

### Subject Description Form

<b>Subject Code</b>	CSE49484
<b>Subject Title</b>	Design Project for Environmental Engineers
<b>Credit Value</b>	4
<b>Level</b>	4
<b>Pre-requisite / Co-requisite/ Exclusion</b>	Pre-requisites: CSE30438 Water Supply and Sewage Engineering Exclusion: CSE40484 Design Project for Environmental Engineers
<b>Objectives</b>	To enable the students to develop the first hand practical design experience before graduation.
<b>Intended Learning Outcomes</b>	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> <li>a. utilize the techniques, skills, and modern engineering tools necessary to undertake a design of solutions for an environmental engineering problem within constraints under the guidance of industrial and academic supervisors;</li> <li>b. an ability to identify, formulate and solve engineering problems;</li> <li>c. communicate logically and lucidly through drawing, calculation, and in writing;</li> <li>d. present ideas and arguments verbally in formal presentations and informal discussions, and negotiate informally with peers, function effectively in multi- disciplinary teams and take responsibility for an agreed area of a shared activity.</li> <li>e. recognize the need for, and to engage in life-long learning.</li> </ul>
<b>Subject Synopsis/ Indicative Syllabus</b>	Students will be required to participate in the formulation of a conceptual solution to an environmental engineering problem, appraisal of the feasible schemes and then carry out the design of the selected scheme. For example, the design of a wastewater treatment plant or sewer system for a new town development.
<b>Teaching/Learning Methodology</b>	<p><b><u>Time Allocation</u></b> The project will last for one term and the number of contact hours is 52. In general, students are expected to spend four hours a week on group discussion and consultations with their supervisors. Project briefing, lectures, and presentations of the projects will also be arranged.</p> <p>The project is divided into four stages (please refer to the Schedule of Programme for details):</p> <ul style="list-style-type: none"> <li>a) Stage I - Feasibility Study and Scheme Appraisal</li> <li>b) Stage II - Formulation of Plan, Schedule and Procedures for the Design</li> <li>c) Stage III - Design for the Selected Scheme in details</li> <li>d) Stage IV - Report and Drawing Preparation</li> </ul> <p><b><u>Group Sizes/Accommodation</u></b> Students will be divided into 6 groups, and two class rooms will be arranged for group discussion and general drawing work.</p>

	<p><b>Supervision</b> The supervising team consists of an academic staff and two visiting lectures. The academic staff and visiting lecturers with practical engineering design experience, can contribute to formulate projects that are based on real engineering problems and bring in up-to-date practical engineering knowledge.</p>																																																																									
<p><b>Assessment Methods in Alignment with Intended Learning Outcomes</b></p>	<table border="1" data-bbox="528 488 1385 719"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="5">Intended subject learning outcomes to be assessed</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> </tr> </thead> <tbody> <tr> <td>1. Project Presentation</td> <td>50</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>2. Project Report</td> <td>50</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>Total</td> <td>100</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><b>Students must attain at least grade D in both coursework and final examination (whenever applicable) in order to attain a passing grade in the overall result.</b></p> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <table border="1" data-bbox="533 976 1410 1563"> <thead> <tr> <th>Assessment Methods</th> <th>Individual Effort for the Project</th> <th>Group Effort for the Project</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Project Presentation:</b></td> </tr> <tr> <td>Consultation Meetings</td> <td>25%</td> <td>5%</td> <td>30%</td> </tr> <tr> <td>Presentation for Scheming</td> <td>6%</td> <td>4%</td> <td>10%</td> </tr> <tr> <td>Presentation for Final Design</td> <td>6%</td> <td>4%</td> <td>10%</td> </tr> <tr> <td colspan="4"><b>Project Report:</b></td> </tr> <tr> <td>Report on Scheming</td> <td>13%</td> <td>7%</td> <td>20%</td> </tr> <tr> <td>Report on Final Design</td> <td>20%</td> <td>10%</td> <td>30%</td> </tr> <tr> <td>Total</td> <td>70%</td> <td>30%</td> <td>100%</td> </tr> </tbody> </table>					Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed					a	b	c	d	e	1. Project Presentation	50	√	√	√	√	√	2. Project Report	50	√	√	√	√		Total	100						Assessment Methods	Individual Effort for the Project	Group Effort for the Project	Total	<b>Project Presentation:</b>				Consultation Meetings	25%	5%	30%	Presentation for Scheming	6%	4%	10%	Presentation for Final Design	6%	4%	10%	<b>Project Report:</b>				Report on Scheming	13%	7%	20%	Report on Final Design	20%	10%	30%	Total	70%	30%	100%
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