

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE – VIRGINIA/EVELETH
COURSE OUTLINE

Course Title: Industrial Data Communications
Quarter Course Prefix and Number:
Semester Course Prefix and Number: EIAT 2235

Approval Date:
Revision Date: 2/22/06

Number of Credits: 3 Number of Lecture Credits: 1 Number of Lab Credits: 2
Semester(s) Offered: Number of Studio/Discussion Credits:
Class Size: 24
Negotiated by AASC on
(Date)___

Course Purpose Code:

- ___ 0 – Developmental Courses
- ___ 1 – Non-Transferable General Studies
- 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 Minnesota Transfer Curriculum (MNTC) requirements.
- ___ 9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:

This offering is designed to provide the student with a fundamental knowledge of industrial data transmission. Basic standards and protocols will be studied with an emphasis on Ethernet, DH+, Modbus, and Fieldbus. Lab safety and the safe and proper use of tools and test equipment is emphasized.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): None
Reading Prerequisite: Minimum score on basic skills test
Composition Prerequisite: None
Mathematics Prerequisite: Minimum score on basic skills test

Career Programs and Transfer Majors Accessing this Course:

Electrical and Industrial Automation Technology

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

- | | |
|---|---|
| 0. <input checked="" type="checkbox"/> None | 6. ___ The Humanities and Fine Arts |
| 1. ___ Communications | 7. ___ Human Diversity |
| 2. ___ Critical Thinking | 8. ___ Global Perspectives |
| 3. ___ Natural Sciences | 9. ___ Ethical and Civic Responsibility |
| 4. ___ Mathematical/Logical Reasoning | 10. ___ People and the Environment |
| 5. ___ History and the Social and Behavioral Sciences | |

Learning outcomes, including any relevant competencies listed in the Minnesota Transfer Curriculum:

Following the completion of this course the student will be able to demonstrate the ability to:

- 1.) Differentiate between industrial network protocols.
- 2.) Understand industrial network terminology.
- 3.) Compare and contrast network communications and traditional hardwired systems.
- 4.) Understand LAN wiring.
- 5.) Utilize a lab based LAN.
- 6.) Observe proper safety procedures.
- 7.) Work cooperatively.
- 8.) Apply critical thinking skills.

Possible student assessment methods:

Lab assignments, worksheets, papers, and tests.

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

Power Point Software, videos, software based lab simulators.

A one-paragraph summary or outline of the major course content:

See "Learning Outcomes" above.

Additional special information (special fees, directives on hazardous materials, etc.)

Laptop Computer Lease

Approvals:

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

Distribution: Original – Administrative Office
Copies: Curriculum Committee Chair, Learning Center, Library, Originating Faculty Member, Records, Student Services, Scheduler, Transfer Specialist
Revised February 10, 2004