Course Title: Process Control for Operators
Semester Course Prefix and Number: PAS 1256
Number of Credits: 4
Semester(s) Offered: Spring
Class Size: 24

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. 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)

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:

<table>
<thead>
<tr>
<th>Body</th>
<th>Representative Signatures</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Committee</td>
<td>Asm. R. Z.</td>
<td>11-29-11</td>
</tr>
<tr>
<td>Faculty Association</td>
<td>Asm. R. Z.</td>
<td>12-5-11</td>
</tr>
<tr>
<td>Academic Affairs Standards Committee</td>
<td>Asm. R. Z.</td>
<td>11-29-11</td>
</tr>
<tr>
<td>Chief Academic Officer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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