1. ECE 4820 - Electrical/Computer Engineering Design II
2. credit hours (1–6)
3. Course Instructor: Dr. Brad Bazuin
4. Textbooks: Recommended
5. Specific course information
   a. Senior electrical/computer engineering design project. A continuation of ECE 481. A formal written report and a formal presentation is required at the end of the semester.
   b. Prerequisites: ECE 4810
   c. This is a required course for both EE and CpE Programs.
6. Specific goals for the course
   a. specific outcomes of instruction
      [1] The student will develop an understanding of realistic engineering design involving project planning and management, team participation, lifelong learning, problem solving, decision making and project report writing (a,b,c,d,e,f,g,h,i,k)
      [2] The student will develop an understanding of the fabrication of prototype hardware and software and/or proof of concept hardware and software and/or finished hardware/software (a,b,c,d,e,g,h)
      [3] The student will learn how to define and develop tests of designed and fabricated systems for compliance with original specifications (a,b,c,d,e,g,h)
      [4] The student will learn reevaluation, redesign, prototype revision and retesting for compliance with original stated specifications (a,b,c,d,e,g,h)
      [5] The student will develop skill, ability and experience in working in a multi-disciplinary team (electrical engineers and computer engineers) (d)
      [6] The student will develop skills in communicating, written and oral forms, for diverse audiences such as team partners, faculty, sponsor, the public in a formal conference atmosphere (g)
   b. This course contributes to the attainment of the following student learning outcomes a, b, c, d, e, f, g, h, i, j and k. ABET learning outcomes d, g and i are directly assessed in this course.
7. Brief list of topics to be covered
- Introduction and orientation
- open-ended design and project management and associated tools
- engineering safety
- contemporary issues in engineering (through college seminars)
- technical writing elements for the final project report
- teams meet weekly with faculty advisors for review of progress and guidance in the specifics of the project design
- teams meet and work independently under self-managed schedule (at least 5 hours/week)
- information for inclusion in Senior Design Project Presentations Conference
- Brochure
- guidelines for oral presentation and final report preparations
- presentation at the College’s Annual Senior Design Projects Conference of the formal design and project results