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Industrial Electrical Technology - CERT B

Semester-by-Semester Pathway

A Certificate is outlined coursework that is designed to prepare a student to head out into the workforce in a short timeframe or for career advancement. This certificate totals 33 credit hours. Consult with an advisor for more information. Not all courses are offered each semester.

(T) are Systemwide Transfer Courses

(★) are recommended for this degree pathway.

| Semester 1 - Fall | | | | |
|-------------------|--|----------------------------------|--------------|----------------------|
| Complete | Course ID | Course Title | Credit Hours | Notes |
| Required Courses | | | | |
| | AE100 | AC/DC Circuits | 4.00 | Fall, Spring |
| | AE101 | Digital Multimeter Principles | 1.00 | Fall, Spring |
| | EE117 | Conduit Fabrication | 1.00 | Fall, Spring |
| | EE126 | NEC Codeology | 1.00 | Fall, Spring |
| | ME106 | Industrial Fluid Power | 3.00 | Fall, Spring |
| | TR120 | Work Ethics | 2.00 | Fall, Spring, Summer |
| | TR121 | General Industrial Safety/OSHA10 | 1.00 | Fall, Summer |
| Electives | | | | |
| | Industrial Electronics Technical Electives | | 2.00 | |
| Semester Total: | | | 15.00 | |

| Semester 2 - Spring | | | | |
|---------------------|--|------------------------------------|--------------|---|
| Complete | Course ID | Course Title | Credit Hours | Notes |
| Required Courses | | | | |
| | AE150 | Programmable Logic Controls (PLCs) | 3.00 | Fall, Spring Prereq: AE100 AC/DC Circuits. |
| | AE155 | Electrical Maintenance | 3.00 | Fall, Spring Prereq: AE100 AC/DC Circuits. |
| | ME110 | Fundamentals of Motor Controls | 3.00 | Fall, Spring Prereq: AE100 AC/DC Circuits. |
| | TR100 | Technical Math | 3.00 | Fall, Spring |
| Electives | | | | |
| | Industrial Electronics Technical Electives | | 3.00 | |
| Semester Total: | | | 15.00 | |

| Semester 3 - Fall | | | | |
|-------------------|-----------|--------------|--------------|-------|
| Complete | Course ID | Course Title | Credit Hours | Notes |
| Required Courses | | | | |

| | | | | |
|-----------------|-------|---|------|---|
| | AE200 | Variable Frequency Drives and Electric Motors | 3.00 | Fall, Spring Prereq: ME110 Fundamentals of Motor Controls. |
| Electives | | | | |
| Semester Total: | | | 3.00 | |

Total Credits: 33.00

*Semester offerings reflect the current academic year.

| Industrial Electronics Technical Electives | | | |
|--|--|--------------|---|
| Course ID | Course Title | Credit Hours | Notes |
| AE205 | Intermediate Programmable Logic Controllers | 3.00 | Fall, Spring Prereq: AE150 Programmable Logic Controllers. |
| AE250 | Distributed/Integrated Control Systems | 3.00 | Spring Prereq: AE200 Variable Frequency Drives & Electric Motors, or AE205 Industrial PLCs. |
| AE252 | Control Systems Development | 3.00 | Fall, Spring Prereq: AE200 Variable Frequency Drives & Electric Motors, or AE205 Industrial PLCs. |
| AE255 | Industrial Robotics | 3.00 | Fall, Spring Prereq: AE150 Programmable Logic Controllers. |
| ME112 | Heating System Fundamentals | 3.00 | Fall, Spring |
| ME114 | Renewable Energy Technology | 3.00 | |
| ME115 | HVAC Fundamentals | 4.00 | Fall, Spring |
| ME116 | Commercial Refrigeration | 4.00 | Spring |
| ME117 | Commercial Heating and Air Conditioning | 4.00 | Spring Prereq: ME115 HVAC Fundamentals, and EE203 Instruments & Measurements, or ME116 Commercial Refrigeration. |
| ME118 | Renewable Energy Technology Systems Analysis | 4.00 | Prereq: ME114 Renewable Energy Technology, and AE155 Electrical Maintenance, and ME115 HVAC Fundamentals. |
| ME124 | Renewable Energy Technology Maintenance | 4.00 | Prereq: ME114 Renewable Energy Technology, and AE155 Electrical Maintenance, and ME115 HVAC Fundamentals. |
| ME125 | Engineering Technology Internship | 3.00 | |
| ME129 | Mechanical Maintenance Skills | 3.00 | Fall, Spring |
| ME131 | EPA 608 | 1.00 | Fall |
| ME132 | HVAC Load Calculations | 1.00 | Fall |
| ME133 | HVAC Duct Sizing | 1.00 | Fall |
| ME134 | HVAC Code Requirements | 1.00 | Fall |
| ME140 | Low Pressure Boilers | 3.00 | Spring |