



Electrical Technology - Associate in Applied Science (2020-21 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"/>	ACLS050	Introduction to Academic Literacy	<input type="checkbox"/>
<input type="checkbox"/>	ENGL027	Writing Skills Workshop	<input type="checkbox"/>

Location: B= BETH, M= MROF, S=SBTH, F= ESTN, D= DIST *subject to change

complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
<input type="checkbox"/>	COLS101	College Success	1		B, M, D	----	B, M, D	D	
<input type="checkbox"/>	CISC101	Introduction to Information Technology	3		B, M, D, E	----	B, M, D, E	B, M, D	
<input type="checkbox"/>	EMEC101	Electrical Fundamentals	4		B	----	B	B	
<input type="checkbox"/>	EMEC114	Mechanical Skills for the Trades	2		B	----	B	----	
<input type="checkbox"/>	ENGL101	English I	3	Comm.	B, M, D	----	B, M, D	B, M, D	PRE: ENGL Placement Policy
<input type="checkbox"/>	MATH140	College Algebra	3	QL	B, M, D	----	B, M, D	B, M, D	PRE: MATH026 or Placement Policy
<input type="checkbox"/>	OSAH101+ or OSAH102	Construction Industry Outreach Safety Education or General Industry Outreach Safety Education	1		B	----	B	----	
Total Semester Credits:			17						
<input type="checkbox"/>	CMGT104	Construction Print Reading	3		B	----	----	----	
<input type="checkbox"/>	ELTC107	Electrical Wiring I	3		B	----	B	----	PRE: EMEC101
<input type="checkbox"/>	EMEC135	Motors and Controls	4		B	----	B	----	PRE: EMEC101
<input type="checkbox"/>	EMEC140	Sensors, Wiring, and Troubleshooting	1		B	----	B	----	PRE: EMEC101
<input type="checkbox"/>	CMTH102	Introduction to Communication	3	Comm.	B, M, D	----	B, M, D	B, M, D	
<input type="checkbox"/>		AH, SIT, or SSHB Elective	3	AH, SIT, SSHB	B, M, D	D	B, M, D	B, M, D	Depends on course selected
Total Semester Credits:			17						
<input type="checkbox"/>	ELTC109	Electrical Wiring II	3		B	----	B	----	PRE: ELTC107
<input type="checkbox"/>	EMEC240	Industrial Control Systems I	4		B	----	----	----	PRE: EMEC101; PRE or CO: EMEC140
<input type="checkbox"/>	ENGL151T	English II (Technical Writing)	3	Comm.	B	----	B	----	PRE: ENGL101
<input type="checkbox"/>		AH, SIT, or SSHB Elective	3	AH, SIT, SSHB	B, M, D	D	B	B, M, D	Depends on course selected
<input type="checkbox"/>		Technical Elective*	3 or 4						Depends on course selected
Total Semester Credits:			16-17						
<input type="checkbox"/>	ELTC211	National Electric Code	4		B	----	B	----	PRE: ELTC109 or permission of instructor
<input type="checkbox"/>	ELTC260G	Electrical Technology Practicum (WI)**	2		----	----	B	----	PRE: 1st-3rd semester technical courses & ENGL101
<input type="checkbox"/>	PHYS101	Physics I	4		B, M, D	----	B, D	M, D	PRE: MATH140 with a C or better
<input type="checkbox"/>		Elective	3		B, M, D	D	B, M, D	B, M, D	Depends on course selected
<input type="checkbox"/>		Technical Elective*	2 or 3						Depends on course selected
Total Semester Credits:			15-16						
Total Degree Credits			64-66						

General Education Requirements

<input type="checkbox"/>		Diversity
<input type="checkbox"/>	ELTC260G	Writing Intensive

Notes: **Students are required to secure a workplace sponsor for the practicum. Assistance can be provided by the electrical program management staff to facilitate sponsorship.

For the General Education Electives, students must select one course from the list of approved courses in two of the following categories: Arts & Humanities (AH); Social Science: Societies and Institution over Time (SIT); Social Science: Scientific Study of Human Behavior (SSHB). One course should be designated as Diversity and Global Awareness (D).

***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**

Arts & Humanities (AH)
ARTA 100 Art and Visual Thinking
ARTA 101 Art History Survey
CMTH 110 Introduction to the Theatre
CMTH 111 Acting I
CMTH 115 Technical Theatre
CMTH 117 Stagecraft
CMTH 126 The Communication Arts
CMTH 189 Stage Voice and Movement
CMTH 190 Stage Production
CMTH 206 Directing
CMTH 211 Plays: Classical to Contemp. (G-WI)
CMTH 212 Acting II
CMTH 218 Theatre Portfolio
CMTH 220 Introduction to Film
DANC 101 Dance History
DANC 110 Ballet I
DANC 120 Modern Dance I
DANC 130 Jazz I
DANC 210 Ballet II
DANC 220 Modern Dance II
DANC 230 Jazz II
ENGL 201 British Literature I (G-WI)
ENGL 203 Shakespeare (G-WI)
ENGL 205 American Literature I (G-WI)
ENGL 211 Plays: Classical to Contemp. (G-WI)
ENGL 215 Multicultural Adolescent Lit (G-WI)
ENGL 250 Latin American Literature (G-WI)
ENGL 251 British Literature II (G-WI)
ENGL 253 Creative Writing
ENGL 255 American Literature II (G-WI)
ENGL 256 Modern Poetry (G-WI)
ENGL 257 20th Century Lit by Women (G-WI)
ENGL258 Fiction Writing
ENGL 260 Contemporary Literature (G-WI)
ENGL 264 Irish Literature (G-WI)
ENGL 265 African-American Literature (G-WI)
ENGL 267 Poetry Writing
HUMA 121 The American Work Experience (G-WI)
HUMA 140 Intro to Women & Gender Studies (G-WI)
HUMA 150 Nature of the Environment
HUMA210 Creativity and the Origin of Ideas
JOUR 101 Journalism and Society
Modern Language - All MDLA Courses
MUSC 101 Introduction to Music
PHIL 111 On Death and Dying (G-WI)
PHIL 121 World Religions
PHIL 201 Introduction to Philosophy
PHIL 202 Ethics and Moral Problems (G-WI)
PHIL 204 Asian Philosophies
PHIL 211 Ancient Philosophy
PHIL 215 Modern Philosophy
PHIL 225 What is Freedom?

Societies & Institutions Over Time (SIT)
CMTH 221 History of Broadcasting
GEOG 101 World Geography
GEOG 151 Geography of the U.S. and Canada (G-WI)
GLBL 130 Intro to Global Studies
GLBL 160 Field Experience & Acad Research in GS
GLBL 230 Global Studies Capstone
HIST 103 Ancient and Medieval History
HIST 113 American History I (G-WI)
HIST 121 The Black Experience (G-WI)
HIST 123 African Civilization
HIST 140 Modern Chinese History
HIST 153 Found of Mod Euro History, 1300-1815 (G-WI)
HIST 163 American History II
HIST 165 The American Experience of Warfare (G-WI)
HIST 166 Civil War and Reconstruction (G-WI)
HIST 168 History of the Middle East (G-WI)
HIST 173 Mod European History, 1815 to Present (G-WI)
HIST 183 Modern American History 1945-Present
HIST 210 History of Mod Science, 1859 to Present
HIST 211 History of Pennsylvania
INTS 201 Implementing Sustainable Energy System...
INTS 202 The Architecture of the City: Classic to Contemp.
POLS 101 Introduction to Political Science
POLS 105 American Constitutional Law (G-WI)
POLS 110 American National Government (G-WI)
POLS 150 Peace Studies & Conflict Resolution (Study Abroad)
POLS 170 Politics of Modern Turkey (Study Abroad)
POLS 202 International Relations
POLS 205 Women and Politics (G-WI)
POLS 251 State and Local Government (G-WI)
SOCA 102 Cultural Anthropology (G-WI)
SOCA 105 American Ethnicity
SOCA 160 Issues in Contemp.Genocide & Mass Violence

Scientific Study of Human Behavior (SSHB)
ECON 201 Macroeconomics
GEOG 121 Environmental Sustainability (G-WI)
GEOG 140 Investigating Climate Change)
GEOG 271 Intro to Geographic Info Systems
HUMA 250 Research Methods in Social Sciences (G-WI)
INTS 250 Study Abroad
PSYC 103 Introduction to Psychology (G-WI)
PSYC 205 Research Methods
PSYC 230 Introduction to Health Psychology
PSYC 235 Dev Child Psychopathology
PSYC 245 Cognitive Psychology
PSYC 255 Abnormal Psychology
PSYC 258 Developmental Psychology (G-WI)
PSYC 265 Psychology of Sex and Gender
SOCA 103 Principles of Sociology (G-WI)
SOCA 125 Sociology of Families (G-WI)
SOCA 210 Sociology of Gender

Electives for A.A. & A.S. Degrees
All courses except: OXX-level courses; EARL221, 222

Technical Electives
CADM235 Revit Fundamentals PRE: CADM100 or ARCH101 or CMGT104
ELTC222 Solar Photovoltaic Systems I PRE: EMEC101
ELTC265 Electrical Cabling Systems I
EMEC130 Introduction to Process Control
EMEC245 Industrial Control Systems II PRE: EMEC240
HVAC101 Fundamentals of HVAC/R I CO: EMEC101 or instructor permission
EMEC125 Process and Automation Diagrams- P&ID

Diversity (D) Electives	
BIOS 126 Environmental Science	HUMA 140 Intro to Women and Gender Studies
BIOS 210 Environmental Biology	HUMA 150 Nature of the Environment
BUSA 115 Intro to International Business	HUMA210 Creativity and The Origin of Ideas
CJST 250 Contemporary Issues in Criminal Justice	INTS 201 Implement Sustain Energy Sys in Dev Com
CMTH 126 The Communication Arts	Modern Language - All MDLA Courses
CMTH 211 Plays: Classical to Contemporary	PHIL111 On Death and Dying
CMTH 215 Intercultural Communication	PHIL 121 World Religions
DANC 101 Dance History	PHIL 204 Asian Philosophies
ENGL 151L English II (Literature)	POLS 101 Introduction to Political Science
ENGL 205 American Literature I	POLS 105G American Constitutional Law
ENGL 211 Plays: Classical to Contemporary	POLS 150 Peace Studies & Conflict Res (Study
ENGL 215 Multicultural Adolescent Literature	POLS 202 International Relations
ENGL 250 Latin American Literature	POLS205 Women & Politics
ENGL 251 British Literature II	POLS 251 State & Local Government
ENGL 253 Creative Writing	PSYC 258 Developmental Psychology
ENGL 255 American Literature II	SOCA 102 Cultural Anthropology
ENGL 256 Modern Poetry	SOCA103 Principles of Sociology
ENGL 257 20th Century Lit by Women	SOCA 105 American Ethnicity
ENGL 260 Contemporary Literature	SOCA 150 Deviance
ENGL 264 Irish Literature	SOCA160 Issues in Cont Genocide & Mass Violence
ENGL 265 African-American Literature	SOCA204 Social Problems
ENGL 267 Poetry Writing	
GEOG 101 World Geography	
GEOG 121 Environmental Sustainability	
GEOG 151 Geographic of the U.S. and Canada	
GEOG 210 Weather and Climate	
GLBL 130 Intro to Global Studies	
GLBL 160 Field Experience & Acad Research in GS	
GLBL 230 Global Studies Capstone	
HIST 113 American History I	
HIST 121 The Black Experience	
HIST 140 Modern Chinese History	
HIST 165 The American Experience of Warfare	
HIST 166 Civil War & Reconstruction	
HIST 168 History of the Middle East	
HIST 173 Mod Euro History: 1815-Present	
HUMA 121 American Work Experience	

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 electrical technology AAS degree offers students an advanced technical credential for those interested in starting an electrical career in the construction trades or pursuing electrical technician positions in the advanced manufacturing sector.

All students completing this program will gain a broad understanding of fundamental electrical principles, residential and commercial wiring practices, and basic PLC / VFD programming/operation. In addition, students may tailor their second year technical courses to focus on their specific career goals, selecting from more advanced electrical courses including solar PV systems design, advanced industrial control systems, or specialized wiring courses.

The program is rounded out by including general education courses that will prepare you to better communicate and build teamwork at your organization, vital skills that are required to advance into supervisory positions. Graduates from this program will have employment opportunities as electricians, electrical service technicians, and electrical maintenance personal in both the construction and advanced manufacturing sectors.

Program Learning Outcomes:

Demonstrate an ability to work and independently and collaboratively.

Demonstrate competent speaking skills when working with diverse groups.

Demonstrate skills in collecting, analyzing and applying technical information.

Explain basic electrical theories, including Ohm's, Kirchoff's, and Watt's laws.

Properly use test equipment to troubleshoot electrical circuits.

Interpret technical information in the form of schematics and electrical specifications.

Describe the function and application of electrical equipment as used in residential, commercial and industrial environments.

Construct, analyze, and troubleshoot common industrial circuits used in control and distribution.

Properly interpret and apply the National Electric Code in common residential, commercial, and industrial applications.

Demonstrate electrical safety practices when working with electrical control and distribution equipment.

Apply mathematics to prepare electrical system documentation.

Transfer Information:

While the program is not specifically intended for transfer, it will be considered on a case-by-case basis by Pennsylvania College of Technology.

In addition, this program is eligible for the Bloomsburg partnership program for their "Bachelor of Applied Science in Technical Leadership" 4 year degree.

Career Information:

Journeyman electrician (residential, commercial)

Industrial electrician

Electrical maintenance technician

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