

MODULE DESCRIPTOR 2019/2020

CL135 Civil Engineering and Society



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

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) 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 / learning styles / working in groups & teamwork

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 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

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, LO4			

Coursework / Submissions deadlines:

Semester 1:

MM1- Week 4 18th October @ 14.00hrs

MM2- Week 6 1st November @ 14.00hrs

MM3- Week 10 29th November @ 14.00hrs

MM4- Week 11 6th December @ 14.00hrs

Resit Assessment Procedures:

Coursework Allocation submitted before August 2020 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)

Recommended Purchase & Read

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

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.

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.

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)

Additional Student Feedback

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

Date	Time	Room No
Various TBC		

Session:2019-2020

Approved:

Course Director Signature: Neil S Ferguson

Date of Last Modifications: 20/08/2019

Module learning Outcomes: Engineering Council AHEP Competencies

Module learning Outcome	Engineering Council AHEP Competencies
LO1	<u>Economic, legal, social, ethical and environmental context</u> Knowledge and understanding of risk issues, including health & safety, environmental and commercial risk, and of risk assessment and risk management techniques.
LO2	<u>Engineering practice</u> Understanding of contexts in which engineering knowledge can be applied (eg operations and management, application and development of technology, etc) Awareness of quality issues and their application to continuous improvement.
LO3	<u>Economic, legal, social, ethical and environmental context</u> Understanding of the need for a high level of professional and ethical conduct in engineering and a knowledge of professional codes of conduct. Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate.
LO4	<u>Engineering practice</u> Understanding of the use of technical literature and other information sources. Understanding of, and the ability to work in, different roles within an engineering team. <u>Additional General Skills</u> Plan self-learning and improve performance, as the foundation for lifelong learning/CPD

JBM Programme Threads

Thread	Primary	Secondary	Contributory
Design			
Health, Safety & Risk Assessment		LO1-LO3	
Sustainability		LO3	
Maths for Engineers			
Industrial Engagement			
Digital Technologies			
Professional Skills	LO1-LO4		

MODULE TIMETABLE

Module Code:

CL315

Module Title:

Civil Engineering and Society

Brief Description of Assessment:

Semester 1

Assignment 1 **(MM1)**: EU / International group construction technology poster

Assignment 2 **(MM2)**: .2 page (max) reflective account of participation in book reading jigsaw activity

Assignment 3 **(MM3)**: Group Bridge Rich Picture.

Assignment 4 **(MM4)**: I'm the Strathclyde Student President of the ICE- 1500 word Address Competition.

Semester One	WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9	WK10	WK11	Exam Period
	Assignment 1&2 Hand-out (MM1 &2)		Assignment 3&4 Hand-out (MM3 &4)	Assignment 1: Hand-in (MM1)		Assignment 2: Hand-in (MM2)				Assignment 3: Hand-in (MM3)	Assignment 4: Hand-in (MM4)	