

# Minnesota Articulated College Credit (ACC) Agreement

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**Agreement Name** **Electrical Wiring**

**Agreement Last Reviewed** **Fall 2024**

**Next Review Date** **Fall 2026**

## College Courses

Class	Title	School	Credits
ELEC 1200	Residential Wiring	Minnesota West Community & Technical College	2.0 of 5.0
AGRI 2220	Building Construction Outreach	Minnesota West Community & Technical College	1.0 of 3.0
MECH 1125	Electrical Controls I	Minnesota West Community & Technical College	1.0 of 2.0
AGRI 2135	Ag Electricity	Ridgewater College	1.0 of 2.0
MEAG 1500	Facility Maintenance	South Central College	1.0 of 3.0

## Curriculum Content Objectives

To receive credit, students will be introduced to 100% of the following content objectives:

1. Identify and demonstrate electrical safety procedures
2. Practice tool and equipment safety
3. Define electrical terms
4. Indicate the purpose of the National Electric Code (NEC)
5. Identify service entrance installation and sizing requirements.
6. Define branch circuits
7. Compute volts, amps, ohms, and watts, using Ohm's Wattage Law
8. Use ammeters, voltmeters and ohmmeters
9. Define fuses and switches and their purpose
10. Calculate conductor and fusing capacity
11. Calculate voltage drop
12. Describe circuit overload devices and where they are required (i.e., thermal circuit breaker, arc fault circuit breaker, ground fault circuit breaker)
13. Correctly wire cord and cord ends
14. Calculate power in circuits
15. Calculate series resistance circuits
16. Calculate parallel resistance circuits
17. Troubleshoot parallel resistance circuits
18. Connect receptacles, switches, and fixtures
19. Read and interpret electrical wiring plans
20. Demonstrate knowledge of the NEC as it pertains to agricultural structures and production facilities
21. Diagram 3-way and 4-way switching

## Assessments

To receive ACC, students must achieve no less than 80% or B for a final grade in the high school course.

## ACC Concept

Through Articulated College Credit (ACC), specific college curriculum content goals and assessments are embedded in participating high school career and technical education (CTE) programs as specified in this agreement. Relevant knowledge, skills, and standards are taught by qualified CTE high school instructor(s) in one or more high school courses. ACC is awarded if the student meets the college equivalency standards and later enrolls in the college(s) listed below requiring the course in a specific program.