

Commercial and Residential Wiring Diploma - 68 credits

Program Area: Electrician (Fall 2019)

REMEMBER TO REGISTER EARLY

Program Description

The Commercial and Residential Wiring diploma program teaches students to install, operate, and repair electrical systems. Students also learn to install wiring in buildings and to make power connections from an outside source. Training in the program includes simulated residential, commercial, and industrial settings. Also covered will be DC and AC motor controls, electrical distribution panels, and testing equipment.

Students become familiar with digital applications, analog solid state, and programmable controllers that are used within industrial settings throughout the nation.

This diploma transfers seamlessly into an AAS degree (82 credits) in Commercial and Residential Wiring.

Program Outcomes

- Have a working knowledge and understanding of the National Electrical Code (NEC)
- Have a working knowledge of safety issues relating to the electrical industry and workplace
- Understand and be able to perform tasks relating to residential wiring
- Understand and be able to perform tasks relating to commercial wiring
- Understand and be able to perform tasks relating to industrial wiring

• Required Courses

Number	Name	Credits	Term
ELTN 1406	DC Electricity	4	
ELTN 1408	AC Electricity	4	
ELTN 1412	Digital Electronics	2	
ELTN 1422	Media and Cabling	2	
ELTN 1500	Practical PC Maintenance	2	
ELTN 1442*	Motors and Generators	6	
ELTN 1470	Systematic Troubleshooting	1	
ELTN 1635*	PLT Control Lab	3	
ELTN 2442	Automation Controllers	3	
ELEC 2401*	Residential Wiring	1	
ELEC 2402*	Residential Wiring Lab	3	
ELEC 2405*	Electrical Blueprint Reading	2	
ELEC 2421*	Commercial Wiring I	1	
ELEC 2422*	Commercial Wiring I Lab	3	
ELEC 2431*	Motor Control	2	
ELEC 2432*	Motor Control Lab	1	
ELEC 2440*	National Electrical Code I	2	
ELTN 2430*	Introduction to Instrumentation	3	
ELEC 2451*	Commercial Wiring II	1	
ELEC 2452*	Commercial Wiring II Lab	3	
ELEC 2461*	Electrical Troubleshooting	2	
ELEC 2471*	Industrial Wiring	2	
ELEC 2472*	Industrial Wiring Lab	2	
ELEC 2501*	Electric Controls	2	
ELEC 2502*	Electrics Controls Lab	1	
ELEC 2510*	National Electrical Code II	2	
ELTN 2440*	Motor Speed Controllers	3	
	Choose 5 credits from the following		
	<ul style="list-style-type: none"> • Any ELTN or ELEC courses not listed above • ALTH 1435: American Red Cross Community First Aid and CPR (1 cr) • COMM 1601: Interviewing Procedure and Practice (1 cr) • COMM 1602: Teambuilding Procedure and Practice (1 cr) 	5	

Total Credits

68

*Requires a prerequisite or a concurrent course



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Pre-program Requirements

Successful entry into this program requires a specific level of skill in the areas of English, mathematics, and reading. Program entry will depend, in part, on meeting the prerequisites listed below:

English/Reading:

- A score of 78 or higher on the reading comprehension portion of the Accuplacer, or
- Completion of ENGL/READ 0950 or 0955 (or equivalent course or higher). ENGL/READ 0950 may be taken concurrently with Semester I coursework.

Mathematics:

- A score of 71 or higher on the Elementary Algebra Skills portion of the Accuplacer, or
- Completion of MATH 0460 (or equivalent or higher). Math 0460 may be taken concurrently with Semester I coursework, or
- With instructor permission, concurrent enrollment in MATH 1115.

*For interpretation of test results and selection of appropriate coursework;
or general information about the program, admissions, financial aid, and getting started at LSC,
contact the [professional advising team](#) at 218-733-7601*

For more information about the Commercial and Residential Wiring Diploma including course descriptions, course prerequisites, the gainful employment disclosure, and potential career opportunities, see the [program website](#)

or

Contact Faculty Advisor, [Steven Oberstar](#) at 218-733-6955



MINNESOTA STATE

CIP Code: 46.0302
Minnesota State Program ID: 1664
LSC Major ID: 5054

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AASC Approval: 2/15/17
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