

ELECTRICITY

Power and Controls Major

TECHNOLOGY & WORKFORCE DEVELOPMENT DIVISION

Program of Study

The Industrial Electricity program prepares students for maintenance and electrical technician positions. Students receive hands-on training on programmable controllers (PLC) AC/DC motors and generators, transformers, test equipment, basic hydraulic systems and industrial wiring practices according to the National Electrical Code.

The basic fundamentals are stressed in this curriculum so that graduates can also adapt to the continuous changes in this field.

The faculty has identified the following Learning Outcomes for all graduates:

- Troubleshoot conventional and specialized motors and their feedback systems.
- Understand residential, commercial, and industrial diagrams, as well as motor control, hydraulic, pneumatic, and instrumentation piping diagrams.
- Troubleshoot and program open and closed loop process systems.
- Install, program and troubleshoot, state of the art, programmable logic controllers.
- Select, install and troubleshoot industrial electrical sensors and devices.
- Design, install, and program a human interface device for a PLC network.

POTENTIAL OCCUPATIONS:

- Programmable Logic Controller Technician
- Industrial Electrician
- Instrumentation & Process Control Technician
- Automation Technician
- Field Service Technician

Associate of Applied Science

TECHNICAL CONCENTRATION

		Credit Hrs.
EET	1050	Electricity. 3
EET	1320	AC/DC Machines. 3
EET	1360	Power Electronics 3
Choose:		EET 1510 Industrial Computing or CIT 1241 Microcomputers 3
EET	1630	Graphical Interfaces 3
EET	2240	Electrical Codes & Prints 3
EET	2400	Motor Controls 4
EET	2440	Programmable Controllers I 4
EET	2790	Programmable Controllers II 4
EET	2830	Instrumentation & Process Controls I. 3
		Total Technical Credit Hours 33

GENERAL EDUCATION AND RELATED COURSES

GEN	1000	First-Year Seminar 1
CAD	1110	CAD I 3
CIT	1090	Computer Fundamentals 3
ENG	1050	College Composition I 3
MET	2200	Hydraulics 3
MFG	1020	Safety. 1
MTH	1310	Intermediate Algebra 4
ROB	2230	Servo Systems 3
SPE	2010	Effective Speaking 3
		*Humanities Elective 3
		*Social Science Elective 3
		Total General Education & Related Credit Hours 30

TOTAL CREDIT HOURS **63**

* See page 95 for a listing of specific electives.
See your advisor for appropriate course selection.

For available Certificate Program options, see catalog pages 97–103.

** All students graduating from Terra State Community College with an Associate degree of any kind will be functionally proficient in common computer operations and applications. Please see your academic advisor or academic division office for further details.

To determine when courses are scheduled, see program curriculum sheet which is available from the Enrollment Services office in Building A/Room 100, from the Technology and Workforce Development Division office, Building E, Room 107 or on the web at www.terra.edu.