

Electrician (ABC)

A 5-year, 20-credit Apprenticeship (day school)

About the Apprenticeship

Associated Building Contractors of Wisconsin in conjunction with WCTC offer this apprenticeship program for a career in the electrical field. Work as an indentured apprentice for an electrical contractor and complete on-the-job work experience in residential, commercial and industrial, and some specialized work.

How to Get Started

Contact:

- Associated Building Contractors of WI (ABC) for non-union building trades. 5330 Wall Street, Madison, WI 53718 800.829.9926
www.abcbwi.org/apprenticeship
- Complete the ABC application packet. The packet will include qualifying test information.
- After application approval, a list of potential employers will be provided.
- Obtain employment for apprenticeship training
- The State of Wisconsin oversees the apprenticeship system and will contact WCTC to set a class schedule.

Required Courses

First Semester

413-511	ABC Construction Elec Appr IA	2
449-501	OSHA Safety Intro for Appr	.5
Total semester credits		2.5

Second Semester

410-513	Carpentry for Electricians	.75
413-512	ABC Construction Elec Appr IB	2
Total semester credits		2.75

Third Semester

413-513	ABC Construction Elec Appr IIA	2
413-521	Residential Design & Estimating	.75
Total semester credits		2.75

Fourth Semester

413-514	ABC Construction Elec Appr IIB	2
442-512	Electrical Apprentice Welding	.5
Total semester credits		2.5

Fifth Semester

413-515	ABC Construction Elec Appr IIIA	2
Total semester credits		2

Sixth Semester

413-516	ABC Construction Elec Appr IIIB	2
413-561	Blueprint for Electricians	1
Total semester credits		3

Seventh Semester

413-517	ABC Construction Elec Appr IVA	2
413-530	Electrical Code I	.5
Total semester credits		2.5

Eighth Semester

413-518	ABC Construction Elec Appr IVB	2
413-522	Industrial Design & Estimating	.75
Total semester credits		2.75

Ninth Semester

413-519	ABC Construction Elec Appr VA	2
413-531	Electrical Code II	.5
Total semester credits		2.5

Tenth Semester

413-520	ABC Construction Elec Appr VB	2
455-455	Transition to Trainer	.2
Total semester credits		2.2

Curriculum is current as of catalog printing. The most current curriculum requirements for graduation will be provided upon admission to program, or review at www.wctc.edu.

Electrician (ABC) Required Courses	
410-513 Carpentry for Electricians .75	
Learn basic terms used to identify components of buildings as well as be introduced to the correct use of power tools used in carpentry construction.	
413-511 ABC Construction Elect Appr IA 2	
Examine the following topics: DC electrical theory, electrical safety, NEC basics, electrical test equipment, commercial electrical wiring, residential electrical wiring, and race-way boxes and fittings. This is the first course of a 10-course series in the ABC Electrician Apprentice curriculum.	
413-512 ABC Construction Elect Appr IB 2	
Discuss the following topics: commercial and industrial electrical wiring, residential electrical wiring, race-ways, boxes and fittings, anchors and supports, conductors, and electrical blueprints. This course is intended for the ABC Electrician apprentice.	
413-513 ABC Construction Elec Appr IIA 2	
Explore the topics of alternating current, motors, grounding, conduit bending, and boxes and fittings. Prerequisites: 413-512	
413-514 ABC Construction Elec Appr IIB 2	
Study topics such as conductor installations, cable tray, conductor terminations and splices, electric service installation, circuit breakers and fuses, contactors and relays, and electric lighting. Prerequisites: 413-513	
413-515 ABC Construction Elec Appr IIIA 2	
Explore the following subjects: distribution equipment, distribution system transformers, electricity in HVAC systems, overcurrent protection, conductor selection, and calculations. Prerequisites: 413-514	
413-516 ABC Construction Elec Appr IIIB 2	
Examine the following subjects: raceway, box and fitting fill requirements, wiring devices, motor controls, motor calculations, motor maintenance, and hazardous locations. Prerequisites: 413-515	
413-517 ABC Construction Elec Appr IVA 2	
Discuss the following topics: high voltage terminations/splices, load calculations, electronic theory, specialty lighting, and motor maintenance. Prerequisites: 413-516	
413-518 ABC Construction Elec Appr IVB 2	
Explore topics such as advanced controls, signaling systems, specialty transformers, standby and emergency systems, welding machines, HVAC controls, heat tracing, and freeze protection. Prerequisites: 413-517	
413-519 ABC Construction Elect Appr VA 2	
Study the principles and applications of advanced electronic theory, voice and data systems, busses and networks, and fiber optics.	
413-520 ABC Construction Elect Appr VB 2	
Broaden knowledge of programmable logic controllers, medical systems, and TV and antenna systems.	
413-521 Residential Desgn & Estimating .75	
Review the basics of electrical blueprints and National Electrical Code requirements for residential areas during this apprenticeship course. Use various methods to develop a residential power plan and residential estimates.	
413-522 Ind Des & Est .75	
Explore the electrical code requirements for commercial and industrial areas. Develop and calculate the power plan and distribution for an application. Discuss various methods of estimating used during an apprenticeship. Prerequisites: 413-521	
413-530 Electrical Code I .5	
Study the Wisconsin Electrical Code and the National Electrical Code as applied to residential and commercial installations, and examine minimum code requirements regulating wiring methods, equipment, occupancies, and special conditions. This is the first course of three in an apprenticeship series.	
413-531 Electrical Code II .5	
Study the Wisconsin Electrical Code and the National Electrical Code as applied to residential and commercial installations, and examine minimum code requirements regulating wiring methods, equipment, occupancies, and special conditions. Prerequisites: 413-530	
413-561 Blpt for Electricians 1	
Become familiar with a commercial project using a complete set of blueprints.	
442-512 Electrical Apprentice Welding .5	
Learn the correct and safe techniques of basic welding during this course, geared for the electrician apprentice.	
449-501 OSHA Safe Intro for Appr .5	
Examine OSHA safety standards as they apply to the construction field. Prepare to test for the OSHA 36-hour card during this course, which was developed to allow the ABC indentured apprentice to fulfill the unpaid evening-related instruction requirement.	
455-455 Transition to Trainer .2	
A required seven hour course that provides guidance for soon to be journey level workers to be effective job site trainers and allows for passing knowledge to future apprentices.	