

EGM 5533 APPLIED ELASTICITY AND ADVANCED MECHANICS OF SOLIDS

FALL 2018, Section 18BC, MWF 2nd Period (8:30-9:20 AM), CSE E118

Instructor	B.V. Sankar, Professor, Department of Mechanical & Aerospace Engineering. Office: NEB 137. Phone: (352) 392-6749, Fax: (352) 392-7303, sankar@ufl.edu http://www.mae.ufl.edu/sankar
Office Hours	MWF 4 (10:30-11:30 AM)
T.A./Grader	TBA
Textbook	Advanced Mechanics of Materials and Applied Elasticity, A.C. Ugural and S.K. Fenster, 5 th Edition, Prentice Hall.
Prerequisites	EGM 3520 Mechanics of Materials or Strength of Materials
Goals	The major goal of this course is to teach exact (Theory of Elasticity) and approximate (Adv. Mech. Materials) methods in the analysis of solids and structures. The methods are applicable to design and analysis of mechanical, aerospace and civil engineering structures.
Topics	Analysis of Stress Strain and Material properties Problems in Elasticity Bending of Beams Torsion of Prismatic Bars Axisymmetrically Loaded members Beams on Elastic Foundation Energy methods Stability of Columns
Computer	Some numerical work necessary; MATLAB or Excel should be sufficient.
Homework	Home problems will be due every week. Two worst HWs will be dropped.
Exams	Closed book; closed notes. Schedule: (in class) WED 09/26, WED 10/31, WED 12/5
Quizzes	Closed book; closed notes. Schedule: (20 minutes, in class) 09/5, 09/19, 10/10, 10/24, 11/14, 11/28. Two quizzes will be dropped.
Grading	Home problems 5%; four quizzes 5% each, and three exams, 25% each A = 93, A- = 90, B+ = 87, B = 83, B- = 80, C+ = 77, C = 73, C- = 70, D+ = 67, D = 63, D- = 60

Honesty Policy – All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

The Honor Code

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."