Introduces students to fundamental principles of force systems acting on particles and rigid bodies in static equilibrium. Applications to structural and mechanical problems, both two-dimensional and three-dimensional.

Instructor: Dr. Yiannis Ampatzidis
Office: Science III, Room 304
Office Hours: MTueW: 3:00 – 4:40 pm, or by appointment
Phone: 654-2846
E-mail: yampatzidis@csub.edu
Class Time: MW: 5:15 – 7:20 pm
Classroom: Science II, rooms 180
Prerequisite(s): PHYS 221, Co-requisite: MATH 202 or 232

Course Outcomes: This course requires students to demonstrate the following:
- Use vectors to model forces and positions within devices and structures
- Identify forces acting on objects and create free-body diagrams
- Calculate moments due to forces about points and axes
- Apply the conditions of equilibrium to determine equations relating forces in both two- and three-dimensional systems
- Analyze structures using both the method of joints and the method of sections
- Solve for internal forces acting within beams
- Solve problems involving forces distributed along a line or over an area
- Use the laws and definitions of statics to analyze forces and torques in biological systems

BLACKBOARD: All class assignments are available on the campus Blackboard system although assignments will not appear there in advance of the day they are assigned.

GRADING:
- In-Class Assign 15%
- Homework 35%
- Midterm Exams 25% open book
- Final Exam 25% open book
  (Mon, 11/23, 5:15–7:20 pm)

CLASS ASSIGNMENTS: Due by end of class period. Students can collaborate, but not copy.

HOMEWORK: No collaboration permitted, do your own work! Use MasteringEngineering
Must show work to get credit.
EXAMS: See schedule for dates.
All exams will be open book, open note.

Tentative Schedule:
- Introduction, Newton’s Laws, Units (1 week)
- Vectors (1 weeks)
- Forces (1 weeks)
- Systems of Forces and Moments (1.5 weeks)
- Objects in Equilibrium (1.5 weeks)
- Structures in Equilibrium (1 weeks)
- Centroids and Centers of Mass (1 week)
- Friction (1 week)
- Internal Forces and Moments (1 weeks)

Policies:
- You are expected to be on-time, and to maintain a respectful and professional atmosphere in the classroom. Unexcused absences will lower your grade, and you will still be responsible for any work done on that day.
- Makeup work will only be available for extraordinary, well-documented circumstances.
- Neither food nor beverages are allowed in the classrooms.
- Cell phones must be turned off when entering the classroom.

Academic Honesty
“There are certain forms of conduct that violate the university’s policy of academic integrity. Academic dishonesty (cheating) is a broad category of actions that involve fraud and deception to improve a grade or obtain course credit. Academic dishonesty (cheating) is not limited to examination situations alone, but arises whenever students attempt to gain an unearned academic advantage. Plagiarism is a specific form of academic dishonesty (cheating) which consists of the misuse of published or unpublished works of another by claiming them as one’s own. Plagiarism may consist of handing in someone else’s work as one’s own, copying or purchasing a pre-written composition and claiming it as one’s own, using paragraphs, sentences, phrases, words or ideas written by another without giving appropriate citation, or using data and/or statistics compiled by another without giving appropriate citation. Another example of academic dishonesty (cheating) is the submission of the same, or essentially the same paper or other assignment for credit in two different courses without receiving prior approval from the instructors of the affected courses.”
Source: 2011-2013 CSUB Catalog, pp.78-79.

Accommodations for Students with Disabilities
To request academic accommodations due to a disability, please contact the Office of Services for Students with Disabilities (SSD) as soon as possible. Their office is located in SA 140, and they may be reached at 661-654-3360 (voice), or 661-654-6288 (TDD). If you have an accommodations letter from the SSD Office documenting that you have a disability, please present the letter to me during my office hours as soon as possible so we can discuss the specific accommodations that you might need in this class.