MEDTEC SCHOOL

Course: Biomedical Electronics and instrumentation

Year: 3

Period: 1st semester

Credits: 10

Objectives

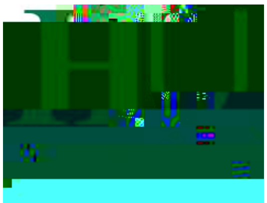
The course will allow students to:

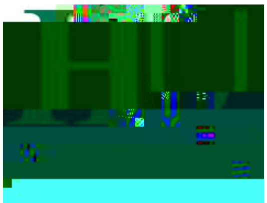
- **be familiar with the basic components of medical instrumentation**
- **be familiar with the basic principles of the biomedical sensors**
- **analyze and understand the basic principles and techniques of biomedical instrumentation**
- **know the main uses and applications of biomedical instrumentation in the clinical settings**
- **understand the main limits of validity of biomedical instrumentation**
- **compare different possible available instruments for clinical measurements**
- **have a sense of the state of the art in the field of biomedical technology**
- **develop a critical appraisal and understand the limits of measurements**

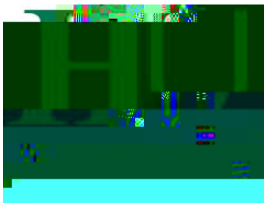
Prerequisites

Student are required to have acquired the content of the following Courses:

- **Fundamentals of Experimental Physics**
- **Chemi ŭ T**







- **Numerical and circuit exercises**
- **Watching demonstrations of biomedical instruments (also in collaboration with biomedical companies)**

  Practice- based demos

Verification of learning

The final exam is constituted by a written test (made of numerical exercise, open-ended questions, multiple choice questions) and a final oral exam.

Texts

John G. Webster (Editor), Amit J. Nimunkar (Editor). Medical Instrumentation: Application and Design, 5th Edition. Wiley