

Business and Project Management

Module Code	CIVE50001	FHEQ Level	Level 5
Pre-requisites	N/A	Co-requisites	N/A
Teaching Term	Spring	Available for CPD (MSc only)	No
Primary Department	Civil & Environmental Engineering		
Module Leader	Whyte, Jennifer		
Additional Teaching Departments	N/A		
Teaching Staff	Whyte, Jennifer; Abeysekera, Atula; Buchanan, Craig; Craske, John		
Programmes on which the Module is delivered			Core/Elective
MEng Civil Engineering (H201)			Core
MEng Civil Engineering with a Year Abroad (H202)			Core
Civil Engineering (H21E)			Core
Module Overview	<p>This module builds on the foundations set in the first year by further exploring the business environment in which civil engineering projects take place. It is part of the design thread through the MEng programme. The module introduces the concept of risk management and the different types of risks inherent in the civil engineering industry. It also gives an overview of the organizations involved in the supply chain and the principles of project management and procurement, including ways to improve performance, worker safety and the environmental impact.</p>		
Learning Outcomes	<p>Upon successful completion of this module you will be able to:</p> <ul style="list-style-type: none"> • Identify risks to the successful delivery of a civil engineering project. • Apply risk assessment methodologies to quantify and rank risks. • Perform a financial appraisal of a civil engineering project and determine if it is financially viable. • Apply project management tools and strategies in delivery of a civil engineering project. • Propose ways to improve safety, performance and environment impact through design. • 6. Review the procurement process, contracts and methods of contract resolution and their impacts. 		

Description of Content	<p>An overview of the concept of risk and the inherent risks (commercial, technological, legal, political, operational and environmental) in UK civil engineering projects. Risk management frameworks, risk assessment and governance structures.</p> <p>Civil engineering project financial appraisal (including cost-benefit analysis and return on investment), sources of financing and resulting risk-sharing corporate structures. Principles of project management and tools for the management of cost, time and quality, e.g. project management plans and Gantt charts, and the importance of leadership and people management.</p> <p>Management of Health & Safety and Environment risks through CDM regulations, point of work risk assessment and environmental impact assessments. Procurement processes, forms of Civil Engineering contracts and methods of contract resolution and their impact on collaboration, innovation and project delivery.</p>		
Assessment			
Assessment information will be provided separately.			
Learning & Teaching Hours	Independent Study Hours	Placement Hours	Total Hours
18	107	0	125
ECTS Credit	5	CATS Credit	10
Date of introduction	1/10/2020	Date of Last Revision	2/9/2020

Reading Lists:

Category as defined by Central Library:

C = Core, S = Supplementary

	Institution of Civil Engineers (2016). Civil Engineering Procedure 7th Edition. ICE Publishing. https://www.icevirtuallibrary.com/doi/book/10.1680/cep.60692 [Available online through Imperial College Library]
	Institution of Civil Engineers and Institute and Faculty of Actuaries (2014). Risk Analysis and the Management of Projects, 3rd Edition, ICE Publishing. https://www.icevirtuallibrary.com/doi/book/10.1680/ramp.41578 [Available online through Imperial College Library]

	<p>Background reading includes:</p> <p>Carroll, B., Turpin, T., Boyden, A., Carroll, A. and Thomas, R. (2009). Environmental impact assessment handbook: A practical guide for planners, developers and communities, 2nd Edition. ICE Publishing. [Available in Civil Engineering Library]</p>
	<p>Health and Safety Executive (2006). Health and safety in construction, 3rd Edition. http://www.hse.gov.uk/pubns/books/hsg150.htm</p>
	<p>Health and Safety Executive (2015). Managing health and safety in construction - Construction (Design and Management) Regulations 2015 - Guidance on Regulations. http://www.hse.gov.uk/pubns/books/l153.htm</p>
	<p>International Organisation of Standardisation (2018). ISO 31000 Risk management – Guidelines, Geneva. https://bsol.bsigroup.com/Bibliographic/BibliographicInfoData/000000000030315447 [Available online through Imperial College library]</p>
	<p>Larsen, G.D. and Whyte, J. (2013). Safe construction through design: perspectives from the site team, Construction Management and Economics, 31(6) pp. 675-690. Full text available at: https://www.researchgate.net/publication/254864670_Safe_construction_through_design_perspectives_from_the_site_team</p>
	<p>Rowlinson, M. (2011). A Practical Guide to the NEC3 Engineering and Construction Contract, Wiley-Blackwell. https://onlinelibrary.wiley.com/doi/book/10.1002/9781444340181 [Available online through Imperial College Library]</p>
	<p>Winch, G.M. (2009). Managing Construction Projects, 2nd Edition. Wiley-Blackwell. [Available through Imperial College Library]</p>
	<p>Whyte, J. and Levitt, R. (2011). 'Information Management and the Management of Projects', in Morris, P. Pinto, J. and Söderlund, J. (eds) Oxford Handbook of Project Management, Oxford University Press. [Available through Imperial College Library]</p>