Course Description

Aspects of structural analysis pertinent to the design of aerospace vehicles. Stress analysis of thin-walled box beams; Work-Energy Methods; Limit states due to initial yielding, fracture, buckling and fatigue in sizing thin-walled structural members; Introduction to aeroelasticity.

Instructor

Vijay K. Goyal, AOE Graduate Research Assistant
Office 100 Randolph-Annex
Office Hours: MW: 2:00pm – 3:30pm; Tu & Th: by appointment; F: 2:00pm-4:30pm
Office Phone: 231-3231 / 3550
E-mail: vgoyal@vt.edu

Text

Fundamentals of Aircraft Structural Analysis, by Howard D. Curtis, © Richard D. Irwin, a Times Mirror Higher Education Group, Inc. company, Chicago, 1997. (TL671.6 C87)

References

2. Dr. Johnson’s AOE3124 website: http://www.aoe.vt.edu/~johnson/ AOE3124
3. These will be available for 2-hour loan at the reserve desk of the Newman library
   • Dowling, N. E., Mechanical Behavior of Materials, 1993 Prentice Hall, Inc., Englewood Cliffs New Jersey; Chapters 8 and 9. (TA404.8 D68)
   • Peery, D. J., Aircraft Structures, McGraw Hill, 1950; Chapters 3 & 10. (TL 671.6 P4)

Grading Distribution

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Homework</td>
<td>30%</td>
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<td>Test 1</td>
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<td>Test 3</td>
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Students should take advantage of bonus homework and projects to improve their grade. There will be no “grade curving” at the end of the semester. Standard grade scale will apply.

Homework and Tests

Only your own handwritten solutions, written legibly on one side of an 8.5 x 11 inch sheet of paper will be accepted for grading. In the case of computer assignment, a computer print out is acceptable whenever a copy of the code is included. Students are encouraged to work together on the homework, but submissions must be the student’s own work. NO LATE HOMEWORKS WILL BE ACCEPTED.

Necessary Absentees

Students who will be attending conferences or seminars during the semester and expect to miss classes must inform the instructor by e-mail on or before January 31st, 2001. Failure to do so will result in unexcused homework/test submission.

Honor Code

The honor code will be strictly enforced in this course. All assignments submitted shall be considered graded work unless otherwise noted. All aspects of your coursework are covered by the honor system. Any suspected violations of the honor code will be promptly reported to the honor system. Honesty in your academic work will develop into professional integrity. The faculty and students of Virginia Tech will not tolerate any form of academic dishonesty.