EL 4396 – Design Capstone II: Development & Evaluation

1. 3 Student Credit Hours, 8 Contact Hours

2. Instructor: Roger Gonzalez, Ph.D., P.E.; David Novick, Ph.D., J.D.

3. Texts:


4. Specific course information:

   a. Catalog Description: This course is the second semester of a two-semester Capstone Design course in Engineering Leadership. Particular focus is on preparing and implementing a project design in which leadership engineering skills are applied to build a cohesive team and to successfully execute a real-world project.

   b. Prerequisites: EL 4395

   c. EL 4396 is a Required course in the BS in Engineering Leadership Curriculum.

5. Specific goals for the course:

   a. Specific outcomes of instruction

      • To accomplish the general scope and feasibility of the design and complete it with full documentation during the second semester

      • To demonstrate that the design has met objectives by considering various alternatives and meeting predefined constraints

      • To understand both the impact of engineering solutions in a global and societal context and one’s professional and ethical responsibility

   b. Explicit Student Outcomes listed in Criterion 3 & 8

      • 1. An ability to communicate effectively with a range of audiences.

      • 2. An ability to recognize leadership issues and to apply leadership principles.

6. Brief list of topics to be covered:

   • Open-ended design
   • Proposal writing
   • Project management and associated tools
• Oral presentations
• Engineering Constraints
• Design standards
• Engineering design process
• Intellectual property in the workplace