INDUSTRIAL ELECTRICITY/ELECTRONICS TECHNOLOGY (Degree)

Program Purpose

The purpose of the Associate in Applied Science in Industrial Electricity/Electronics Technology program is to provide accessible, premium quality educational opportunities that will provide individuals with the knowledge, technical skills, values, and attitudes necessary to obtain entry-level employment in the electrical, electronics, computer, and/or industrial maintenance fields.

The associate degree is intended to produce graduates who are prepared for employment as entry-level industrial electricians, electronics technicians, or computer industry technicians. Program graduates are to be competent in the academic areas of communications, mathematics, computer literacy, and human relations and in the technical areas of electronics circuit repair, industrial electrical wiring, programmable logic controllers, instrumentation, troubleshooting, preventive maintenance, and computer system operation set up and repair. Reid State Community College will accomplish program objectives by providing students with a comprehensive general education and technical training in the core area of industrial electricity/electronics/maintenance. The occupational skill preparation will meet recognized skill standards. The College will ensure program quality through internal certification of graduate competencies.

Occupational Data

Graduates of the Industrial Electronics/Electricity program work in the electronic/electrical industry where they use their skills which are grouped under the classification of industrial electronic/electrical maintenance/technician personnel. According to Economic Modeling, the national median wage for industrial electronic/electricity maintenance/technician personnelwas $35.02/hr. in 2022.

Program Outcome Objectives

- Program graduates will be proficient in communication, computation, and interpersonal skills.
- Program graduates will be technically proficient.
- Program graduates will be able to obtain industry certification.
- Program graduates will be successfully employed in the field.
- Employers of program graduates will be satisfied with their education and training.

Admission Requirements

Applicants to this program must complete the application procedures and be 16 years of age. Additionally, applicants must present official documentation of a high school diploma, in accordance with ACCS Board of Trustees Policy, or GED. If the ACCUPLACER score is between 200-242 the student will be required to enroll in MTH 098. With a score of 243-252 the student must take MTH 100+MTH 099.

Industrial Electricity/Electronics Technology, Associate in Applied Science

MINIMUM CREDITS REQUIRED: 71-72 Semester Credit Hours
Length : 6 Semesters of full-time attendance

GENERAL EDUCATION CORE: 16-17 Semester Credit Hours		Theory	Lab	Internship	Contact	Credit
ORT 100 ORI 101	Orientation OR Orientation to College	1	0		1	1
AREA I: WRITTEN COMPOSITION 3 hours						
ENG 101	English Composition I	3	0		3	3
AREA II: HUMANITIES AND FINE ARTS 3 hours						
ART 100 MUS 101 REL 151 REL 152 PHL 206	Art Appreciation OR Music Appreciation OR Survey of the Old Testament OR Survey of the New Testament OR Ethics and Society	3	0		3	3
AREA III: NATURAL SCIENCE AND MATHEMATICS 6-7 hours						
*Students are required to complete one three-hour mathematics course and may either complete an additional mathematics course or one natural science course as listed below. *NOTE: MTH courses higher than MTH 100 may be substituted for the three-hour math requirement as well. MTH 110 or 112 is suggested for students anticipating transfer. A four-hour science course is also suggested.*						
MTH 100 MTH 116 MTH@	Intermediate College Algebra OR Mathematical Applications* OR Higher MTH Course	3	0		3	3
MTH* BIO 113 BIO 101 BIO 103 PHS 111	Any MTH course OR History of Biology OR Introduction to Biology I OR Principles of Biology OR Physical Science I	3 3 3 3 3	0 0 1 1 1		3 3 5 5 5	3 3 4 4 4
AREA IV: HISTORY, SOCIAL, AND BEHAVIORAL SCIENCES 3 hours						
Students are required to complete one three-hour history, social, or behavioral science listed below.						
PSY 200 PSY 210 SOC 200 ECO 231 ECO 232 HIS@	General Psychology OR Human Growth and Development OR Introduction to Sociology OR Principles of Macroeconomics OR Principles of Microeconomics Any HIS course level 100 or above	3	0		3	3

TECHNICAL CONCENTRATION: 55 Semester Credit Hours							
ILT	104	Industrial Instrumentation	2	1		4	3
ILT	105	Industrial Instrumentation Lab	0	2		4	2

TECHNICAL CONCENTRATION: 55 Semester Credit Hours							
ILT	117	Principles of Construction Wiring	1	2		5	3
ILT	160	DC Fundamentals	1	2		5	3
ILT	161	AC Fundamentals	1	2		5	3
ILT	169	Hydraulics/Pneumatics	2	1		4	3
ILT	194	Intro to Programmable Logic Controllers	2	1		4	3
ILT	195	Troubleshooting Techniques I	2	1		4	3
ILT	216	Industrial Robotics	3	0		3	3
ILT	217	Industrial Robotics Lab	0	2		4	2
INT	113	Industrial Motor Control I	1	2		5	3
INT	213	Industrial Motor Control II	1	2		5	3
WKO	110	NCCER Core	2	1		5	3
INT	112	Industrial Maintenance Safety Procedures	3	0		3	3
WKO	142	MSSC Quality Practice/Measurement Course	1	2		5	3
ELT	241	National Electric Code	3	0		3	3
WKO	144	MSSC Maintenance Awareness Course	1	2		5	3
INT	161	Blueprint Reading for Industrial Technology	3	0		3	3
ILT	196	Advanced Programmable Logic Controllers	2	1		4	3

INDUSTRIAL ELECTRICITY/ELECTRONICS TECHNOLOGY (Certificate)

Program Purpose

The purpose of the Industrial Electricity/Electronics Technology (CER) is to provide accessible, premium quality educational opportunities that will provide individuals with the knowledge, technical skills, values, and attitudes necessary to obtain entry-level employment in the electrical, electronics, computer, and/or industrial maintenance fields.

The Industrial Electricity/Electronic (CER) is intended to produce graduates who are prepared for employment as entry-level industrial electricians, electronics technicians, or computer industry technicians. Program graduates are to be competent in the academic areas of communications, mathematics, computer literacy, and human relations and in the technical areas of electronics circuit repair, industrial electrical wiring, programmable logic controllers, instrumentation, troubleshooting, preventive maintenance, and computer system operation set up and repair. Reid State Community College will accomplish program objectives by providing students with a comprehensive general education and technical training in the core area of industrial electricity/electronics/maintenance. The occupational skill preparation will meet recognized skill standards. The College will ensure program quality through internal certification of graduate competencies.

Occupational Data

Completers of the Industrial Electronics/Electricity (CER) work in the electronic/electrical industry where they use their skills which are grouped under the classification of industrial electronic/electrical maintenance/technician personnel. According to Economic Modeling, the national median wage for industrial electronic/electricity maintenance/technician personnelwas $35.02/hr. in 2020-22.

Program Outcome Objectives

- Program graduates will be proficient in communication, computation, and interpersonal skills.
- Program graduates will be technically proficient.
- Program graduates will be able to obtain industry certification.
- Program graduates will be successfully employed in the field.
- Employers of program graduates will be satisfied with their education and training.

Admission Requirements

Applicants to the Industrial Electricity/Electronics (CER) must complete the application procedures and be 16 years of age. Additionally, applicants must present official documentation of a high school diploma, in accordance with ACCS Board of Trustees Policy, orGED. If the ACCUPLACER score is between 200-242 the student will be required to enroll in MTH098
With a score of 243-252 the student must take MTH 100+MTH 099.

Industrial Electricity/Electronics, Certificate

MINIMUM CREDITS REQUIRED: 56 Semester Credit Hours Length of Program: 4-5 Semesters of full-time attendance

GENERAL EDUCATION CORE: 7 Semester Credit Hours			Theory	Lab	Contact	Credit
ORT 100 ORI 101		Orientation OR Orientation to College	1	0	1	1
AREA I: WRITTEN COMPOSITION 3 hours						
ENG	101	English Composition I	3	0	3	3
AREA III: NATURAL SCIENCE AND MATHEMATICS 3 hours						
MTH MTH @	116	Mathematical Applications or MTH higher level course	3	0	3	3
TECHNICAL CONCENTRATION: 49 Semester Credit Hours						
ILT	104	Industrial Instrumentation	2	1	4	3
ILT	105	Industrial Instrumentation Lab	0	2	4	2
ILT	117	Principles of Construction Wiring	1	2	5	3
ILT	160	DC Fundamentals	1	2	5	3
ILT	161	AC Fundamentals	1	2	5	3
ILT	169	Hydraulics/Pneumatics	2	1	4	3
ILT	194	Introduction to Programmable Logic Controllers	2	1	4	3
ILT	195	Troubleshooting Techniques I	2	1	4	3
ILT	216	Industrial Robotics	3	0	3	3
ILT	217	Industrial Robotics Lab	0	2	4	2
INT	113	Industrial Motor Control I	1	2	5	3
INT	213	Industrial Motor Control II	1	2	5	3
WKO	110	NCCER Core	2	1	5	3
INT	112	Industrial Maintenance Safety Procedures	3	0	3	3
WKO	142	MSSC Quality Practices and Measurement Course	1	2	5	3
ELT	241	National Electric Code	3	0	3	3
WKO	144	MSSC Maintenance Awareness Course	1	2	5	3