

## CLASS DESCRIPTION FORM 2022/2023

### CL315 Engineering and Society



<b>Module Registrar:</b> Dr Mike Murray	<b>Taught To (Course):</b> Civil Engineering Civil and Environmental Engineering	
<b>Other Lecturers Involved:</b>	<b>Credit Weighting:</b> 10	<b>Semester:</b> 1
<b>Assumed Prerequisites:</b> Course entry requirements	<b>Elective class</b>	<b>Academic Level: 1</b>

#### Module Format and Delivery (hours):

Lecture	Tutorial	Laboratory	Project	Assignments	Private Study	Total
22	10	0	15	20	33	100

#### Educational Aim

The aims are to introduce students to the role of global civil engineering practice and the contribution to society through examining both historical and contemporary issues of civil engineering practice and the professions.

#### Learning Outcomes

On completion of the module the student is expected to be able to:

LO1 Describe the practice of the civil engineering sector and the various disciplines involved related to their future careers within the industry.

LO2 Identify the processes and technologies employed in civil engineering through case studies (including failures) and construction site visits.

LO3 Explain the importance of Professionalism (Ethical behaviour / Health and Safety legislation/ Environmental Issues / Diversity) related to civil engineers practice.

LO4 Demonstrate an understanding of Information Literacy, knowledge acquisition (explicit & tacit) & personal / peer group learning / Continuing Professional Development (CPD) and metacognition whilst studying at university.

#### Syllabus

- History of the civil engineering profession (people, projects, place)
- The construction industry- roles, responsibilities and interaction with society.
- Construction technology and the life cycle of buildings and infrastructure.
- Professional Ethics / Health & Safety / Environmental & Diversity issues.
- Developing an appreciation of risk through examining failures in structures.
- Lifelong learning / Meta Skills / Reflective Writing

#### Assessment of Learning Outcomes

##### Criteria

LO1 Describe the organisation of the civil engineering sector and the various disciplines involved

C1 Review a topical issue in civil engineering based on cited references.

C2 Identify strategic challenges facing the profession and outline a strategy to address these.

LO2 Critically review processes and technologies employed in civil engineering through case studies and construction site visits.

C1 Describe the technology used in a civil engineering project based on a review of articles on recent projects.  
 C2 Describe construction processes used in civil engineering based on a site visit.

LO3 Discuss the importance of Professionalism within the construction industry

C1 Appreciate the need for ethical behaviour & practice related to a professional membership of a relevant institution.

C2 Develop an understanding and awareness of the importance of occupational health and safety.

C3 Identify key environmental issue for civil engineering practice.

C4 Appreciate the need for diversity in civil engineering operating within a global environment.

LO4 Demonstrate the importance lifelong learning through

C1 Develop skills for professional technical and academic writing.

C2 Discuss the techniques for proper CV writing and profile building.

C3 Understand the role of metacognition & reflective practice in learning.

C4 Engage in continuing professional practice through participation in co-curricular activities.

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

### Principles of Assessment and Feedback

[https://www.strath.ac.uk/media/ps/cs/gmap/academicaffairs/policies/assessment\\_and\\_feedback\\_policy\\_-\\_Effective\\_Sep\\_14.pdf.pagespeed.ce.gW5ceJcqeN.pdf](https://www.strath.ac.uk/media/ps/cs/gmap/academicaffairs/policies/assessment_and_feedback_policy_-_Effective_Sep_14.pdf.pagespeed.ce.gW5ceJcqeN.pdf)

**PRINCIPLE 1. ASSESSMENT AND FEEDBACK PRACTICES PROMOTE EFFECTIVE STUDENT LEARNING-** All four coursework's are Assessments' for learning (Afl) and involve collaborative peer working & assessment. Coursework's 1-3 require active participation and deployment of intrapersonal communication skills.

**PRINCIPLE 2. ASSESSMENT AND FEEDBACK PRACTICES ARE APPROPRIATE, FAIR, AND TRANSPARENT-**Given that the module is for first-year year students in transition to university the LO's and assessment criteria require evidence linked to the bottom tier of Blooms taxonomy (Knowledge-comprehension-application) and require students to develop professional level standards of information mining consistent with life-long learners.

**PRINCIPLE 3. ASSESSMENT AND FEEDBACK PRACTICES ARE CLEARLY COMMUNICATED TO STUDENTS AND STAFF-**Assessment guidance and feedback policy will be communicated to students on week 1.The registrar is open to consultation with students (as partners, vis-à-vis HEA Guidance) regarding the assessment requirements and weightings.

**PRINCIPLE 4. ASSESSMENT AND FEEDBACK PRACTICES ARE CONTINUOUSLY REVIEWED**  
 The assessment (coursework's 1-4) provide novel approaches (book jigsaw / internationalisation at home/ rich pictures / role play) within the UG course and anonymous reflective feedback from students will be used to evaluate the deployment of these coursework's.

### Assessment Method(s) Including Percentage Breakdown and Duration of Exams

	Examinations			Coursework's		Projects	
	Number	Duration	Weighting	Number	Weighting	Number	Weighting
L/Outcomes				4	100%	-	-
				LO1,LO2, LO3, L04			

## Coursework / Submissions deadlines:

As Below

## Resit Assessment Procedures:

Coursework Allocation submitted before August 2023 Exam diet begins.

### PLEASE NOTE:

Students need to gain a summative mark of 40% to pass the module inclusive of a 40% pass in all 4 individual coursework's. Students who fail the module at the first attempt will be re-examined during the August diet and be required to submit any outstanding coursework.

### Useful Reading (Textbooks, journal papers, and internet resources)

#### Purchase Recommended

Argawal, R. (2018) *Built: The Hidden Stories Behind our Structures*, London: Bloomsbury.

#### Highly recommended reading

Blockley, D. (2014) *Structural Engineering: A Very Short Introduction*, Oxford: OUP Oxford.

Muir Wood, D. (2012) *Civil Engineering: A Very Short Introduction*, Oxford: OUP Oxford.

#### For reference

#### Electronic Books available from University Library

Ferguson, H & Chrimes, M. (2011) *The Civil Engineers: The Story of the Institution of Civil Engineers and the People who Made it*, London, ICE Publishing.

Ferguson, H & Chrimes, and M. (2013) *The Contractors: The Story of British Civil Engineering Contractors*, London, ICE Publishing.

Ferguson, H & Chrimes, and M. (2020) *The Consulting Engineers: The British Consulting Engineers who Created the World's Infrastructure*, London, ICE Publishing.

#### Magazines

*New Civil Engineer* (NCE) Free Monthly online / tablet version when you join the Institution of Civil Engineers for free as a Student Member, see <https://www.ice.org.uk/membership/grades-of-ice-membership/student-membership-of-ice>

*The Structural Engineer*, Monthly online magazine of the Institution of Structural Engineers (electronic access through the university library) + join the IStructE as a student member for free, see <https://www.istructe.org/membership/types-of-membership/student-member>

#### Examples of Video & Radio resources available on the University Planet eStream, A full list will be emailed to students:

The Five Billion Pound Super Sewer –Thames Water London(Pt1)  
<http://ls-video2.ces.strath.ac.uk/view.aspx?id=14877~5o~hmeyrgzdK8>

Brunel: The Man Who Built Britain (Part 1)  
<http://ls-video2.ces.strath.ac.uk/view.aspx?id=12377~5h~zBbEwS8VBB>

The Lighthouse Stevensons - <https://ls-video2.ces.strath.ac.uk/view.aspx?id=2419~4q~qMPbenUS>

Thomas Telford: The Man who Built Britain- <http://video.strath.ac.uk/07/250-07-01.wvx>

How they Work (Ceramics) –Concrete in Civil Engineering

<http://ls-video2.ces.strath.ac.uk/view.aspx?id=6644~4u~vC7fULN2>

How they Work (Metals)-Cast Iron and Steel in Civil Engineering

<http://ls-video2.ces.strath.ac.uk/view.aspx?id=6671~4u~vC7fUOMY&nonhttps=true>

Queensferry Crossing (BBC Radio Scotland) science involved in the construction of the Queensferry Crossing

<http://ls-video2.ces.strath.ac.uk/view.aspx?id=7019~4r~SFdwPyf3>

Costing the Earth (Wildlife-Friendly Motorways)

<http://ls-video2.ces.strath.ac.uk/view2.aspx?id=8065~4t~V4IjBBG>

### Additional Student Feedback

*(Please specify details of when additional feedback will be provided)*

Date	Time	Room No
Various TBC		

Session: **2022-2023**

### Approved:

**Course Director Signature: Neil S Ferguson**

**Date of Last Modifications: 20/08/2022**

