

# CONSTRUCTION TECHNOLOGY - ELECTRICAL, ASSOCIATE IN APPLIED SCIENCE DEGREE

NMC Code 653

The AAS in Electrical provides in-depth training and knowledge to those students who seek to have a well-balanced foundation of not only technical skills, but soft skills as well. Students completing this degree will find a wide range and availability of job opportunities. Electrical technicians have been in demand for installations, maintenance, repair, and support for industries ranging from private home owners to hospitals, manufacturers, and breweries. Technical training includes electrical theory, National Electrical Code, motors, generators, lighting, and control systems for residential through commercial/industrial applications. The curriculum is designed by the industry and aligned with State of Michigan electrical apprenticeship requirements. Information: (231) 995-2777.

Within this degree students will have the opportunity to earn the following: Electrical Journeyman's License.

## Requirements

### Major Requirements

Course	Title	Credits
<b>General Education Requirements</b>		
ENG 111	English Composition	4
Select one of the following:		3-4
BUS 231	Professional Communications	
ENG 112	English Composition	
ENG 220	Technical Writing	
Any Group 1 Humanities course		3
Math Competency <sup>1</sup>		4
Select one of the following:		4
ENV 103	Earth Science	
ENV 117	Meteorology & Climatology	
PHY 121	General Physics I	
Any Group 1 Social Sciences course		3
<b>Occupational Specialty Requirements</b>		
CAR 100	Introductory Craft Skills	2
ELE 101	Introduction to Electrical	3
ELE 105	Beg Residential Electrical	3
ELE 110	Electrical Code Studies I	3
ELE 111	Electrical Code Studies II	3
ELE 121	Adv Residential Electrical	3
ELE 125	Pre-Commercial Electrical	3
ELE 131	Commercial Electrical	3
ELE 135	Adv Commercial Electrical	3
ELE 142	Industrial Electrical	3
ELE 146	Adv. Industrial Electrical	3
EGY 115	Residential Energy Efficiency	3

Approved Construction Technology Electives	6
<b>Total Credits</b>	<b>62-63</b>

<sup>1</sup> Placement into MTH 122 Trigonometry *or* higher, *or* completion of MTH 121 College Algebra

### Approved Electives

Course	Title	Credits
CAR 101	Introduction to Carpentry	3
CAR 102	Intro to Woodworking	3
CAR 103	Construction Blueprint Reading	3
CAR 105	Foundations and Framing	3
CAR 121	Exterior Construction	3
CAR 125	Interior Construction <sup>1</sup>	3
CMT 107	Construction Supervision	4
CMT 207	Construction Cost Estimating <sup>1</sup>	3
EET 103	Electrical Studies I <sup>1</sup>	3
EET 204	Electrical Studies II <sup>1</sup>	3
EET 221	Industrial Controls <sup>1</sup>	3
EET 232	Programmable Logic Controllers <sup>1</sup>	3
EET 233	PLC Applications I <sup>1</sup>	3
EET 234	PLC Applications II <sup>1</sup>	3
EGY 101	Principles of Renewable Energy <sup>1</sup>	3
EGY 105	Sustainable Building Design	3
EGY 115	Residential Energy Efficiency	3
EGY 141	Solar Photovoltaic Tech I <sup>1</sup>	3
EGY 143	Solar Thermal Technology I <sup>1</sup>	3
EGY 145	Geothermal Technology <sup>1</sup>	3
ELE 101	Introduction to Electrical	3
ELE 105	Beg Residential Electrical <sup>1</sup>	3
ELE 110	Electrical Code Studies I <sup>1</sup>	3
ELE 111	Electrical Code Studies II <sup>1</sup>	3
ELE 121	Adv Residential Electrical <sup>1</sup>	3
ELE 125	Pre-Commercial Electrical <sup>1</sup>	3
ELE 131	Commercial Electrical <sup>1</sup>	3
ELE 135	Adv Commercial Electrical <sup>1</sup>	3
ELE 142	Industrial Electrical <sup>1</sup>	3
ELE 146	Adv. Industrial Electrical <sup>1</sup>	3
HVA 101	Introduction to HVAC/R	3
HVA 106	Fundamentals of Heating <sup>1</sup>	3
HVA 122	Refrigeration Fundamentals <sup>1</sup>	3
HVA 126	Residential and Commercial A/C <sup>1</sup>	3
HVA 132	Commercial A/C & Refrigeration <sup>1</sup>	3
HVA 136	EPA Certification <sup>1</sup>	3
PLU 101	Introduction to Plumbing	3
PLU 105	Plumbing Components <sup>1</sup>	3
PLU 121	Commercial Plumbing <sup>1</sup>	3
PLU 125	Plumbing Installation <sup>1</sup>	3
UAS 141	Remote Pilot Flight	3
UAS 211	Commercial Drone Operations <sup>1</sup>	3
UAS 241	Advanced Drone Operations <sup>1</sup>	3

<sup>1</sup> Denotes courses with required prerequisites.

## Course Sequence Guide

Course	Title	Credits
<b>Year 1</b>		
<b>Fall</b>		
ENG 111	English Composition	4
Social Sciences: Any Group 1 course		3
ELE 101	Introduction to Electrical	3
ELE 105	Beg Residential Electrical	3
CAR 100	Introductory Craft Skills	2
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
Select one of the following:		3-4
ENG 112	English Composition	
ENG 220	Technical Writing	
BUS 231	Professional Communications	
ELE 121	Adv Residential Electrical	3
ELE 131	Commercial Electrical (Spring only)	3
EGY 115	Residential Energy Efficiency	3
Approved Construction Technology Elective		3
<b>Credits</b>		<b>15-16</b>
<b>Year 2</b>		
<b>Fall</b>		
Select one of the following:		4
ENV 103	Earth Science	
ENV 117	Meteorology & Climatology	
PHY 121	General Physics I	
MTH 121	College Algebra	4
ELE 110	Electrical Code Studies I	3
ELE 125	Pre-Commercial Electrical (Fall only)	3
ELE 135	Adv Commercial Electrical (Fall only)	3
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
ELE 111	Electrical Code Studies II	3
ELE 142	Industrial Electrical	3
ELE 146	Adv. Industrial Electrical	3
Humanities: Any Group 1 course		3
Approved Construction Technology Elective		3
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>62-63</b>

The responsibility for determining the transferability of this degree and courses to another institution is the sole responsibility of the student.