

CoE 115 Project Guidelines

2nd Sem AY 2018-2019

The project is a final requirement that will showcase your hardware and programming skills. The proposed project must be a unique and creative application of the concepts and ideas learned in this course.

1. The project must make use of a minimum of 4 peripherals.
2. At least of 1 out of the 4 peripherals must not been used in lab exercises and machine exercises.
3. A complete list of used/not used peripherals is provided below for the student's guidance.
4. The student may also opt to integrate any module from the provided list.
5. The project will be done in pairs.
 - (a) You may choose to work individually. If so, you would only need to implement a minimum of 3 peripherals (1 of which should be a new peripheral).
 - (b) Students that have taken CoE115 previously must not have the same project partner as before.

6. Proposals:

- (a) At most 2 groups are allowed to have the same topic across all sections. This will be determined based on a "first-come, first-serve" basis.
- (b) If the student has previously taken CoE115, the proposed project must not be the same as the one proposed previously.
- (c) Proposals must contain the following:
 - i. Description of the project + simple block diagram
 - ii. Peripherals used. Also include here the sensors and other hardware will be used in your project.
 - iii. Implementation plan. Should also include how the project will be tested and demonstrated.
 - iv. Milestones
 - v. Work distribution
- (d) Project proposals will be submitted through this link: <http://bit.ly/2F9Vk1G>. The student must sign-in first using his EEEI account to view and access this link.
- (e) The **first draft** of the proposal should be submitted on **April 9, 2019 (12:00 MN)**.
- (f) Once submitted, status can be viewed here: <http://bit.ly/2HxX8Zu>
- (g) The first draft will be evaluated by your instructor. You will need to submit your **final project proposal** on **April 29, 2019 (12:00 NN)** through **UVLe (pdf)**.

7. Grading:

- (a) In the proposal, the student should define five milestones corresponding to the following scores:
 - i. Milestone 1 - worth 25%
 - ii. Milestone 2 - worth 40%
 - iii. Milestone 3 - worth 60%
 - iv. Milestone 4 - worth 85%
 - v. Milestone 5 - full functionality, 100%
- (b) The instructors will evaluate if the proposed milestones are acceptable. If acceptable, the said milestones will be used as basis for checking and grading.

- (c) There will be peer grading/evaluation. The instructor will set a multiplier to the peer grade, depending on the interview and observed student's work performance.
 - (d) Total project grade will be composed of 75% functionality and 25% peer grade.
 - (e) For individually done projects, the 25% peer grade will be considered as a bonus to compensate for doing the project alone.
8. **Checking and demo** will be done from **May 6, 2019** until **May 22, 2019**. There will be no late checking for this project.

PIC Peripherals List

USED	NOT USED
1. GPIO 2. ADC 3. Output Compare 4. I2C* 5. Timer*	1. Input Capture 2. SPI 3. UART 4. USB OTG 5. Parallel Master Port 6. RTCC 7. CRC 8. Triple Comparator Module 9. CVR 10. Charge Time Measurement Unit