

ENGG*4400

Biomechanical Engineering Design - Fall 2011

Professor and TA Information

Instructor: Nikolas Trutiak, NTrutiak@UoGuelph.Ca, THRN 1415

Office Hours: Every Tuesday from until , or by appointment (if you've got a quick question/concern please feel free to send me an email or talk to me before or after class; if you have a question(s)/concern(s) that requires more time, we can set a time to meet that will work for both of our schedules).

Teaching Assistant:

Matt DiCicco: MDicicco@UoGuelph.Ca

Office: Room VMI 106B

Course and Schedule Information

Prerequisites: ENGG*2120, ENGG*3170

Class Time: T,TH - 14hr30 - 15hr50 CRSC Building, Room 101

Lab Time: TH - 11hr30 - 13hr30 THRN Building, Room 1004

No Classes on:

Final Examination:

Books/Texts:

Numerous books will be consulted during this course. I will try to find some downloadable resources from Springer Link. You might as well utilize that source as much as you can while you are still students!

Learning Objectives

Course Description:

Objectives of this course include the ability to:

- a) Identify common biomechanical device problems
- b) Specify suitable device materials and manufacturing strategies
- c) Apply engineering principles to the development of a novel biomechanical design
- d) Design and manage the development of biomedical devices

This course stresses concept development, design, modeling, manufacturing and testing of medical implants and/or tools. This course investigates the biomechanical factors influencing design, regulatory issues, current development trends, and the possible future of medical implant technology. Emphasis will be placed on design, research methods and practice of skills related to academic research and industrial environments.

Marking

Activity	Percentage of Final Grade
Assignments (4-5 depending on time)	25%
Individual Design Project (proposal, seminar and report)	25%
Major Group Design Project (proposal, seminar and report)	50%

Assignments will be handed out through Courselink. Students are encouraged to complete all of these assignments. The teaching assistant will announce the due date for each assignment during the tutorial sessions. Late assignments will receive a grade of 0. The questions will be marked rigorously - i.e. answers should be thoroughly and professionally presented. The teaching assistant and I will be available during office hours and lab time, if requested, in order to provide advice and suggestions. Lab time is typically used to work on assignments and, later, to work on the group projects.

Projects will be discussed and handed out in class. Proposals are required in order to approve the topic. Seminars will later be conducted in class and/or labs if time is tight. Reports are expected to be professional and well written with all effort made to reference material properly using available tools.

University Policy on Academic Misconduct:

Academic misconduct, such as plagiarism, is a serious offence at the University of Guelph. Please consult the Undergraduate Calendar 2011-2012 and School of Engineering programs guide, for offences, penalties and procedures relating to academic misconduct.

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Communications

Communications is through announcements in class. Some information will be posted on the course website and some will be out through e-mails. I am generally quite quick when it comes to returning emails, so if you have questions, please ask. My TA should also be available through e-mail.

Disclaimer

The instructor reserves the right to change any or all of the above in the event of appropriate circumstances, subject to the University of Guelph Academic Regulations.