

# **Policies Regarding Laboratory Facilities and Equipment**

## **1.0 Introduction:**

ECE477 is a project-based senior design course in which students are expected to design and construct a functional hardware prototype of an embedded design project. To assist students in this endeavor, laboratory facilities and equipment are provided for student use. This course policy document serves to inform students of rules and guidelines related to the usage of laboratory facilities and equipment.

## **2.0 ECE477 Laboratory Facilities:**

The Purdue School of Electrical Engineering provides Digital Systems Senior Design (ECE477) with exclusive use of rooms EE061, EE063, and EE064 for laboratory activities related to senior design. Access to these laboratories is regulated through the use of electronic passcode door locks. The laboratories include workbench space assigned to student teams, student team lockers for senior design materials, cabinets for materials related to senior design, and shared stations for soldering and other electronics assembly activities. The ECE477 laboratory facilities are managed by the Digital Systems Laboratory Engineer, Joseph Bougher.

Failure to follow the rules contained in this document could result in the removal of lab privileges or other disciplinary action for the student in question or the entire student team.

## **2.1 Use of the ECE477 Laboratory Facilities**

The following rules govern student use of the ECE477 laboratory facilities.

1. Use of the ECE477 labs is authorized for staff, students officially enrolled in ECE477, and those with written consent from the ECE477 staff. Use of the lab facilities by other individuals is strictly prohibited.
2. Electronic passcodes to the lab facility door locks are provided to students enrolled in ECE477. These passcodes are confidential and may not be shared with any other individual.
3. For liability and safety reasons, use of any electrical and mechanical assembly tools (drill presses, soldering irons, etc.) require two team members to be present. This rule does not apply to computer usage and other design-related activities.
4. Smoking, food, and drink within the ECE477 labs is strictly prohibited.
5. Students are responsible for maintaining clean and orderly laboratory facilities. In particular, the shared soldering stations are cleaned on a weekly basis. Students are highly discouraged from leaving team items or personal belongings at the shared soldering stations.
6. When a team member is not present, student team valuables should be locked in the provided team lockers. The ECE477 staff is not responsible for lost or stolen items.

## **3.0 ECE477 Course Laboratory Equipment**

The ECE477 lab contains course laboratory equipment to assist students with their senior design projects. For the purposes of this policy document, course laboratory equipment refers to any equipment in the senior design lab which is provided for student use that does not require a student

to sign out the equipment with the Digital Systems Laboratory Engineer. Examples of course laboratory equipment include:

- Laboratory desktop computers, monitors, peripherals, printers, and other computing equipment
- Workbenches, chairs, shelves, and other laboratory furnishings
- Oscilloscopes, power supplies, digital multimeters, spectrum analyzers, waveform generators, and other workbench test and measurement equipment
- Soldering irons, hot air rework tools, microscopes, and other shared fabrication tools
- Wire cutters, SMD tweezers, exacto knives, and other shared laboratory tools

### **3.1 Rules Concerning ECE477 Course Laboratory Equipment**

The following rules govern the use of ECE477 course laboratory equipment.

1. The laboratory equipment contained in the ECE477 lab facilities is to be used for senior design activities or activities given written consent by the ECE477 staff. Use of laboratory equipment for other activities is strictly prohibited.
2. Laboratory equipment provided to students may not be rearranged or removed from the ECE477 lab without the express written consent of the ECE477 staff.
3. Writing on, vandalizing, or otherwise defacing course laboratory equipment is strictly prohibited.
4. Sitting on anything other than the chairs provided is prohibited, and placing feet on anything other than the floor is also strictly prohibited.
5. Problems and malfunctions concerning course laboratory equipment should be promptly reported to ECE477 course staff.

### **4.0 ECE477 Student Laboratory Equipment**

In addition to the course laboratory equipment provided to students, the ECE477 staff are able to purchase or provide student laboratory equipment to assist ECE477 senior design teams at no cost to the students. For the purposes of this policy document, student laboratory equipment refers to any special item or piece of equipment that requires student teams to sign out the equipment in order for the equipment to be used. Examples of student laboratory equipment include:

- Motherboards, development boards, breakout boards, or other electronic shortcuts used by a team for prototyping purposes
- Programming or debugging tools specific to a particular team's target microcontroller or other embedded processor
- Specific mechanical tools such as crimpers, specialty hand tools, or other such tools
- Any other item that the ECE477 course staff deems valuable and reusable to assist current and future generations of ECE477 students

**4.1 Rules Concerning ECE477 Student Laboratory Equipment**

The following rules govern the use of ECE477 student laboratory equipment.

1. Student laboratory equipment must be checked out by filling out a form provided by the Digital Systems Laboratory Engineer. Student lab equipment is the property of ECE477, and must be checked back in to the ECE477 course staff in good condition at the end of the semester. Failure to do so may result in academic penalties to the offending team.
2. Student laboratory equipment should be used for ECE477 activities and activities receiving written approval from the ECE477 course staff. Other uses of student laboratory equipment are prohibited.
3. In the event that a piece of student laboratory equipment is requested for purchase in ECE477, course staff will have final determination over the purchase and whether or not that purchase request is reasonable and useful to ECE477.