

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Electrical Safety Submitted By: Robert Stevens
Semester Course Prefix and Number: EIAT 1260 Approval Date: January 2008
Old Quarter Course Prefix and Number: Revision Date:

Number of Credits: 1 Number of Lecture Credits: 1
Semester Offered: Spring Number of Lab Credits: Number of Lab Hours:
Class Size: 24 Number of Studio/Demonstration/Internship Credits:
Negotiated by AASC on:
(date)

Course Purpose Code:

- 0 - Developmental Courses
1 - Non-transferable, General Education
x 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 general education (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:

This course is designed to familiarize the student with the safety practices and procedures applied in the installation and maintenance of electrical systems and equipment. Instruction includes the identification of the hazards associated with working on electrical equipment and distribution systems, identification and use of Personal Protection Equipment (PPE) and safe and proper use of test equipment. In addition, the course presents information on general industrial safety practices such as lock-out-tag-out, material safety data sheets(MSDS) and confined space identification.

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 & Industrial Automation Technology (Diploma)
Electrical & Industrial Automation Engineering Technology (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. Curriculum Committee review and the Chief Academic Officer's approval are required.)

- 0. x 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:

- Identify the hazards related to working with electrical equipment and systems.
- Identify Personal Protection Equipment (PPE) and the application requirements of PPE usage.
- Identify categories of electrical circuit and source dangers.
- Demonstrate the proper and safe use of electrical test equipment.
- Follow proper Lockout Tagout procedures.
- Identify hazardous area categories and precautions taken when working in those areas.
- Identify confined spaces and precautions taken when working in those areas.

Student Assessment Methods:

Lab practices, worksheets, observation of student's safe lab practices, and tests

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

Web research, videos, interactive PC based learning modules, Online learning supplement

Outline or Statement of Major Course Content:

This course is designed to train the student to perform work to established safety standards. The student will gain a working knowledge of the hazards that exist in working with electricity and, in general, working in industrial environments. The course teaches the safe use of tools, materials, and procedures used in the installation and maintenance of electrical systems and equipment. Topics to be included are:

- NFPA 70E Standards for Electrical Safety in the Workplace
- Electrical Shock and Arc Flash
- Personal Protection Equipment (PPE)
- Electrical Testing and Equipment Safety
- Tool Safety
- Lockout Tagout
- Hazardous Locations/ Confined Space

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

Lab Fee – Adult CPR & AED / Child CPR & AED / Infant CPR Certification

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

None

Approvals:

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

Distribution: Original – Administrative Office
Copies: Curriculum Committee Chair, AASC Chair, Transfer Specialist, Originating Faculty Member, Scheduler, Records, Student Services, Learning Center, Library
Revised: October 2006