

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Process Control for Operators
Semester Course Prefix and Number: PAS 1256
Old Quarter Course Prefix and Number:

Submitted By: Scott Norcia
Approval Date:
Revision Date: 11/23/11

Number of Credits: 4
Semester(s) Offered: Spring
Class Size: 24
Negotiated by AASC on: (date)

Number of Lecture Credits: 3
Number of Lab Credits: 1 Number of Lab Hours: 2
Number of Studio/Demonstration/Internship Credits:

Course Purpose Code:

- 0 – Developmental Courses
- 1 – Non-transferable, General Education
- 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 provides an overview of the system and process controls. The course outlines common system control configurations, equipment layouts, and quality control strategies. Included in the coursework is a general overview of control standards, flow meters and calibration, radioactive safety, instrumentation components, process parameters and terminology, operator interface and system troubleshooting. The course focus is on practical application from an operational viewpoint.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): EIAT 1255, Electrical For Operators
Reading Prerequisite: None
Composition Prerequisite: None
Mathematics Prerequisite: None

Career Programs and Transfer Majors Accessing this Course:

Industrial Technology – mining emphasis

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. <input checked="" type="checkbox"/> None | 6. <input type="checkbox"/> The Humanities and Fine Arts |
| 1. <input type="checkbox"/> Communications | 7. <input type="checkbox"/> Human Diversity |
| 2. <input type="checkbox"/> Critical Thinking | 8. <input type="checkbox"/> Global Perspectives |
| 3. <input type="checkbox"/> Natural Sciences | 9. <input type="checkbox"/> Ethical and Civic Responsibility |
| 4. <input type="checkbox"/> Mathematical/Logical Reasoning | 10. <input type="checkbox"/> People and the Environment |
| 5. <input type="checkbox"/> 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. demonstrate logical troubleshooting skills.
2. demonstrate understanding of radioactive safety.
3. analyze the relationship between operator action and systems reaction.
4. analyze what operators are controlling and why.
5. demonstrate safe work practices.
6. demonstrate the relationship between control system stability and product quality.
7. identify primary measurement devices related to precise control.
8. identify final control devices related to process control.
9. analyze closed loop control.

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

Lecture covers theory and terminology

Lab: scheduled lab, lab by arrangement, and/or on-the-job-training/internships

Outline or Statement of Major Course Content:

See catalog description – course must also include:

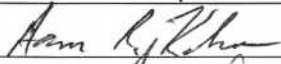

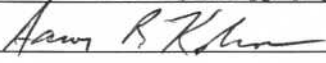
- Diamond drill to mine sampling to production

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

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

None

Approvals:

Body	Representative Signatures	Date
Curriculum Committee		11-29-11
Faculty Association		12-5-11
Academic Affairs Standards Committee		11-29-11
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