

COLLEGEWIDE COURSE OUTLINE OF RECORD

EECT 103, SOLDERING

COURSE TITLE: Soldering
COURSE NUMBER: EECT 103
PREREQUISITES: None
SCHOOL: Technology
PROGRAM: Electronics and Computer Technology
CREDIT HOURS: 1
CONTACT HOURS: Lecture: 0 Lab: 2
DATE OF LAST REVISION: Summer, 2011
EFFECTIVE DATE OF THIS REVISION: Fall, 2011

CATALOG DESCRIPTION: Students practice and develop skills soldering and desoldering through-hole and surface mount components. Students will use and maintain commercial grade solder/desolder stations. Also students will be introduced to basic fabrication techniques.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course, the student will be expected to:

1. Use basic hand tools when soldering/desoldering electrical and electronic components.
2. Etch circuit boards.
3. Safely remove through-hole electrical and electronic components.
4. Safely install through-hole electrical and electronic components.
5. Safely remove surface mount electrical and electronic components.
6. Safely install surface mount electrical and electronic components.
7. Populate electrical and electronic components onto printed circuit boards.
8. Prepare circuit boards for installation and removal of electrical and electronics components.
9. Tin soldering irons and solder extractors prior to use.
10. Inspect solder connections for defects.
11. Correct solder connection defects.
12. Properly maintain soldering/desoldering equipment.
13. Prepare circuit boards and components for soldering/desoldering.
14. Properly splice and solder wire connections.
15. Properly apply shrink tubing and/or other insulation to electrical connections.
16. Properly solder and desolder electrical components to terminal strips.
17. Properly remove insulation from wire.
18. Solder and desolder wire and cables onto various electrical connectors.
19. Describe Ball Grid Array (BGA) technology.

COURSE CONTENT: Topical areas of study include –

Soldering	Fabrication
Desoldering	Insulation removal

Through-hole
Surface mount
Etching
Circuit construction

Tinning
Printed circuit boards
Connectors

HOW TO ACCESS THE IVY TECH COMMUNITY COLLEGE LIBRARY:

The Ivy Tech Library is available to students' on- and off-campus, offering full text journals and books and other resources essential for course assignments. Go to <http://www.ivytech.edu/library/> and choose the link for your campus.

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

COPYRIGHT STATEMENT:

Students shall adhere to the laws governing the use of copyrighted materials. They must insure that their activities comply with fair use and in no way infringe on the copyright or other proprietary rights of others and that the materials used and developed at Ivy Tech Community College contain nothing unlawful, unethical, or libelous and do not constitute any violation of any right of privacy.

ADA STATEMENT:

Ivy Tech Community College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.

SYLLABUS FOR EECT 103, SOLDERING

The instructor will provide students with a course syllabus on the first scheduled class meeting. The syllabus should communicate clear and concise information to help the student understand the scope of the course and expectation for successful completion. The following information will appear on the syllabus and be identical to information on the Course Outline of Record (COR):

Required Syllabus Information from (COR)

- Course title
- Course prefix and number
- Prerequisite(s)
- Corequisite(s)
- Program
- Division
- Credit hours
- Contact hours
- Catalog description
- Major course learning objectives
- Course content
- Academic honesty statement
- ADA statement

Additional Required Syllabus Information

The syllabus must also contain the following additional information. The instructor may determine the content of this information.

- Instructor
- Course section number
- Additional course learning objectives (if required)
- Required text, or other instructional materials
- Required consumable materials and equipment supplied by student
- Instructor phone number
- Instructor e-mail address
- Instructor office location and hours
- Method(s) of instructional delivery
- Method(s) of evaluation
- Grading scale
- Make-up policy
- Attendance policy
- Activities schedule, including calendar of topics, assignment, test, etc.
- Last date to drop course without grade

- The name and location of the Disability Services Coordinator
- Right of revision statement

Optional Syllabus Information

Faculty are encouraged to provide additional information that will help the student understand in more detail how the class will be conducted.

- Extra credit work, if applicable
- Class/lab relationship
- References or reading that are optional but recommended
- Format for papers, projects, or other assignments
- Computer room/lab rules if applicable
- Withdrawal process and responsibility
- Other