ELECTRICAL TECHNOLOGY

Program Description & Curriculum

About the Program

The purpose of this program is to provide a basic core of instruction and practical shop experience to prepare students for employment in Electrical Technology. Students who complete the basic core may choose any of the concentrations. Concentration areas prepare the graduate as an Industrial Electrician or a Commercial Electrician.

The Industrial Electrician concentration prepares individuals to install, troubleshoot, and repair wiring, electrical equipment, and other electrical devices used in the industrial environment, such as motors (AC and DC drives), transformers, control systems, instruments, PLC's, and lighting systems.

The Commercial Electrician concentration prepares individuals to install, maintain, troubleshoot, and repair electrical devices, components, and equipment that are utilized in residential and commercial electrical systems. Students have two choices to complete the Commercial Electrician concentration. 1) by course work or 2) by employment in a work-based learning course with an electrical contractor.

All program specialties emphasize safe and efficient work practices, basic occupational skills, and are organized into competency-based courses that specify occupational competencies, which the student must successfully complete. Each area includes a study of all applicable codes and standards, blueprint reading, wiring diagrams, and installations which are appropriate to the area. All work is performed with an emphasis on shop and work safety.

Degrees/Certificates

Technical Diploma (TD)
Certificate of Technical Studies (CTS)
Technical Competency Area (TCA)

Available degrees and certificates may vary at each campus. Check with your local campus for more information.

CIP 460302

Electrical Technology CURRICULUM

Course #	Course Title	Lecture/Lab Hours	Credit Hours	Clock Hours
ORNT1000	Student College Career Success Seminar	1/0	1	15
ELEC1120	Basic Electricity	2/4	6	180
ELEC1210	Residential Wiring	2/4	6	180
	TCA - Electrician Helper		**13**	**375**
ELEC2460	Technical Mathematics For Electricians	1/1	2	45
ELEC1220	Electrical Raceways	0/3	3	120
ELEC1230	National Electrical Code	0/2	2	90
ELEC1311	Residential Wiring Installation	1/5	6	205
ELEC1430	Blueprint Interpretation	1/2	3	90
CPTR1000	Introduction To Computers	1/1	2	45
JOBS2450	Job Seeking Skills	2/0	2	30
Basic Electrical Core			**33**	**1000**
	CTS-Residential Electrician		**33**	**1000**
*A Technical Diploma in Electrical Technology requires the completion of the Basic Electrical Core (33 credit hours) plus the completion of courses required of the Industrial Electricity **OR** Commercial Electricity Concentration.*				
ELEC1330	Generators/Motors And Transformer Operation	0/2	2	110
ELEC1420	Introduction To Motor Controls	0/2	2	110
ELEC1440	Motor Controls	0/2	2	150
ELEC2520	Solid State Theory	1/1	2	90
ELEC2540	Logic Functions	0/2	2	115
ELEC2720	Introduction To Programmable Logic Controllers	0/2	2	115
	TD - Electrical Technology (Industrial Electrician Concentration)		**45**	**1690**
There are two choices to achieve the Technical Diploma in Commercial Electricity: *1) by completing the Basic Electrical Core (33 credits) plus ELEC 1330, ELEC 1420, ELEC 1440, and ELEC 1410 OR* *2) by completing the Basic Electrical Core (33 credits) plus ELECT 2542 and ELEC 2543.* *The enrollment in #2 above is contingent upon the availability of employers partnering with SCLTC for the purposes of Workbased learning training.*				
Commercial Electricity Concentration (#1)				
ELEC1330	Generators/Motors And Transformer Operation	0/2	2	110
ELEC1420	Introduction To Motor Controls	0/2	2	110
ELEC1440	Motor Controls	0/3	3	150
ELEC1410	Commercial Wiring	2/4	6	320

Commercial Electricity Concentration (#2)				
ELEC2542	Electrical Work Based I	1/5	6	390
ELEC2543	Electrical Work Based II	1/5	6	300
	TD - Electrical Technology (Commercial Electrician Concentration)		**45**	**1690**
Additional Exit Points:				
SOLR1000	Solar Fundamentals	3/0	3	45
SOLR1010	PV Solar Applications	1/2	3	75
SOLR1020	Industrial Solar Applications	1/2	3	75
SOLR1030	Solar Thermal Applications	1/2	3	75
	TCA- Solar Systems Installer		**12**	**270**
ELEC1120	Basic Electricity	2/4	6	180
ELEC1210	Residential Wiring	2/4	6	180
ELEC2460	Technical Mathematics For Electricians	1/1	2	45
ELEC1230	National Electrical Code	0/2	2	90
ELEC1311	Residential Wiring Installation	1/5	6	205
ELEC1420	Introduction To Motor Controls	0/2	2	110
SOLR1000	Solar Fundamentals	3/0	3	45
SOLR1010	PV Solar Applications	1/2	3	75
SOLR1020	Industrial Solar Applications	1/2	3	75
	CTS-ELEC: Energy Systems Technician		**33**	**1005**
Optional Electives:				
CSRV1000	Customer Service	3/0	3	45
CSRV2000	Customer Service and Sales	3/0	3	45
ENTP1000	Foundations of Entrepreneurship	3/0	3	45
SOLR1000	Solar Fundamentals	3/0	3	45
SOLR1010	PV Solar Applications	1/2	3	75
SOLR1020	Industrial Solar Applications	1/2	3	75
SOLR1030	Solar Thermal Applications	1/2	3	75
The following courses may be substituted for the above course requirements with approval from the College's Chief Academic Officer.				
ELEC2991	Special Projects I	0/1	1	30
ELEC2993	Special Projects II	0/2	2	60
ELEC2995	Special Projects III	0/3	3	90
ELEC2996	Special Projects IV	3/0	3	45
ELEC2998	Special Projects V	1/0	1	15
HACR2997	Practicum	0/3	3	135
HACR2999	Cooperative Education	0/3	3	135

Revised: March 15, 2013