Instructor:
Dr. Vijay Vaidyanathan
Vijay.vaidyanathan@unt.edu
Office: NTDP B 131
Office Hours: Tuesday & Thursday 11 am to 12:30 pm or by appointment

Catalog Course Description:
Data acquisition and quantitative analysis of biomedical and physiological signals using LabVIEW; A/D conversion; basic transforms; power supply consideration for biomedical systems; filtering of biomedical signals; electrical circuits and analog representations of physiological systems.

Prerequisite(s): MATH 1720

Course Objectives:
1. Understand data acquisition process for biomedical signals
2. Develop knowledge in circuit analysis with RLC networks, op. amps., and regulators
3. Build circuits to properly filter and amplify biomedical signals
4. Use software to simulate and verify circuit designs for biomedical applications

On completion of the course, students will have the ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (1).

Homework:
Homework assignments will be given using UNT’s Blackboard Learn online program. Homework due dates are given with assignment. Homework is turned in class the day it is due. No late submission of homework will be accepted. All late homework will be marked as a zero.

Grade Evaluation:
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</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>20%</td>
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<tr>
<td>Final Project</td>
<td>25%</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.

Attendance:
Attendance is not required for lecture, but highly recommended due to the constant coverage of
information in the course. The student is responsible for obtaining information from missed classes.
Exams will require attendance in classroom. If lab or exam cannot be attended, student is required
to give proper notice so that make up lab or exam can be scheduled accordingly.

Labs:
If lab cannot be attended, student is required to give notice so that a makeup lab can be given
accordingly. If makeup lab is not completed in a timely manner (determined by TA), the TA can
assign a late grade to the lab, or refuse submission.

Lab questions are to be turned in to the TA by the due date specified on each lab. Late submissions
will not be accepted.

The TA is responsible for the lab, and any questions concerning lab are to be directed to the TA.

Exams:
Exams are given in class. A formula sheet will be given to students and calculators are allowed
during the exam.

Final Project
The final project is a separate grade from the lab, but will be worked on during lab hours.
Attendance in lab during the project is recommended so that all team members can communicate
effectively and contribute to the project. The project description and template outline for the project
report will be posted on Blackboard.

Extra Credit
There may be opportunities for extra credit during the course. Extra credit will not be taken after
due date. Any extra credit opportunities will be announced in class and posted to Blackboard. No
further extra credit outside what is announced will be given.