Course Title: Intro to DC/AC Electronics
Approval Date: 
Quarter Course Prefix and Number: EIAT 1253
Revision Date: 2/22/06
Semester Course Prefix and Number: EIAT 1253

Number of Credits: 4
Number of Lecture Credits: 1
Number of Lab Credits: 3
Number of Studio/Discussion Credits:

Semester(s) Offered: 
Class Size: 24
Negotiated by AASC on ____________ (Date)

Course Purpose Code:

0 – Developmental Courses
1 – Non-Transferable General Studies
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 Minnesota Transfer Curriculum (MNTC) requirements.
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 DC/AC theory is studied with a focus on electrical quantities, circuit components, schematic symbols, measurement, and the mathematical and practical analysis of series, parallel, and series/parallel circuits from a troubleshooting perspective. 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: 
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. 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.) Differentiate between DC and AC voltage sources.
2.) Construct basic DC and AC circuits.
3.) Analyze and troubleshoot basic DC and AC circuits.
4.) Properly use test equipment to measure voltage, current and resistance.
5.) Read a schematic.
6.) Identify basic electronic and electrical components and their schematic symbols.
7.) Observe proper safety procedures.
8.) Work cooperatively.
9.) 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:

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