Instructor(s): Dr. Weiguo Yang

Contact Info: Office: 369 Belk Building  
Office Hours: Posted on office door  
Office Phone: 227-2693  
E-mail: wyang@email.wcu.edu

Meeting Periods: Friday, 2:00 PM-4:40 PM, Belk 370

Course Description: A continuation of EE 401 consisting of project development and analysis, culminating in a written and oral presentation.

Course Goals:
- Practical real-world R&D project team experience;
- The opportunity to learn product design philosophies and/or research methodologies;
- The development of team problem-solving skills;
- Experience budgeting time and finances and project management skills;

This course is the second of a sequence of two senior design courses.

Prerequisites: EE 211, Logic and Networks Lab., EE 212, Instrumentation and Networks Lab., EE 311, System and Electronics Lab., EE 312, Electromagnetic and Electronic Devices Lab., EE 331, Fundamentals of Electronics and Semiconductors, EE 351, Systems Analysis I, EE 401, Senior Design I, and senior standing in EE.

Corequisites: None.

Required Text: None. The course will rely on presentations, notes and documents. These materials can be found on the course website at http://paws.wcu.edu/wyang.

References: Manufacture Data sheets, World-Wide-Web resources, and software manuals.
**Instructional Approach:** Related course material will be introduced during lectures. Project teams are expected to address issues from design, project planning, to delivery independently and without close supervision of a class instructor.

**Lab Notebook:** Engineers in the workplace carry a lab/design notebook with them wherever they go. They write everything in this notebook with respect to product design. You are required to purchase a lab notebook (i.e. a comp notebook, college ruled). You will be expected to maintain such a notebook and use it to enter all of your design ideas. These notebooks will be offered to the project sponsors when you are done with the project. We will examine these notebooks throughout the semester and assign grades based on the value of their contents.

**Evaluation:** Evaluation and assessment will be by an Expert/Practitioner/Apprentice/Novice rubric. Grades are based on the quality and adherence to the pre-published criteria. These project specific criteria will be posted on the course website when the assignment is distributed.

**Grading Scale:** The grading scale below will be used to determine final grades:

<table>
<thead>
<tr>
<th>Final Grade</th>
<th>Letter Grade</th>
<th>Final Grade</th>
<th>Letter Grade</th>
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</thead>
<tbody>
<tr>
<td>92 - 100</td>
<td>A</td>
<td>72 - 77.9</td>
<td>C</td>
</tr>
<tr>
<td>90 - 91.9</td>
<td>A-</td>
<td>70 - 71.9</td>
<td>C-</td>
</tr>
<tr>
<td>88 - 89.9</td>
<td>B+</td>
<td>68 - 69.9</td>
<td>D+</td>
</tr>
<tr>
<td>82 - 87.9</td>
<td>B</td>
<td>62 - 67.9</td>
<td>D</td>
</tr>
<tr>
<td>80 - 81.9</td>
<td>B-</td>
<td>60 - 61.9</td>
<td>D-</td>
</tr>
<tr>
<td>78 - 79.9</td>
<td>C+</td>
<td>0 - 59.9</td>
<td>F</td>
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</tbody>
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**Attendance:** Students are required to attend all meeting periods.

**Assignments:** Timely and full completion of assignments is vital to student success in this course. To this end, the following policies will be in effect:

- Students are expected to submit work on time.
- Late assignments will not be accepted.
- Students who submit assignments after the due date/time will receive a grade of zero.
- Assignments missed due to an excused absence will be due during the next class period.
Honor Code: Students are expected to comply with the spirit and intent of the University Academic Honesty Policy as stated in the Undergraduate Catalogue. Visit WCU’s Undergraduate Student Handbook for all related policies and procedures. Evidence of academic dishonesty will result in a grade of F (numerically “0”) for that assignment on the first infraction. A second infraction will result in a grade of F for the course.

Accommodations for Students with Disabilities:

Western Carolina University is committed to providing equal educational opportunities for students with documented disabilities. Students who require disability services or reasonable accommodations must identify themselves as having a disability and provide current diagnostic documentation to Disability Services. All information is confidential. Please contact Disability Services for more information at (828) 227-2716 or 144 Killian Annex.

Classroom Policies: The following policies will be in effect during class meetings and project sessions:

- Cell phones must be turned off during lecture time.
- Drinks, food and tobacco are not permitted in classrooms or laboratories.
- Instant messenger, AOL or other non-instructional software is not permitted on classroom or lab computers. Printing of material in lab which is not course-related is also not permitted.

Objectives: This course is intended to make students experience the real world R&D project team work and project management aspects. Each project team is expected to perform independently with minimum intervention of a class instructor and deliver the final product and/or research results.

Class Topics: Course objectives and requirements; Discussion of projects; Design process, product development; Requirement and defining functionality; Prototype fabrication and testing. Written reports and oral presentation.