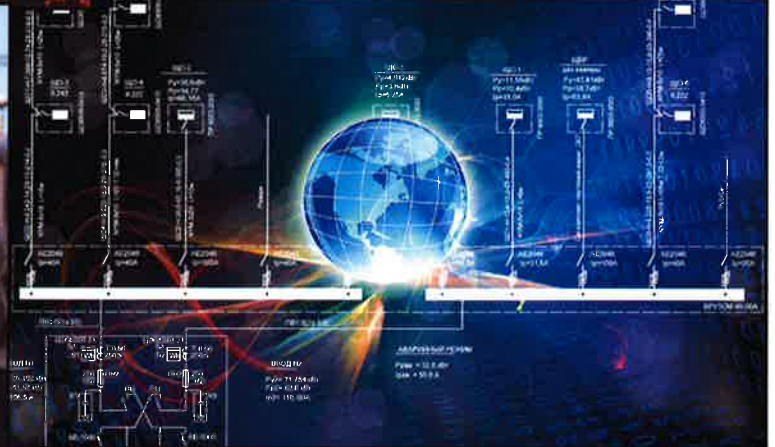




# Burlington County Institute of Technology Electronic & Computer Engineering Technology Academy



**BCIT's Engineering Academy prepares you for the following Engineering jobs:**

Aerospace Engineering  
Computer Engineering  
Electrical Engineering  
Electronics Engineering  
Industrial Engineering  
Manufacturing Engineering  
Mechanical Engineering



Microelectronic Engineering  
Network Engineering  
Process Engineering  
Project Engineering  
Safety Engineering  
Software Engineering  
Systems Engineering



## Electronic & Computer Engineering Technology Academy



The Electronic & Computer Engineering Technology (ECET) Academy is a program focused on technical excellence, communication skills, and a well-rounded education. Mathematics, science, and computer science courses are all linked to engineering applications and problem-solving practices. The academy is designed to provide two distinct career pathways: a professional track leading to further education in engineering, and a technical track which may lead to both higher education and/or immediate employment. Strong mathematics skills are fundamental to both tracks of the program.

The academy's curriculum is centered on college preparatory, honors, AP level, and collegiate courses that integrate applied academics and the sciences with computer technology. At the core of the program are science and engineering laboratory courses, all of which accentuate hands-on, team-oriented approaches to this highly multi-disciplinary field. The academy's science laboratories and facilities are equipped with state-of-the-art technology and laboratory equipment that meets the latest industry standards.

The academy collaborates with post-secondary partners. An articulation agreement is in place with Burlington County College through their College Accelerated Placement (CAP) program whereby students can earn college credits while in high school. The academy graduation requirements exceed those mandated by the New Jersey Department of Education. Additionally, guest engineers and partnerships with the Engineering community are a staple of the program.

Applicants are selected from a diverse population of eighth grade students in each of the 40 sending districts of Burlington County.

### College Placements

BCC  
Drexel University  
Kean University  
Kettering University  
Morgan State  
Penn State  
Ramapo College  
Rochester Institute of Technology  
Rowan University  
Rutgers University  
TCNJ  
University of Arizona  
University of Maryland  
University of Virginia  
University of West Virginia  
Widener University

### Program Highlights

Goodwin College of Drexel University  
Competition  
Panasonic CDC Competition  
Pumpkin Chunkin' Contest  
Skills USA Robotics Competition  
VEX Robotics Competitions:  
Judges Award 2012-2013  
Tournament Champion 2013-2014  
Amaze Award 2013-2014  
Widener University Mouse Trap Competition

### Professional Partners

Batteries Plus  
Exxon/Mobile  
Lockheed Martin Aerospace Company  
Palmyra Cove Nature Park Geosciences  
Power Systems

**Tentative Course Sequence**

## Engineering Academy Course Sequence

**Freshmen Year**

English I\*  
 Physical Education/Health I  
 Algebra I\* or Geometry\*  
 US History I\*  
 Spanish I\*  
 Biology\*  
 Introduction to Engineering  
 Introduction to Digital Logic  
 Introduction to Computer Science Using C++  
 DC Circuit Analysis

**Sophomore Year**

English II\*  
 Physical Education/Health II  
 Geometry\* or Algebra II\*  
 US History II\*  
 Chemistry\*  
 Financial Literacy  
 Integrated Circuit Logic Families  
 Sequential Logic Circuits  
 Micro-Controllers/Assembly Language  
 Finite State Machines (FSM)  
 Interfacing to the Analog World

**Junior Year**

English III\*  
 Physical Education/Health III  
 Algebra II\* or Pre-Calculus\*  
 AP World History or World History\*  
 Spanish II\*  
 AP Chemistry\*  
 Object Oriented Programming Using C++  
 AC Circuit Analysis  
 Electronic Communications Systems  
 Digital Communications Systems

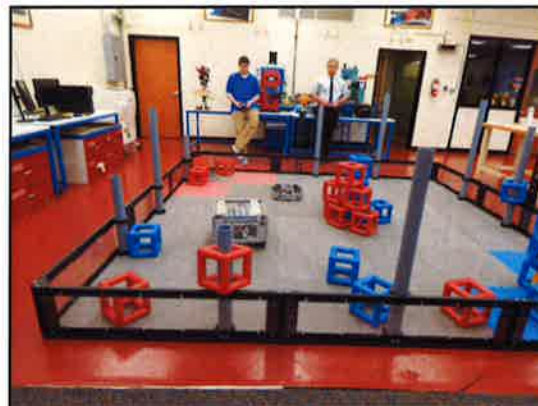
**Senior Year**

AP English Language & Composition or English IV\*  
 Physical Education/Health IV  
 Pre-Calculus\* or Calculus\* or AP Calculus AB  
 AP European History  
 AP Physics or Physics\*  
 Spanish III\*  
 Senior Project  
 Programming with JAVA

\*= Honors or College Prep

*“Logic will get you from A to Z;  
 Imagination will get you everywhere”.*

-Albert Einstein



*“Genius is one percent inspiration and  
 ninety-nine percent perspiration”.*

-Thomas A. Edison

## Career in Engineering Resource Links

### Top Paying Jobs are in Engineering

<http://money.cnn.com/2013/04/25/news/economy/engineering-best-paid-jobs/index.html>

This Tech Company Pays Engineers the Most – \$160,000 – And It's Not Google

<http://finance.yahoo.com/news/tech-company-pays-engineers-most-003606966.html>

### Engineering Your Future

<http://www.futuresinengineering.com/what.php>

### MIT – What is Engineering Video

<http://video.mit.edu/watch/what-is-engineering-3785/>

### Tomorrow's Engineers

<http://www.tomorrowsengineers.org.uk/home/>

### Engineer Girl

<http://www.engineergirl.org/>

### Try Engineering

<http://tryengineering.org/>

### Career Cornerstone Center

<http://www.careercornerstone.org/eng/eng.htm>

### O-Net Online

<http://www.onetonline.org/>

### Engineering.com

<http://www.engineering.com/>

### Discover Engineering

<http://www.discovere.org/discover-engineering>

### About Career Planning

<http://careerplanning.about.com/od/occupations/p/engineer.htm>

### VIDEOS

Lockheed Martin: We're Engineering a Better Tomorrow

<https://www.youtube.com/watch?v=a6L5J7WcUpo>

Made in America: Small Town Goes High Tech

<http://abcnews.go.com/WNT/video/small-town-high-tech-16247633>

Engineering Precision

<https://www.youtube.com/watch?v=uyN9y0BEMqc>



**Burlington County Institute of Technology**  
**Medford Campus**  
**10 Hawkin Road**  
**Medford, NJ 08055**  
**(609) 654-0200**  
**[www.bcit.cc](http://www.bcit.cc)**