CAE 304, Structural Analysis I, summer 2012

Syllabus

Instructor: A. Longinow; PhD, PE

Teaching Assistant: Natalie Waksman

This course will cover the following topics:

1. Structures and Loads
2. Analysis of Statically Determinate Structures
3. Statically Determinate Trusses
4. Internal Loadings Developed in Structural Members
5. Cables and Arches
6. Influence Lines for Statically Determinate Structures
7. Approximate Analysis of Statically Indeterminate Structures
8. Deflections

The above outline generally follows the chapter outline given in the assigned text which is “Structural Analysis” seventh edition by R. C. Hibbeler, Prentice Hall

If time allows we will consider some “statically indeterminate structures” as presented in chapters 10 and 11.

Homework consisting of about four to five problems will be assigned each week. Homework will be due in class one week after it has been assigned. The homework will be graded by the Teaching Assistant (TA) and will be returned promptly.

In addition to the lectures given by the Instructor, the TA will lecture on the use of SAP2000. This is a general purpose structural analysis program which is resident on the IIT computer system. Students will be taught how to use this program to solve structural problems.

We are planning approximately one forty to fifty minute period for this purpose during each class. During this time the students will listen to the lecture and then will be asked to solve one or two problems which would be submitted to the TA at the end of class period. These solved problems will constitute a part of the homework and will be graded as homework in addition to the regularly assigned homework. This homework will be returned the following class period.

There will be one Midterm Exam and one Final Exam. The Midterm exam is tentatively scheduled for Monday, the 2nd of July. The Final exam will be given on the day assigned by the University. The date will be announced.

The final grade (score) will consist of following parts having the given weights:

Homework 40%
Midterm 30%
Final Exam 30%
Using the scores obtained as given above, the grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 -100</td>
<td>A</td>
</tr>
<tr>
<td>80 – 89</td>
<td>B</td>
</tr>
<tr>
<td>70 – 79</td>
<td>C</td>
</tr>
<tr>
<td>60 – 69</td>
<td>D</td>
</tr>
<tr>
<td>&lt;60</td>
<td>E</td>
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</tbody>
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Scores falling in the 89-90; 79-80; 69-70 ranges will be given the higher grade.

A. Longinow, June 5, 2012