Module Code	CE7S04
Module Name	S4 – Bridge Engineering
ECTS Weighting[1]	5 ECTS
Semester taught	Semester 2
Module Coordinator/s	Professor Alan O'Connor (alan.oconnor@tcd.ie)
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. L05. Computer Modelling and Analysis of Bridges. 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[2]
Please include the following:

- **Assessment Component**
- **Assessment description**
- **Learning Outcome(s) addressed**
- **% of total**
- **Assessment due date**

Assessment Component	Assessment Description	LO Addressed	% of total	Week due
	Coursework		15%	Wk 8
	Coursework		85%	Wk 14

Reassessment Requirements	Coursework (100%)

Contact Hours and Indicative Student Workload[2]

Contact hours: 36
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	

Approved by	
Academic Start Year	1st January 2025
Academic Year of Date	2024/2025