1. Course number and name – 055:088 - Principles of Electrical Engineering Design

2. Credits and contact hours: 3

3. Instructor: Cliff Curry

4. Textbook: None.

5. Specific course information
   a. Brief description: Design problems requiring integration of subject matter from other required electrical and computer engineering courses
   b. Prerequisite: Senior standing.
   c. Required for all majors

6. Specific goals for course

<table>
<thead>
<tr>
<th>Course Goal</th>
<th>Basis For Goal Assessment</th>
<th>Supports ABET Outcomes</th>
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<tbody>
<tr>
<td>1. Students will be able to integrate technical concepts and techniques learned in earlier EE courses</td>
<td>Quizzes &amp; laboratory projects</td>
<td>a(●), b(●), c(●), e(●), i(●), k(●)</td>
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<td>2. Students will be able to incrementally build complex systems by designing, constructing, testing, and integrating parts of the system.</td>
<td>Laboratory projects</td>
<td>a(●), b(●), c(●), d(●), e(●), g(●), k(●)</td>
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<td>3. Students will be able to select appropriate parts and circuits in order to design an electronic system to meet specified performance criteria</td>
<td>Laboratory projects</td>
<td>a(●), b(●), c(●), d(●), e(●), i(●), j(●), k(●)</td>
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<td>4. Students will develop a proposal and specification, for their capstone design project.</td>
<td>Laboratory projects</td>
<td>a(●), c(●), d(●), e(●), f(●), g(●), j(●), k(●)</td>
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7. Brief list of topics to be covered
   1. Process, guidelines, requirements for formation of project teams
   2. Introduction/explanation of lab projects
   3. Top down, bottom up design
   4. Design process for capstone projects
   5. Overview of capstone design project requirements
   6. Labs: Electricity, Safety, and Measuring Leakage, currents, electronic thermometer with PC display and data, An logging, ECG monitor design