ESET 462 Course Project (Mini Maker Event Demo)

The course project requires your team to design a gadget, and you need to have a working prototype ready by the last week of the semester (before the reading days).

Project requirements

1. Design a product that has potential commercial value or potential use in your daily life.
2. It must have a microcontroller (the use of myRIO or another equivalent device needs to be approved by the Instructor).
3. The prototype must have at least one sensor and one control action (for example, controlling motor speed, turning something on/off)
4. Use at least one thing you learned in ESET 462 (PID control, transfer function, stability analysis, digital system, etc.)
5. Team members MUST be from the SAME lab section.
6. The number of students in each team should be 4-6.

Team formation

This work should be carried out in teams of 5 (+/-1). Please talk to your classmates in the same section and form your own team. Teams with more than five members should receive approval from your TA.

Mini Maker Event

1. Participation in the event is mandatory.
2. The event will be held in the last week of the semester (The exact event date will be scheduled and announced later).
3. A presentation (videorecording) is required for each team. If you miss the event, this will result in zero credit for both the peer evaluation and the instructor's evaluation of the project.

Project report

1. An abstract containing no more than 500 words must be submitted through Canvas. The abstract should include a brief description of your project. The due date of the abstract will be announced later.
2. A project report is mandatory and due by the 1st reading day.
3. A link to the video recording of your demo must be submitted.
4. The project report should follow the writing style and formatting rules of the IEEE conference. https://www.ieee.org/conferences_events/conferences/publishing/templates.html
5. The report as a Word document should be submitted through Canvas.

Project Evaluation

	Instructor	non-team members	teammates
Originality (or Significance)	10		
Complexity	10		
Functionality	10		
Demo	15		
Report	15		
Contribution to your team			15
Peer review (by non-team members)		10	
Abstract	10		
Team formation before the deadline	5		

(Peer Evaluation Guide: A+: 15, A: 13, B: 11, C: 9, D: 7, F: equal or less than 5)

- Students are expected to evaluate every project except their own project. For each project that you fail to evaluate, 1% will be deducted from your project score.
- You are also expected to evaluate your team members. Failure to evaluate your team members will cause you to lose 15% of your project score.