

ELECTRICAL TECHNOLOGY - AAS

Offered at: Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Hopkinsville Community College, Madisonville Community College, Owensboro Community and Technical College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 4603027039

Students enrolled in the Electrical Technology program are required to achieve a minimum grade of "C" in the technical core and in those courses selected as technical electives.

| Course | Title | Credits |
|--|---|---------|
| General Education | | |
| ENG 101 | Writing I | 3 |
| Select one of the following three options: | | 3 |
| MAT 116 | Technical Mathematics | |
| MAT 126 | Technical Algebra and Trigonometry | |
| Higher Level Quantitative Reasoning Course | | |
| Natural Sciences | | 3 |
| Social/Behavioral Sciences | | 3 |
| Heritage/Humanities | | 3 |
| Subtotal | | 15 |
| Technical Core | | |
| EET 119 or ELT 110 | Basic Electricity Circuits I | 5 |
| EET 250 | National Electrical Code | 4 |
| Select one of the following four options: | | 11-14 |
| <i>Option 1</i> | | |
| EET 270 & EET 271 | Electrical Motor Controls I and Electrical Motor Controls I Lab | |
| EET 264 & EET 265 | Rotating Machinery and Rotating Machinery Lab | |
| EET 272 & EET 273 | Electrical Motor Controls II and Electrical Motor Controls II Lab | |
| <i>Option 2</i> | | |
| EET 268 & EET 269 | Rotating Machinery Electrical Motor Controls I and Rotating Machinery and Motor Controls I Lab | |
| EET 272 & EET 273 | Electrical Motor Controls II and Electrical Motor Controls II Lab | |
| <i>Option 3</i> | | |
| EET 270 & EET 271 | Electrical Motor Controls I and Electrical Motor Controls I Lab | |
| EET 266 & EET 267 | Rotating Machinery and Transformers and Rotating Machinery and Transformers Lab | |
| EET 272 & EET 273 | Electrical Motor Controls II and Electrical Motor Controls II Lab | |
| <i>Option 4</i> | | |
| EET 274 & EET 275 | Electrical Motor Controls and Electrical Motor Controls Lab | |

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|--|--|-------|
| EET 264 & EET 265 | Rotating Machinery and Rotating Machinery Lab | |
| EET 127 | Electrical Technology Capstone | 1 |
| Digital Literacy ¹ | | 3 |
| General Education and Technical Core Subtotal | | 39-42 |
| <i>Students must complete one of the tracks listed below to complete the AAS requirements.</i> | | |

¹ If any student successfully tests out of Digital Literacy, he/she must take an additional Technical Course approved by the Electrical Program Coordinator.
Digital Literacy must be demonstrated either by competency exam or by completing a digital literacy course.

Automated Industrial Controls Technician Track

Offered at: Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Hopkinsville Community College, Owensboro Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 460302704

| Course | Title | Credits |
|---|------------------------------------|--------------|
| General Education and Technical Core Subtotal | | 39-42 |
| EET 276 | Programmable Logic Controllers | 2 |
| EET 277 | Programmable Logic Controllers Lab | 2 |
| Select one of the following two options: | | 3-5 |
| FPX 100 & FPX 101 | Fluid Power and Fluid Power Lab | |
| ELT 265 | Applied Fluid Power | |
| Technical Electives | | 16 |
| Total Credits | | 62-67 |

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Technical Electives for the Automated Industrial Controls Technician Track

| Course | Title | Credits |
|------------------------|---------------------------------------|---------|
| All EET Prefix Courses | | |
| All IMT Prefix Courses | | |
| ACR 100 | Refrigeration Fundamentals | 3 |
| ACR 101 | Refrigeration Fundamentals Lab | 2 |
| ACR 130 | Electrical Components | 3 |
| ACR 131 | Electrical Components Lab | 2 |
| BBT 100 | Introduction to HFC/Cable-TV | 3 |
| BBT 200 | Introduction to Cellular Technology | 2 |
| BRX 110 | Basic Blueprint Reading for Machinist | 2 |
| BRX 120 | Basic Blueprint Reading | 3 |
| BRX 220 | Blueprint Reading for Construction | 3 |
| CAD 100 | Introduction to Computer Aided Design | 3 |

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|---------|-----------------------------------|---|
| CMM 114 | Fundamentals of Machine Tools | 6 |
| ELT 103 | Introduction to Engineering | 3 |
| ELT 110 | Circuits I | 5 |
| ELT 114 | Circuits II | 5 |
| ELT 120 | Digital I | 3 |
| ELT 210 | Devices I | 4 |
| ELT 214 | Devices II | 4 |
| ELT 220 | Digital II | 3 |
| ELT 232 | Computer Software Maintenance | 3 |
| ELT 234 | Computer Hardware Maintenance | 3 |
| ELT 260 | Robotic and Industrial Automation | 5 |
| ELT 265 | Applied Fluid Power | 3 |
| ESP 101 | Introduction to Energy Systems | 3 |
| ISM 102 | Fundamentals of Instrumentation | 4 |
| ISM 210 | Fundamentals of Process Control | 4 |
| ISX 100 | Industrial Safety | 3 |
| ISX 101 | Introduction to Industrial Safety | 3 |
| WLD 140 | Gas Metal Arc Welding | 2 |
| WLD 141 | Gas Metal Arc Welding Fillet Lab | 3 |
| WLD 151 | Basic Welding A | 2 |
| WLD 152 | Basic Welding B | 5 |

Construction Electrician Track

Offered at: Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Hopkinsville Community College, Madisonville Community College, Owensboro Community and Technical College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 460302702

| Course | Title | Credits |
|---|--|--------------|
| General Education and Technical Core Subtotal | | 39-42 |
| Select one of the following two options: | | 7-8 |
| <i>Option 1</i> | | |
| EET 154 & EET 155 | Electrical Construction I and Electrical Construction I Lab | |
| EET 252 & EET 253 | Electrical Construction II and Electrical Construction II Lab | |
| <i>Option 2</i> | | |
| EET 254 & EET 255 | Electrical Construction and Electrical Construction Lab | |
| Technical Electives | | 16 |
| Total Credits | | 62-66 |

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Technical Electives for Construction Electrician Track

| Course | Title | Credits |
|------------------------|----------------------------|---------|
| All EET Prefix Courses | | |
| ACR 100 | Refrigeration Fundamentals | 3 |

| | | |
|---------|---|---|
| ACR 101 | Refrigeration Fundamentals Lab | 2 |
| ACR 130 | Electrical Components | 3 |
| ACR 131 | Electrical Components Lab | 2 |
| BBT 100 | Introduction to HFC/Cable-TV | 3 |
| BBT 200 | Introduction to Cellular Technology | 2 |
| BRX 110 | Basic Blueprint Reading for Machinist | 2 |
| BRX 120 | Basic Blueprint Reading | 3 |
| BRX 220 | Blueprint Reading for Construction | 3 |
| CAD 100 | Introduction to Computer Aided Design | 3 |
| CMM 114 | Fundamentals of Machine Tools | 6 |
| ELT 103 | Introduction to Engineering | 3 |
| ELT 110 | Circuits I | 5 |
| ELT 114 | Circuits II | 5 |
| ELT 120 | Digital I | 3 |
| ELT 210 | Devices I | 4 |
| ELT 214 | Devices II | 4 |
| ELT 220 | Digital II | 3 |
| ELT 222 | Mechanics of Telephony | 3 |
| ELT 224 | Basic Telecommunications Installation and Maintenance | 3 |
| ELT 232 | Computer Software Maintenance | 3 |
| ELT 234 | Computer Hardware Maintenance | 3 |
| ELT 260 | Robotic and Industrial Automation | 5 |
| ELT 265 | Applied Fluid Power | 3 |
| ESP 101 | Introduction to Energy Systems | 3 |
| FPX 100 | Fluid Power | 3 |
| FPX 101 | Fluid Power Lab | 2 |
| ISX 100 | Industrial Safety | 3 |
| ISX 101 | Introduction to Industrial Safety | 3 |
| ISM 102 | Fundamentals of Instrumentation | 4 |
| ISM 210 | Fundamentals of Process Control | 4 |

Industrial Automation and Process Control Technician Track

Offered at: Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Owensboro Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 460302705

| Course | Title | Credits |
|---|------------------------------------|--------------|
| General Education and Technical Core Subtotal | | 39-42 |
| ISM 102 | Fundamentals of Instrumentation | 4 |
| ISM 210 | Fundamentals of Process Control | 4 |
| FPX 100 | Fluid Power | 3 |
| FPX 101 | Fluid Power Lab | 2 |
| EET 276 | Programmable Logic Controllers | 2 |
| EET 277 | Programmable Logic Controllers Lab | 2 |
| Technical Electives | | 9 |
| Total Credits | | 65-68 |

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with

the same number of hours from the technical elective list or a course approved by the program coordinator.

Technical Electives for the Automation and Process Control Technician Track

| Course | Title | Credits |
|------------------------|-----------------------------|---------|
| All ETT Prefix Courses | | |
| All IMT Prefix Courses | | |
| ELT 103 | Introduction to Engineering | 3 |
| ELT 120 | Digital I | 3 |
| ELT 210 | Devices I | 4 |
| ELT 214 | Devices II | 4 |
| ELT 220 | Digital II | 3 |

Industrial Automation and Robotics Technician Track

Offered at: Bluegrass Community and Technical College, Elizabethtown Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 460302706

| Course | Title | Credits |
|---|--|--------------|
| General Education and Technical Core Subtotal | | 39-42 |
| EET 290 | Troubleshooting Industrial Controls and Motors | 4 |
| Select one of the following two options: | | 4 |
| EET 200 & EET 201 | Robotic Systems I and Robotic Systems II | |
| IMT 200 | Industrial Robotics and Robotic Maintenance | |
| EET 202 | Robotic Maintenance | 2 |
| EET 203 | Robotic Vision Systems | 2 |
| EET 276 | Programmable Logic Controllers | 2 |
| EET 277 | Programmable Logic Controllers Lab | 2 |
| EET 280 | Multi-Platform Programmable Logic Controllers | 4 |
| Technical Electives | | 6 |
| Total Credits | | 65-68 |

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Technical Electives for Industrial Automation and Robotics Technician Track

| Course | Title | Credits |
|------------------------|-----------------|---------|
| All EET Prefix Courses | | |
| All IMT Prefix Courses | | |
| FPX 100 | Fluid Power | 3 |
| FPX 101 | Fluid Power Lab | 2 |

Industrial Electrician Track

Offered at: Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Hopkinsville Community College, Owensboro Community and Technical

College, Southcentral Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 460302701

| Course | Title | Credits |
|---|---|--------------|
| Required | | |
| General Education and Technical Core Subtotal | | 39-42 |
| Select one of the following two options: | | 7-8 |
| <i>Option 1</i> | | |
| EET 154 & EET 155 | Electrical Construction I and Electrical Construction I Lab | |
| EET 252 & EET 253 | Electrical Construction II and Electrical Construction II Lab | |
| <i>Option 2</i> | | |
| EET 254 & EET 255 | Electrical Construction and Electrical Construction Lab | |
| EET 276 | Programmable Logic Controllers | 2 |
| EET 277 | Programmable Logic Controllers Lab | 2 |
| Technical Electives | | 14 |
| Total Credits | | 64-68 |

In the situation that any course that has been used in the Technical Core is also repeated in the Track, the student must select a course with the same number of hours from the technical elective list or a course approved by the program coordinator.

Technical Electives for Industrial Electrician Track

| Course | Title | Credits |
|------------------------|---|---------|
| All EET Prefix Courses | | |
| All IMT Prefix Courses | | |
| ACR 100 | Refrigeration Fundamentals | 3 |
| ACR 101 | Refrigeration Fundamentals Lab | 2 |
| ACR 130 | Electrical Components | 3 |
| ACR 131 | Electrical Components Lab | 2 |
| BBT 100 | Introduction to HFC/Cable-TV | 3 |
| BBT 200 | Introduction to Cellular Technology | 2 |
| BRX 110 | Basic Blueprint Reading for Machinist | 2 |
| BRX 120 | Basic Blueprint Reading | 3 |
| BRX 220 | Blueprint Reading for Construction | 3 |
| CAD 100 | Introduction to Computer Aided Design | 3 |
| CMM 114 | Fundamentals of Machine Tools | 6 |
| ELT 103 | Introduction to Engineering | 3 |
| ELT 110 | Circuits I | 5 |
| ELT 114 | Circuits II | 5 |
| ELT 120 | Digital I | 3 |
| ELT 210 | Devices I | 4 |
| ELT 214 | Devices II | 4 |
| ELT 220 | Digital II | 3 |
| ELT 222 | Mechanics of Telephony | 3 |
| ELT 224 | Basic Telecommunications Installation and Maintenance | 3 |
| ELT 260 | Robotic and Industrial Automation | 5 |
| ELT 265 | Applied Fluid Power | 3 |
| ELT 232 | Computer Software Maintenance | 3 |

| | | |
|---------|-----------------------------------|---|
| ELT 234 | Computer Hardware Maintenance | 3 |
| ESP 101 | Introduction to Energy Systems | 3 |
| FPX 100 | Fluid Power | 3 |
| FPX 101 | Fluid Power Lab | 2 |
| ISX 100 | Industrial Safety | 3 |
| ISX 101 | Introduction to Industrial Safety | 3 |
| ISM 102 | Fundamentals of Instrumentation | 4 |
| ISM 210 | Fundamentals of Process Control | 4 |
| WLD 140 | Gas Metal Arc Welding | 2 |
| WLD 141 | Gas Metal Arc Welding Fillet Lab | 3 |
| WLD 151 | Basic Welding A | 2 |
| WLD 152 | Basic Welding B | 5 |