

**Department:** BME

**Course No. :** 3600W [261W]

**Credits :** 4

**Title :** Biomechanics

**Contact:** Lisa B Ephraim

**WQ:** W

**Catalog Copy:**

Biomechanics. Four Credits. Prerequisites: BME 3150, or CE 2110 and CE 2120; ENGL 1010 or 1011 or 3800. A lecture and laboratory course that covers mechanics of bone and soft tissues. Biosolids and biofluids. Simple and combined stress and strain, torsion and flexure. Tissue strength and constitutive equations. Fatigue and fracture resistance of bone. Synovial joint mechanics, friction and wear.

**W Criteria:** 1. The six laboratory experiments demonstrate principles covered in the lectures and reading assignments. Although students conduct the lab experiments in small groups, each student is required to submit an individual lab report consisting of five typed finished pages totaling at least 4000 words in length. Each lab report is worth 5% of the overall grade for a total of 30% of the final course grade. Failure to complete the written portion of the course satisfactorily will result in failure of the course.

2. The primary modes of written instruction to students are:

- Formal classroom instruction supplemented by a handout prescribing a format and examples.
- Written commentary from the teacher of record or faculty project advisor
- Individual/group conferences with students addressing written comments if requested
- Oral presentation instruction is by example

3. The reports will be graded based on both technical content and the quality of writing and returned to the student before or during the subsequent laboratory period. So that feedback on the previous report can be reviewed and incorporated into the next laboratory report.