UNIT COORDINATOR AND LECTURER
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OBJECTIVE
The objective of the course is to develop an understanding of equilibrium, stress, strain, deformation and stability of 2D and 3D statically determinate and indeterminate structures, and to provide an introduction to the methods of analysis for design of structural and mechanical elements.

EXPECTED OUTCOMES
Students are expected to be able to analyse and design 2D and 3D truss, beam and column elements under axial force, shear force, bending moment, and torque, be able to perform stress and strain analysis to estimate the principal stress and strain of a structural element under the combination of loads, estimate structural element deformation, and buckling potential of structural columns.

STRUCTURE OF THE COURSE
The course comprises 39 lectures (39 contact hours) and 34 tutorial sessions. The following major topics will be covered:
- Revision of statics
- Analysis of 2D and 3D trusses
- Analysis of 2D beams. Shear forces and bending moment diagrams
- Section Properties
- Tension, compression and direct shear
- Analysis of statically determinate and indeterminate axial and torsional members
- Normal and shear stresses in beams
- Analysis of stress and strain
- Column buckling and stability

ASSESSMENT

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<th>Assessment</th>
<th>Contribution</th>
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<tr>
<td>1</td>
<td>3-hour final examination at the end of semester one.</td>
<td>70%</td>
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<tr>
<td>2</td>
<td>1-hour quiz in teaching week 7</td>
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<td>3</td>
<td>13-weekly assignments</td>
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<td><a href="http://w3.civil.uwa.edu.au/~civl2110/assignment/index2110.html">http://w3.civil.uwa.edu.au/~civl2110/assignment/index2110.html</a></td>
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Notes: a 50% penalty will be imposed for each late submission of weekly assignments.
TEXTBOOK
(please note, this is the latest edition. However, any previous edition of this text book will be fine)

RECOMMENDED READING

IMPORTANT INFORMATION
• Students should be aware of the University guidelines on Academic Misconduct (see
  http://www.teachingandlearning.uwa.edu.au/tl4/for_uwa_staff/policies/student_related_policies/academic_conduct)
• Students should be aware of the Faculty Policy for Appeals (see
• Students should be aware of the Charter of Student Rights (see