Subject Description Form

Subject Code	CSE40419
Subject Title	Engineers in Society
Credit Value	3
Level	4
Exclusion	CSE419 Engineers in Society
Objectives	The subject aims to provide students with appreciation and understanding of social, legal and ethical aspects of engineering solutions and role of engineers in society. The emphasis will be on application of the above to assess the socio-political and legal impacts of civil engineering projects and ways of enhancing project delivery process.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: 1. Identify and analyze the socio-political and ethical aspects of engineering projects. 2. Understand the role of stakeholders' ways of better communication throughout the project delivery process. 3. Discuss wider problems which face the society and to diagnose the engineers' contribution to possible solutions. 4. Present ideas and arguments logically in formal presentations and informal discussions. 5. Understand the impact of engineering solutions in a global, economic and socio-political context. 6. Recognize the need for, and to engage in life-long learning.
Subject Synopsis/ Indicative Syllabus	1. Hong Kong Political and Legal System Public works, funding, procurement and implementation. Government hierarchy, Political system, legal framework and legislature. Overview of ordinances related to Civil, Structural and Environmental Engineering in Hong Kong. (3 Weeks) 2. Contract law and law of tort Major parties in the construction industry. Formation of a contract and its essential elements. Excuses for non-performance (misrepresentation, illegality, frustration and impossibility etc.). Breach of contract and remedies. Standard forms of contract. Tort of negligence, duty of care, breach of duty and remedies. Professional negligence and development. Dispute resolution mechanisms. (5 Weeks)

3. Sustainable Development Concepts of sustainable development. International efforts to cope with climate change; regional corporations for environmental issues. (2 Weeks)

4. Ethics for Construction Professionals Ethical concepts. Ethical management. Standards of behaviour. Case studies of malpractices and ethical dilemmas (1 Week) by ICAC

5. Seminars on Representative Engineering Projects Civil, environmental, structural, and fire engineering. (2 Weeks)

Teaching/Learning Methodology

Teaching methodology includes lectures by subject lecturers; invited seminars by professionals with the relevant backgrounds (government engineers, consultants, contractors and ICAC). Learning outcomes will be assessed continuously by monitoring the in-class response, quizzes, case study reports and assignments.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d	e	f
1. Two group assignments and class participation/ discussion (25%) 2. Individual seminar report (10%) 3. Quiz (5%)	40%	√	√	√	√	√	√
4. Examination	60%	√	√	√		√	√
Total	100 %						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

1. The intended learning outcomes are monitored through continuous assessment (40%) and final examination (60%).
2. The continuous assessment would consist of a quiz, an individual seminar report and group-based tasks.
3. As guest lecturers and practitioners will be invited in lectures/seminars and presentation assessment,

<table>
<tr><td></td><td colspan="2">lectures/seminars may be conducted on Saturday mornings, and in evenings of weekdays.

4. Students must pass the final examination and achieve a passing overall score/ grade to pass the subject.</td></tr>
<tr><td rowspan="7">Student Study Effort Expected</td><td>Class contact:</td><td>.</td></tr>
<tr><td>▪ Lecture/seminar</td><td>39 Hrs.</td></tr>
<tr><td>Other student study effort:</td><td></td></tr>
<tr><td>▪ Assignments</td><td>39 Hrs.</td></tr>
<tr><td>▪ Case study and presentation</td><td>13 Hrs.</td></tr>
<tr><td>▪ Self-study</td><td>26 Hrs.</td></tr>
<tr><td>Total student study effort</td><td>117 Hrs.</td></tr>
<tr><td>Reading List and References</td><td colspan="2">1. S. Furst, Keating on Construction Contracts, Sweet & Maxwell, 11th Edition, 2021.
2. G. Soo, Construction Law and Practice in Hong Kong, Sweet & Maxwell, 4th Edition, 2018.
3. J.T. Bockrath, Contracts and the Legal Environment for Engineers & Architects, 6th edition, McGraw Hill, 2000.
4. B. Patten and H. Saunders, Chapter 6, Liability for Professional Negligence, Professional Negligence in Construction, Informa Law, 2018.
5. R. Jackson, J. Powell and R. Stewart, Jackson & Powell on Professional Liability, Chapter 9 and 10, Sweet & Maxwell, 8th Edition, 2017.
6. B. Wasserman et al, Ethics and the Practice of Architecture, John Wiley & Sons, Inc., 2000.
7. For Environmental Laws
- EPD, (2015), A Concise Guide to the Air Pollution Control Ordinance.
- EPD, (2017), A Concise Guide to the Noise Control Ordinance.
- EPD, (2003), Training Manual for the EIA Mechanism.
- https://www.epd.gov.hk/epd/english/laws_regulations/envir_legislation/laws_overview.html
8. For Sustainable Development
- HKSAR Government, (2005), A First Sustainable Development Strategy for Hong Kong.
- Blewitt, John, Understanding sustainable development, Abingdon, Oxon: Routledge 2015 Second edition.</td></tr>
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	- Planning Department, The Study on Sustainable Development for the 21st Century in Hong Kong. - United Nations, (2015), The Paris Agreement. 9. Halsbury's Laws of Hong Kong – Building & Construction. 10. Build on Integrity. Engineers in the Construction Industry: https://hkbedc.icac.hk/construction-elearning/engine.html