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BIOE C112/MECHE C115 - MOLECULAR BIOMECHANICS AND MECHANOBIOLOGY OF THE CELL (4 UNITS)

(Taken from the UC Berkeley Course Guide (http://guide.berkeley.edu))

COURSE OVERVIEW

SUMMARY

This course applies methods of statistical continuum mechanics to subcellar biomechanical phenomena ranging from nanoscale (molecular) to microscale (whole cell and cell population) biological processes at the interface of mechanics, biology, and chemistry.

PREREQUISITES

MATH 54 (math54.html), PHYS 7A (phys7a.html), and BIOE 102 (bioe102.html) or MECHE 85 or instructor's consent.

Spring only

TOPICS COVERED

This course, which is open to senior undergraduate students or graduate students in diverse disciplines ranging from engineering to biology to chemistry and physics, is aimed at exposing students to subcellular biomechanical phenomena spanning scales from molecules to the whole cell.

The students will develop tools and skills to (1) understand and analyze subcelluar biomechanics and transport phenomena, and (2) ultimately apply these skills to novel biological and biomedical applications.

WORKLOAD

TIME COMMITMENT

3 hours of lecture and 1 hour of discussion per week.

UC Berkeley Course Guide (http://guide.berkeley.edu)

COLLEGE OF CHEMISTRY PEER SERVICES

Made by Angela Lee, c/o 2019

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lang=en) students/peer-
advising