 96.0</td>
<td>5.00</td>
<td>4.50</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>89.5 – 92.0</td>
<td>4.70</td>
<td>4.20</td>
<td>3.70</td>
</tr>
<tr>
<td>B+</td>
<td>86.5 – 89.0</td>
<td>4.30</td>
<td>3.80</td>
<td>3.30</td>
</tr>
<tr>
<td>B</td>
<td>82.5 – 86.0</td>
<td>4.00</td>
<td>3.50</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>79.5 – 82.0</td>
<td>3.70</td>
<td>3.20</td>
<td>2.70</td>
</tr>
<tr>
<td>C+</td>
<td>76.5 – 79.0</td>
<td>3.30</td>
<td>2.80</td>
<td>2.30</td>
</tr>
<tr>
<td>C</td>
<td>72.5 – 76.0</td>
<td>3.00</td>
<td>2.50</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>69.5 – 72.0</td>
<td>2.70</td>
<td>2.20</td>
<td>1.70</td>
</tr>
<tr>
<td>D+</td>
<td>66.5 – 69.0</td>
<td>2.30</td>
<td>1.80</td>
<td>1.30</td>
</tr>
<tr>
<td>D</td>
<td>62.5 – 66.0</td>
<td>2.00</td>
<td>1.50</td>
<td>1.00</td>
</tr>
<tr>
<td>D-</td>
<td>59.5 – 62.0</td>
<td>1.70</td>
<td>1.20</td>
<td>0.70</td>
</tr>
<tr>
<td>F</td>
<td>Below 59.5</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

COURSE LEVELS

**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 exami-nations to high school students.

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

CURRICULUM

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.

Every AMSA student receives comprehensive training in mathematical thinking and analysis— the foundation skills necessary for success in college/graduate learning as well as STEM and other careers. They learn not what to think, but how to think, using critical thinking and problem solving skills that are future-proof.

For a complete list of high school course offerings, please visit amsacs.org to view our Program of Studies.

<table>
<thead>
<tr>
<th>Graduation Requirements: 28 Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Science</td>
</tr>
<tr>
<td>History</td>
</tr>
<tr>
<td>Foreign Language</td>
</tr>
<tr>
<td>Computer Science</td>
</tr>
<tr>
<td>Art</td>
</tr>
<tr>
<td>Physical Education</td>
</tr>
<tr>
<td>Health/Wellness</td>
</tr>
</tbody>
</table>

Students must pass the MA Comprehensive Assessment System exams.
ADVANCED PLACEMENT COURSES

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

AMSA students took a total of 413 AP Exams in the 2021-2022 school year. 89% of students scored 3, 4, or 5 on at least one exam. 88% of the class of 2022 took at least one AP course while at AMSA. 2022 seniors took an average of 3.6 AP classes while at AMSA.

ACCELERATED COURSES

<table>
<thead>
<tr>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrete Mathematics for Computer Science</td>
</tr>
<tr>
<td>Intro to Data Science</td>
</tr>
<tr>
<td>Linear Algebra / Differential Equations</td>
</tr>
<tr>
<td>Intro to Cyber Security &amp; Cryptography</td>
</tr>
<tr>
<td>Intro to Data Science</td>
</tr>
</tbody>
</table>

2022 AP Scholar Awards

<table>
<thead>
<tr>
<th>Award</th>
<th># of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Scholar</td>
<td>42</td>
</tr>
<tr>
<td>AP Scholar With Honor</td>
<td>20</td>
</tr>
<tr>
<td>AP Scholar With Distinction</td>
<td>36</td>
</tr>
</tbody>
</table>

Class of 2022 National Merit Scholars

2 National Merit Semi-Finalists
8 Commended Students

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>Algebra I and Geometry A</td>
<td>Algebra II and Geometry I (CP)</td>
<td>Algebra II (H) and Geometry I (H)</td>
<td>Algebra II / Trigonometry and Advanced Geometry</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 10</th>
<th>Algebra II and Geometry B</th>
<th>Algebra III or Precalculus and Geometry II (CP)</th>
<th>Precalculus (H)</th>
<th>Advanced Precalculus / Beginning Calculus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra III</td>
<td>Precalculus or Intro to Calculus</td>
<td>Calculus (H)</td>
<td>AP Calculus AB / BC</td>
<td></td>
</tr>
</tbody>
</table>

| Grade 12 | Precalculus or Accounting | Intro to Calculus or Statistics (H) or Accounting | AP Calculus AB / BC or Statistics (H) | Multivariable / Vector Calculus and/or AP Statistics and/or Linear Algebra |

SCIENCE RESEARCH OPPORTUNITIES

AMSA’s flagship science research program offers students the opportunity to conduct graduate school level research in the 10th-12th grades. Students conduct independent research in areas such as Molecular Biology, Geochemistry, Ecology, Biochemistry, Astronomy, and Engineering.

A new scanning electron microscope donated by Thermo Fisher Scientific is taking the science research program to new heights. This unprecedented gift—the only electron microscope housed at a public high school in the U.S.—gives AMSA students unrivaled learning and research opportunities normally only found in college science labs.

“We create an environment where it’s safe for students to make mistakes. We encourage risk-taking and creativity. Growth comes from struggle, mistakes, and challenges.”

- Dr. Scott Joray, Founding Science Dept. Chair
CLASS OF 2022 COLLEGE ACCEPTANCES

University of Akron*
University of Alabama*
Albany College of Pharmacy & Health Sciences
Alfred University
Anna Maria College
Arizona State University*
Assumption University*
College of the Atlantic
Auburn University
Augusta University*
Babson College
Bard College
Bates College
Baylor University*
Belmont University
Bentley University*
Binghamton University*
Boston College*
Boston University*
Brandeis University*
University of Bridgeport
Bridgewater State University
University of British Columbia
Brown University*
Bryant University*
Univ. of California - Berkeley
Univ. of California - Los Angeles
Univ. of California - San Diego
California Institute of Technology
Carnegie Mellon University
Case Western Reserve University
Univ. of Central Florida
Champlain College
College of Charleston
Univ. of Colorado - Boulder
Univ. of Colorado - Denver
Chatham University
Chicago State University
Clark University*
Clarkson University
Clemson University
Coastal Carolina University*
Colgate University
College of the Holy Cross
College of William & Mary
Columbia University in the City of NY
University of Connecticut*
Connecticut College
Cornell University*
Curry College
Dartmouth College
Dean College
University of Delaware*
Drexel University
Duke University
East Carolina University
Eastern Nazarene College
Elmira College
Elms College*
Elon University*
Embry-Riddle Aeronautical Univ.
Emerson College*
Emmanuel College
Emory University
Endicott College*
Fairfield University
Fairleigh Dickinson University
Fitchburg State University*
University of Florida*
Florida State University
Fordham University
Framingham State University
Franklin Pierce University
George Mason University
George Washington University*
Georgia Institute of Technology*
Hamphshire College
University of Hartford
Hawaii Pacific University*
High Point University
Univ. of Illinois at Urbana - Champaign
Illinois State University
Indiana University - Bloomington
Ithaca College
James Madison University
Johnson & Wales University - Providence
Keene State College*
University of Kentucky
Lasell University
Lehigh University
Lesley University
Liberty University
Louisiana State University
Loyola University - Chicago
University of Maine*
Univ. of Maryland - College Park*
Maryland Institute College of Art
Marymount Manhattan College
Univ. of Mass - Amherst*
Univ. of Mass - Boston*
Univ. of Mass - Dartmouth*
Univ. of Mass - Lowell*
Mass College of Art & Design
Mass College of Pharmacy & Health Sciences*
McGill University*
Merrimack College*
University of Miami
Univ. of Michigan - Ann Arbor*
Michigan State University
Univ. of Minnesota - Twin Cities*
Mississippi State University
Nazereth College
Univ. of New England
New England College
Univ. of New Hampshire*
New Jersey Institute or Technology
New York Institute of Technology
New York University
Nichols College*
Univ. of North Carolina at Charlotte
North Carolina State University at Raleigh*
Northeastern University*
Northern Vermont University - Johnson
Univ. of Pennsylvania*
Penn State University
Univ. of Pittsburgh
Plymouth State University*
Pratt Institute
Providence College
Quinnipiac University*
Quinsigamond CC*
Rensselaer Polytechnic Institute*
Univ. of Rhode Island
Rivier University
University of Rochester*
Rochester Institute of Technology*
Roger Williams University*
Rutgers University - New Brunswick
Sacred Heart University
Saint Anselm College
Saint Thomas University
Salem State University
Salve Regina University
San Diego State University
Univ. of San Francisco*
Savannah College of Art & Design*
School of the Art Institute of Chicago
School of Visual Arts
Siena College
Simmons University*
Skidmore College*
Smith College
Univ. of South Alabama
Univ. of South Florida
Southern Connecticut State University
Univ. of Southern Maine*
Southern New Hampshire University
Springfield College
Univ. of St. Andrews
St. Bonaventure University*
St. Lawrence University
Stevens Institute of Technology
Stevenson University
Stonehill College
Stony Brook University
Suffolk University*
SUNY at Albany
SUNY College at Geneseo
SUNY College at Oswego*
Syracuse University*
University of Tampa
Temple University
Texas A&M University
The New School*
University of Toronto
Trinity College
Tufts University*
Union College
University of Utah
University of Vermont
Univ. of Washington - Seattle
University of Waterloo
Univ. of Wisconsin - Madison
Utica University
Villanova University
Virginia Polytechnic Institute and State Univ.*
Washington Univ. in St. Louis*
Wentworth Inst. of Tech.
West Virginia University*
Western New England University
Westfield State University
Wheaton College - Mass*
Winthrop University
Worcester Polytechnic Institute*
Worcester State University*
Yale University

* Indicates students attending

2022 Student Outcomes

94% plan to attend a 4-year institution ● 3% plan to attend a 2-year institution ● 3% plan to work, join the military, or take a gap year