CONSTRUCTION ELECTRICAL (AAS)

Degree: Associate of Applied Science
Major: Construction Electrical
Program Code: 1392

The AAS degree in Construction Electrical is designed to prepare students for a wide range of opportunities in the Construction Electrical field. The curriculum incorporates courses in building materials, estimating, planning and scheduling, installations, codes, safety, tools, calculations, and print reading. Career options include obtaining a position as an apprentice electrician, journeyman electrician, electrical installer, or maintenance and repair electrician.

For more information on what you can do with this major, visit CMU Tech's Programs of Study page.

All CMU/CMU Tech associate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, quantitative fluency, communication fluency, critical thinking, personal and social responsibility, and information literacy. In addition to these campus#wide student learning outcomes, graduates of this major will be able to:

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a construction electrician. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly calculate electrical formulas, and linear measurements. Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis/troubleshooting of electrical systems and apply those findings to strategies to properly repair these systems. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices of a construction electrician. (Applied Learning)
5. Demonstrate personal and professional ethical behavior as applied to a construction electrician. (Specialized Knowledge)
6. Demonstrate mastery of the current terminology in the construction electrician industry. (Specialized Knowledge)

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Degree Requirements

The following institutional degree requirements apply to all CMU and CMU Tech Associate of Applied Science (AAS) degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- 60 semester hours minimum.
- Students must complete a minimum of 15 of the final 30 semester hours of credit at CMU/CMU Tech.
- 2.00 cumulative GPA or higher in all CMU/CMU Tech coursework.
- A course may only be used to fulfill one requirement for each degree/certificate.
- No more than six semester hours of independent study courses can be used toward the degree.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed 20 semester credit hours for an AAS degree.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Degree Requirements.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See “Requirements for Undergraduate Degrees and Certificates” in the catalog for a complete list of graduation requirements.

Specific to this program:

- 64 semester hours total for the AAS, Construction Electrical.
- A minimum of 16 credits taken at CMU in no fewer than two semesters.

Essential Learning Requirements

(16 semester hours)
See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

Code	Title	Semester Credit Hours
Communication		
ENGL 111	English Composition I-GTCO1	3
SPCH 101	Interpersonal Communication	3
Mathematics		
MATH 108	Technical Mathematics (or higher) [1]	4
Other Essential Learning Core Courses		
Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
Total Semester Credit Hours		**16**

[1] MATH 108 is a 4 semester credit hour course; however, if a student completes a higher-level, Essential Learning eligible Mathematics course it must be at least 4 semester credit hours

Other Lower Division Requirements

Code	Title	Semester Credit Hours
Wellness Requirement		
KINE 100	Health and Wellness	1
Select one Activity course		1
Total Semester Credit Hours		**2**

Program Specific Degree Requirements

(46 semester hours, must earn a grade of "C" or better in each course.

Code	Title	Semester Credit Hours
Required Courses		
ELCE 102	Electrical Blueprint Reading	4
ELCE 110	House Wiring	4
ELCE 120	Commercial Wiring	4
ELCE 124	Electrical Safety	1
ELCE 130	National Electrical Code I	4
ELCE 135	National Electrical Code II	4
ELCE 144	Grounding and Bonding	1
ELCE 150	DC Circuit Fundamentals	4
ELCE 155	AC Circuit Fundamentals	4
ELCE 167	Electrical Maintenance	4
ELCE 220	Industrial Controls	4
ELCE 225	Introduction to PLCs	4
ELCE 229	AC/DC Variable Speed Drive	2
ELCE 263	Specific Wiring for Structured Cabling Systems	2
Total Semester Credit Hours		**46**

Suggested Course Plan

First Year		
Fall Semester		**Semester Credit Hours**
ELCE 102	Electrical Blueprint Reading	4
ELCE 110	House Wiring	4
ELCE 150	DC Circuit Fundamentals	4
MATH 108	Technical Mathematics (or higher) [1]	4
KINE 100	Health and Wellness	1
	Semester Credit Hours	**17**
Spring Semester		
ELCE 120	Commercial Wiring	4
ELCE 124	Electrical Safety	1
ELCE 130	National Electrical Code I	4
ELCE 144	Grounding and Bonding	1
ELCE 155	AC Circuit Fundamentals	4
KINA Activity Course		1
	Semester Credit Hours	**15**
Second Year		
Fall Semester		
ELCE 135	National Electrical Code II	4
ELCE 225	Introduction to PLCs	4
ELCE 263	Specific Wiring for Structured Cabling Systems	2
ENGL 111	English Composition I-GTCO1	3
Essential Learning Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
	Semester Credit Hours	**16**
Spring Semester		
ELCE 167	Electrical Maintenance	4
ELCE 220	Industrial Controls	4
ELCE 229	AC/DC Variable Speed Drive	2
SPCH 101	Interpersonal Communication	3
Essential Learning Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
	Semester Credit Hours	**16**
	Total Semester Credit Hours	**64**

[1] MATH 108 is a 4 semester credit hour course; however, if a student completes a higher-level, Essential Learning eligible Mathematics course it must be at least 4 semester credit hours

Advising and Graduation

Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a degree. The suggested course sequencing outlines how students could finish degree requirements. Some courses are critical to complete in specific semesters, while others may be moved around. Meeting with an academic advisor is essential in planning courses and altering the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for their intended degree(s).

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a degree and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their degree requirements:

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found on the Graduation web page.

If a student's petition for graduation is denied, it will be their responsibility to apply for graduation in a subsequent semester. A student's "Intent to Graduate" does not automatically move to a later graduation date.