

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Basic Soldering
Semester Course Prefix and Number: PAS 1295
Old Quarter Course Prefix and Number:

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

Number of Credits: 1
Semester(s) Offered: Fall
Class Size: 24
Negotiated by AASC on: (date)
Number of Lecture Credits: 0
Number of Lab Credits: 1
Number of Studio/Demonstration/Internship Credits: 2
Number of Lab Hours: 2

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 offering is designed as a foundational course for those entering electrical maintenance/engineering related fields. Basic soldering concepts are studied with a focus on materials, equipment and various soldering processes. 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: None
Composition Prerequisite: None
Mathematics Prerequisite: None

Career Programs and Transfer Majors Accessing this Course:

Process Automation Systems Diploma
Process Automation Systems 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)

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

- 1.) State the safety precautions to take when soldering.
- 2.) Describe the various forms of solder and soldering equipment available.
- 3.) Explain the three methods of wire stripping.
- 4.) Describe the procedures for tinning.
- 5.) Explain the soldering process.
- 6.) Compare or contrast point-to-point, PCB, and surface mount device soldering.
- 7.) Describe the procedures for common soldering and drag soldering.
- 8.) Distinguish a good soldered connection from a poor one.
- 9.) Explain the three methods of removing solder.
- 10.) Observe proper safety procedures.
- 11.) Work cooperatively.
- 12.) Apply critical thinking skills.

Student Assessment Methods:

Lab assignments.

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

Power Point Software, videos, software based lab simulators.

Outline or Statement of Major Course Content:

See "Learning Outcomes" above.

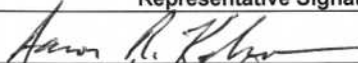
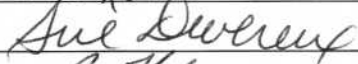

Additional Special Information: (special fees, directives on hazardous materials, etc.)

Laptop Computer Lease

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