Instructor:
Dr. Vijay Vaidyanathan
vijay.vaidyanathan@unt.edu
(940) 565-4203
Office: B 131
Office Hours: TR: 10 AM -12 NOON

Class Schedule:
MWF: 12:30 – 1:20, Room: B 185

Laboratory Schedule: M: 2 – 5 PM

Required Textbook:
Introduction to Biomedical Engineering
Enderle and Bronzino

Catalog Course Description:
Introduction to biomedical instrumentation design; design, building and testing of bioinstrumentation circuits including power supplies, analog signal amplifiers and analog filter circuits.

Prerequisite(s): BMEN 1300 and (ENGR 2405 or EENG 2610).

Course Objectives:
1. Give an understanding of biomedical instrumentation design.
2. Understand the product lifecycle of biomedical instrument design.
3. Understand the applications of engineering and mathematics fundamentals.
4. Gain more programming experience with LabVIEW and MATLAB.
5. Gain more programming experience with Biopac software.
6. Gain experience working in teams.
7. Apply learned knowledge through a team-based project.
ABET Criteria:
BMEN 2320 addresses the following ABET program outcomes:

a) Apply knowledge of mathematics, engineering and science
b) Develop project-based learning skills through design and implementation of a system
c) Function in multi-disciplinary teams
d) Identify, formulate and solve engineering problems
e) Have an understanding of professional and ethical responsibility
f) Communicate effectively
g) Achieve broad education necessary to understand the impact of Biomedical Engineering
   engineering solutions in a global and societal context
h) Achieve knowledge of contemporary issues
i) Use techniques, skills and computer-based tools for conducting experiments and carrying
   out designs

Homework and Quizzes:
Homework assignments will be given using UNT’s Blackboard Learn 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>Homework/Quizzes</td>
<td>15%</td>
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<tr>
<td>Exam 1</td>
<td>20%</td>
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<tr>
<td>Exam 2</td>
<td>20%</td>
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<tr>
<td>Laboratory Assignments</td>
<td>25%</td>
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<tr>
<td>Final Project</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>.