Instructor:
Dr. Vijay Vaidyanathan
vijay.vaidyanathan@unt.edu
(940) 565-3268
Office: K 220 D
Office Hours: MW, 11 AM – 1 PM or by appointment

Required Textbook:
None

Catalog Course Description:
Team biomedical engineering design project involving development of problem statement, alternative approaches for solution, product portfolio, specific system analysis and design.

Specific course information
a. Course catalog description: Team biomedical engineering design project involving development of problem statement, alternative approaches for solution, product portfolio, specific system analysis and design.

b. Prerequisites or co-requisites: Prerequisite(s): BMEN 3310, BMEN 3350, BMEN 3311, BMEN 3312, BMEN 3321; senior classification.

c. Required

Specific goals for the course:
d. Specific outcomes of instruction: Upon successful completion of this course, students will understand: Develop a product or process portfolio with a marketing plan. Develop an understanding of the product development cycle from inception to a test model as used in an industrial setting. Develop an appreciation of a team effort in product development. Prepare a formal technical document covering the actual design. Learn the process of utilizing catalogs, specification sheets and vendor documents in the design process. Learn to apply the breadth of the major engineering technology courses to the completion of the final design. Develop an appreciation for the requirements and techniques of an oral presentation covering a group effort. Develop an appreciation for the free market system

e. ABET Outcomes 1, 2, 3, 5.
an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics;
an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors;
an ability to communicate effectively with a range of audiences;
an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives;

Brief list of topics to be covered:
• Biomedical engineering design project involving development of problem statement
• Alternative approaches for solution
• Product portfolio
• Specific system analysis and design

Homework and Quizzes:
Homework assignments will be given using UNT’s Canvas online program. In-class quizzes will cover reading material from the textbook and reference material.

Grade Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Project Proposal</td>
<td>40%</td>
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<tr>
<td>Proposal presentation</td>
<td>40%</td>
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<tr>
<td>Attendance</td>
<td>20%</td>
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</tbody>
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A – 90-100%
B – 80-89%
C – 70-79%
D – 60-69%
F - < 60%

Disability Policy:
All reasonable accommodation will be made to facilitate special needs. If special accommodations are required, the student must first meet with the staff of the Office of Disability Accommodation (ODA), Union Suite 322, (940) 565-4323. After meeting with that office, please contact me to discuss what accommodations will be necessary. For more information, see http://www.unt.edu/oda.