<table>
<thead>
<tr>
<th><strong>Module Code</strong></th>
<th>CE7S04</th>
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<tbody>
<tr>
<td><strong>Module Name</strong></td>
<td>S4 – Bridge Engineering</td>
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<tr>
<td><strong>ECTS Weighting</strong></td>
<td>5 ECTS</td>
</tr>
<tr>
<td><strong>Semester taught</strong></td>
<td>Semester 2</td>
</tr>
<tr>
<td><strong>Module Coordinator/s</strong></td>
<td>Professor Alan O’Connor (<a href="mailto:alan.oconnor@tcd.ie">alan.oconnor@tcd.ie</a>)</td>
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**Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline**

On successful completion of this module, students should be able to:

- LO1. Aesthetics of Bridge Design.
- LO2. Bridge Loading.
- LO3. Introduction to Concrete Bridge Design.
- LO4. Preliminary Scheme Design.
- LO6. Design of Cable Supported Bridges.
- LO7. Concrete Bridge Durability.
- LO8. Risk Assessment and Whole Life Optimisation.

**Graduate Attributes: levels of attainment**

To act responsibly - Introduced
To think independently - Enhanced
To develop continuously - Enhanced
To communicate effectively - Enhanced

**Module Content**

To provide and understanding of bridge design, modelling, construction, maintenance and whole life management.
### Teaching and Learning Methods

Lectures, tutorials, coursework.

### Assessment Details

Please include the following:
- Assessment Component
- Assessment description
- Learning Outcome(s) addressed
- % of total
- Assessment due date

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<thead>
<tr>
<th>Assessment Component</th>
<th>Assessment Description</th>
<th>LO Addressed</th>
<th>% of total</th>
<th>Week due</th>
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<tbody>
<tr>
<td>Examination [3 hours]</td>
<td></td>
<td></td>
<td>85%</td>
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<tr>
<td>Coursework</td>
<td></td>
<td></td>
<td>15%</td>
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### Reassessment Requirements

### Contact Hours and Indicative Student Workload

Contact hours:

Independent Study (preparation for course and review of materials):

Independent Study (preparation for assessment, incl. completion of assessment):

### Recommended Reading List

Reading lists will be provided by each lecturer on the course.

### Module Pre-requisite

### Module Co-requisite

### Module Website

### Are other Schools/Departments involved in the delivery of this module?
If yes, please provide details.

### Module Approval Date
<table>
<thead>
<tr>
<th>Approved by</th>
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<tbody>
<tr>
<td>Academic Start Year</td>
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<tr>
<td>Academic Year of Date</td>
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