Instructor: Dr. F. Necati Çatbaş
ENG-II 406, 407-823-3743, e-mail: catbas@mail.ucf.edu, http://people.cecs.ucf.edu/catbas/

Course Location, and Times: ENG II-203, Mon, Wed, Fri (10:30 AM - 11:20 AM)
Office Hours: Mon, Wed, Fri (9:30-10:30) or by appointment. Do not e-mail unless it is absolutely necessary.

Course Objective: The main objective course is to introduce analysis of determinate and indeterminate structures by flexibility and stiffness methods (3 credit hours). Upon completion of the course, the students are expected to:
1) Develop an understanding and knowledge of different structural systems and their general behavior
2) Conceptualize, analyze and determine structural reactions, member forces, deflections using different analysis methods.
3) Gain knowledge of software tools for computer based applications and develop skills in idealizing and modeling structures using PC-based structural analysis software and then will be able to interpret the solutions from hand calculations, and structural analysis software

Pre-requisites: A good background of Statics (EGN 3310), Mechanics of Materials (EGN 3331), Mathematics (MAP 2302) or consent of the instructor.

Laboratory manual: Structures Laboratory Manual (will be available at the bookstore)
Additional References:

Grading Policy:
• Exam 1: 20% (February 15, 2006)
• Exam 2: 20% (March 20, 2006)
• Laboratory: 20%
• Final: 25% (TBA)
• Homework/Quiz: 15%

Grading Standards:
Homework problems are to be turned in for grading as announced by the instructor. All work, to be submitted in Engineer’s paper must be done neatly and professionally (on the plain side of the paper only). MATLAB, MathCAD and Excel users may turn in printed work on white single sided 8”x11” papers. In ALL cases, steps of the solution must be clearly shown with all final answers boxed or underlined. Loose papers must be properly stapled together. Any missed or late work will not be made up unless an emergency or unavoidable cause can be identified and approved by the instructor. UCF Golden Rules will be followed for academic integrity.

Letter Grades

Course Highlights:
• Introduction and Overview of Structural Analysis
• Design Loads and Statics of Structures
• Overview and Analysis of Plane Trusses, Beams, Frames, Cables and Arches
• Determination of Structural Deformations Using Different Methods (Energy, Flexibility, Approximate Methods), and Computation of Member Forces, NVM diagrams
• Use of Structural Analysis Software
• Evaluation and Presentation of Engineering Problems