

WESTERN DAKOTA TECH

ELECTRICAL TRADES

Associate of Applied Science, 71-77 Credit Hours, 18-Month Program

This program provides in-depth instruction in the theories and principles of electricity and electrical construction. Strong math skills are a requirement. Principles of operation for electrical devices/equipment and correct/safe operation of tools are covered. A typical job description for an electrician may include typically working 40 hours per week. However, some jobs may require working evenings or weekends. Electricians must be physically capable of climbing and working at heights and outside. Other physical work may be required.

Students will study and learn to interpret and apply the requirements of the National Electrical Code. A solid background in the theory and technology of the electrical field will give the knowledge and ability to install, maintain, troubleshoot, and repair electrical circuits and equipment. The training gives students the flexibility to pursue different areas of employment as entry-level electricians. Most of our lab experience mimics outside work-sites and allows students to have first-hand experience in a controlled environment. The Electrical Trades program prepares students for employment as an apprentice electrician in the construction, mining, and industrial manufacturing sectors of the Electrical Industry.

The South Dakota Electrical Commission requires successful completion of First Aid/CPR training to graduate from an electrical trades program.

Course	No.	Course Title	Credits
General Education Requirements			
CSC	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS <i>online or</i>	3
SOC	100	INTRODUCTION TO SOCIOLOGY	
ENGL	106	WORKPLACE COMMUNICATIONS I*	3
MATH	104	TECHNICAL MATHEMATICS**	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
		Total	15
Technical Requirements***			
IEL	102	ELECTRICAL FUNDAMENTALS I	9
IEL	103	ELECTRICAL FUNDAMENTALS II	3
IEL	122	ELECTRICAL CODE STUDY I	3
IEL	123	INDUSTRIAL DATA COMMUNICATION	2
IEL	131	INTRODUCTION TO ELECTRICAL WIRING	3
IEL	135	BASIC ELECTRICAL MATERIALS AND DEVICES	1
IEL	211	ELECTRICAL MOTOR CONTROL	3
IEL	213	ELECTRICAL HEATING AND APPLIANCES	2
IEL	214	ELECTRICAL CODE STUDY II	2
IEL	216	ELECTRICAL MOTOR CONTROL LAB	2
IEL	217	SPECIAL SYSTEMS	4
IEL	218	WIRING LAB I	3
IEL	220	WIRING LAB II	3
IEL	221	PROGRAMMABLE LOGIC CONTROLLERS	2
IEL	222	PROGRAMMABLE LOGIC CONTROLLERS LAB	3
IEL	223	ELECTRICAL MOTOR LAB	1
IEL	224	POWER DISTRIBUTION	2
IEL	226	ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE	2
IEL	231	ELECTRICAL DRAWINGS AND SCHEMATICS	2
IEL	232	DIGITAL DRAWINGS AND ESTIMATING	2
IEL	299	ELECTRICIAN INTERNSHIP/CO-OP (OPTIONAL)	6
WDM	100	WELDING AND FABRICATION FOR GENERAL APPLICATIONS	2
		Total	56-62

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

**Prerequisite: Acceptable ACCUPLACER score or Basic Math.

***CPR/First Aid must be completed before graduation.

Semester breakdown on next page

2023-2024 Academic Catalog – 4/2023

Apply online today at wdt.edu or call Admissions Department at (605)718-2565 or email admissions@wdt.edu

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