

# Policies and Norms for the courses ICOM5047 and INEL 5195 – Design Project in Electrical and Computer Engineering<sup>1</sup>

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## 1 General Norms

The class and lab environment should be such that people are able to make the most of the workshops, lectures, space, time, and any other resource available to assist and enhance their learning experience. In order to guarantee the most efficient use of the resources there are several rules that must be obeyed at all times. Needless to say these rules are in addition to any civil and criminal laws as well as University and Department rules that could be in effect at any given time. The following rules are just examples and should not be construed to be the only applicable rules. The lab and or teaching assistants are responsible for any aspect related to the course whenever the faculty members are not present and as such they should be treated as you would treat any faculty in charge of the course.

The capstone lab is an environment of respect and consideration. Proper behavior is expected from all students in the course. Proper language must always be used and any unnecessary noises must be avoided at all times. Being a lab and a class environment you must use adequate clothing, shoes, and hands and eyes protection. Unauthorized use of any equipment is not permitted whether the equipment is property of the University of Puerto Rico or not. Anyone in the class or lab must behave in a way that minimizes risks to others and self or danger to the facilities and equipment. Therefore, playing, eating, drinking, smoking or any other activity that could result in damage to the facilities, equipment, or represent a risk to anyone is not allowed. Failing to comply with these and any other norms or rules will result in access to the laboratory being suspended immediately and proper notification will follow. If the fault is deemed by the faculty members to represent danger to people and/or property, further disciplinary actions may be pursued.

Access to the laboratory is exclusive to students registered in the course, faculty members and authorized personnel and only for activities and work directly related to the course. A student or team requiring to invite any other person should request authorization in writing to the professors and should specify the name of the person(s), the date and time the person(s) will be visiting the laboratory, the expected duration of and the justification for the visit. No visitors will be allowed until duly authorized by the professors. Failing to comply with this norm will result in access to the laboratory being revoked.

Students can request equipment, devices and other elements for their projects. Students should fill a request form and sign it. The student signing the request form is responsible for the good care of all the elements loaned him/her. Damaged and lost elements will be replaced at the student's expense. If any of the devices, equipment or elements changes hands, students should inform the teaching assistants or

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<sup>1</sup> These policies and norms may change to meet new needs. The changes, if any, will be announced in class and in the course Website; and will be enforced immediately.

the professors in writing about any such changes. Otherwise, the student who signed the request form will be held responsible for all the elements assigned to him/her.

After the final presentation, the students should return to the laboratory within the next two business days all the elements, devices, and equipment assigned to him/her. Failure to comply with this may result in disciplinary action against the student or his/her UPRM account being declared delinquent.

The area assigned to each group must be clean at the end of the semester. Failure to clean the workstation area will result in an incomplete grade with F in the course.

Every effort will be made to assign each team a locker in the laboratory. Students should buy a lock and provide a copy of the key to the professors or the teaching assistants. This copy of the key will only be used in case of emergency and will be returned to the team after all the elements, devices and equipment assigned to the team have been returned.

## 2 Attendance

Attendance to class and team meetings is compulsory<sup>2</sup>. Missing 50% or more of a lecture is equivalent to one absence. Missing 10 minutes to 50% of a lecture is considered as a quasi-absence. Three quasi-absences is equivalent to one absence.

Each absence will result in a deduction of one (1) point from the final total score. Four or more absences to class without reasonable excuse constitute a grade of F in the course. More than eight total absences to class constitute a grade of F in the course. A student with more than three absences to team meetings without reasonable excuses may be dismissed from the team with all the corresponding consequences described in section 3 below. Students engaged in activities not related to the lecture during lecture time may also be deducted one (1) point for each occurrence.

Excuses should be submitted within the following week after returning to class. Medical excuses should have printed the name of the physician, the office address and the telephone number(s). The professors may verify the veracity of any excuse at their own discretion.

Students are responsible for making the arrangements for duly justified absences to oral presentations or practical demonstrations<sup>2</sup>. Conditions for makeup presentations or practical demonstrations should be agreed upon with the professors and when necessary with the teammates.

## 3 Accountability and performance

All the teams should maintain a Web log (blog) which serves as a journal of the team activities, work, discussions and decisions. This blog is to begin no later than the second week of class and should remain during the entire semester. Professors must be given access to the team's blog. Team meeting

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<sup>2</sup> Class attendance and examinations. *Undergraduate Catalog 2013-2014*. University of Puerto Rico, Mayagüez Campus. Page 73.

notes and attendance control should be posted on the blog on a regular basis. Any doubts about the blog should be directed to the faculty members.

Every student is accountable to his/her teammates. A student with poor performance in his/her work may be dismissed from his/her team. Dismissal of a student from the team can be the result of:

- individual student evaluation by the professor(s);
- request in writing by his/her teammates; or
- any other just and adequate procedure.

A request to dismiss a student from a team should present evidence of the student's poor performance, prejudice to the teamwork or unjustified absences to team meetings, but the decision of his/her dismissal is the sole decision and responsibility of the professors, based on the evidence and arguments of all the parties involved.

A student dismissed from his/her team will have his/her access to the course laboratory removed and should return all the elements, devices and equipment assigned to him/her no later than one day after his/her dismissal. Failure to comply with this may result in a disciplinary action or his/her UPRM account being declared delinquent. A student dismissed from a team will obtain a grade of F in the course<sup>3</sup>.

#### **4 ADA**

In order to make the necessary arrangements, students must provide a letter for reasonable accommodation within the first two weeks of the beginning of the semester.

#### **5 Reports, presentations and practical demonstration examinations**

The project proposal, progress and project report should be submitted on the date specified in the course calendar (see <http://ece.uprm.edu/~icom5047/>), unless a date change is agreed upon with the professors. Every delayed submission will result in a penalty of 25% reduction of the full grade per calendar day of delay. After four calendar days of delay the grade will be 0.

All reports must contain a table of contents. This table of contents will list each section of the report. We require that all sections contain the name of the writer of this section. In addition, the report must contain the name of the editor (person who edits the whole report).

Practical demonstrations should comply with the requirements established by the professors for each one and should present at least the outcomes described in section 5.1 below, on the dates specified in the course calendar and at the times agreed upon between each team and the professors. Delayed demonstrations will result in a penalty of 25% reduction of the full grade for each additional opportunity. After four opportunities the demonstration grade will be 0.

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<sup>3</sup> Evaluation of students's academic coursework. *Undergraduate Catalog 2013-2014*. University of Puerto Rico, Mayagüez Campus. Page 73.

Absence to a presentation or practical demonstration without reasonable excuse will result in a grade of 0 in the presentation or demonstration.

## 5.1 Expected demonstrations outcomes

There will be three practical demonstrations in the semester and the expected results in each one are specified below:

- First practical demonstration: Complete detailed design of all the components both hardware and software; bill of materials and some implementations.
- Second practical demonstration: Full implementation of all the components and modules of the system, individually tested and ready for integration and final testing. Students are expected to explain in detail all the technical aspects of their module(s) specifications including interfacing with the rest of the system, their designs, implementations, and individual tests performed. Students should be able to explain any difficulties or problems faced with their project and how they were solved.
- Third and final practical demonstration: System fully integrated, functional and tested. Students are expected to explain in detail all the technical aspects of the system specifications, design, implementation, integration and testing. Students should provide testing evidence and data together with their analysis, and be able to explain any difficulties or problems faced with their project and how they were solved.

## 5.2 Grading of practical demonstrations

Practical demonstrations are at the very heart of this course and thus are a very significant part of the students' grade in the course. Therefore, a student's performance in each practical demonstration may become a deciding factor between her/his passing or failing the course. In every practical demonstration students are **individually evaluated and graded** by the team of the course professors. At the professors' discretion, the teaching assistants may become part of the evaluating team. Other persons may be invited to assist in the evaluation of a project when there is a need for expertise in a particular area. Evaluation and grading criteria will be published on the course website at least one week before the practical demonstration date.

In all the demonstrations, every student is expected to have a sound knowledge of the whole system, and detailed and in-depth knowledge of his/her assigned components or modules. The first two practical demonstrations will be graded according to the achievement of the outcomes described in section 5.1 above.

For the final demonstration, the system should be fully functional, integrated and tested according to specifications. **Partial credit will not be given for isolated components or modules that are working.** If the system is not fully functional, integrated and tested as specified, the demonstration grade will be 0.

The final demonstration is pass or fail. If the demonstration fails, the group will obtain a 0 in the final report. If the group passes the demonstration, the report will be graded and the full grade will be awarded. If the group does not have success in the demonstration during the first attempt and tries a

second time with success, the grade of the final report will be multiplied by 0.75. Similarly, if only the third trial is a success, the final report grade will be multiplied by 0.50 and if a fourth trial is required for success, then it will be multiplied by 0.25. No more than 4 tries will be allowed.

## 6 Teamwork and Peer evaluation

The performance of each student in a design team will be peer-reviewed by his/her teammates three times during the semester. The proposal and reports grades of a student will be the group's document grade scaled by the up-to-date student's peer evaluation and the class instructor's evaluation. For example, if a student's project reports receive a score of 95 (A) from the professor, but the student receives a poor evaluation from his/her teammates of 65% and a lab evaluation by the professor of 60% because he/she never showed up to the lab among other things, the student's final grade in the project would be  $95*(0.5*0.65 + 0.5*0.60) = 59.375(F)$ . Hence, all students are strongly encouraged to contribute to all aspects of the project.

## 7 Additional constraints

- The capstone project must solve a real world problem.
- This is a design course therefore the project must show an open ended problem is solved using a design process in one of the following areas:
  - For ICOM
    - Software
    - Hardware
    - Combination of Software or Hardware
  - For INEL
    - Electronics
    - Communications
    - Electromagnetics
    - Control Systems
    - Power/Power Electronics
    - Combination of the areas above
- A real actual customer is desirable for all projects.
- A final prototype is expected. All projects must be delivered with final assembly in encasing.

- For ICOM students, all code will be graded from the course repository, hosted at the ECE department. Git will be used as the repository. Code contribution will be determined solely from the repository content.

## **8 Public health measures**

A student presenting the symptoms of a contagious disease should stay at home, not attend public places and call his/her primary doctor. The student should inform the professors by telephone or email of his/her condition and must not return to class until a physician certifies in writing that the student is back in a health condition suitable to attend public places.

If the symptoms appear while on campus, the student should go immediately to Medical Services or to his/her primary doctor and must not return to class until a physician certifies in writing that the student is back in a health condition suitable to attend public places.

Possible contagious conditions include flu, conjunctivitis, small pox, and measles. The student should follow appropriate measures to ensure that the disease is not spread to his/her classmates.