COURSE INFORMATION

MATRIX METHODS OF STRUCTURAL ANALYSIS

Course Title

CE 441

Course Number

Fall 2014

Semester

Meeting Time(s)
T Th, 12:35 - 1:50 pm

Meeting Location(s)
Engr. A - 320

Office Hours
T Th, 10:00 am - 12:00 noon and 2:00 - 3:00 pm

Office Location
Engr. B - 36

Office Telephone
(618) 453 - 7807

INSTRUCTOR INFORMATION

Dr. Aslam Kassimali

Instructor Name

aslam@siu.edu

e-mail

COURSE GOALS AND TOPICS

Brief Summary of Course Goals and Topics

1. Review of the fundamental concepts of structural analysis using matrix notation.
2. Detailed study of the displacement (stiffness) method of analysis as applied to statically loaded framed structures.

TEXTBOOKS AND MATERIALS

Required Textbook(s)


Required Materials and Equipment

Recommended Textbook(s)

Recommended Materials and Equipment
ASSIGNMENTS AND EVALUATIONS

Type and Number of Planned Assignments

Homework assignments consist of solving (about 20) structural analysis problems

Methods of Evaluation

<table>
<thead>
<tr>
<th>Test # 1</th>
<th>25%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test # 2</td>
<td>30%</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>10%</td>
</tr>
<tr>
<td>Computer project</td>
<td>5%</td>
</tr>
<tr>
<td>Final examination</td>
<td>30%</td>
</tr>
</tbody>
</table>

COURSE SCHEDULE OVERVIEW

General Outline of Course Topics

- Review of Matrix Algebra (Chapter 2)
- Matrix Stiffness (Displacement) Method for Plane Trusses (Chapters 3 & 4)
- Matrix Stiffness (Displacement) Method for Beams (Chapter 5)
- Matrix Stiffness (Displacement) Method for Plane Frames (Chapter 6)
- Member Releases and Secondary Effects (Chapter 7)
- Matrix Stiffness (Displacement) Method for Three-Dimensional Framed Structures (Chapter 8)