Q1: Are there any student suggested topics?

Q2: How many teams are already formed?

Q3: Who is not sure which topic to pre-select?
ECE-492/3 TEAMING

- All members are expected to act professionally
- Personality differences among members are not relevant. The common goal is all that matters!
- Respect each other by:
  - Doing tasks on time
  - Keeping in contact with each other all the time
  - Attending weekly meetings, etc.
  - Helping other members without being asked
- Focus on your assigned task and GET THE JOB DONE!
  - It also means – delivering your work in such a shape so nobody needs to work on it again!
- Keep yourself organized and work through frustration
- All members required to switch into a pro-active mode
Characteristics of an Effective Team

- Select team members based upon skills
  - Technical and functional skills
  - Problem solving skills

- Identify and agree upon objectives
  - You need to define what the team is going to achieve – an end goal
  - This goal/objective must be aggressive, yet achievable to stay motivated through the course
  - All team members must be committed to achieving the objectives

- Make it clear how the team will make decisions
  - Read Chapter 9
➢ Respect each other
  o Do not dominate others
  o Listen actively
  o Consider how you respond to others
  o Constructively criticize ideas, not people – stay positive
  o Respect those not present
  o Communicate your ideas

➢ Manage conflicts constructively
  o Real teams do encounter conflicts, but they are adept at resolving them
  o Do not escalate conflicts into personal conflicts (!)

➢ Spend a lot of time together
  o Teams that spend a lot of time together are generally more successful
  o It takes time to form a bond
Holding Effective Meetings
A key to a successful team organization and execution

✔ Agree upon a meeting time and place (on a weekly basis)
✔ All members prepare for a meeting, show up on time, and bring all relevant materials
✔ Keep a formal part of a meeting as short as possible
✔ All members must keep notes:
  ❖ Engineering Notebook
✔ Have an agenda (in writing) ahead of meeting time – have a plan, list of issues to be discussed/resolved
✔ Pay attention – no person should monopolize the conversation and all points of view should be heard
✔ Summarize – have a list of decisions made and a list of actions for the next week
Example Meeting

Thursday 9pm: PM writes a meeting agenda, emails to all team members, and asks for any additions

Friday 2:50pm: Team members show up for the meeting
3pm: PM opens the meeting; writes who is present/absent
   Agenda is discussed and appended
3:05pm: Project progress is discussed on a task by task basis
   (There is no discussion of technical issues)
3:10pm: Short discussion of WBS and progress
3:13pm: Identification of bottlenecks and problems encountered
   Solutions to these problems are defined
3:20pm: Identification of tasks for the next week
   Allocation of resources and responsibilities
3:27pm: Meeting summary:
  * Tasks for the next week
  * Definition of next week deliverables for each task
  * People assignment

3:30pm: PM closes the meeting

3:35pm: Technical sessions begin

4:30pm: Meeting adjourns

4:35pm: PM writes a memo summarizing the meeting
  Provides a list of tasks for the next week (w/ deliverables)

4:45pm: PM emails the memo to all team members
Boeing Code of Cooperation/Conduct

- Every member responsible for team’s progress and success
- Attend all meetings, be on time
- Come prepared
- Carry out assignments on schedule
- Listen to and show respect for the contributions of others; be an active listener
- Constructively criticize ideas, not persons
- Resolve conflicts constructively
- Pay attention; avoid disruptive behavior
- No disruptive side conversations
- Only one person speaks at a time
- Everyone participates; no one dominates
- Be on point; avoid long anecdotes and examples
- No rank in the room
- Respect those not present
- Ask questions when you do not understand
- Have fun
Engineering Notebook

- Each team member must have his/her own Eng. Notebook (!)
- Permanently bounded notebook with numbered pages (do not leave empty spaces)
- It’s a record of your activities, meetings, tasks, thoughts, assignments/progress, designs, explanations, etc.
  This is your professional life (not social life)
- Certain companies have team engineering notebooks – you will be required to record your daily activities and progress
- Can be used in court
- Do not include any info/data which is not related to your job
  - Keep your private life, hobby, business separated (!)
Project Manager
(Introduction)

- Each team must have a Project Manager
- Choose your PM very carefully
- Recommended personal characteristics:
  - Self-motivated and well-organized
  - Polite but decisive
  - Past experience in successful management of people a plus
  - Timely and capable of working under pressure
  - Able to handle administrative duties!
  - Easily accessible and with spare time
- Should keep the team motivated and integrated
Acts as the team Point of Contact (PoC) to the FS, CC and AC

PM is not a boss in the traditional sense and is a member of the team contributing to technical tasks as well

If in a trouble, you may decide to reorganize

Respect your PM!
Selected Deficiencies to Overcome

- **GENERAL COMMENT:** Senior design projects are run much better than in the past. But you need to be aware of mistakes made such as listed below

- Significant problems with work ethics (!)
- Not getting started on tasks due to lack of motivation
- Lack of self-organization of members (!)
- Members skipping meetings
- Members not doing their assignments on time or not at all
- Piggybacking on someone else’s effort
- Pretending to work (or actually “working”) but not delivering anything useful
- Team members who simply do not care (!)
- Working hard, but not smart
- Too many members “helping out’ on task they were not assigned to
- Avoiding feedback from a faculty supervisor (!)
- Problems with presentation skills
- Delayed delivery of documents (!)
- Weak project management
- Insufficient teamwork
- Lack of understanding of top-down design principles (!)
- Delayed work with microcontrollers and other complex chips (!)
➢ Too much and/or improper bread-boarding (!)
➢ Insufficient PCB design skills or late jump-start (!)
➢ Writing code without first designing it with state diagram, flowcharts, etc.
➢ Not anticipating delivery times for items ordered
➢ Going over budget
➢ No Plan-B on hand when things go wrong (!)
➢ Not having enough time for proper testing (!)
For the Next Meeting

- Read textbook – Chapter 1 and Chapter 9
- **Research, research, research** topics of you interest
- Connect with potential team members
- Talk to topic FS
- Form a team and deliver ‘Project Title Form’

- **Next meeting:**
  - Engineering design; Requirements specification & analysis; Conceptual design
Project Selection Session

- You have only one week to select your topic, form and organize your team

- Let’s mark topics already taken (and teams formed)

- Other students, please put your initials on 2 topics

- Be sure to get contact info (phone# & email) of other students in order to form a team within a couple of days