

Biotechnology High School Class of 2015 Profile

#1 High School in New Jersey (2014 US News & World Report)

Mission & Vision

Mission Statement: Biotechnology High School, an International Baccalaureate (IB) World School, integrates life science, technology, and engineering into a rigorous curriculum that inspires students toward open-minded participation in the global community and prepares them for higher education and leadership in an increasingly demanding workplace through scholarly research, original investigations, and interactive partnerships.

Vision Statement: Biotechnology High School strives to prepare students to be innovative and influential leaders in the international scientific community.

School & Community

Biotechnology High School (BTHS), an International Baccalaureate (IB) World School, is one of five Career Academies in Monmouth County Vocational School District (MCVSD). Students admitted to the MCVSD Career Academies, including BTHS, are selected through a highly competitive application and admissions process. The student population represents a cross section of students from more than fifty sending school districts throughout Monmouth County. With a college preparatory curriculum emphasizing research, laboratory skills, critical thinking, problem solving, technology, leadership and teamwork, BTHS provides students with an elite educational experience. BTHS is the only high school in New Jersey in which 100% of students are IB Diploma Candidates. Colleges and universities worldwide recognize IB as a rigorous high school program that provides exceptional preparation for college success.



Biotechnology High School is a close-knit and supportive learning community of approximately 320 students and 27 world-class faculty members. The facilities and equipment at BTHS are state of the art, including two full biotechnology labs, a tissue culture lab and 3D printers. BTHS is proud to be part of the pipeline for the rapidly growing biotechnology sector.

Curriculum

BTHS classes are taught in a block-scheduling format and are either full year or semester long. Teachers deliver creative lessons in which student-learning objectives are linked tightly with hands-on activities. Classroom learning is extended through the use of technology, guest speakers, and field trips. All core and themed courses, not otherwise designated as AP or IB are taught at an honors level. Beginning in grade 11, all students are IB Diploma Candidates. As IB Diploma Candidates, students are required to take seven IB courses, write a 4,000 word senior thesis, and complete 150 Creativity, Action, and Service (CAS) hours. To earn the IB diploma, students need to achieve superior scores on externally assessed exams, projects and essays.

Graduates of BTHS complete 160 credit hours of instruction, including a minimum of 45 credit hours in laboratory sciences and mandatory coursework in leadership and ethics. In addition, each senior completes a science-based senior internship. Partner sites this year included Microsoft, NJIT, Rutgers, Jersey Shore Medical Center, Innovo Rx and Zodiac.

Course Sequence

Grade 9	Grade 10	Grade 11	Grade 12
Digital Literacy English I Fitness / Health I Geometry or Algebra II/Trig Intro to Biology/Genetics Intro to Chemistry Intro to Experimental Design Spanish I or II World Cultures	Algebra II/Trig or IB Math SL I Bioethics Biotech Lab Skills English II Fitness / Health II Intro to Physics Molecular and Agricultural Biotechnology Spanish II or III US History I	IB Biology HL I IB English HL I IB History SL IB Math SL I or IB Math SL II IB Physics HL I or IB Chemistry HL I Leadership, Exercise & Personal Growth (LEAP) I Spanish III or IB Spanish SL + Electives	Financial Literacy IB Biology HL II IB English HL II IB Math SL II or Advanced Placement (AP) Calculus BC IB Physics HL II or IB Chemistry HL II IB Spanish SL (if needed) Leadership, Exercise & Personal Growth (LEAP) II Theory of Knowledge + Electives

Grading System & GPA

Due to the selectivity of the admissions process, students are not ranked. The grade point average, computed at the end of each year, is unweighted and includes all courses. GPAs are based on a 100-point scale system.



Biotechnology High School

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"Excellence is in our DNA"

- National Blue Ribbon School of Distinction (2014)
- Ranked as #1 in *U.S. News & World Report's* "Best High Schools in New Jersey"
- Ranked as #11 in *U.S. News & World Report's* "Best High Schools in America"
- 100% of faculty members are highly qualified; 11% hold a doctoral degree
- Honored by the HealthCare Institute of New Jersey (HINJ) in recognition of leadership and achievement in STEM education
- Accredited by the Middle States Commission on Secondary Schools



Class of 2014 Highlights (72 students)	2013-2014 Achievements
<ul style="list-style-type: none"> ➤ 94% earned an IB Diploma ➤ 90% pursuing a STEM-related major ➤ 390 college acceptances ➤ 16 Ivy League acceptances ➤ 11 attending Ivy League Universities ➤ US Presidential Scholars Program Semi-Finalist (1) ➤ 46% National Merit Commended Scholars 	<ul style="list-style-type: none"> ➤ Governor's STEM Scholars (7) ➤ Verizon Innovative App Challenge: Best in Region (\$10,000) ➤ Jersey Shore Science Fair – 35 winners (7 first place) ➤ Delaware Valley Science Fair – 14 winners (1 first place) ➤ National TSA Conference (3 winning teams) ➤ JSA Mid-Atlantic Conference Best Speaker Awards (8) ➤ National FFA Convention (8 first place)

Summary of Test Results class of 2014

SAT & ACT Combined Comparison

Test	BTHS	Nation	State
SAT	2105	1497	1526
ACT	30.4	21	23.1

SAT Reasoning Score Summary

Section	Mean	Middle 50%
Critical Reading	700	670 - 760
Math	705	670 - 770
Writing	700	670 - 770
Total	2105	2060 - 2260

IB Assessment Scores

Subject	BTHS Mean Score	Worldwide Mean Score
Biology	5.92	4.31
Chemistry	4.16	4.52
English	5.38	5.10
History	5.49	4.56
Mathematics	5.29	4.48
Physics	5.04	4.64
Spanish	5.44	5.05

Molecular Biology SAT II

BTHS Average Score – 748
National Average – 655

IB Biology HL Exam

78% of BTHS students scored a 6 or 7
(compared to 36% worldwide)

Perfect SAT I Section Scores

28 Total
14 Writing, 8 Reading and 6 Math

College Matriculation class of 2014

Brookdale Community College (2)	Gettysburg College	Rensselaer Polytechnic Institute	University of Maryland, College Park
California Polytechnic State University	Harvard College	Rice University	University of Miami
Case Western Reserve University	McGill University	Richard Stockton College	University of Michigan
Columbia University (3)	Monmouth University (2)	Rowan University (4)	University of Pennsylvania (3)
Cornell University	Muhlenberg College	Rutgers University at New Brunswick (15)	University of South Carolina (3)
Dartmouth College	New Jersey Institute of Technology	Stanford University	University of Washington
Drexel University (2)	New York University (2)	Stevens Institute of Technology (2)	Villanova University
Duke University	Northeastern University	The College of New Jersey (2)	Virginia Polytechnic Institute
Emory University (2)	Princeton University (2)	Union College	Wagner College
Fairleigh Dickinson University	Purdue University	University of Georgia	Yale University