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TEXT: Analysis of Aircraft Structures, Bruce K. Donaldson
REF. TEXT: Aircraft Structures for Engineering Students, T. H. G. Megson

PREREQUISITES: MTH 242 (Diff. Eq.s), EAS 206 (Mechanics), Computer Language

GRADING POLICY: The final grade will be determined from the following break-down:

Homework*	20%
Quizzes*	30%
Mid-semester Test	15%
End-semester Test	20%
End-semester Project	15%

Project will involve a group effort with an analyze and build component. A competition will be held during the final exam period for the class.

*Lowest homework and lowest quiz will be dropped

*There is no excuse for not turning in homework. If you feel you have a valid excuse, this must be presented **prior** to the due date to be considered. Homework is due **BEFORE** class starts. The grade for any homework turned in after class begins is immediately cut by 25%. Any homework turned in after the class ends is not considered.*

COURSE OUTLINE: The course will cover concepts of stress and strain, basic elasticity, bending and deflection of beams, energy methods, and basic principles and concepts of Finite Element Analysis.

ACADEMIC DISHONESTY:

Academic Dishonesty of any type (cheating, plagiarism, etc.) are grounds for receiving an F in this course.

DATE	CLASS	MATERIAL	HW/QUIZ
8/28	1	Introduction to Structural Analysis, Stress - Chpt. α	
8/30	2	Stress, Principal Stresses, Mohr's Circle - Chpt. β	
9/1	3	Mohr's Circle continued	
9/4	Break	Have a nice Labor Day!	
9/6	4	Displacements, Strains, Compatibility- Chpt. γ	
9/8	5	Plane Strain - Chpt γ	H1 due
9/11	6	Princ. Strains, Strain Gauges, Materials - Chpts. γ, δ, ϵ	Q1
9/13	7	Linear Elasticity, Intro. to Basic Elasticity - Chpts. ζ, η	
9/15	8	Basic Elasticity, Chpt. η	H2 due
9/18	9	Basic Elasticity, Plane Stress - Chpts. η, θ	
9/20	10	Same, Intro to Bending Stresses - Chpt. κ	
9/22	11	Bending Stresses - Chpt. κ	H3 due
9/25	12	Modulus Weighted Properties - Chpt. κ	Q2
9/27	13	Beam Deflections - Chpt. λ	
9/29	14	Same	H4 due
10/2	15	Beam Bending - Chpt. μ	
10/4	16	Work and Potential Energy - Chpt. ρ	
10/6	17	Virtual Work	H5 due
10/9	Break	Yom Kippur - classes cancelled until 6 p.m.	Q3
10/10	18	Complementary Work (follow Monday's schedule)	
10/11	19	Same	
10/13	20	Same	H6 due
10/16	21	Stat. Value of T.P.E./T.C.E.	
10/18	22	Deflection Problems	
10/20	23	Same	H7 due
10/23	24)	Unit Load Method - Chpt. σ	
10/25	25	Statically Indeterminate Problems	
10/27	26	Same	H8 due
10/30	27	FEM Intro - Chpt. Φ	Q4
11/1	28	Spring elements	
11/3	29	Truss elements	H9 due
11/6	30	Rotated bar elements - Chpt. Ξ	
11/8	31	Same	
11/10	32	Assembling the system equations	H10 due
11/13	33	Same	Q5
11/15	34	Basic beam element - Chpt. Φ	
11/17	35	Beam bending element	H11 due
11/20	36	Beam - all degrees-of-freedom	Q6
11/22-24	Break	Have a great Fall Recess!	
11/27	37	Structures with multiple element types	
11/29	38	Same	
12/1	39	Same	H12 due
12/4	40	Multi-dimensional elements	Q7
12/6	41	Review	
12/8	42	Test 2	