

# BERGEN COUNTY ACADEMIES

**CLASS OF 2021 PROFILE** 



# **ABOUT US**

1119 STUDENTS





15% ACCEPTANCE





## ONE SCHOOL, SEVEN ACADEMIES

- Academy for the Advancement of Science & Technology (AAST)
- Academy for Business and Finance (ABF)
- Academy for Culinary Arts & Hospitality Administration (ACAHA)
- Academy for Engineering & Design Technology (AEDT)
- Academy for Medical Science Technology (AMST)
- Academy for Technology & Computer Science (ATCS)
- Academy for Visual & Performing Arts (AVPA)

# **CLASS OF 2021 STATS**

1473 AVERAGE 713 EBRW 760 MATH

283 SENIORS

34 AVERAGE ACT

NATIONAL MERIT 116
COMMENDED SCHOLARS

130+ CLUBS AND ORGANIZATIONS

17 SPORTS OFFERED

# BEST PUBLIC HIGH SCHOOL IN AMERICA 2021



STUDENTS ENROLLING 99.9%





#### **CONTACT US**

Bergen County Academies 200 Hackensack Avenue Hackensack, NJ 07601 (201) 343-6000 x3330

www.bergen.org/bca

Russell Davis, Principal

2 U.S. PATENTS
BASED ON
IN-HOUSE
RESEARCH



REGENERON/INTEL NATIONAL FINALISTS IN PAST 10 YEARS

#### **COUNSELING TEAM**

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# WHAT MAKES US SPECIAL?

## **RESEARCH**



A particularly significant aspect of our research program is that the students select the problems that they will be studying and do not receive preliminary data for their projects. The labs at BCA are functional, professional entities not normally found in a high school setting. They include agriscience, mechatronics, optics, nanotechnology, stem cell research, which includes flow cytometry and DNA microarray analysis, the nano-structural imaging lab, which includes a Scanning Electron Microscope (SEM) and Transmission Electron Microscope (TEM), the Financial Markets Lab, equipped with a Bloomberg workstation and a variety of other research opportunities. In the past 12 years of BCA's research program, students have published 20 peer-reviewed scientific papers in scientific journals, and 30 conference papers.

## **GLOBAL EXCHANGES**



BCA offers an increasingly expanding array of opportunities to participate in global exchanges with partner schools across the world. Students collaborate on research projects and presentations in advance. Recent global exchanges include Japan, Singapore, UK, Hong Kong, Israel, and the United Arab Emirates.

#### SENIOR INTERNSHIP



All of our seniors devote Wednesdays to a yearlong individualized internship experience called Senior Experience. Seniors 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. Internships are virtual until 1/2021.

## **ELECTIVES**



BCA students enrich their education and pursue their interests by selecting from an array of electives in art, humanities, math, research, science, and technology. Students can choose from over eighty elective courses in visual, performing, and culinary arts, music, physics, engineering and robotics, computer science, psychology, business, the study of languages and cultures, agricultural science, biology, and chemistry.

## **PROJECTS**



During their first three years at the Academies, students will spend two hours every Wednesday working on an interdisciplinary project. Students have the opportunity to choose a different project each trimester.

# **ACADEMIC INFORMATION**

#### GRADING

On March 13, 2020 the Bergen County Academies transitioned to a fully virtual asynchronous learning model. All classes were taught on a pass/fail basis with a pass translated into a grade of 99 for Trimester 3. Electives, projects, clubs, and sports were not offered. Year-end grades for the 2019-20 academic year were calculated by equally weighing our three trimester numerical averages. As of September 2020, grading practices have returned to normal.

- Students are NOT RANKED because of the selectivity of the admissions process
- GPA's are calculated yearly based on the final grade attained in each course
- GPA is unweighted and includes academic courses only
- 4.0 is the highest possible GPA

# • D is the lowest passing grade **COURSES**

- All courses are taught at the honors level or above
- All Academy programs far exceed NJ State graduation requirements
- Due to scope and sequence, students in some Academies may not be able to take the "Post AP/IB Courses" listed

#### **AP COURSES**

**AP Art History** 

AP Biology AP Calculus AB, BC

**AP Chemistry** 

AP Computer Science A

AP Government

AP Macroeconomics

AP Microeconomics AP Music Theory AP Physics C AP Psychology

**AP Statistics** AP Studio Art

#### **IB COURSES**

IB Economics HL

IB Environmental Systems SL

**IB History HL** 

IB World Literature HL

IB Literature / Language HL

**IB Computer Science SL** 

IB Math SL, HL

IB Business Mat SL

**IB Physics SL** 

IB Spanish SL, HL

IB French SL, HL

IB Mandarin ab initio

#### **POST AP/IB COURSES**

**Advanced Math Topics** AP Calculus BC+ Data Structures Lin Alg/Diff Equation

Multivariable Calculus Topics in Adv Math Organic Chemistry Advanced Prob Music

## **ACADEMY INFORMATION**

#### **AAST-SCIENCE**

AAST students take multiple years of chemistry and physics while completing studies in chemical engineering, organic chemistry and modern physics particular to AAST. Graduates from AAST are prepared to continue studies across a wide range of scientific disciplines. AP Chemistry is a requirement of the program. Throughout the curriculum, students are encouraged to find original answers to modern research challenges using the state of-the-art facilities available on campus.

#### **ABF-BUSINESS**

ABF students take business, finance, marketing, and economics classes as part of their core. Business principles are taught in multiple, high-level core courses which incorporate topics such as: the global business environment, management, marketing, finance, economics and entrepreneurship. ABF has incorporated an emphasis on a global perspective. The driving force behind this global component is the integration of the International Baccalaureate curriculum to an already rigorous course of study.

#### **ACAHA-CULINARY ARTS AND HOSPITALITY**

Students in the Academy for Culinary Arts and Hospitality Administration have a strong interest in culinary arts and restaurant/hospitality management. ACAHA Students are prepared for study in any area by an honors-level core curriculum, augmented by elective options in all facets of food preparation, facility management, customer service, and entrepreneurship. Students may elect to participate in the IB Diploma program.

#### **AEDT-ENGINEERING**

AEDT students study courses in the engineering sciences, including design technology, computer science, manufacturing, electronics, and biomedical engineering. AEDT focuses on general engineering disciplines and prepares students for entrance into college engineering programs. Students in this academy have a concentration in engineering and design courses and focus on skills which are generally useful in any engineering curriculum. Projects include product development, civil or architectural designs, and robotic competitions.

#### **AMST-MEDICINE**

AMST students study a system-based approach to medicine that allows students to learn the basic sciences in an integrated format. Transdisciplinary projects develop teamwork, communication and presentation skills. In addition to multiple advanced level sciences classes, students take specialized courses such as Medical Science Seminar, Biotechnology, Advanced Topics in Medicine, Anatomy and Physiology and AP science.

#### **ATCS-COMPUTER SCIENCE**

ATCS students develop a strong foundational understanding of programming, computer architecture, data structures and algorithms, and program analysis. The program is oriented around underlying ideas that will never become obsolete, even as technologies change. Throughout their careers at BCA, students extend their skills in computing through projects and electives of their choice, often including processor design, web application development, robotics, computer security, and mechatronics.

#### **AVPA-MUSIC**

AVPA Music students have an outstanding ability in music and are some of the strongest musicians in their communities. Students learn woodwind, brass, string and percussion instruments. They study college-level music theory, which includes harmonic analysis, counterpoint, voice leading and ear training. Students also learn current technological and composition techniques in electronic music synthesis where they work with state-of-the-art software.

#### **AVPA-THEATRE**

AVPA Theatre students participate in a rigorous training program for students interested in pursuing a college major in theatre or film leading to a career in some aspect of the entertainment industry. Core courses include sequences in acting, dance, voice and speech, musical theatre, theatre history, theatrical design, dramatic writing, and directing. Students are introduced to a variety of methods most productive for their individual growth.

#### **AVPA-VISUAL**

AVPA Visual students study essential aspects of the visual arts through immersion in a curriculum that embraces new technologies, while emphasizing traditional skills and principles of art and design. The program allows students to pursue their passion in any one of a broad range of arts including graphic and web design, illustration, photography, animation/video, game design, package design, virtual reality and traditional/fine arts, and art history.

# COLLEGE ENROLLMENTS 2018-2020

American University	1	Manhattan College	2	Union College	1
Amherst College	5	Marymount Manhattan College	1	United States Military Academy	2
Arizona State University-Tempe	1	Massachusetts Institute of Tech	4	United States Naval Academy	1
Babson College	2	McGill University	4	University College London	1
Barnard College	4	Miami University-Oxford	1	University of California-San Diego	7
Baylor University	1	Montclair State University	4	University of California-Berkeley	19
Bentley University	1	Mount Holyoke College	1	University of California-Los Angeles	1
Bergen Community College	4	Muhlenberg College	5	University of California-Santa Barba	
Berklee College of Music	1	New Jersey Institute of Technology		University of Chicago	4
Binghamton University	3	New York Institute of Technology	1	University of Connecticut	4
Boston College	16	New York University	36	University of Georgia	1
Boston Conservatory at Berklee	1		45	University of Illinois	5
Boston University	- 18	Northwestern University	7	University of Kansas	1
Brandeis University	1	Nova Southeastern University	1	University of Maryland	2
Brown University	12	NYU Abu Dubai	1	University of Miami	2
Bucknell University	2	Oberlin College	1		25
California Institute of Technology		Ohio State University		University of Michigan	
			1	University of Minnesota	1
Carnegie Mellon University	17	Pennsylvania State University	8	University of North Carolina	2
Columbia College Chicago	1	Pepperdine University	1	University of Notre Dame	5
Columbia University	16	Point Park University	1	University of Oxford	2
Columbia University/Trinity	1	Pratt Institute	2	University of Pennsylvania	12
Cooper Union	7	Princeton University	13	University of Pittsburgh	7
Cornell University	45	Purdue University	2	University of Rhode Island	1
Culinary Institute of America	1	Ramapo College of New Jersey	3	University of Rochester	3
CUNY Macaulay Honors College	1	Rensselaer Polytechnic Institute	6	University of Scranton	1
Dartmouth College	2	Rhode Island School of Design	1	University of Southern California	10
Drew University	4	Rice University	3	University of Tampa	1
Drexel University	11	Ringling College of Art and Design	1	University of the Sciences	2
Duke University	9	Rochester Institute of Technology	3	University of Toronto	2
Eastman School of Music	1	Rutgers University-New Brunswick	90	University of Vermont	1
Eckerd College	1	Rutgers University-Newark	4	University of Virginia	1
EHL (École hôtelière de Lausanne)	<b>1</b>	San Diego State University	1	University of Wisconsin	3
Elon University	3	Savannah College of Art and Des	1	Ursinus College	1
Emerson College	5	School of the Art Inst of Chicago	2	Vanderbilt University	11
Emory University	9	School of Visual Arts	2	Vassar College	1
Florida Southern College	2	Seton Hall University	3	Villanova University	8
Fordham University	5	Siena College	1	Virginia Polytechnic Institute	2
Franklin W Olin College	1	Smith College	1	Wagner College	1
George Washington University	6	Soka University of America	1	Wake Forest University	1
Georgetown University	5	Stanford University	6	Washington and Lee University	1
Georgia Institute of Technology	8	Stevens Institute of Technology	18	Washington University in St Louis	8
Grinnell College	1	Stony Brook University	3	Webb Institute	1
Hampshire College	1	Swarthmore College	1	Wellesley College	1
Harvard College	_ 12	Syracuse University	1	Wesleyan University	2
Haverford College	2	Temple University	1	Western Colorado University	1
Hofstra University	1	The College of New Jersey	6	William and Mary	1
Howard University	2	The Juilliard School	1	William Paterson University	1
Indiana University-Bloomington	2	The New England Conserv of Music	_	Williams College	
Johns Hopkins University	2	The University of Texas at Austin		_	2
Johnson & Wales University	1	The University of Texas at Dallas	1	Worcester Polytechnic Institute	1
Lehigh University	2	Tufts University	2	Yale University	12
Loyola Marymount University	1	Tulane University	11	Yonsei University	1
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