Preparing for Senior Design

1. Senior Design is a two semester course where you spend about 15 hours a week on just this course. Plan your academic, work and social schedule accordingly. The first semester is usually considered the more time challenging of the two semesters.

2. Form a team. Normally the team should have four members. We sometimes accept three in a team, but never more than four. Your team should include members with complementary skills and attitudes. No cookie cutter "we are all alike" for senior design. Create a team whose personnel have writing skills, ability to speak to groups, analog design, digital design, microcontroller ability, software capability and, don't forget, management skills.

3. Decide on a societal problem you want to tackle. World hunger is too broad. Novel drip irrigation for tomatoes is a more manageable problem. Investigate and then chose a design approach to tackle this chosen societal problem.

   a. State your design in broad terms.
   b. List features your design idea will implement
   c. Task team members to research the feature implementations. Are these features within your ability to create? Loss of a team member is not grounds for a change in the feature set of your design. Despite time adversity – can you complete the design?
   d. Estimate how much the design idea will cost in hard cash. Can your team afford to build this design? Decide if you are going to seek funding/parts from vendors, student associations (ASI often supports senior design), or ??? Obtain funding as necessary.
   e. Estimate resources needed to complete the design in terms of work space, test equipment, software, specialized tools or other needs. Discuss with faculty what is available from the ECS College and the EEE Dept.

4. Week 1, Semester 1 – have a team, have a societal problem, have a design idea, have a feature set, and have a game plan. You will be asked to immediately begin work. There is no time during the semester to waste on creating your initial choices! You will have a working laboratory prototype by the end of the first semester and time is precious.

5. See the course website for course syllabus, specific assignments and deadlines. http://www.csus.edu/indiv/t/tatror/Senior_Design/Senior_Design_Lab_Index.html