

Requirements on the Midterm Course Project Proposal

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In the semester each team needs to submit a Project Proposal for their course project after the project is approved by the instructor. In the proposal, you need to clearly describe the project target, technical specifications your team plan to achieve in the project, any preliminary design you have, hardware/ devices (motor, sensors, ...) you plan to use and the justifications of the use, and the sub-tasks each team member will work. Please carefully and thoroughly read the follows for the detailed requirements on the format and contents of the proposal. The grade of your proposal will be determined by its completeness, clarification, technical soundness, and professionalism of the proposal. Feel free to contact me for any question you may have.

Please submit the proposal ONLY via the Blackboard. For the instructor to assign a grade to everyone, every member in a team needs to submit a proposal onto the Blackboard!

- **Format of the Proposal:**

The proposal should be **at least 3 pages (letter size) EXCLUDING** cover page and references, with **single spaced lines**. The font of the main text body should **NOT be larger than 12pt**. Any font size of 30+pt can **NOT** be used for any other content (including title, cover page, section titles, ...). The page margin should not be more than 1.25"×1.25". If a figure, picture or table is used, it should not be larger than a half page. Do **NOT** separate each section on different pages. All the pages except the cover page need to be numbered.

Absolutely include any **reference** you use for the project (including **webpages, youtube videos, books or articles, etc.**). **Table of contents** is also required. Include your team name (if applicable) and all team members' names with CUNYFirst IDs on the cover page.

Note: In the main body of the proposal, do **NOT** use separate page for different sections.

- **Contents of the Proposal:**

The proposal should at least have a **cover page**, a title, clear statements and description of **the main target** your team plan to achieve in the project. Besides these, you also need to include:

1. A clear, well-defined **title** that precisely reflects the main task, feature or functionality of you project.
2. In the main body of the proposal, expand the title and clearly describe and explain the task your system will achieve. In another word, you need to technically clarify what your project will do by detailed descriptions.

3. Clearly describe and state the **project setup, operating condition/environment** under which your system will function.
4. A **Preliminary System Design** is **ABSOLUTELY** required: Include a preliminary design of the proposed system. Use block diagram and flow-chart here to help explain your preliminary design.

Note: You can always upgrade your preliminary design later.

5. **Task division among team members:**

Break down the entire projects into as many sub-tasks as possible, and assign them to each team member. Clearly state each member's assignments.

Here are some sub-tasks you can refer to: *search & order the parts (e.g., Bluetooth, blah blah shields, ...), search & order the camera,, test blah blah sensor(s), mechanical component design/assembly, test/programming LCD display, I2C programming, sensor testing/programming, Bluetooth testing/programming, cloud programming, system assembly,, system integrated testing/ upgrading,* and so on.

Include a list in the proposal to explicitly show the sub-task division among members. For example, in a proposal, it writes:

Person A's subtasks: search and order blah blah sensor(s)s, test the sensor(s), mechanical component design, system assembly, system testing.....

Person B's subtasks: Search and order the camera, test the camera, mechanical component assembly, electrical circuit design,

Note: This job division will help your team understand the detailed works to done, split and clarify the tasks and responsibility for each team member. It surely can be changed later on the condition of your team agreement.

6. **Project Timeline:**

Plan a timeline for your project, starting from the first day of the class, finishing on the last day of the class which will be also the final project demonstration day. Use a software (e.g., ProjectLibre or Microsoft Project) to draw a Gantt chart to indicate the timeline and corresponding subtasks along the timeline. Include the subtasks descriptions and Gantt chart in the proposal.

See course website for more details on Gantt chart.

Due date: See the announcement on the Blackboard.