

# BERGEN COUNTY ACADEMIES

## Academy for Engineering & Design Technology

CEEB Code 310449

### CLASS of 2016 PROFILE

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### School and Community

A model for innovation and reform in the 21st century, the Academy for Engineering & Design Technology (AEDT) 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

AEDT's program of study is college preparatory with a career focus which includes a strong core curriculum that balances three pure sciences studied simultaneously with a synergy of rigorous academic requirements in the engineering sciences, computer technologies, fabrication and design, electronics, mathematics, humanities, foreign language and the arts. Trans-disciplinary class-wide projects, from ninth through eleventh grade, develop teamwork, communication and presentation skills, promoting an integrated, multi-dimensional approach to learning. All students complete core areas complemented by required units in creative cultural arts, humanities, physical education, health and various Wednesday projects, while also choosing interesting 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 engineering and scientific disciplines. The labs are functional, professional entities, not normally found in a high school setting. They include our fabulous BCA Makerspace fabrication center, Electronics, Nanotechnology, Cell and Molecular Biology and Microscopy. Many of our students have won significant national and international awards, and some have been able to publish their findings in professional journals and patent awards.

### ACT / SAT COMBINED TEST RESULTS

Test	State	Nation	AEDT
ACT	23.2	21.0	33
SAT	1520	1490	2133

### SAT Score Summary – Class of 2015 – AEDT

Critical Reading	Math	Writing
2 Perfect Scores	5 Perfect Scores	1 Perfect Score
Average: 672	Average: 754	Average: 707

### 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 (NCSSS)

### 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 Engineering & Design 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 AEDT exceed state graduation requirements.

English .....	4 years	Biology .....	2 years
Mathematics .....	4 years	Design Technology .....	4 years
Phys. Ed./Health .....	4 years	Electronic/Electrical Tech .....	3 years
Chemistry .....	3 years	Manufacturing Tech .....	3 years
Physics .....	3 years	Creative/Cultural Arts .....	1 year
Social Studies .....	3 years	Senior Internship .....	1 year
World Languages .....	3 years	Community Service .....	40 hours

### AEDT Accolades

**NJRSF – Engineering:** 2nd Place

**Panasonic Creative Design Challenge:** 2nd Place

**SkillsUSA - Engineering Technology:** 2nd Place

**Extreme Redesign Challenge:** 2 Top 10 Finalists

**Titanium Knights - Rage in Cage:** 3rd Place

**Toshiba Exploravision:** Honorable Mention

### 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

### AEDT Grade Frequency Distribution

GPA Ranges	Frequency
4.000 - 3.900	22%
3.899 - 3.800	16%
3.799 - 3.700	16%
3.699 - 3.600	6%
3.599 - below	40%

### AEDT • College Acceptances and Enrollment • Class of 2015

#### Accepted (A) Matriculated (M)

	A	M		A	M		A	M
Amherst College	1	1	Massachusetts Institute of Technology	1	1	Tufts University	3	1
Arcadia University	1		New Jersey Institute of Technology	7	2	University of California, Berkeley	4	1
Babson College	1		New York Institute of Technology	1		University of California, Davis	1	
Bentley University	1		New York University	3		University of California, Los Angeles	1	
Boston University	2		Northeastern University	14	3	University of California, San Diego	1	
Brandeis University	1		Northwestern University	1	1	University of California, Santa Barbara	1	
Brigham Young University	1		Polytechnic Institute of NYU	2		University of Chicago	1	1
Carnegie Mellon University	5	3	Princeton University	2	1	University of Connecticut	1	
Case Western Reserve University	2		Purdue University	1		University of Delaware	1	
Columbia University	2	2	Quinnipiac University	1		University of Illinois at Urbana-Champaign	2	
Cornell University	2		Rensselaer Polytechnic Institute	10	1	University of Maryland, Baltimore County	1	
DeSales University	1		Rochester Institute of Technology	2		University of Maryland, College Park	1	
Drexel University	12	3	Rowan University	1		University of Miami	2	1
Emory University	2		Rutgers, The State University of NJ	20	1	University of Michigan	1	
Fairfield University	2	1	Saint Francis University	1		University of Pennsylvania	2	2
Fordham University	2		Seton Hall University	2	1	University of Pittsburgh	1	
Georgetown University	1		Stanford University	1	1	University of Richmond	1	
Georgia Institute of Technology	4		Stevens Institute of Technology	10	2	University of Rochester	1	
Harvard University	1		Stony Brook University	4		University of Virginia	2	
Hofstra University	1		Syracuse University	1		Villanova University	4	1
Ithaca College	1		Texas A&M University	1		Virginia Tech	2	
Johns Hopkins University	1		The College of New Jersey	5		Wake Forest University	1	
Johnson & Wales University (RI)	1		The Cooper Union	3	1	Washington University in St. Louis	1	
King's College	1		The George Washington University	2		Wentworth Institute of Technology	2	
Lafayette College	2		The Ohio State University	1	1	Yale University	1	1
Lehigh University	1	1	The Pennsylvania State University	2				

**190 Acceptances for 35 Students**