Drawings of 3 Ideas for Week 2

Each team needs to pick their top 3 ideas to discuss with the instructor. Each of your three ideas should fit on a single page so you will bring 3 pages with your 3 ideas to the Week 2 project meeting.

Each page should include:
- Title for the project
- Drawing of what the project might look like (80% of the page)
    o Draw freehand in pencil.
    o This is the most important part
    o Include what it would look like plus show motors and other electronics
    o Try to make it clear what you're up to
- Brief text summary
    o A list of inputs that your project will sense
    o A list of outputs that your project will control
    o A brief (two sentence) description of what your project is and how it works

By the time you have completed this development, you should now have a sense of how difficult each of the three projects would be and how much effort would be required to complete each. Your instructor will help with this difficulty evaluation during your Week 2 project meeting.

Bring these 3 pages to your first project meeting with the instructor in week 2.

Select your project for Week 3

  For this step you need to decide what you want to build for your project and prepare a drawing for review and discussion.

Your team is not required to pick your project from your 3 ideas. It can be something totally new.

This is an easy week, but you should be committed to this project from this point forward.

Your only deliverable is an improved drawing of your project.

Project Proposal for Week 4

  A Project Proposal can be over 1 page and needs the following sections:

        -- Title page
                Team number, names, project title, other such info that looks pretty
        -- Single page summary
                -- Similar to the single page for the 3 ideas
                -- A list of inputs that your project will sense
                -- A list of outputs that your project will control
                -- A description of what your project is and how it works
        -- Parts required list (the major change from the 3 ideas)
                A rough draft list of everything you need to purchase
                 (For next time you'll have a picture of the specific part you plan to order)
                 (Finishing the week 4 assignment early is always welcome if you want.)
        -- The pie in the sky extras
                        Any project has a core functionality then additional things that
                might be fun to add. The last page of the week 3 proposal is things you'll
                add if time permits. Let me know some things you might try to do if you
                can get the core functionality together early. Pictures are always welcome.

By the time you have completed this development, you should have a much better sense
of how difficult your project might be. It's time to start deciding if it's too much or needs
more bells and whistles. Most students do too much actually. Think about keeping the
project in scope.

The project proposal will have three phases this is phase 1. You should bring a printed
version of your Project Proposal to your group meeting for week 3. After your group
meeting you should make revisions and start shopping for where you will purchase parts.
Phase 2 will be your week 4 submission and phase 3 will be your week 5 meeting. Make
sure to keep your project proposal up to date with any changes as you go. Your project
proposal will be the start of your final project documentation at the end of the class.

Keeping an eye on points you can see that most the project proposal you submit this week
is really only a draft and the real points come with the week 4 submission. It builds on
this week so all your hard work will pay off if this week is solid.

  For this week in the project you will update/revise your Week 3 Project Proposal and
convert it to an electronic format. You will submit your completed project proposal
electronically on Angel as a **single** Word file. This project proposal should include
anything requested in the week 3 requirements plus a shopping list. So you need to scan
in any drawings of your project from week 3 or make the drawing in an electronic format.
At any rate, the only thing you turn in is a single Word document. That document is due

by 5pm at the end of Day 12. There is, however, no Week 4 project meeting, just submit the Final Project Proposal.

A well formatted shopping list should look like this. This is only a small portion of this groups shopping list. Make sure to include a power supply!

Name	Quantity	Link to Purchasing Location	Picture	Unit Cost	Total Cost
DOOR LOCK ACTUATOR	2	http://www.allelectronics.com/make-a-store/item/DLA-1/DOOR-LOCK-ACTUATOR/-/1.html		5.50	$11.00
NERF N-STRIKE MAVERICK	2	http://www.hasbro.com/nerf/default.cfm?page=viewproduct&product_id=15953		7.99	$15.98
		etc			
				TOTAL	$46.32

Make the links clickable so that the instructor can navigate to the webpage where you plan to purchase each item. Word uses Crtl+click to go to the web page. If setup as a link

The last phase is approval of your complete shopping list. Bring your computer and current project proposal to the week 5 meeting. Hopefully the instructor has gotten a chance to look at your Angel document before then. It's wise to combine your purchase with another group (or two or three groups) to save on shipping.

Note on submitting large file sizes to Angel:
  Compress your images within Word before submitting the file to Angel to reduce the document file size. If you do not know how to do that do a Google search for something like "word compress images".

   Also… you are NOT allowed to purchase anything from the EE stock room. They stock parts for use in ECE classes only. This being an ME class, we are not to purchase any of their inventory.

Week 5 Meeting

The week 5 meeting is simply a chance to discuss your week 4 project proposal and figure out any last questions before placing an order. Place orders ASAP! Read week 7 grading system to encourage you to order early and hound shippers if it doesn't ship right away. Be wary of back order items and make sure you get a "Your items have shipped" email within a few days.

Week 6 Meeting

The Week 6 meeting is a quick one. You need to show me a receipt so that I know you've placed your order for project parts. Then you will get a core ME component assignment. The core ME component assignment is usually to build the mechanical structure of your project or some motor actuator component. Your PIC and breadboard will be busy with your labs, so you will start with the ME work due week 8.

Week 7 Meeting

I want to see your parts! Bring in everything you ordered and we'll see if we got what we thought we ordered. Building materials not required. Your grade **WILL** be based on what parts have actually arrived. So this grade is based on things you did back in week 5. If you ordered parts right away and made sure you got a "Your items have shipped email" then it should be no problem. It is a major problem to have items delayed. Get on shipper early is the only solution.

Week 8 Meeting

Big day! You need to demonstrate your core ME component assignment from week 6. You've had two weeks to work on this assignment, so it should be looking good. You will also be assigned your CS/EE core component during this meeting.

Week 9 Meeting

Big day! Finished the assigned CS/EE core component part of the project. This is a demo. The instructor will **not** look at your code. It is a demo of what you have working. Excuses and pointing to the screen at code that "should" work is not the same as a functional demo. 👆

Project Demonstrations - Week 10

   No meeting just the project demonstrations. It is very important that your demo work in the **programming** mode not just the debugger. You should not even need to bring in your computer. During project demonstrations you will be expected to give your full attention to the other teams presenting. There will not be time in class for you to tinker with last minute fixes. Come in ready to demo your programmed project.

Plan for that day:
1) Get a picture taken by professor
2) Introduce yourself and partner
3) Start with an overview of the project's device/system to be built.
4) Describe (briefly) how the project works
      People will want to see it not hear about it.
5) Demonstrate the working prototype
6) Identify a couple of things you learned by working on this project.
7) Allow other students/professor to inspect and try out your project.

Project Documentation

For the project documentation you will have 1 of 2 possible tasks (you will do one or the other, not both):

      1. Standard written project documentation submitted on Angel
      2. An addition to the Gems of Wisdom Wiki based on a task in your project

At some point during the project or during the 10th week your team will been assigned a task either project documentation or a Gems of Wisdome Wiki entry.

For the teams assigned Written Project Documentation:
1) Written Project Documentation: If you are submitting project documentation, you must start with your project proposal document and update that file. Leave all of the important information from your original project proposal and update all changes.

You are expected to have either a detailed drawing or a photograph of your final project with labeled details.

I'm not too tough about the project documentation. I will grade it during the final, so submit it before the final begins. It'll be submitted electronically only on Angel. Usually I'm okay with a simple paragraph or two explanation (whatever is necessary to explain your project) and a few good pictures! I'm big on pictures with labels! Very informal compared to ME421. :))

The must have pictures, include:
      1. Picture of project as a whole
      2. Picture of you with your project
      3. Close up pictures of interesting sub-parts of your project

I'll be taking pictures during to project demonstration day that you can use.

In my mind the main purpose of the document is for you. I want you to have something to remember.

For teams assigned a Gems of Wisdom explanation on the Angel Wiki:
2) You should click on Lessons -> Gems of Wisdom wiki and look at the template. Write your information and try to stick to the template layout as appropriate. This is intended to help future students with projects please write every detail they might possibly need to use your assigned component.

If you are doing a wiki entry please read the entries by Isaac Weintraub for formatting and adding pictures. Go to the Angel wiki under the lessons tab, type in "Isaac" into the search box. You should find "Adding Images and Formatting to Wisdom WIKI". Read that document and add pictures and quality formatting to your wiki entry.