CE7S04: S4 – Bridge Engineering [5 credits]

Module Co-ordinator(s): Assoc. Prof. Alan O’Connor (Alan.OConnor@tcd.ie)

Module organisation
Department of Civil, Structural and Environmental Engineering

Module description, aims and contribution to programme
To provide an understanding of bridge design, modelling, construction and maintenance.

Learning outcomes
1. Aesthetics of Bridge Design.
2. Bridge Loading.
3. Introduction to Pre-stressed Concrete Bridge Design.
4. Preliminary Design.
5. Seismic Performance Assessment.
6. Design of Cable Supported Bridges.
7. Concrete Bridge Durability.
8. Risk Assessment and Whole Life Optimisation.

Teaching strategies
Lectures, tutorials, coursework.

Assessment
Written examination at end of semester (85%); coursework during semester (15%).

Required textbook
Reading lists will be provided by each lecturer on course.

Further information
School of Engineering weblink.