Course Content: Introduction to the physiology and engineering analysis of:
  - the Standard Human
  - rigid bodies in equilibrium (statics)
  - hard and soft tissues
  - mechanics of materials (stress and strain)
  - beams, bones, and how they break

Instructor: Prof. Fred Vetter e-mail: vetter@ele.uri.edu
Schneider Electric first floor phone: 401-874-5141

Classes: MWF 8:00 – 8:50 am, Bliss 305; exams in Kirk Auditorium
course web page: www.ele.uri.edu/faculty/vetter/BME207

Office Hours: at Schneider Electric: by appointment (shuttle schedule on web page)
on-campus: Tues 8:30-9:30 am & Wed 10-11 am in 125 Pastore Hall

Textbook: Özkaya, Nordin, Goldsheyder, and Leger; Fundamentals of Biomechanics:
  Equilibrium, Motion, and Deformation, third edition (Springer 2012). Second
  edition (1999) is fine, but lectures and homework are based on the third
  edition.

Prerequisites: MTH 142, PHY 204, and BIO 121 (may be concurrent)

Grade Distribution:
- Quizzes 5% Grade scale: 90-100% A
- Exam 1 15% 80-89% B
- Exam 2 20% 70-79% C
- Exam 3 20% 63-69% D
- Final 40% < 63% F

Exams: There will be three mid-term exams and a final exam. All exams will be
  closed-book. A calculator and one sheet of regular notebook paper (8.5 × 11”)
  will be allowed for notes. Pertinent reference material (tables, charts, etc.)
  will be provided with each exam. All exams may be comprehensive, covering
  all the material covered in the course to date.

Quizzes: A quiz will be given at the end of class on most Mondays. Each quiz will
  be modeled after the current homework assignment. Quizzes will be closed
  book and closed notes. I strongly recommend bringing a calculator to work
  through the quiz.

Scientific calculators are recommended; cell phones & other wireless devices are prohibited!
Homework: Homework will be assigned frequently and provides the best way of keeping up with the course material. Answers to most of the problems will be provided, but not the solutions. Homework assignments are not collected or scored, but the weekly quizzes will cover material from the homework. I encourage you to study in groups, but be sure you understand the material since exams and quizzes require your individual performance.

Grading Policy: Attendance does not figure into your course grade, but quizzes and exams will be based on the homework, textbook readings, and lectures. There is no make-up for missed quizzes and exams, except in cases of serious illness (a physician’s note will be required), accident, personal tragedy, or University sanctioned events (see the University Manual section 8.51). If an unforeseen situation causes you to miss a quiz or exam, contact me via voice mail or e-mail before the end of that day’s class.

Time Commitment: The expected weekly time commitment for this course is three hours of study time for every hour of class time. Hence, you should expect to spend an average of 7.5 hours per week outside of class to study the course materials and complete the assignments.

Important Dates: January 29 Last day for “Open Add”
February 5 Last day to add courses via permission number
February 13 Last day to drop courses without a W on transcript
February 15 Exam 1 in Kirk Auditorium
February 21 no class, President’s Day
March 6 Last day to drop courses – W will appear on transcript
March 13–17 no class, Spring Break
March 22 Exam 2 in Kirk Auditorium
April 19 Exam 3 in Kirk Auditorium
May 1 Last class meeting
May 10 Final Exam, 8-11 am, room TBA (probably Kirk Aud)

Reading Schedule: week 1 Chapt. 1, Appendices A & B
(Chapt. 2, Chapt. 3
weeks 2–4 Chapt. 4 (skip 4.12), Chapt. 5
week 5 Chapt. 12, Chapt. 13 sections 1–5
week 6 Chapt. 13 sections 6–10, 16
Chapt. 14 sections 1–2
weeks 7–9 Chapt. 14 sections 3–4
week 10 Chapt. 14 section 11
week 11 Chapt. 14 section 12
week 12 Chapt. 14 sections 6–10
week 13 Chapt. 14 section 13
(Chapters 12–14 in the 3rd edition are 6–8 in the 2nd edition)
Academic Integrity:  Cheating and plagiarism will be handled according to the University Manual sections 8.27.10 to 8.27.21 (see web.uri.edu/manual/chapter-8/chapter-8-2). The penalty for cheating or plagiarism can range from a zero score on the assignment to a failing grade for the course.

Accommodations:  Any student with a documented disability should contact me early in the semester so that we can make reasonable accommodations to support your success in this course. You should also contact Disability Services for Students, Office of Student Life, 302 Memorial Union, 874-2098.

ABET Program Outcomes covered in this course:

A. an ability to apply knowledge of mathematics, science, and engineering;
E. an ability to identify, formulate and solve engineering problems;
L. an ability to critically evaluate alternate assumptions, approaches, procedures, and tradeoffs related to engineering problems.

ABET Professional Component contribution of this course:

Engineering Science: 3 credit hours