

# 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 on state administered assessments 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 provide a personal email address, not your current school email address.** We do not accept late applications.

Questions? Email us at [ATHSadmissions@bergen.org](mailto:ATHSadmissions@bergen.org)



# Cybersecurity



The ATHS Cybersecurity program aims to scaffold all students from beginner to expert in the cybersecurity field. Students will be introduced to concepts such as cybersecurity vocabulary, hardware and networking basics, Windows and Linux command-line administration, Python programming to code and break ciphers, with the goal of going into future college classes with a strong background and essential skills they will need to succeed. Cybersecurity students have the opportunity to earn industry-recognized certifications prior to their senior year. Dual-enrollment coursework allows students to earn advanced standing into several technical Associates programs at Bergen Community College, including the opportunity to earn an A.A.S in Cybersecurity. Students completing their Associate's Degree at BCC may transfer their credits to all four-year public college 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—Biology

#### Math—Algebra I

#### Social Studies—U.S. History I

#### Language Arts—English I

#### 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)
- Applied Cryptology

#### Science—Physics

#### Math—Algebra II

#### Social Studies—World History

#### Language Arts—English III

#### 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 Itaics 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—English II

#### 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)
- Cyber Electives

#### Science—

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

#### Math\*—

- *Pre-Calculus (MAT 160)/Statistics (MAT 150) \*\**

#### Social Studies—

- *Macroeconomics (ECO 101)*

#### Language Arts—

- *English Comp I (ENG 101)/English Comp II (ENG 202)*

#### Visual & Performing Arts—

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

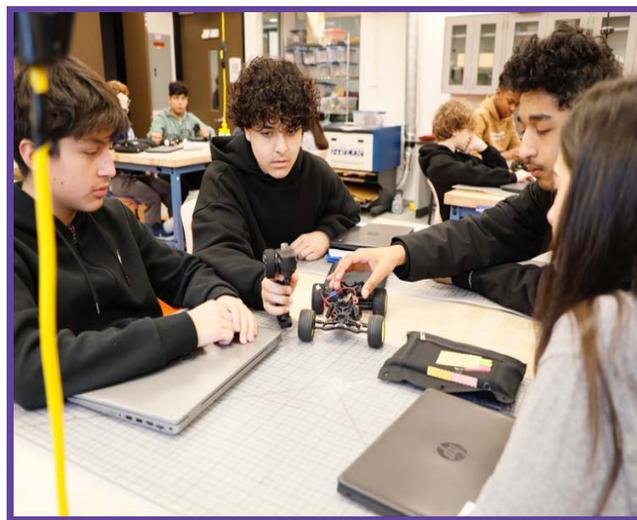
#### World Language—*Speech Communication (COM 100)*

#### Health & PE—

- *Contemporary Health Issues (WEX 185)*
- *Core Stability (WEX 117)/ Aquacise (WEX 104)*

# 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—English I

#### 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

#### Social Studies—World History

#### Language Arts—English II

#### 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—English II

#### 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)

#### Math\*—

- Pre-Calculus (MAT 180)/Calculus

#### Social Studies—

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

#### Language Arts—

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

#### 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 work force needs.

Students learn both through didactic training and hands-on clinical simulations in the classroom. The simulations are reinforced by attending BCC's Center for Simulation approximately once a week, depending on the body system being studied.

## 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**—English I

**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)
- Healthcare Policy
- Diversity in Healthcare

**Science**—Physics

**Math**—Algebra II

**Social Studies**—World History

**Language Arts**—English III

#### 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 Itaics are not required for graduation.

### 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**—English II

**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)
- Healthcare, Ethics, & Law (HSC 102)/Healthcare Sims III
- Professional Certifications (EMR)

#### Math\*—

- Statistics I (MAT 150)/Pre-Calculus (MAT 180)

#### Social Studies—

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

#### Language Arts—

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

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

#### Health & PE—

- Contemporary Health Issues (WEX 185)
- Core Stability (WEX 117)
- Aquacise (WEX 104)

## 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). Students report to their internships every Wednesday during senior year.

### Senior Experience Internships for SY2024-2025 include:

Advanced Dental  
Assemblyman Robert Auth  
Bergen County Sheriff's Department  
Bergen Institute for Creative Arts  
Bergen New Bridge Medical Center  
Boswell Engineering  
Brescia and Migliaccio Women's Health  
CarePoint Health  
Century Air  
Creationari Graphic Studio LLC  
Dellicker Strategies  
Dellicker Strategies  
Evans Architects  
Ferry Machine Corp.  
Ferry Machine Corp.  
Hackensack Meridian Pascack Valley Medical Center  
Hackensack University Medical Center  
Holy Name Medical Center  
Hackensack University Medical Center  
ID Signs & Graphics  
Integrated Pain Management  
Jain Orthodontics  
Juniper Village at Paramus  
Meadowlands Chamber of Commerce  
Northern Jersey Plastic Surgery Center  
Office of Senator Paul A. Sarlo  
Overpeck Creek Animal Hospital  
Parkside Community Church  
Play Learn Explore Academy  
Pullum Productions, Inc.  
RVN Enterprises  
Savia Community Counseling, LLC  
St. Joseph's University Medical Center  
Teaneck Volunteer Ambulance Corps  
The Valley Hospital (Cardiothoracic Surgery Dept.)  
TheraPhysical  
TNTMAX  
Urban Associates, LLC  
Versa Valves  
Veterinary Emergency Group  
Waldwick Public Library  
Westchester Medical Center

## 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.

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

Debate Club	Technology Students Association (TSA)
Diversity Club	Women in STEM
Drama Club	Yearbook
Gaming Club	
GSA	
HOSA (Health Occupations Students of America)	
Project Invent	
Mathletes	
Model UN	
Music Club	
Student Council	

## PROJECT INVENT

Project Invent is a nationwide organization that supports high school students to invent technologies for social good. As a student on a Project Invent team, you spend a full year taking a human-centered approach to developing a technology solution to solve a need in your community. You will work directly with people in your neighborhoods to invent solutions that create a better, safer, more equitable world.



Our Project Invent team has collaborated with The Blesham Regional Day School (part of BCTS) to create a wireless wheelchair controller for a student with Cerebral Palsy. By changing the position of his hand, he will be able to maneuver his chair on his own, providing him with some freedom of movement in his day to day life.

## WOMEN IN STEM

ATHS has an active Women in STEM club where all students are welcome to participate in enrichment activities. Last year students toured the BCC's Emil Buehler Perpetual Trust, the college's aviation program with state-of-the-art simulation laboratories, they visited Bergen Maker Space in Hackensack and hosted the 7th annual Young Women in Leadership Conference.



## Athletics

Athletics are a vital part of our commitment to providing a well-rounded education. We are proud to offer our student-athletes the opportunity to play under the banner of the Bergen Tech Knights, regardless of which campus they attend. Our student-athletes have the opportunity to develop important life skills through their participation in interscholastic sports, including determination, perseverance, sportsmanship, communication, and teamwork.

We believe athletics play an important role in promoting a positive self-concept and a healthy body. By participating in athletic competition, our students develop school spirit and pride in their school and community. Additionally, our student-athletes leave our athletic programs with the readiness to be active participants in today's global community.

At BCTS, we strive to provide a wholesome form of physical activity for as many students as possible. We are committed to offering our student-athletes the best in equipment, facilities, and coaching to ensure an enjoyable and rewarding athletic experience. 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, the arts, or clubs, sets the tone for the school year and helps to create a positive and inclusive school community. We are dedicated to creating a supportive and inclusive athletic community that welcomes athletes of all backgrounds and skill levels.

Our student-athletes compete in the Big North Conference and the NJTAC at the varsity, junior varsity, and freshman levels. We hold ourselves to the highest standards of sportsmanship and integrity and are strongly committed to the rules and regulations set forth by the NJSIAA and Big North Conference.

At Bergen County Technical High Schools, we understand the tremendous responsibility we have as coaches and administrators to the student-athletes in our care. We are committed to strengthening the bond of trust between parents, students, and our school community by providing a positive athletic experience.

## 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
- Football 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 (tryouts are held in summer)

### 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 & Field
- Boys Volleyball–Varsity and Junior Varsity

## Accolades 2023-2024 School Year

- GIRLS GOLF - BIG NORTH LIBERTY DIVISION CHAMPIONS
- GIRLS VOLLEYBALL - BIG NORTH LIBERTY DIVISION CHAMPIONS
- BOYS VOLLEYBALL - BIG NORTH LIBERTY DIVISION CHAMPIONS
- GIRLS BOWLING - BIG NORTH LIBERTY DIVISION CHAMPIONS, BCWA CHAMPIONS, TEAM OF THE YEAR
- BOYS BOWLING - NJSIAA SECTIONAL CHAMPIONS, BIG NORTH LIBERTY DIVISION CHAMPIONS, BCCA CHAMPIONS, TEAM OF THE YEAR
- GIRLS FENCING - BPFL PATRIOT DIVISION CHAMPIONS
- BOYS FENCING - BPFL PATRIOT DIVISION CHAMPIONS, BCCA CHAMPIONS
- GIRLS TENNIS - BIG NORTH LIBERTY DIVISION CHAMPIONS
- BOYS TENNIS - BIG NORTH LIBERTY DIVISION CHAMPIONS, BCCA CHAMPIONS

## COLLEGE ACCEPTANCES - CLASS OF 2024

Albany College of Pharmacy and Health Sciences  
Arizona State University-Tempe  
University of Arizona  
Assumption University  
Auburn University  
Barry University  
Baylor University  
Binghamton University  
Boston College  
Brandeis University  
Caldwell University  
Case Western Reserve University  
Cedar Crest College  
University of Cincinnati-Main Campus  
Coastal Carolina University  
University of Connecticut  
Cornell University  
University of Delaware  
Drew University  
Drexel University  
East Stroudsburg University of Pennsylvania  
Eckerd College  
Embry-Riddle Aeronautical  
University-Daytona Beach  
Fairfield University  
Fairleigh Dickinson University-Metropolitan  
Campus  
Fashion Institute of Technology  
Felician University  
Florida Atlantic University  
Florida Gulf Coast University  
Florida Institute of Technology  
Florida International University  
Florida State University  
University of Florida  
Fordham University  
Georgia Institute of Technology-Main Campus  
Hampton University  
University of Hartford  
Hofstra University  
Howard University  
University of Illinois Chicago  
Iona University  
CUNY John Jay College of Criminal Justice  
Johnson & Wales University-Providence  
Kean University  
Le Moyne College  
Lehigh University  
Louisiana State University and Agricultural &  
Mechanical College  
Lynn University  
Manhattan College  
Marist College  
University of Maryland-College Park  
Massachusetts College of Pharmacy and Health  
Sciences  
University of Massachusetts-Amherst  
University of Massachusetts-Boston  
University of Miami  
Michigan State University  
University of Minnesota-Twin Cities  
Misericordia University  
University of Missouri-Kansas City  
Monmouth University  
Montclair State University  
University of Mount Saint Vincent  
University of New Haven  
New Jersey City University  
New Jersey Institute of Technology  
The College of New Jersey  
New York Institute of Technology  
Northeastern University  
Northwestern University  
Northwestern University in Qatar  
Norwich University  
Nova Southeastern University  
Ohio University-Main Campus  
Pennsylvania State University-Penn State Main  
Campus  
University of Pittsburgh-Pittsburgh Campus  
SUNY at Purchase College  
Purdue University-Main Campus  
Quinnipiac University  
Ramapo College of New Jersey  
Rensselaer Polytechnic Institute  
University of Rhode Island  
Rider University  
Rochester Institute of Technology  
University of Rochester  
Roger Williams University  
Rowan University  
Rutgers University  
Sacred Heart University  
Saint Peter's University  
University of Scranton  
Seton Hall University  
Siena College  
University of South Carolina-Columbia  
University of South Florida-Main Campus  
St. John Fisher University  
St. John's University-New York  
St. Thomas Aquinas College  
State College of Florida - Lakewood Ranch  
Stevens Institute of Technology  
Stockton University  
Stony Brook University  
SUNY Polytechnic Institute  
Temple University  
Texas State University  
The University of Texas at Austin  
Ohio State University-Main Campus  
United States Merchant Marine Academy  
University at Albany, SUNY  
University of York  
Vaughn College of Aeronautics and Technology  
Villanova University  
Virginia Commonwealth University  
Virginia Tech  
Washington & Jefferson College  
West Virginia University  
Western New England University  
Widener University  
William Paterson University of New Jersey  
Vaughn College of Aeronautics and Technology  
Villanova University  
Virginia Commonwealth University  
Virginia Tech  
Washington & Jefferson College  
West Virginia University  
Western New England University  
Widener University  
William Paterson University of New Jersey

## 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.

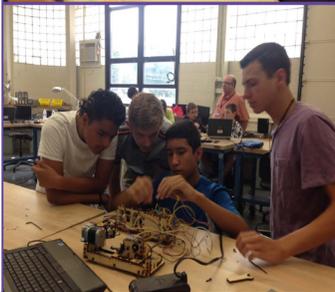
### **Are services provided to students with disabilities?**

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

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

An entrance exam is not required for consideration to Applied Technology High School. Qualified students who meet the admissions criteria are offered interviews. Students are required to take a placement test once they've been accepted.







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