



Electrical

Career Cluster: Architecture and Construction
Endorsement: Business & Industry

Course(s)	State ID	Local ID	Credits	Prerequisites	Industry Based Certifications
Middle School Course(s)	n/a	n/a	n/a	n/a	n/a
Level 1 Course(s)					
Principles of Construction	13004220	007165	1	None	630 NCCER Core Level I
<p><i>Principles of Construction is intended to provide an introduction and lay a solid foundation for those students entering the construction or craft skilled areas. The course provides a strong knowledge of construction safety, construction mathematics, and common hand and power tools. For safety and liability considerations, limiting course enrollment to 15 students is recommended. This course also provides communication and occupation skills to assist the student in obtaining and maintaining employment.</i></p>					
Level 2 Course(s)					
Electrical Technology I	13005600	047195	2	Principles of Construction	640 NCCER Electrical I
<p><i>In Electrical Technology I, students will gain knowledge and skills needed to enter the workforce as an electrician or building maintenance supervisor, prepare for a postsecondary degree in a specified field of construction or construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, and the reading of electrical drawings, schematics, and specifications.</i></p>					
Level 3 Course(s)					
Electrical Technology II	13005700	047019	2	Electrical Technology I	641 NCCER Electrical II
<p><i>In Electrical Technology II, students will gain advanced knowledge and skills needed to enter the workforce as an electrician, a building maintenance technician, or a supervisor; prepare for a postsecondary degree in a specified field of construction or construction management; or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.</i></p>					
Level 4 Course(s)					
Practicum in Construction Technology	13005250	047081	2	Electrical Technology II	783 OSHA 30 Construction
<p><i>In Practicum in Construction Technology, students will be challenged with the application of knowledge and skills gained in previous construction-related coursework. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.</i></p>					



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Industry Based Certifications

630 NCCER Core Level I



NCCER Core is designed as a rigorous, competency-based, industry-recognized program for career and technical education. Students may complete the required elements sooner or later than the recommended 150 hours of knowledge and skills-based instruction, depending on their individual proficiency in mastering the content. NCCER Core is a prerequisite to all other Level 1 craft curriculum. Its modules cover topics such as Basic Safety, Communication Skills and Introduction to Construction Drawings. The recently released sixth edition of Core features a new, elective module introducing construction careers, more rigorous performance tests and extensive updates on math, hand tools, power tools and drawings. Completing this curriculum gives the trainee the basic skills needed to continue education in any craft area he or she chooses.

640 NCCER Electrical I



Electricians install electrical systems in structures; they install wiring and other electrical components, such as circuit breaker panels, switches, and light fixtures, and they follow blueprints, the National Electrical Code® and state and local codes. The NCCER Level 1 Electrical exam covers the topics such as an orientation to the electrical trade, electrical safety, introduction to electrical circuits, electrical theory, introduction to the National Electrical Code®, device boxes, and basic electrical construction drawings.

641 NCCER Electrical II



Electricians install electrical systems in structures; they install wiring and other electrical components, such as circuit breaker panels, switches, and light fixtures, and they follow blueprints, the National Electrical Code® and state and local codes. The NCCER Level 2 Electrical exam covers the topics such as an alternating current, motor theory and application, electric lighting, conduit bending, pull and junction boxes, and conductor installations. Additional topics can be found at the link below.

783 OSHA 30 Construction



The OSHA Outreach Training Program provides workers with basic and more advanced training about common safety and health hazards on the job. Students receive an OSHA 30-hour course completion card at the end of the training. Students can complete the 30-hour course online or through an OSHA authorized outreach trainer. Trainers are authorized to deliver outreach training classes. If a teacher is interested in becoming an authorized trainer, the OSHA Training Institute Education Centers will have additional information.

Career and Technical Student Organizations



SkillsUSA Texas: <https://skillsusatx.org/>



National Technical Honor Society: nthsof.org

