

# MESABI RANGE COLLEGE

## Course Outline

**Course Title:** National Electrical Code

**Semester Course Prefix and Number:** ECM 1265

**Old Quarter Course Prefix and Number:**

**Submitted By:** Robert Stevens

**Approval Date:**

**Revision Date:** 9/6/16

**Number of Credits:** 2

**Number of Lecture Credits:** 2

**Semester(s) Offered:** Spr

**Number of Lab Credits:** 0

**Number of Lab Hours:** 0

**Class Size:** 24

**Number of Studio/Demonstration/Internship Credits:**

Negotiated by AASC on:  
(date)

### Course Purpose Code:

\_\_\_\_\_ 0 – Developmental Courses

\_\_\_\_\_ 1 – Non-transferable

2 – Technical course related to career programs

\_\_\_\_\_ 3 – College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)

\_\_\_\_\_ 4 – Other college course not considered a part of MNTC (e.g. computer science, health, physical education)

\_\_\_\_\_ 5 – Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.

\_\_\_\_\_ 9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

### Catalog Description:

The course is a "Hybrid" or "Blended" course with the majority of the learning environment traditional in-class lectures and hands-on lab work which also includes Web-based learning activities to complement face-to-face work. This course is an introduction to the National Electrical Code (NEC). The course covers the layout of the code book, definitions of terminology used in the NEC, and a review of code sections related to industrial wiring. The course provides practice in locating and applying articles from the NEC to solve specific electrical design problems and/or calculation parameters needed for the sizing and selection of equipment and material.

### Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): None

Reading Prerequisite: None

Composition Prerequisite: None

Mathematics Prerequisite: None

### Career Programs and Transfer Majors Accessing this Course:

Electrical Controls and Maintenance Diploma

Electrical Controls and Maintenance AAS

### Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:

(Notes: No more than two goals may be met by any one course. AASC review and the Chief Academic Officer's approval are required.)

0.  None

1. \_\_\_\_\_ Communications

2. \_\_\_\_\_ Critical Thinking

3. \_\_\_\_\_ Natural Sciences

4. \_\_\_\_\_ Mathematical/Logical Reasoning

5. \_\_\_\_\_ History and the Social and Behavioral Sciences

6. \_\_\_\_\_ The Humanities and Fine Arts

7. \_\_\_\_\_ Human Diversity

8. \_\_\_\_\_ Global Perspectives

9. \_\_\_\_\_ Ethical and Civic Responsibility

10. \_\_\_\_\_ People and the Environment

**Learning Outcomes:** (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

Describe the purpose, scope, and jurisdiction of the *National Electrical Code*

Identify the arrangement of the *National Electrical Code*.

Define terms that are important to the proper application of the *Code*.

Identify rules association with grounding, conductors, branch circuits, feeders and motors.

**Student Assessment Methods:**

Assessment made of lab assignments, worksheets, and papers using rubrics and check lists. Tests and quizzes of technical knowledge to be given at regular intervals during semester.

**Use of Instructional Technology:** (includes software, interactive video and other instructional technologies):

ECM Laptop Computer Lease with Industrial Software

**Additional Special Information:** (special fees, directives on hazardous materials, etc.)

Laptop Computer Lease and Required Tool List

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.)

None

**Affiliated Mesabi Range College Courses and Programs:**

**Approvals:**

Body	Representative Signatures	Date
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

**Distribution:** Original – Instructional Services  
**Copies:** Transfer Specialist, Originating Faculty Member, Records  
**Revised:** December 2012