

# APPLIED TECHNOLOGY HIGH SCHOOL

Engineering Technology

Health Professions

Cybersecurity



A Bergen County Technical Schools/Bergen Community College

*Career & Technical Education*

high-school program

PROGRAM DESCRIPTIONS & ADMISSIONS INFORMATION

**A**ppplied Technology High School, located on the Paramus Campus of Bergen Community College, provides students a unique educational experience through a blend of academic high school curriculum, college classes, and hands-on technical training. ATHS currently offers three technical concentrations—Engineering Technology, Health Professions, and Cybersecurity.

### Our Unique Program offers students:

- Dual-enrollment courses taught by Bergen Community College professors. During freshman and sophomore years, professors teach courses at Applied Tech. Junior and senior ATHS students attend dual enrollment classes at Bergen Community College. Dual-enrollment classes allow students to earn up to 30 college credits upon graduation that are transferable to all four-year public colleges and universities in New Jersey.
- Technical classes taught in labs within ATHS as well as labs at Bergen Community College. For Health Professions students, these classes take place at the Health Professions Integrated Teaching Center. For students in Engineering Technology, classes are held in the college's Technology Center.
- Participation in the Senior Experience Internship program during students' senior year. This program is a graded internship graduation requirement. Student interns report directly to their internship every Wednesday during the academic year for the full business day.
- Access to the full range of sports offered by Bergen County Technical Schools. Bus transportation is provided students to attend practices at the Hackensack campus.

## PROFILE OF AN APPLIED TECH STUDENT

- Students who exhibit strong interpersonal skills, a commitment to excellence, a desire to become part of a unique high-school-within-a-college, and the potential to become active contributors to our dynamic learning community.
- A highly motivated student who enjoys participating as a team member.
- A student on or close to grade level with proficient scores on NJ ASK/Terra Nova/ PARCC who demonstrates the desire to challenge her/himself through academic and career-focused Dual Enrollment classes.

### If you are interested in attending Applied Technology High School @ Bergen Community College:

- Watch our virtual open house video, or learn about our programs by reading the materials posted on our website. Speak to your parent(s)/guardian(s) about the school and your personal high school goals.
- Make your decision. It is your education. Do you think Applied Technology High School is right for you? Review the information on our website with your parent(s)/guardian(s) to help you make an informed decision.
- Meet all application deadlines and requirements. Follow all instructions on our admissions website. Be sure to print forms for your counselors and teachers and submit them as soon as possible. We do not accept late applications.





## Cybersecurity

Applied Tech's newest program offers a curriculum centered on data security. Utilizing a blend of academic high school curriculum, college classes, and hands-on technical training, students will learn to apply programming, networking, and forensics to hands-on projects in the fields of cybersecurity. Students will learn essential skills needed to pursue a career in a wide variety of areas including programming, information technology, and law enforcement. Dual-enrollment coursework allows students to earn advanced standing into several technical associates programs at Bergen Community College, including an A.A.S. program in Cybersecurity. Students completing their Associates Degree at BCC may transfer their credits to all four-year public colleges and universities in New Jersey.

## SCOPE AND SEQUENCE

Course titles in purple represent dual enrollment classes where students earn both high school and college credits

### 9TH GRADE

#### CTE Course—

- Intro to Cybersecurity

#### Science—Physics

#### Math—Algebra I

#### Social Studies—U.S. History I

#### Language Arts—Academic Literacy

#### World Language—Spanish I (LAN 113)

#### Health & PE—

- Dynamics of Health (WEX 101)/PE
- Body Conditioning (WEX 112)

### 11TH GRADE

#### CTE Courses—

- Intro to Python (INF 103)
- Network Security (INF 267)

#### Science—Biology (BIO 101)

#### Math—Algebra II and Trigonometry

#### Social Studies—World History

#### Language Arts—World Literature

#### Visual & Performing Arts—

- World Music (MUS 106)

#### Health & PE—

- Yoga (WEX 170)
- Weight Training (WEX 116)

\* Math and ELA courses are contingent upon placement test results. HS-level courses may be taken as an equivalent. Additional 12th-grade BCC electives are available. Courses in Itasca are not required for graduation.

### 10TH GRADE

#### CTE Courses—

- Intro to Networking (INF 160)
- PC Maintenance (INF 108)
- Intro to LINUX (INF 165)

#### Science—Chemistry (CHM 100)

#### Math—Geometry

#### Social Studies—U.S. History II

#### Language Arts—American Literature

#### World Language—Spanish II (LAN 230)

#### Health & PE— CPR/First Aid (WEX 159)/Self-Defense (WEX 167)

### 12TH GRADE

#### CTE Courses—

- Ethical Hacking (INF 271)
- One of the following electives:  
Computer Crime (INF 270), Intrusion Detection (INF 273),  
UNIX/LINUX Admin (INF 254), Java Fundamentals (INF 236)

#### Science—

- *Gen Chemistry I (CHM 140-141)/Physics I (PHY 280)*

#### Math\*—

- *Inter Algebra (MAT 160)/Statistics (MAT 150) \*\**

#### Social Studies—

- *Macroeconomics (ECO 101)/Psychology (PSY 101)*

#### Language Arts—

- *English Comp I (WRT 101)/Tech Writing (WRT 202)*

#### Visual & Performing Arts—

- *Western Civ I (HIS 101) or Western Civ II (HIS 102)*

#### World Language—Speech Communication (COM 100)

#### Health & PE—

- *Contemporary Health Issues (WEX 185)*
- *Core Stability (WEX 117)*

# Engineering Technology

The Engineering Technology program provides students a unique educational experience through a blend of academic high school curriculum, college classes, and hands-on technical training. Students are given the opportunity to apply math, science, and technology to hands-on projects in the fields of automation, electronics, and advanced manufacturing as they acquire the essential skills needed to pursue a career in a wide variety of areas including engineering technology in General Engineering Technology. Associates degrees earned at BCC are transferable to all four-year public colleges and universities in New Jersey.



## SCOPE AND SEQUENCE

Course titles in purple represent dual enrollment classes where students earn both high school and college credits

### 9TH GRADE

#### CTE Courses—

- Engineering Design

#### Science—Physics

#### Math—Algebra I

#### Social Studies—U.S. History I

#### Language Arts—Academic Literacy

#### World Language—Mandarin I (LAN 116)

#### Health & PE—

- Dynamics of Health (WEX 101)/PE
- Body Conditioning (WEX 112)

### 11TH GRADE

#### CTE Courses—

- Smart Machines
- Intro to Python (INF 103)
- Machine Tool Principles I (MFG 122)

#### Science—Biology (BIO 101)

#### Math—Algebra II and Trigonometry

#### Social Studies—World History

#### Language Arts—World Literature

#### Visual & Performing Arts—

- World Music (MUS 106)

#### Health & PE—

- Yoga (WEX 170)
- Weight Training (WEX 116)

### 10TH GRADE

#### CTE Courses—

- Intro to Mechatronics
- CAD I (DFT 210)

#### Science—Chemistry (CHM 100)

#### Math—Geometry

#### Social Studies—U.S. History II

#### Language Arts—American Literature

#### World Language—Mandarin II (LAN 276)

#### Health & PE—

- CPR/First Aid (WEX 159)
- Self-Defense (WEX 167)

### 12TH GRADE

#### CTE Courses—

- Concepts of Industrial Design (MFG 206)
- Fundamentals of Programming (CIS 165)

#### Science—

- General Chemistry 1 (CHM 140-141)
- Physics 1 (PHY 280)

#### Math\*—

- Intermediate Algebra (MAT 160) and/or
- Pre-Calculus (MAT 180)

#### Social Studies—

- Macroeconomics (ECO 101) or Microeconomics (ECO 102)

#### Language Arts—

- English Comp I (WRT 101) Fall/Eng Comp II (WRT 201) Spring

#### Visual & Performing Arts—

- *Western Civilization I (HIS 101) or II (HIS 102)*

#### World Language—Speech Communication (COM 100)

#### Health & PE—

- Contemporary Health Issues (WEX 185)
- Core Stability (WEX 117)

\* Math and ELA courses are contingent upon placement test results. HS-level courses may be taken as an equivalent. Additional 12th-grade BCC electives are available. Courses in Itaics are not required for graduation.



## Health Professions

The mission of the Health Professions Program at ATHS is to provide preparation for multiple health careers through a core curriculum that emphasizes science, the human and organizational side of health care, and the opportunity to earn college credit and clinical experience. The goal of the program is to promote the concept of teamwork as essential to patient well-being, provide students a strong foundation in science, and address New Jersey's healthcare workforce needs. Students receive their clinical training in BCC's Health Professions Integrated Teaching Center.

## SCOPE AND SEQUENCE

Course titles in purple represent dual enrollment classes where students earn both high school and college credits

### 9TH GRADE

#### CTE Courses—

- Medical Explorations
- Healthcare Simulations I

**Science—Biology (BIO 101)**

**Math—Algebra I**

**Social Studies—U.S. History I**

**Language Arts—Academic Literacy**

**World Language—Spanish I (LAN 113)**

#### Health & PE—

- Dynamics of Health (WEX 101)/PE
- Body Conditioning (WEX 112)

### 11TH GRADE

#### CTE Courses—

- Anatomy & Physiology I (BIO 109)
- Intro to Sociology (SOC 101)

**Science—Physics**

**Math—Algebra II and Trigonometry**

**Social Studies—World History**

**Language Arts—World Literature**

**Visual & Performing Arts—**

- World Music (MUS 106)

#### Health & PE—

- Yoga (WEX 170)
- Weight Training (WEX 116)

### 10TH GRADE

#### CTE Courses—

- Medical Terminology (MOA 140)
- Healthcare Simulations II

**Science—Chemistry (CHM 100)**

**Math—Geometry**

**Social Studies—U.S. History II**

**Language Arts—American Literature**

**World Language—Spanish II (LAN 230)**

#### Health & PE—

- CPR/First Aid (WEX 159)
- Self-Defense (WEX 167)

### 12TH GRADE

#### CTE Courses—

- Anatomy & Physiology II (BIO 209) *Elective*
- Healthcare, Ethics, & Law (HSC 102)/Healthcare Sims III
- Professional Certifications (EMR)

**Science—Electives Available**

#### Math\*—

- Intermediate Algebra (MAT 160)
- Statistics I (MAT 150)

#### Social Studies—

- Macroeconomics (ECO 101) or
- Microeconomics (ECO 102)

#### Language Arts—

- English Comp I (WRT 101) Fall/Eng Comp II (WRT 201) Spring

**World Language—Speech Communication (COM 100)**

#### Health & PE—

- Contemporary Health Issues (WEX 185)
- Core Stability (WEX 117))

\* Math and ELA courses are contingent upon placement test results. HS-level courses may be taken as an equivalent. Additional 12th-grade BCC electives are available. Courses in Itaics are not required for graduation.

## School Counseling

For each student, a successful experience in high school is crucial to a solid foundation for future success. To that end, it is important to understand that success is predicated on meeting the needs of the whole student. ATHS is proud to offer students a comprehensive school counseling program in Naviance, the web-based college readiness platform used throughout our school district. This program enables us to meet the development of the social, emotional, psychological, and educational aspects of each student.

The school gives parents and students individual registration codes for Naviance/Family Connection early in freshman year. Our goal is to ensure that our students and families find this process to be informative, collaborative, and successful. Utilization of Naviance/Family Connection, provides students the ability to complete their respective Naviance programs and be adequately prepared for college and beyond.

### School Counseling through Naviance/Family Connection:

- Transition Survey
- Game Plan Survey
- Career Cluster Finder
- Study Skills Survey
- Learning Style Inventory
- Enrichment Program Search
- Career Interest Profiler
- Student Profile
- Intake Conference Worksheet
- Take PLAN, PSAT, SAT, SAT Subject Tests, ACT
- SuperMatch College Search
- Completion of FAFSA
- Scholarship Search
- Common Application
- Graduation Survey

## SENIOR EXPERIENCE

The Senior Experience internship is an interactive learning partnership through which students increase their knowledge and skills in a particular area of study while under the guidance of a mentor(s). The internship allows our students to team up with a variety of people within the community, and it allows businesses and corporations to invest in the future of their industry. Students report to their internship site every Wednesday during Senior Year.

### Senior Experience Internships for SY2022-2023 include:

Air Fleet Training Systems  
BCA / ABC Television  
Brescia & Migliaccio Women's Health  
Bergen County Board of Commissioners  
Bergen County Department of Planning & Engineering  
Bergen County Sheriff's Department  
Bergen New Bridge Medical Center  
Boswell Engineering  
Brightside Manor  
Cactus Group  
Constellation Agency  
Dassault Falcon Jet Corporation  
Dellicker Strategies  
ENT, Sinus & Hearing Care Center  
Euclid Elementary School  
Ferry Machine Corporation  
Garden State Helicopters  
Hackensack Meridian Pascack Valley Medical Center  
Hackensack University Medical Center  
Hytoroc  
Holy Name Medical Center  
ID Signs  
IZ Medical  
La Pet-isserie  
Levy Dental Arts  
Michael Hern Realtors  
Middle Village Pharmacy  
Professional Physical Therapy  
Pullum Productions  
Randazzo Dental Associates  
Ramsey Subaru  
Daniel Samadi, MD, PC  
Schmidt Surveying, LLC  
Catherine Suarez, Esq.  
TheraPhysical  
TNTMAX LLC

## Clubs/Activities

Clubs and activities are an important component of our learning environment. Students have the opportunity to participate in a variety of clubs that are held after school. They must submit signed consent forms to participate in club activities, abide by attendance guidelines, and participate in only one club per day.

**The following clubs are open to all ATHS students:**

Chess Club	Dance
Debate Club	GSA
Guitar Club	Homework Club
HOSA Club	Intramurals
Math Club	Music Club
National Honor Society	Newspaper Club
Peer Leaders/Student Ambassadors	Student Council
Physics Club	VEX Club
Teen LEADS	Yearbook Club
VR Club	

## WOMEN IN LEADERSHIP

The purpose of the Young Women's Leadership Program is to empower the young women of Applied Technology High School by cultivating an environment where people can speak openly about topics regarding women's rights, and create an ongoing conversation about women's successes and struggles in the workforce.

Every year, the program hosts a panel discussion and Q&A with successful women in business, politics, medicine, technology, and the military. They share an overview of their careers and offer advice and support to our students. These events are organized and moderated by students in the Women in Leadership program.



## PROJECT INVENT

Project Invent empowers students with the 21st-century skills to succeed individually and impact globally, through invention. Design thinking and invention programs empower every student as an innovator. In Project Invent, high school students invent technologies that solve real-world problems. Teachers are trained and supported to ensure students are getting a transformative learning opportunity through inventing real change.

Our Freshmen team devised and produced a portable Decontamination Station for firefighters to remove harmful chemicals and pollutants from their boots to limit exposure to “forever chemicals” like fire retardants in their gear. This team put so much heart into this project and we cannot wait to see what they accomplish here at ATHS in the coming years.



Our Sophomore team devised a remotely operated ice rescue vehicle equipped with an infra-red and full spectrum camera system, loudspeaker and winch attachment to aid firefighters in rescuing victims in situations where the danger to rescuers is too great to put a first responder in harm's way. Team HeatSeek, as they call themselves, was awarded \$500.00 in funding to continue developing their product, garnering the “Moonshot Award” for being the most ambitious project with the largest community impact.

## Athletics

The athletic program is an integral part of the total educational process at Bergen County Technical High School District. Young people learn a great deal through their participation in interscholastic athletics. Valuable attributes such as determination, perseverance, sportsmanship, communication, and teamwork can all be attained through athletic participation. Athletics plays an important role in helping the individual student develop a positive self-concept as well as a healthy body. Athletic competition fosters school spirit and develops pride in the school and community for participants, students and spectators. Student-Athletes will leave our athletic programs with the readiness to be active participants in today's global community.

Through athletics we seek to provide a wholesome form of physical activity for as many students as possible. We make every effort to offer our student-athletes the best in equipment, facilities, and coaching, in order to provide an enjoyable and rewarding athletic experience. While the reputation of our school and community is enhanced whenever its representatives excel, by far the greatest rewards and satisfactions are derived by the number of students who actually participate on our athletic teams.

We believe that the soul of our school can be reflected in what occurs before and after the normal academic day. This extension of the school day, whether it be in athletics, in the arts, or in clubs, will set the tone for the school year. If we can keep students involved and concerned beyond the classroom, we are bound to have a more positive effect on them in the classroom. We are aware of the tremendous obligations we have as coaches and administrators to the student-athletes in our care. Parents entrust their children to us and we shall always strive to strengthen that bond.

Students at Applied Technology High School play on sports teams with students from Bergen County Technical Schools' Teterboro, Paramus, and Hackensack campuses. Bergen Tech athletes compete in the Big North Conference and the NJTAC. Our teams compete at the varsity, junior varsity, and freshman levels.

## SPORTS OFFERED

### Fall

- Football–Varsity, Sub-Varsity
- Boys/Girls Soccer–Varsity, JV, and Freshman
- Boys/Girls Cross Country
- Girls Tennis–Varsity and Junior Varsity
- Girls Volleyball–Varsity, Junior Varsity, and Freshman
- Cheerleading

### Winter

- Boys Basketball–Varsity, Junior Varsity, and Freshman
- Girls Basketball – Varsity and Junior Varsity
- Boys/Girls Bowling
- Boys/Girls Fencing
- Boys/Girls Indoor Track
- Competitive Cheerleading

### Spring

- Baseball–Varsity, Junior Varsity, and Freshman
- Softball–Varsity, Junior Varsity, and Freshman
- Boys/Girls Golf
- Boys/Girls Lacrosse–Varsity and Junior Varsity
- Boys Tennis–Varsity and Junior Varsity
- Boys/Girls Track
- Boys Volleyball–Varsity and Junior Varsity

## Accolades

### 2021-2022 School Year

- Boys/Girls Bowling–Bergen County Champions
- Girls Bowling–Bergen County Team of the Year
- Girls Bowling–Big North Liberty Division Champions
- Girls Volleyball–Big North Liberty Division Co-Champions
- Boys Track–Big North Liberty Division Champions
- Girls Golf–Bergen County Champions
- Girls Golf–Big North Liberty Division Champions
- Boys Tennis–Bergen County Champions
- Boys Tennis–Big North Liberty Division Champions
- Girls Fencing–BPFL League Champions

## COLLEGE ACCEPTANCES

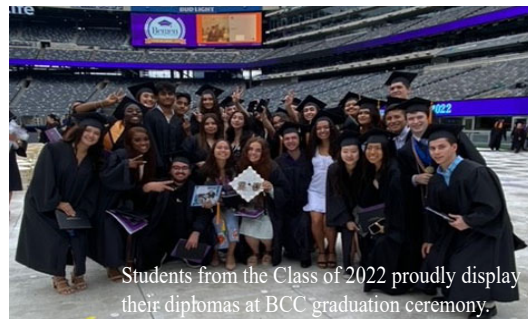
Class of 2022

American University  
 Ana Maria College  
 Bergen Community College  
 Binghamton  
 Bloomfield College  
 Boomburg University  
 Brandeis University  
 Caldwell University  
 California Northstate University  
 Centenary University  
 City University New York  
 Clemson University  
 Columbia College Chicago  
 Curry College  
 Daemen College  
 Dominican College  
 East Stroudsburg University  
 Emerson College  
 Emory Riddle University  
 Fairfield University  
 Fairleigh Dickinson University  
 Florida Agricultural & Mechanical University  
 Florida Institute of Technology  
 Florida International University  
 Felician University  
 Greensboro College  
 Iona University  
 Johnson & Wales University  
 Kean University  
 Loyola University Chicago  
 Loyola University Maryland  
 Loyola University Maryland  
 Massachusetts College of Pharmacy & Health Sciences  
 Mercy College  
 Merrimack College  
 Michigan State University  
 Montclair State University  
 Montclair State University  
 Morgan State University  
 Mount St. Mary College  
 New England College  
 New Jersey City University  
 New Jersey Institute of Technology  
 New York Institute of Technology  
 Portland State University

Portland State University  
 Pace University  
 Pennsylvania State University  
 Ramapo University  
 Reed College  
 Rider University  
 Rowan University  
 Rutgers University  
 Sacred Heart University  
 St. Bonaventure University  
 St. John's University  
 St. Peter's University  
 Savannah College of Art & Design  
 Seton Hall University  
 Stockton University  
 SUNY Albany  
 SUNY Binghamton  
 Susquehanna University  
 Temple University  
 The College of New Jersey  
 University of California-Irvine  
 University of California-San Diego  
 University of California-Santa Barbara  
 University of Colorado  
 University of Denver  
 University of Florida  
 University of Hartford  
 University of New Hampshire  
 University of Maine  
 University of Maryland-Eastern Shore  
 University of Massachusetts-Amherst  
 University of Massachusetts-Boston  
 University of Miami  
 University of New Haven  
 University of Pittsburgh  
 University of Scranton  
 University of South Florida  
 University of Tennessee  
 University of Vermont  
 Vanderbilt University  
 Virginia State University  
 Washington College  
 Webb Institute  
 West Chester University  
 William Paterson University

Thirty students from the Class of 2022 graduated simultaneously from BCC with their Associates Degrees, and twelve students earned their Associates Degrees in July of 2022.

Ten students from the Class of 2021 were accepted into Phi Theta Kappa, the official two-year college Honor Society at BCC.



Students from the Class of 2022 proudly display their diplomas at BCC graduation ceremony.

## Frequently Asked Questions

### **What is the length of the school day and school year?**

The school is in session from 7:30 a.m. until 2:30 p.m. for 180 days per year.

### **Is there any cost to the parents for sending students to Applied Tech?**

Bergen Tech is a free public school of choice for residents of Bergen County.

### **Do parents arrange and pay for transportation?**

Transportation to Applied Tech is arranged by the students' home district at no cost to the parents.

### **Can students transfer to this school after the ninth grade?**

No. The program structure is such that students enter Applied Tech with a selected major and prescribed courses.

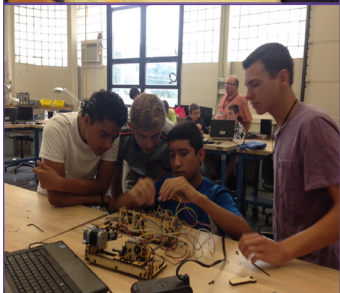
### **Are services provided to students with disabilities?**

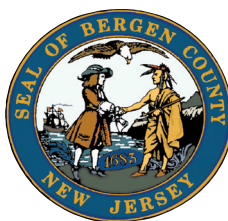
Yes. Services are provided according to the child's IEP or 504 Plan.

### **Is there an admissions test for the school?**

There is no admissions test for Applied Technology High School. Qualified students who meet the admissions criteria are offered interviews.







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