

BERGEN COUNTY ACADEMIES

Academy for the Advancement of Science & Technology

CEEB Code 310449

CLASS of 2016 PROFILE

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www.bergen.org/bca



School and Community

A model for innovation and reform in the 21st century, the Academy for the Advancement of Science & Technology (AAST) is part of the Bergen County Academies (BCA), located in a multicultural suburban community within 5 miles of New York City. Students are accepted from across the county and commute up to twenty miles to a diverse public magnet school of choice with an enrollment of 1,050 students. BCA features career-focused academies operating as a cohesive unit to provide a dynamic, specialized, student-centered environment. Applicants from seventy towns in Bergen County are selected through a rigorous admissions process that considers middle school grades, standardized test scores, interviews, as well as assessments in writing and math. BCA has an extended school day from 8:00 am until 4:10 pm. Underclassmen, grades 9–11, devote Wednesday mornings to interdisciplinary projects and independent research. The faculty has many years of experience as instructors and industry leaders.

Curriculum

AAST's program of study is college preparatory with a career focus. It includes a strong core curriculum that balances three pure sciences studied simultaneously with a synergy of rigorous academic requirements in mathematics, humanities, foreign language and the arts. Transdisciplinary class-wide projects, from ninth through eleventh grade, develop teamwork, communication and presentation skills, promoting an integrated, multi-dimensional approach to issues and learning. All students complete core areas, complemented by required units in creative cultural arts, humanities, physical education, health, projects, and also choose electives each trimester. All academic courses are taught at the honors level or above.

Research

The Research programs at the Bergen County Academies operate within highly sophisticated, state-of-the-art laboratories that have been designed and equipped to allow exploration within a variety of scientific disciplines. The labs are functional, professional entities, not normally found in a high school setting. They include cell and molecular biology, nanotechnology, chemistry, materials science, microscopy and a variety of engineering programs. Many of our students have won significant national and international awards, and some have been able to publish their findings in professional journals.

ACT / SAT COMBINED TEST RESULTS

Test	State	Nation	AAST
ACT	23.2	21.0	34
SAT	1520	1490	2195

SAT Score Summary – Class of 2015 – AAST

Critical Reading	Math	Writing
5 Perfect Scores	17 Perfect Scores	6 Perfect Scores
Average: 718	Average: 753	Average: 724

BCA Highlights

- A highly competitive, diverse public magnet high school which typically accepts 250 of the over 1500 students who apply
- Named a 2015 National Blue Ribbon School of Excellence by the U.S. Department of Education
- Named a Model School in the Arts by the N.J. Department of Education
- Home of a 2015 Gold Medal Winner of the International Math Olympiad.
- Home of the 2013 Winner of the International Biology Olympiad.
- Home of Two 2014 National Intel Science Talent Search Finalists
- Ranked #5 in the Nation on the list of America's Top High Schools by Newsweek
- Ranked #1 in New Jersey, #2 in the Northeast and #15 in the Nation on the list of Top High Schools by The Daily Beast
- Member of the National Consortium of Secondary STEM Schools (NCSS)

Highest Level Courses Available

Advanced Math Topics	Lin Alg/Diff Equation	Organic Chemistry
AP Calculus BC+	Multivariable Calculus	Research
Data Structures	Nanotechnology	Topics in Adv Math

Advanced Placement Courses

AP Art History	AP Computer Science	AP Physics C
AP Biology	AP Macro Economics	AP Psychology
AP Calculus AB, BC	AP Micro Economics	AP Statistics
AP Chemistry	AP Music Theory	AP Studio Art

International Baccalaureate Courses

IB Environmental Systems	IB Literature	IB Spanish
IB History	IB Math	IB French

In May 2015, 269 students took a total of 635 IB exams (5.39 average) and 493 students took a total of 904 AP exams (4.26 average).

A note about International Baccalaureate courses: Students may choose to challenge themselves by taking IB courses, even though the Academy for the Advancement of Science & Technology does not offer the opportunity to earn an IB Diploma.

Due to the number of core course requirements, even the most ambitious students may have limited access to Advanced Placement (AP) courses and International Baccalaureate (IB) courses.

Graduation Requirements

The requirements of AAST exceed state graduation requirements.

Mathematics	4 years	World Language	3 years
English	4 years	Physics	3 years
Phys. Ed. / Health.....	4 years	Experimental Tech	1 year
Biology	3 years	Senior Internship	1 year
Chemistry	3 years	Creative Arts	1 year
Social Studies	3 years	Community Service	40 hours

AAST Accolades

First Place Team US Physics Bowl for specialized math and science schools
 USA Biology Olympiad National Finalist
 Young Science Achievers Program Recipient
 First Place Junior Science and Humanities Symposium in Life Sciences
 New Jersey Governor's STEM Scholar
 First Place North Jersey Regional Science Fair
 President's Volunteer Gold Service Award

Full Year - All Day Senior Internships

All of our seniors devote Wednesdays to a yearlong individualized internship experience. Students receive (9) academic credits for this supervised graduation requirement. Over two hundred employers offer experiential learning opportunities in research centers, hospitals, universities, non-profit organizations, government agencies, major corporations and large and small businesses in the NY/NJ metropolitan area.

Grading System

Students are NOT RANKED because of the selectivity of the admissions process. Grade point averages are calculated yearly based on the final grade attained in each course. Cumulative GPA is an unweighted calculation which includes academic courses only. 4.0 is the highest possible GPA. Each trimester students who achieve an A in each of their courses are distinguished by being named to the Academy High Honor Roll which is the school's highest academic honor.

Grade Key

A = 4.00 B+ = 3.33 C+ = 2.33 D+ = 1.33 P = Pass
 A- = 3.80 B = 3.00 C = 2.00 D = 1.00 I = Incomplete
 B- = 2.80 C- = 1.80 F = 0.00 W = Withdrew

AAST Grade Frequency Distribution

GPA Ranges	Frequency
4.000 - 3.900	30%
3.899 - 3.800	17%
3.799 - 3.700	11%
3.699 - 3.600	11%
3.599 - below	31%

AAST • College Acceptances and Enrollment • Class of 2015

Accepted (A) Matriculated (M)

	A	M		A	M		A	M
Barnard College	1		Marquette University	1		The Pennsylvania State University	2	
Binghamton University	1		Marywood University	1	1	The University of Texas, Austin	2	1
Boston College	4		Massachusetts Institute of Technology	7	4	Trinity College	1	
Boston University	10		Middle Tennessee State University	1	1	University of California, Berkeley	9	2
Brandeis University	2		Monmouth University	1		University of California, Davis	1	
Brown University	3	3	Mount Holyoke College	1		University of California, Los Angeles	5	
Bucknell University	1		New Jersey Institute of Technology	7	5	University of California, San Diego	4	
California Institute of Technology	2		New York University	12	1	University of California, Santa Barbara	3	
Carnegie Mellon University	9	4	Northeastern University	20	5	University of Chicago	2	1
Case Western Reserve University	4		Northwestern University	1		University of Illinois at Urbana-Champaign	2	1
Colby College	1		Princeton University	5	3	University of Maryland, College Park	5	
College of William and Mary	2		Providence College	1		University of Miami	2	
Columbia University	3	1	Purdue University	1		University of Michigan	9	1
Cornell University	5	2	Rensselaer Polytechnic Institute	6	1	University of Minnesota	1	
Dartmouth College	1		Rice University	1	1	University of Pennsylvania	2	1
Drew University	1		Rochester Institute of Technology	1		University of Pittsburgh	3	
Drexel University	4		Rowan University	1		University of Rochester	6	1
Duke University	1		Rutgers, The State University of NJ	39	4	University of Southern California	3	1
Elizabethtown College	1	1	Sacred Heart University	1		University of the Sciences	1	
Emory University	4	1	Savannah College of Art and Design	1		University of Vermont	2	
Fairfield University	1		School of the Art Institute of Chicago	1	1	University of Virginia	1	
Five Towns College	1		Seton Hall University	1		University of Wisconsin	2	
Fordham University	5	1	Simmons College	1		Vanderbilt University	1	
Full Sail University	1		Stanford University	2	1	Villanova University	6	2
Georgetown University	2	1	Stevens Institute of Technology	13	1	Virginia Tech	1	
Georgia Institute of Technology	5	3	Stockton University	1	1	Washington University in St. Louis	4	2
Harvard University	1	1	Stony Brook University	2		Wesleyan University	1	
Hollins University	1		The College of New Jersey	4	1	Williams College	1	1
Johns Hopkins University	4	2	The Cooper Union	1		Worcester Polytechnic Institute	3	
Lafayette College	2		The Evergreen State College	1		Yale University	2	1
Lehigh University	2		The George Washington University	3	1	York College of Pennsylvania	1	1
Marist College	1							

313 Acceptances for 68 Students