**COE/ELE70A: General Guidelines to Follow in Preparing the Milestone Document**

1) The template for milestone document is already posted in D2L and all students are required to use the same format which divides the tasks into group and individual tasks from week 3 to 12.  At the end of the document you will also find a tentative implementation plan for COE/ELE 70B divided into 4 slots with 4 phases of 3 weeks.

2) Before you prepare your milestone document as a group you all should think through the complete project i.e., your team should go through mentally (or on paper) the process of converting the specifications into possible realizable components and interfaces that when integrated will result in a working prototype.

3) The initial weeks should identify "tight specifications" of individual components that are needed for the projects individually and as a group task should arrive at "tight specifications" for the interfaces and interaction between the components. This is a very IMPORTANT step. Do not use words like will "Explore", "Gather", "Survey", “Research” etc. be specific in what is needed. For example, if your project requires a MCU, you should identify what specific abilities (e.g: speed, 8 or 16 bit, memory, I/O, footprint) are needed and then in a logical manner arrive at a solution based on available options, if it is software, then you should identify what features (portability, complexity, real-time, hardware access) are needed and then narrow down on the platform and required hardware computing facilities etc.

4)  Once step 3 is done, then breakdown logically the tasks of your individual component design. For example in the case of MCU, peripheral interface design, program flow chart, handshake and communication, physical housing etc. In case of analog design, front end interface, safety, signal processing circuits, interface translators (if connected to MCU or digital devices), power requirement, power supply, thermal management, housing etc. Each of the week should detail the need and the logical arrival of design plan that will address it. In proceeding with this sequence you should keep pace with group tasks in integrating and reviewing with other team members.

5)  In the final weeks, you should focus on integration aspects, simulations (where possible), physical housing design, economic and environmental aspects, safety aspects, and enhancements.  As a group tasks, review and correlate expected outcomes with project specifications and most importantly should identify bottle necks (if any) in your project and prepare a plan B (of course you do not have document this but have to discuss with your FLC).

Once you have completed the above process it is a good idea (but optional depending on the FLC) to make an illustration of your complete design integrating all the components in a poster format with as many details and notes possible. This will help you a lot to get a bird's view of the project and sometime things that are not apparent will show up (especially issues) when seen in a complete form. It will also help you prepare for your oral exam in understanding the overall picture of your project and how your design efforts fit in with other team members.

Please note **milestone preparation is an IMPORTANT task in COE/ELE 70A. I**f thoughtfully planned and executed, it will set you up for an effective COE/ELE 70B. In COE/ELE 70A, during Weeks, 5, 7, 9, and 11, **students responsible for managing the respective phases will submit a milestone compliance report** on D2L.