

MESABI RANGE COLLEGE

Course Outline

Course Title: Industrial PC Applications
Semester Course Prefix and Number: ECM 2245
Old Quarter Course Prefix and Number:

Submitted By: Scott Norcia
Approval Date:
Revision Date: 9/6/16

Number of Credits: 3
Semester(s) Offered: Spr
Class Size: 24
Negotiated by AASC on: (date)
Number of Lecture Credits: 1
Number of Lab Credits: 2
Number of Lab Hours: 4
Number of Studio/Demonstration/Internship Credits:

Course Purpose Code:

- 0 - Developmental Courses
1 - Non-transferable
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 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 offering is designed to provide the student with a fundamental knowledge of industrial personal computer based applications. PC based applications related to industrial controls will be studied with an emphasis on project/device documentation, data management and SCADA. Lab safety and the safe and proper use of tools and test equipment are emphasized.

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. 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:

- 1.) Comprehend the current role of PCs in industrial automation.
- 2.) Install software.
- 3.) Manage data files.
- 4.) Use current software to document projects.
- 5.) Utilize current software to configure, troubleshoot and document field devices.
- 6.) Integrate SCADA systems with industrial control devices.
- 7.) Troubleshoot PC software/hardware problems.
- 8.) Observe proper safety procedures.
- 9.) Work cooperatively.
- 10.) Apply critical thinking skills.

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.

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
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