

Electronics Technology Program A.A.S. Degree

Electronics Engineering Technology Option

This option is designed for transfer to colleges or universities offering a Bachelor of Science in Technology or a Bachelor of Science in Engineering Technology degree, or for immediate employment in the electronics industry. Students should work with the transfer institution, their counselors, and the Electronics Technology faculty to insure correct course choices.

Graduates of this program will be able to:

- Perform engineering analysis and problem solving
- Develop an engineering design to meet given specifications
- Describe the social and cultural context of the engineering and technology fields
- Work well in diverse teams and provide leadership to teams and organizations
- Communicate effectively in oral, graphic and written form
- Recognize the need for continued learning throughout their career

Requirements

General Education - 20 credits as described on page 51 of the Catalog.

The following general education courses are recommended for students choosing this program.

(Credit hours listed with each course)

ENGL 121 English Composition: 3

The Writing Process

ENGL 122 English Composition: 3

Writing and Research

HIST 105 World Civilization I 3

ECON 107 Economics 3

OR

PSYC 105 Introduction to Psychology I 3

PHYS 111 General Physics I (Non-Calculus) 4

PHYS 112 General Physics II (Non-Calculus) 4

Career Studies - 46 credits as follows:

COMP 137 Programming for Engineers 3

ELEC 101 Computer Aided Circuit Analysis 3

ELEC 103 Electrical Skills and Techniques 4

ELEC 111 Electrical Circuits I 4

ELEC 112 Electrical Circuits II 4
ELEC 121 Introduction to Electronic
Devices and Circuits 4
ELEC 222 Advanced Electronic Circuits 4
ELEC 241 Introduction to Digital Circuits 4
ELEC 242 Introduction to Microprocessors 4
MATH 161 Technical Mathematics I 4
MATH 162 Technical Mathematics II 4
MATH 263 Applied Technical Calculus 4

**Suggested Sequence - Electronics Technology Program
A.A.S. Degree Electronics Engineering Technology
Option**

The following sequence is an example of how this degree can be completed in two years. This sequence is based on satisfaction of all Basic Skills requirements and *prerequisites and presumes a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your counselor for other options and to monitor your progress. This program is part of a joint admissions agreement program with N.J.I.T. Students completing this program may work toward a Baccalaureate degree or may continue in the Baccalaureate Degree Program at N.J.I.T.

Course Code	Credits	Course Code	Credits
SEMESTER 1 SEMESTER 2			
ELEC 101	3	ELEC 111	4
ELEC 103	4	MATH 162	4
HIST 105	3	ENGL 122	3
ENGL 121	3	Humanities or Social Sciences	3
MATH 161	4	PHYS 111	4
17	18		
SEMESTER 3 SEMESTER 4			
ELEC 112	4	ELEC 222	4
ELEC 121	4	ELEC 242	4
ELEC 241	4	COMP 137	3
PHYS 112	4	MATH 263	4
16	15		

Total Credits for Degree 66

*MATH 151 and/or MATH 152 may be required if MATH requirements are not satisfactory.

90 Programs of Study

Electronics

Technology

Program A.A.S.

Degree

Electronic/Computer

Technician Option

Computers have found their way into businesses and homes throughout

the nation and the world. This option provides the student with the skills required to troubleshoot and repair a wide variety of computer systems and digital electronic equipment. The student learns how to interface I/O to a microprocessor, and how peripherals and computers communicate with each other. The proliferation of computer systems has created a demand for highly qualified individuals to install and maintain computer systems, peripherals, and networks.

Graduates of this program will be able to:

- Build, test, operate and maintain electrical systems
- Apply circuit analysis, problem solving and design, computer programming, associated software, analog and digital electronics, and microcomputers to the building, testing, operation, and maintenance of electrical/electronic(s) systems
- Apply physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry
- Describe the social and cultural context of engineering and technology
- Work effectively in diverse teams and provide leadership to teams and organizations
- Communicate effectively in oral, graphic, and written form
- Recognize the need for continued learning throughout their career

Requirements

General Education - 20 credits as described on page 51 of the Catalog.

The following general education courses are recommended for students choosing this program.

(Credit hours listed with each course)

CHEM 100 Principles of Chemistry 4

ENGL 121 English Composition: 3

The Writing Process

ENGL 122 English Composition: 3
Writing and Research
HIST 105 World Civilization I 3
ECON 107 Economics 3
MATH 161 Technical Mathematics I 4
Career Studies - 45 credits as follows:
COMP 137 Programming for Engineers 3
ELEC 101 Computer Aided Circuit Analysis 3
ELEC 103 Electrical Skills and Techniques 4
ELEC 111 Electrical Circuits I 4
ELEC 112 Electrical Circuits II 4
ELEC 121 Introduction to Electronic 4
Devices and Circuits
ELEC 222 Advanced Electronic Circuits 4
ELEC 241 Introduction to Digital Circuits 4
ELEC 242 Introduction to Microprocessors 4
ELEC 243 Mini/Microcomputer Interfacing 4
ELEC 244 Computer Peripherals Data 4
Communications Networking

* Technical Elective 3-4

**Choose from technical courses such as ELEC 295,
ELEC 299, MATH 162, MATH 263, PHYS 111,
PHYS 112.*

A+ Computer Repair

Technician Academic Credit Certificate

At the conclusion, students can sit for A+ certification.

Graduates of this certificate program will be able to:

- Demonstrate knowledge of classifications, categories and principles of motherboards, processors, power supplies, expansion slots and memory in desktop computer systems
- Demonstrate knowledge and skills to identify, install, configure, and upgrade desktop computer modules and peripherals, as well as knowledge of basic types of printers, printer concepts and printer components
- Demonstrate knowledge of basic network concepts, terminology and security
- Demonstrate knowledge of operating systems including installation, upgrading, configuration, optimization, security and preventive maintenance
- Demonstrate the ability to diagnose and troubleshoot common problems and system malfunction as well as perform preventive maintenance.

Requirements

General Education - 6 credits required:

Required:

ENGL 121 English Composition: 3

The Writing Process

Recommended:

SPCH 115 Public Speaking 3

Career Studies – 25 credits as follows:

ELEC 101 Computer Aided Circuit Analysis 3

ELEC 103 Electrical Skills and Techniques 4

ELEC 241 Introduction to Digital Circuits 4

ELEC 243 Mini/Microcomputer Interfacing 4

ELEC 244 Computer Peripherals, Data 4

Communications and Networking

COMP 129 Information Technology 3

COMP 137 Programming for Engineers 3

Total Credits 31

Suggested Sequence - Electronics Technology Program

A.A.S.; Electronic/Computer Technician Option

The following sequence is an example of how this degree can be completed in two years.

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and presumes a Fall Term start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your counselor for other

options and to monitor your progress. This program is part of a joint admissions agreement

program with N.J.I.T. Students completing this program may work toward a Baccalaureate degree or may continue in the Baccalaureate Degree Program at N.J.I.T.

Course Code Credits Course Code Credits

SEMESTER 1 SEMESTER 2

ELEC 101 3 COMP 137 3

ELEC 103 4 ELEC 121 4

ELEC 111 4 ELEC 241 4

MATH 161 4 ECON 107 3

ENGL 121 3 ENGL 122 3

18 17

SEMESTER 3 SEMESTER 4

ELEC 112 4 ELEC 222 4

ELEC 242 4 ELEC 243 4

CHEM 100 4 ELEC 244 4

HIST 105 3 Technical Elective 3-4

15 15-16

Total Credits for Degree 65-66

Programs of Study 91

