

**BMEN 5310**  
**Clinical Instrumentation**  
**Course Syllabus**

**Instructor:** Dr. Vijay Vaidyanathan

**Office:** K 220D

**Office Hours:** TR; 3-5 PM

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**Course Description:** Responsibilities, functions, and duties of the hospital based biomedical engineer, including program organization, management, medical equipment acquisition and use, preventive maintenance and repair and hospital safety.

**Reference:** Webster JG. Medical Instrumentation: Application and Design, 4th ed. 2010 John Wiley & Sons: New York

**Prerequisites:** Graduate classification

**Course Objectives:**

1. To provide an overview of instrumentation systems used in clinical medicine and biomedical research.
2. To understand the systems for measuring biologic signals
3. To understand the safety considerations in the design and maintenance of clinical systems
4. To understand ethical and regulatory issues in clinical systems

**Grading Policies:**

A – 90% - 100%  
B – 80 - 89  
C – 70 - 79  
D – 60 - 69  
F – < 60

**Additional Comments:**

- Students are encouraged to discuss class material and homework in order to better understand concepts. However, all the homework you submit must be of your own. Direct copying of a solution (from a friend or a book) will be considered as plagiarism and a violation of the University Honor Code.
- Homework assignments are to be turned at the beginning of the class on the due date. Late submission (homework and project) will not be accepted.
- Conceptual Device Design Report, to be turned in online (email or Canvas)
- All students are responsible for announcements made in lecture on the student access website or via the class email list.
- It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office (see <http://www.unt.edu.oda>).

**Withdraws:** Note that students wishing to drop the course must take appropriate action (Details can be found in the following link: <http://essc.unt.edu/registrar/schedule/withdraw.html>). It is your responsibility to make sure all of the requisite paperwork is submitted. Ceasing attendance does not automatically drop you from the course.

**Americans with Disabilities Act:** The University of North Texas does not discriminate on the basis of an individual's disability and complies with Section 504 and Public Law 101-336 (Americans with Disabilities Act) in its admissions, accessibility, treatment, and employment of individuals in its programs and activities. A copy of the College of Engineering ADA Compliance Document is available in the Dean's Office. **It is the responsibility of the student to inform the instructor of any disabling condition that will require modifications by the 12<sup>th</sup> class day.**