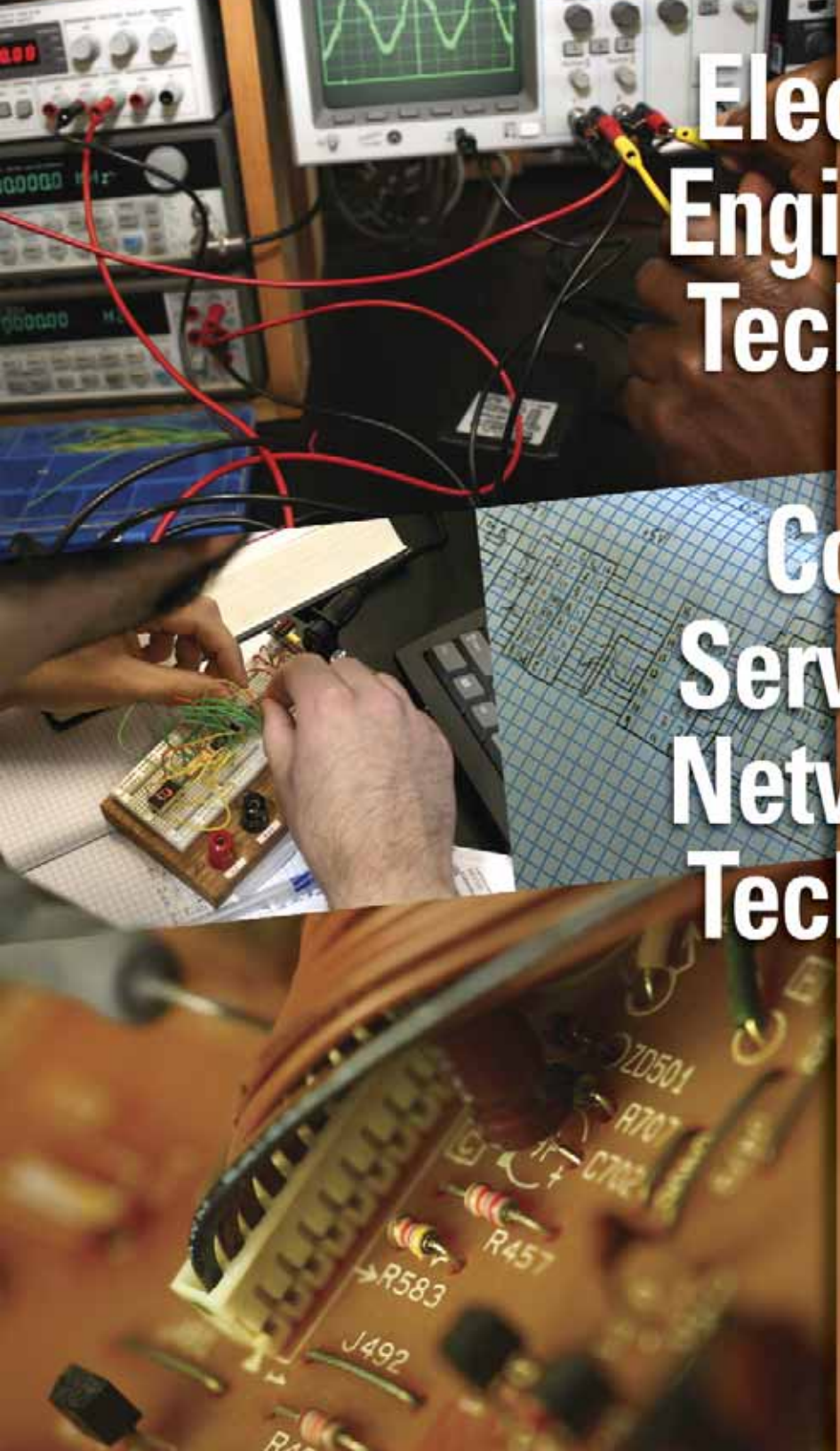

Electronics Engineering Technology and Computer Servicing & Networking Technology

BCC

BURLINGTON COUNTY COLLEGE

We Can Get You There.

BCC
BURLINGTON
COUNTY COLLEGE
We Can Get You There.

Electronics Engineering Technology
and
Computer Servicing & Networking Technology
Programs

Index

The Field of Engineering Technology*

Engineering technologists, working in multidisciplinary teams, use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, quality control, field service and maintenance. Their work is more hands-on oriented than that of scientists and engineers.

Most employers prefer to hire engineering technologists with at least a two-year associate degree in engineering technology. Some colleges offer only two-year associate degrees; others offer four-year BS degree programs, and some offer both degrees. Regardless of which type of degree you choose, it is important to select a program that is accredited.

Employment Opportunities and Earnings

Of the 530,000 engineering technicians who held jobs in 2004, about a third or 180,000 were electrical and electronics engineering technicians. About 36 percent of all engineering technicians worked in manufacturing, mainly in the computer and electronic equipment, transportation equipment, and machinery manufacturing industries. Another 22 percent worked in professional, scientific, and technical service industries, mostly in engineering or business services companies that do engineering work.

The top four types of engineering technicians (2004) and their earnings:

Engineering Technician	Number	Median Earnings
Electrical and Electronic Engineering Technologists	182,000	$46,310
Civil Engineering Technologists	94,000	$38,550
Industrial Engineering Technologists	69,000	$43,590
Mechanical Engineering Technologists	48,000	$43,400

A "Day in the Life" of an Electronics or Computer Engineering Technologist

Electronics and computer engineering technologists help to design, develop, test, manufacture and service electrical, electronic and computer equipment such as communication equipment, radar, industrial and medical measuring or control devices, robotics, and computers.

Engineering technologists who work in research and development build or set up equipment, prepare and conduct experiments, collect data, calculate or record results, and help engineers or scientists in other ways, such as making prototype versions of newly designed equipment. They also assist in design work, often using circuit analysis software and computer-aided design (CAD) techniques.

As our society is increasingly dependent on technology, ET experience is useful to large and small businesses, education, health care, travel, and other industries. On a daily basis, however, Engineering Technologists will apply their knowledge of science, technology, engineering, and mathematics to solve problems.

Almost all jobs in engineering technology require some sort of interaction with coworkers. Whether they are working in a team situation or writing a report, most engineering technologists must have the ability to communicate and work with other people.

After initial on-the-job experience, an ET might choose to move away from more technical responsibilities and become more involved in management, sales, marketing, or other support areas.

Preparation and Training

Most employers prefer to hire someone with at least a two-year associate degree in engineering technology. Training at technical institutes, other community colleges, and public and private vocational-technical schools, and in the Armed Forces can lead to advanced standing in the Burlington County College Electronics Engineering or Computer Servicing & Networking Technology programs.

Prospective engineering technologists should take as many high school science and math courses as possible to prepare for postsecondary programs in engineering technology. Because many engineering technologists assist in design work, creativity is desirable. Therefore, prospective technologists should be involved in hands-on activities that encourage innovation. Finally, most engineering technologists must have the ability to communicate effectively and work well with other people.

Many publicly and privately operated schools provide technical training; the type, quality and cost of training varies considerably. Therefore, prospective students should consider accredited programs. Graduates of programs accredited by the Accreditation Board for Engineering and Technology (ABET) usually are recognized to have achieved an acceptable level of competence in the mathematics, science, and technical courses required for engineering technology.

Much of this information was from the Sloan Career Cornerstone Center. Please refer to this web site for* ***extensive* *career information* **(www.careercornerstone.org)**

Program Mission Statement

The mission of the Burlington County College Electronics Engineering Technology and Computer Servicing & Networking Technology programs is to produce graduates who are able to obtain employment as a technicians or transfer to a four-year college. In addition, our graduates will be technically competent, able to communicate effectively, work well with others and demonstrate professionalism.

Program Educational Objectives

The Electronics Engineering Technology and Computer Servicing & Networking Technology programs prepare graduates who, during the first few years after graduation, should be able to:

1. Find employment as a technician or transfer to a four-year college,
2. Apply a broad knowledge of electronics and computer engineering technology to support manufacturing, design, testing, troubleshooting, sales, and field service of electronic and computer systems,
3. Apply knowledge of analog and digital electronics and use mathematics, scientific principles, and critical thinking to creatively solve technical problems,
4. Utilize computers and software in a technical environment,
5. Communicate effectively both verbally and in writing,
6. Work effectively as an individual and as a member of a team,
7. Show a recognition of the need for professional, ethical and social responsibilities,
8. Continue professional training through conferences, seminars, courses and the pursuit of advanced degrees.

Program Outcomes

Graduates of the Electronics Engineering Technology and Computer Servicing & Networking Technology programs should demonstrate:

a. an appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines,

b. an ability to apply current knowledge to new applications,

c. an ability to conduct, analyze and interpret experimental results and apply results to make improvements where applicable,

d. an ability to apply creativity in the design of systems, circuits or processes,

e. an ability to work effectively on teams,

f. an ability to identify the characteristics of, analyze and solve technical problems,

g. an ability to communicate effectively through writing and oral presentation,

h. a recognition of the need for, and an ability to engage in lifelong learning,

i. an ability to understand professional, ethical, and social responsibilities,

j. respect for diversity and a knowledge of contemporary professional, societal, and global issues, and

k. a commitment to quality, timeliness and continuous improvement.

Associate of Applied Science (Electronics Engineering Technology)

The Electronics Engineering Technology program provides a solid theoretical foundation as well as practical "hands-on" laboratory experiences in Electronics. The program includes traditional EET courses as well as a course in A+ Certification. Graduates of this program will be able to enter an industrial career as an electronics engineering technician, involved in the manufacture, design, testing, troubleshooting, sales, and field service of electronic, computer, communication and electrical systems.

The AAS degree in Electronic Engineering Technology is also transferable. Graduates can transfer into the BS degree program in Applied Engineering Technology at Drexel at BCC, the innovative partnership program between Drexel University and BCC. Graduates similarly can transfer into the BS degree programs in Engineering Technology at the New Jersey Institute of Technology in Newark, NJ and at Temple University in Philadelphia, PA.

Electronics Engineering Technology

General Education Courses †	Credits
Written Communications	3
Arts and Humanities	3
Social Science (SOC 160 required) [1]	6
Mathematics (MTH 130 required)	4
Natural Science (PHY 110/111 required)	4
Computer Science (CIS 111, CIS 130, or CSE 135 recommended)	3
Total	**23**

† See General Edu. Requirements in catalog.

Program Courses	Credits	
EET 111 Electronic Computer Graphics	3	
EET 121 Circuits I [2]	4	
EET 131 Solid State Devices	4	
EET 141 Digital Circuits	4	
EET 222 Circuits II	3	
EET 232 Analog Integrated Circuits	4	
PHY 112 Principles of Physics II	3	
PHY 113 Principles of Physics II Lab	1	
MTH 142 Calculus: Tech& Apps.	3	3-4
or MTH 118 Calculus I [3]	4	
or MTH 226 Discrete Math	3	
Total required Program credits	**29-30**	

Program Electives	Credits	
Select 9 credit hours from the following:		
EET 101 Intro. to Electronics [2,3]	3	9
EGR 103 Fund. of Eng. Design [4]	3	
EET 251 Industrial Electronic Controls	4	
EET 210 IT Essentials: A+	4	
EET 242 Microprocessor Systems [4]	4	
CIS 150 Networking Fundamentals	4	
CIS 156 Introduction to UNIX & Linux	4	
Total	**9**	
Electives (ENG 102 [3] recommended)	3	
Total Required for Degree	**64**	

Notes:

[1] SOC 160 and ECO 203 required for Drexel at BCC.

[2] If the student does not have a previous background in circuits it is recommended that he/she take EET101, Intro to Electronics before taking EET 121, Circuits I.

[3] EET101 cannot be taken after passing EET121

[4] Required for Drexel at BCC.

Associate of Applied Science (Computer Servicing & Networking Technology)

This innovative program is designed to prepare students for the A+, Server+, Net+, Linux+ and Cisco CCNA and Cisco Wireless LAN Support Specialist Certification exams. This program provides a solid background in electronics, computer equipment servicing and networking, covering both hardware and software. Graduates of this program will qualify for a job as a Computer Service and Networking Technician in business, industry, education and government service centers and offices.

The AAS degree in Computer Servicing & Networking Technology is also transferable to Drexel University's at BCC, BS AET degree programs in Mechanical Engineering Technology or Manufacturing Technology; and New Jersey Institute of Technology's, Newark, New Jersey, BS degree in Engineering Technology with the Computer Option.

Computer Servicing & Networking Technology
(Option of Electronics Engineering Technology)

General Education Courses †	Credits
Written Communications	3
Arts and Humanities	3
Social Science (SOC 160 required) [1]	6
Mathematics (MTH 130 required)	4
Natural Science (PHY 110/111 required)	4
Computer Science (CIS 111, CIS 130, or CSE 135 recommended)	3
Total	**23**

† See General Edu. Requirements in catalog.

Program Courses	Credits
EET 121 Circuits I [2]	4
EET 131 Solid State Devices	4
EET 141 Digital Circuits	4
EET 210 IT Essentials: A+	4
EET 215 IT Essentials: Networking Oper. Sys	4
CIS 150 Networking Fundamentals	4
CIS 151 Cisco Network Routing Fund.	4
MTH 142 Calculus: Tech& Apps. 3 / or MTH 118 Calculus I [3] 4 / or MTH 226 Discrete Math 3	3-4
Total required Program credits	**31-32**

Program Electives	Credits
Select 10 credit hours from the following:	
EET 101 Intro. to Electronics [2,3]	3
EGR 103 Fund. of Eng. Design [4]	3
EET 111 Electronic Computer Graph. [4]	3
EET 232 Analog Integrated Circuits	4
EET 242 Microprocessor Systems [4]	4
CIS 152 Cisco Switching Basics and Intermediate Routing	4
CIS 157 Cisco WAN Technologies	4
CIS 156 Introduction of UNIX & Linux	4
CIS 207 Intro. to Computer Forensics	3
	10
Total	**10**
Electives (ENG 102 [4] recommended)	3
Total Required for Degree	**64**

Notes:
[1] SOC160 and ECO203 required for Drexel at BCC.
[2] If the student does not have a previous background in circuits it is recommended that he/she take EET101, Intro to Electronics before taking EET 121, Circuits I.
[3] EET101 cannot be taken after passing EET121
[4] Required for Drexel at BCC.

Industrial Advisory Committee

Our program receives support from engineers and technologists working in industry. Current companies represented are Inductotherm Corporation, Lockheed Martin, NWL Transformer, and others. Committee members suggest topics to be covered, provide plant trips for our students, review major program changes and assist in the program accreditation.

Accreditation

The Electronic Engineering Technology Program and the Computer Servicing & Networking Technology Program (Option to the EET program) are accredited by the Technology Commission of Accreditation Board for Engineering and Technology (TAC of ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700, or www.abet.org.

BCC Contact Information

Telephone: (609) 894-9311 or (856) 894-931, web site: **www.bcc.edu**

Admissions: Please call or refer to our website
Dr. David Spang, Dean of Science, Engineering and Technology
Jack Braun, Professor, Electronics, Engineering, Physics
Tom Houck, Assistant Professor, Electronics, Engineering

Burlington County College
Technology and Engineering Center
3331 State Route 38
Mt. Laurel, NJ 08054

BURLINGTON COUNTY COLLEGE

We Can Get You There.

June 2008