Syllabus

Engineering Science 201, Statics
Fall Semester, 2010

Three Credits
Prerequisites: Physics 121
Co-requisite: Math 231

Materials and Metallurgical Engineering Department, New Mexico Tech
Tuesday – Thursday 0930-1045 and 1100 – 1215 Room 101 Jones Annex

Instructor: Dr. Loren A. Jacobson, Adjunct Professor, Materials and Metallurgical Engineering
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Office: Jones 21

Course Designation: This is a required course for all engineering students, except those majoring in Electrical Engineering.

Course Description: Statics represents a set of fundamental concepts and tools for understanding of forces and moments in actual engineering applications. It deals with forces and interaction of forces that occur in rigid bodies that are in static equilibrium. In this course two and three-dimensional structures are analyzed to determine how they react to, and how they support applied loads.

Topics of Study: The primary areas of emphasis will be vector analysis, free body diagrams, and simple structures. It will also be important for the student to obtain more experience with estimating and three dimensional visualization.


Homework and Class Attendance: Homework assignments will be made on Tuesdays, and will be required to be returned by the following Tuesday. Problems will be selected from a number of different sources. Out of each set of homework, one or two problems will be graded. Solutions to the homework will be presented on the following Thursday, in class. Class attendance is vital, because some material will be presented that might not be found in the text. Also, multiple choice questions will be asked in class, first for individual responses and then responses from student teams. The clicker technology will be used, so that each response will be automatically recorded. One point will be given for an answer, and two points will be given for a correct answer. Scores will be used to determine a class participation grade, as indicated below.

Grading:
Your final grade will be determined by the following percentage distribution:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>20%</td>
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<tr>
<td>Homework</td>
<td>25%</td>
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<tr>
<td>Exams</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
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The standard for letter grades will be as follows:
A - 90% or above
B - 89% to 80%
C - 79% to 70%
D - 69% to 60%
F - 59% or below.

Assessment: Class participation question scores will be used to assess how the class is learning the material.

Pace of the Class: The class is expected to proceed at a pace that will insure that all of the students can reach a reasonable level of understanding of the concepts of statics, and the use of vectors in the process.

Getting Help: Students are strongly encouraged to work together. I will be available for help during specified office hours, after class meetings, and at other times by appointment. I strongly encourage informal drop-in visits to my office, and contact by e-mail.

Detailed calendar and reading and homework assignments will be found in separate documents available on the web site for the course. The URL for this web site is:
http://infohost.nmt.edu/~ljacobso/ES 201.html