Course title and number  BMEN 451/652 Cell Mechanobiology
Term  Spring 2012
Meeting times and location  Monday/Wednesday/Friday 9:10 in ETB 1003

Course Description and Prerequisites
The course will focus on how mechanical forces influence cell behavior through physical and biochemical mechanisms. The objectives include integrating engineering and cell biology to solve biomedical problems, which includes developing experimental models for applying forces to cultured cells and tissues and measuring changes in cell biochemistry, structure and function. Prerequisites: BMEN 282 or graduate status.

Instructor Information
Name  Roland Kaunas, Ph.D.
Telephone number  845-2412
Email address  rkaunas@tamu.edu
Office hours  By appointment
Office location  5045 Emerging Technologies Building

Textbook and/or Resource Material
(suggested) Cell & Molecular Biology by Gerald Karp, John Wiley & Sons, Inc. Additional supplemental handouts will be provided in eLearning.

Grading Policies

Evaluation:
Undergrads:  Homework  15%  Letter Grading Scale:  A = 90-100
Design Project  20%  B = 80-89
Midterm 1 (Feb. 20)  20%  C = 70-79
Midterm 2 (Mar. 30)  20%  D = 60-69
Final Exam (May 4)  25%  F < 60

Design projects will be graded based in the following areas:
Abstract  10%
Literature Review  15%
Mechanistic Model  20%
Experimental Testing  20%
Scale up  5%
Figures  15%
Grammar & Spelling  10%
Reference Section  5%

Due dates
March 21: Completed first draft of the Literature review (with Reference Section) and a 2-page outline of the Mechanistic Model and Experimental Testing sections.
April 20: Final report
### Course Topics

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### Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu)

### Academic Integrity

*For additional information please visit: [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor)*

*“An Aggie does not lie, cheat, or steal, or tolerate those who do.”*

### Attendance Policy and Grading Scale Examples

*“The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. University rules related to excused and unexcused absences are located on-line at [http://student-rules.tamu.edu/rule07.]*