Educating Alabama’s future leaders since 1989

The Alabama School of Mathematics and Science is our state’s only fully public and residential high school for sophomores, juniors, and seniors seeking advanced studies in math, science, and the humanities.
**Welcome to ASMS**

The Alabama School of Mathematics and Science is the state of Alabama's only fully public residential high school for highly motivated sophomores, juniors, and seniors seeking advanced studies in math, science, and the humanities. The Alabama State Legislature founded ASMS in 1989 “to better prepare Alabama’s future leaders” for STEM (science, technology, engineering, and math) careers. ASMS’s mandate encourages it to offer a challenging academic environment for students from all across Alabama and especially to those from underserved counties.

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### Student Body Demographics

<table>
<thead>
<tr>
<th>Race / Ethnicity</th>
<th>Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>37</td>
<td>15%</td>
</tr>
<tr>
<td>Caucasian</td>
<td>159</td>
<td>62%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11</td>
<td>4%</td>
</tr>
<tr>
<td>Asian</td>
<td>32</td>
<td>13%</td>
</tr>
<tr>
<td>Arab American</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Multiracial</td>
<td>9</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>3</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>255</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### Year in School

<table>
<thead>
<tr>
<th>Year in School</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>80</td>
</tr>
<tr>
<td>Juniors</td>
<td>93</td>
</tr>
<tr>
<td>Sophomores</td>
<td>82</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>255</strong></td>
</tr>
</tbody>
</table>

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**Admissions**

Rising 10th and 11th graders from across Alabama apply to attend ASMS. The Admissions Committee receives nearly 600 applications per year and selects approximately the top 17% of applicants. The committee considers ACT score, GPA, extracurricular activities, motivation, maturity, and campus diversity in choosing the best students from the state’s 67 counties.

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**Curriculum**

ASMS operates on an accelerated system of three academic terms per year. Students benefit from a challenging curriculum that includes AP courses, honors courses, electives modeled on university seminars, and individualized independent study courses. Access to AP courses and upper-level electives requires department or instructor approval. All students are required to enroll in at least five academic courses per term, but many choose to take on additional research hours and electives in their areas of interest. Students complete a minimum of 27 Carnegie Units in coursework. Those who surpass the curriculum requirement in a subject area by 1.5 CU may graduate with a “Concentration” in the subject, while those who exceed the requirement by 3 CU may earn a “Concentration with Distinction” designation. All concentration coursework must meet subject-area GPA requirements set by the department.

### Required ASMS Coursework

- Biology: 1.5 CU
- Chemistry: 1.5 CU
- Computer Science: 0.5 CU
- English: 4.5 CU
- Foreign Language: 2.0 CU
- History: 4.0 CU
- Mathematics: 4.0 CU
- Physics: 1.5 CU
- Special Projects: .75 CU
- Electives: 5.0 CU
College Preparedness

All ASMS instructors hold advanced degrees in their subject areas and most have experience teaching at postsecondary institutions. All courses are taught at the Honors level or above. Most academic courses are modeled on university equivalents and are taught using college textbooks. Students must maintain a 2.5 GPA to remain enrolled. Thanks to ASMS’s challenging academics and college-like residential environment, our graduates begin their college experience uniquely prepared to succeed.

Grading

ASMS reports both weighted and unweighted cumulative GPA, which includes transfer coursework from the freshmen and, possibly, sophomore years. ASMS does not rank students.

Research Fellows

ASMS juniors are eligible to apply and be selected for the Research Fellows program. Students conduct scholarly research and complete a bibliography, literature review, conference paper, poster, presentation, and portfolio. Faculty members serve as mentors who advise students on their research. The program is in a limited pilot stage at present but will be open to all juniors for the 2020-2021 school year.

Special Projects

Between the Winter and Spring Terms, ASMS students participate in a five-day academic event known as Special Projects Week. Each student enrolls in a single intensive course that meets for six hours per day. These specialized courses are designed around the research interests and areas of expertise of ASMS faculty, and their purpose is to expose students to the exciting challenge of academic and professional labor.

Student Life and Leadership

Students at ASMS hold leadership positions that empower them to improve their learning and residential environments. Student Government manages a total annual budget of $39,500, which it uses to host events, invite guest speakers, and install amenities. Student Ambassadors escort visitors on campus and serve as hosts during official functions. Members of the Residence Life Support Team acclimate new students to dorm life, plan hall activities, and supervise cleaning responsibilities. Students invent and perpetuate memorable campus traditions from the Geekfest convention to the charity musical chairs event.

Class of 2019 Statistics

Graduates

79 Students
100% College Bound

Standardized Test Performance

ACT Average Composite Score: 30
SAT Mean Evidence-Based Reading & Writing: 691
SAT Mean Mathematics: 652
SAT Mean Total Score: 1343

National Merit

5 National Merit Finalists
6 Commended Scholars

GPA

4.0-3.75 50 students
3.74-3.5 20 students
3.49-3.0 9 students

AP Data for 2019 Test Takers

Total AP Students 127
Number of Exams 252
AP Students with Scores 3+ 103
% of Total AP Students with Scores 3+ 81.1%
## Course Offerings

**BIOLOGY**  
- Honors Biology  
- AP Biology  
- Anatomy and Physiology  
- AP Environmental Science  
- Zoology: Vertebrate, Invertebrate  
- Classical Genetics  
- Molecular Genetics and Genomics  
- Intro to Microbiology  
- Marine Biology  

**CHEMISTRY**  
- Introductory Chemistry  
- General Chemistry  
- Organic Chemistry  
- AP Chemistry  
- Intro to Organic Chemistry  
- Biochemistry  
- Inorganic Chemistry  
- Environmental Chemistry  

**COMPUTER AND INFORMATION SCIENCE**  
- Computer Science: Principles  
  Programming w/ Alice  
- AP Computer Science  
- Database Design & SQL  
  Programming w/ Python  
- Java I, II, III  
- C#  
- HTML/CSS  
- App Inventor for Android  

**ENGLISH**  
- AP English Composition  
- Sophomore English  
- American Literature 19th Century  
- American Literature 20th Century  
- Dystopian Novel  
- AP English Literature  
- British Literature I & II  
- African-American Literature  
- Speech Communication  
- Journalism, Media Literacy, & Mass Communication  
- Creative Writing  
- Shakespeare on Stage  

**FINE ARTS/GENERAL ELECTIVES**  
- AP Studio Art  
- Graphic Design  
- Survey of the Arts: Music  
- Survey of the Arts: Visual Arts  
- Health  
- Debate  
- Intro Music Theory  
- Advanced Music Theory I, II, III  
- Broadway Blues & Jazz  
- Theater Arts/Production  
- Advanced Art I, II, III  
- Sight Singing & Ear Training  
- Intro to Sociology  

**FOREIGN LANGUAGE**  
- Beginning French  
- Intermediate French  
- Advanced French  
- French IV & V  
- Readings in French  
- Beginning German  
- Intermediate German  
- Advanced German  
- German IV & V  
- Readings in German  
- Beginning Spanish  
- Intermediate Spanish  
- Adv. Spanish Reading & Writing  
- Program Abroad: Germany & Spain  
- Spanish Grammar & Comp. I & II  
- Spanish Conver. & Phonetics I & II  
- Hispanic Literature & Culture I & II  
- Spanish IV  

**HISTORY**  
- Intro to Western Thought  
- Adv American Studies I & II  
- Economics  
- Adv American Government  
- American Minority Relations  
- American Pop Culture: Rock-n-Roll Revolutions  
- World War I & II  
- AP US History  
- Post-1945 US History  
- Civil War  

**MATHEMATICS**  
- Geometry  
- Intermediate Algebra  
- Accelerated Algebra  
- Trigonometry  
- Precalculus  
- AP Calculus Review  
- AP Statistics Review  
- Differential Calculus  
- Integral Calculus  
- BC Calculus  
- Introduction to Statistics  
- Visual Mathematics  
- Number Theory  
- Multivariable Calculus I & II  
- Differential Equations  
- Linear Algebra  
- Problem Solving  
- Topology  

**PHYSICS**  
- Intro to Physics  
- Flight Studies  
- Honors Physics  
- AP Physics 1 & 2 (AP Physics B)  
- Robotics  
- AP Physics C  

## Five-Year Matriculation

- Agnes Scott College  
- Alabama A & M University  
- Alabama State University  
- Amherst College  
- Auburn University  
- Baylor University  
- Berklee College of Music  
- Birmingham Southern College  
- Brandeis University  
- Brigham Young University  
- Brown University  
- Case Western University  
- Centre College  
- Coastal Alabama Community College  
- Colorado State University  
- Columbia University  
- Cornell University  
- Embry-Riddle Aeronautical University  
- Emory University  
- Florida A & M University  
- Florida Southern College  
- George Washington University  
- Georgia Institute of Technology  
- Hendrix College  
- Howard University  
- Illinois Institute of Technology  
- Jacksonville State University  
- James Madison University  
- Johns Hopkins University  
- Kenyon College  
- Lake Erie College  
- Lehigh University  
- Louisiana State University  
- Macalester College  
- Massachusetts Institute of Technology  
- Millsaps College  
- Mississippi State University  
- New York University  
- Oberlin College  
- Oglethorpe University  
- Oxford College of Emory University  
- Parsons School of Design  
- Pomona College  
- Rice University  
- Santa Fe Community College  
- Southern University and A & M College  
- Stanford University  
- Sweet Briar College  
- Texas A & M University  
- Tougaloo College  
- Trevecca Nazarene University  
- Trinity University  
- Tulane University  
- United States Merchant Marine  
- United States Military Academy  
- United States Naval Academy  
- University of Alabama  
- University of Alabama at Birmingham  
- University of Alabama at Huntsville  
- University of Florida  
- University of Miami  
- University of Mississippi  

- University of Montevallo  
- University of North Carolina - Chapel Hill  
- University of North Carolina - Charlotte  
- University of Notre Dame  
- University of Oklahoma  
- University of Pittsburgh  
- University of Rochester  
- University of South Alabama  
- University of Southern California  
- University of Texas - El Paso  
- University of Texas - Austin  
- University of West Florida  
- Vanderbilt University  
- Wellesley College  
- Williams College  
- Yale University