

1. Course number and name: BMED 1000 Design Your Biomedical Engineering Degree
2. Credits and contact hours: (1-0-0-1)
3. Prepared by: Todd Fernandez and Cristi Bell-Huff
4. Textbook: Design Your Life by Bill Burnett and Dave Evans
5. Specific course information
  - a. Catalog description: Design Your Biomedical Engineering Degree is an introduction to the field of biomedical engineering, with an emphasis on career preparation.
  - b. Prerequisites or co-requisites: None
  - c. Required
6. Specific goals for the course
  - a. Tackle a complex, real-world problem (Student Outcome 7)
    - i. Define the problem and identify the problem goals
    - ii. Explore the problem statement to identify critical problem features
    - iii. Develop provisional models and hypotheses that frame problem-solving
    - iv. Plan an attack strategy, carry it out, and evaluate the results
  - b. Conduct self-directed inquiry (Student Outcome 7)
    - i. Recognize inadequacies of existing knowledge, identify learning needs, set specific learning objective, and make a plan to address these objectives
    - ii. Evaluate inquiry, assess reliability of sources, digest findings and communicate them effectively to self and others
    - iii. Apply the newly acquired knowledge to the problem
  - c. Demonstrate effective group skills (Student Outcome 4)
    - i. Help group develop team skills, and willingly forego personal goals for group goals
    - ii. Complete tasks on time, and avoid contributing excessive or irrelevant information
    - iii. Express disappointment or disagreement directly, give emotional support to others, demonstrate enthusiasm and involvement
    - iv. Monitor group progress, facilitate interaction with other members, and assess group skills of self and others
7. Brief list of topics to be covered
  1. Team formation, peer- and self-evaluation of team work
  2. Design thinking – using empathy and tools for understanding users to engineer better products
  3. Development of individual entrepreneurial mindset – to encourage students to exercise curiosity, encourage connections, and appreciate the diverse ways of creating value
  4. Planning students' experience in BMED – begin a portfolio that represents students' capacity as budding biomechanical engineers