



# Electrical Technology - Specialized Diploma (2022-2023 Catalog)

## SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion  
Plans can be modified to fit student needs by adding more semesters

**Choose your courses with your Advisor.**

Developmental Education Courses (if required)		<input type="checkbox"/>	MATH020	Pre-Algebra	
<input type="checkbox"/>	ACLS050	Introduction to Academic Literacy	<input type="checkbox"/>	MATH022	Elementary Algebra
<input type="checkbox"/>	ENGL027	Writing Skills Workshop	<input type="checkbox"/>	MATH026	Intermediate Algebra

complete	Course #	Course Title	Credits	Gen Ed	Pre-requisites / Co-requisites	
Semester 1	<input type="checkbox"/>	COLS101	College Success	1		
	<input type="checkbox"/>	CISC101	Introduction to Information Technology	3		
	<input type="checkbox"/>	ELTC101	Electrical Fundamentals	3		
	<input type="checkbox"/>	EMEC114	Mechanical Skills for the Trades	2		
	<input type="checkbox"/>	MATH103	Technical Mathematics	3	QL	
	<input type="checkbox"/>	OSAH101** or OSAH102	Construction Industry Outreach Safety Education** or General Industry Outreach Safety Education	1		
			Total Semester Credits:	13		
Semester 2	<input type="checkbox"/>	CMGT104	Construction Print Reading	3		
	<input type="checkbox"/>	ELTC107	Electrical Wiring I	3		PRE: ELTC101
	<input type="checkbox"/>	ELTC135	Electrical Motors and Controls	4		PRE: ELTC101
	<input type="checkbox"/>	EMEC140	Sensors, Wiring, and Troubleshooting	1		PRE: ELTC101
	<input type="checkbox"/>		Technical Elective+	3/4		Depends on course selected
		Total Semester Credits:	14-15			
		Total Degree Credits	27-28			

Technical Electives	
ELTC222	Solar Photovoltaic Systems I
ELTC265	Electrical Cabling Systems I
HVAC101	Fundamentals of HVAC/R I

Notes:  
 \*\*OSAH101 is recommended  
 +Eligible Technical Electives: any ELTC, HVAC, CADM, EMEC, ELEC, ENGG, CHEM, CISC, or WELD. Ineligible electives: CADM100, CADM117, EMEC115, ENGG100, or ENGG117.

**\*It is the student's responsibility to be knowledgeable of NCC graduation requirements and to verify transfer requirements with the 4-year institution. Courses listed on the program map are based upon the assumption that prerequisites and courses taken in previous semesters will be successfully completed**

**Program Narrative:**

- There has never been a more rewarding time to consider entering the electrical trades. With a large number of electricians approaching retirement age and the increasing technical complexity of new equipment, skilled electrical technicians are consistently in demand now and into the future. If you enjoy hands-on physical activities combined with complex problem solving opportunities, the electrical trade offers you a rewarding career path.
- Northampton's electrical technology program offers a range of stackable degrees; starting with a specialized diploma that can be completed in one-year, a certificate requiring a minimum of 39 credits, and an AAS degree requiring a minimum of 64 credits.
- All of our electrical programs are designed to be completed on either a full time or a part time basis, with most courses available in the evenings as well as during the day.

**Program Features**

- The specialized diploma in electrical technology offers students an entry-level credential for those interested in starting a career in the electrical trades. Students completing this program will gain a broad understanding of fundamental electrical principles, as well as valuable skills in residential wiring, basic electrical troubleshooting, and construction print reading. In addition, you will have the opportunity to learn about the basic industrial wiring of motors, sensors and controls; key electrical skills that are necessary in a wide variety of industries.
- Graduates will have entry level employment opportunities as apprenticeship electricians in both the construction and manufacturing sectors.
- Our program is designed to be completed either on a full time or part time basis, with most courses available in the evenings as well as during the day on NCC's main campus.
- All course work in this program may be directly applied toward Northampton's more comprehensive electrical technology certificate or our Associate of Applied Science (AAS) degree in electrical technology.

**Program Learning Outcomes:**

Students who complete the Electrical Technology Specialized Diploma will be able to:

- Demonstrate an ability to work and independently and collaboratively.
- Demonstrate skills in collecting, analyzing and applying technical information.
- Explain basic electrical theories, including Ohm's, Kirchhoff's, and Watt's laws.
- Properly employ test equipment to troubleshoot basic electrical circuits.
- Interpret technical information in the form of architectural drawings, schematics and electrical specifications.
- Describe the function and application of common electrical equipment as used in residential and light industrial environments.
- Explain basic electrical safety procedures.

**Career Information:**

Journeyman electrician (residential, commercial)

Industrial electrician

Electrical maintenance technician

See <https://northampton.emsicc.com/programs/electrical-construction-technology-aas/214379>