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HIGH SCHOOL PROFILE

CEEB Code: 221349

MISSION & CORE VALUES

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.

MODEL INTEGRITY

At AMSA, we model integrity by being truthful in our work and caring in our relationships with people.

PURSUE YOUR EXCELLENCE

At AMSA, 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!

FOSTER COMMUNITY

At AMSA, we foster community by being good citizens -- by helping others, by appreciating and celebrating diversity, and by collaborating kindly and supportively.

COMMUNITY & ENROLLMENT FOR 2020-21

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: 147 **Grade 10:** 155 **Grade 11:** 147 **Grade 12:** 141

IMPACT OF COVID-19 ON AMSA'S EDUCATIONAL PROGRAM

20-21 School Year- AMSA students are learning remotely for at least fall 2020 but are receiving standard AMSA grades as outlined on page 2.

19-20 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, AMSA 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.

Standardized Testing was canceled in Massachusetts and surrounding states for the majority of spring 2020. AMSA is not a test site and is unable to offer school-day testing. Some test centers are open in our area, most with limited capacity.

Mrs. Ellen Linzey
Executive Director

Mr. Mike Nawrocki
Principal

Ms. Brianna Murphy
Vice Principal

Mr. Daniel Amaral
Dean of Students

Mr. Pete Jones
Director of Athletics

Ms. Kate Driver
Director of School
Counseling

Mrs. Amber Hampton
School Counselor

Mrs. Sarah Morrissey
School Counselor



Recognized by *US News and World Report* as a Best High School in 2017, 2018, and 2019, 2020.

AMSA ranked #4 in Massachusetts and #47 Charter School nationally in 2020.

GRADING SYSTEM / CLASS RANK / GPA CALCULATION

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

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.

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.

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

Biology
Calculus AB/BC
Chemistry
Computer Science
English Language
English Literature
European History
French
Government & Politics

Latin
Macroeconomics
Physics
Psychology
Spanish
Statistics
Studio Art
U.S. History

AMSA students took a total of 532 AP Exams in the 2019-2020 school year. 92% of students scored 3, 4, or 5 on at least one exam. 88% of the class of 2020 took at least one AP while at AMSA.

ACCELERATED COURSES

Discrete Mathematics for Computer Science
Linear Algebra / Differential Equations
Intro to Cyber Security & Cryptography
Intro to Data Science
Multivariable/Vector Calculus

2020 AP Scholar Awards	
Award	# of Students
AP Scholar	33
AP Scholar with Honor	30
AP Scholar with Distinction	48
National AP Scholar	2

**Class of 2021
National Merit Scholars**

2 National Merit Semi-Finalists
18 Commended Students

AMSA 2020 SAT Cohort			
Percentile	Total	EBR	Math
75th	1420	700	740
50th	1330	640	680
25th	1180	590	600

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 Terrill, Art

GRADUATION REQUIREMENTS: 28 CREDITS

Math	4 Years	Students must pass the MA Comprehensive Assessment System exams.
English	4 Years	
Science	3 Years	
History	3 Years	
Foreign Language	2 Years	
Computer Science	3 Years (1.5 Credits)	
Art	2 Years (1 Credit)	
Physical Education	3 Years	
Health/Wellness	1 Year	

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.

MATH LEVELS

	College Prep I	College Prep II	Honors	Advanced
Grade 9	Algebra I <i>and</i> Geometry A	Algebra II <i>and</i> Geometry I (CP)	Algebra II (H) <i>and</i> Geometry I (H)	Algebra II / Trigonometry <i>and</i> Advanced Geometry
Grade 10	Algebra II <i>and</i> Geometry B	Algebra III <i>or</i> Precalculus <i>and</i> Geometry II (CP)	Precalculus (H) <i>and</i> Geometry II (H)	Advanced Precalculus / Beginning Calculus
Grade 11	Algebra III	Precalculus <i>or</i> Intro to Calculus	Calculus (H)	AP Calculus AB / BC
Grade 12	Precalculus <i>or</i> Accounting	Intro to Calculus <i>or</i> Statistics (H) <i>or</i> Accounting	AP Calculus AB / BC <i>or</i> Statistics (H)	Multivariable / Vector Calculus <i>and/or</i> AP Statistics <i>and/or</i> 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, Wildlife Management, 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, Sci. Dept. Chair

CLASS OF 2020 COLLEGE ACCEPTANCES

University of Alabama	Duke University	MA College of Art & Design*	University of San Francisco
American University	Elon University	MA College of Liberal Arts	School of the Art Institute
Anna Maria College	Emerson College	MCPHS	Simmons College
Arizona State University*	Emory University	University MA Amherst*	Skidmore College
University of Arizona	Endicott College*	University MA Dartmouth	Smith College*
Assumption College*	University of Edinburgh*	University MA Boston*	Univ. of Southern California
Babson College*	Fairfield University*	University MA Lowell*	Southern NH University*
Baylor University	Fisher College*	McGill University*	Springfield College
Becker College*	Fitchburg State University	Merrimack College	St. Anselm College
Bentley University*	Florida Institute Technology	Miami University-Oxford	St. Bonaventure University
Binghamton University	Florida State University	Michigan State University*	St. John's University
Boston College*	University of Florida	Michigan Tech University	St. Michael's College
Boston University*	Fordham University*	University of Michigan*	Stevens Institute of Tech.
Brandeis University*	Framingham State Univ.*	University of Minnesota	Stonehill College
Bridgewater State Univ.	Franklin Pierce University	University of Missouri	Stony Brook University
Univ. of British Columbia	George Mason University	Mount Holyoke College	Suffolk University
Brown University*	George Washington Univ.*	New England Inst. of Tech	SUNY Oswego
Bryant University*	Georgia Institute of Tech.*	University of New England*	Syracuse University
Bryn Mawr College	University of Georgia	Univ. of New Hampshire*	University of Tampa
Bucknell University	Gordon College*	New Jersey Institute Tech.	Temple University
Univ. California, Berkeley*	University of Guelph	New York University*	University of Tennessee
Univ. California, Irvine	Hamilton College	Nichols College	Univ. of Texas Austin
Univ. California, Los Angeles*	University of Hartford	North Carolina State Univ.	Tony & Guy Hair Acad.*
Univ. California, San Diego	Hobart and William Smith	Univ. of NC, Chapel Hill	University of Toronto*
Cardiff University	Hofstra University*	Univ. of NC, Wilmington	Union College
Carnegie Mellon Univ.*	University of Houston	Northeastern University*	University of Utah*
Case Western Reserve	Howard University*	Oberlin College	US Military Academy
University Central Florida	Illinois Institute of Tech	Ohio State University	Utah Valley University
Champlain College*	University of Ill. Urbana*	University of Ottawa	University of Vermont
University of Cincinnati	Indiana University	Pennsylvania State Univ.	Villanova University
Clark University	Iona College	University of Pittsburgh*	Washington Univ St. Louis
Clarkson University*	Ithaca College	Plymouth State University	Webb Institute*
Clemson University*	James Madison University	Providence College	Wellesley College*
University of Colorado	Johns Hopkins University	Purdue University*	Wentworth Institute Tech.*
Colorado College	Johnson & Wales Univ.	Queen's University*	Western New England Univ.*
Colorado School of Mines	University of Kent	Quinnipiac University	Westfield State University
Connecticut College	Lake Erie College	Quinsigamond CC*	Wheaton College
University of Connecticut*	Lasell University	Regis College	William & Mary*
Cornell University*	Lehigh University*	Rensselaer Polytechnic Inst.*	Wilson College
Dean College	LeMoyne College	University of Rhode Island*	Univ. of Wisconsin Madison
University of Denver	LeTourneau University	Rochester Institute of Tech.*	Univ. of Wisconsin Eau Claire
University of Delaware*	Loyola Univ. Chicago	University of Rochester*	Worcester Polytechnic Inst.*
DePaul University	Loyola Univ. Maryland	Roger Williams University*	Worcester State University*
Dickinson College	University of Maine	Rutgers University*	University of Wyoming*
Drew University	Univ of Maryland College P.	Salem State University	
Drexel University*	MA Bay CC*	Salve Regina University	

* Indicates students attending

2020 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