

**CEEB410 /CEEB420 –Civil Engineering Project I/II  
Syllabus**

Coordinating Unit:	Department of Civil and Environmental Engineering, Faculty of Science and Technology		
Supporting Unit(s):	Nil		
Course Code:	CEEB410 /CEEB420	Year of Study:	4
Course Title:	Civil Engineering Project I/II		
Compulsory/Elective:	Compulsory		
Course Prerequisites:	N/A		
Prerequisite Knowledge:	Final year level		
Duration:	Two semesters	Credit Units:	6
Class/Laboratory Schedule:	N/A		
Laboratory/Software Usage:	Dependent on the selected topic.		
Course Description:	The final year project (FYP) for Civil Engineering Programme is a one-year independent study under the supervision of a faculty member, which includes either analytical, experimental, computational, or case-study type work. A final report must be submitted near the end of the second semester accompanied with an A3 size poster. The FYP will be assessed through both report writing and oral presentation. The mark will be given as a single unit for both the courses " CEEB410 PROJECT I" and " CEEB420 PROJECT II", with a total of 6 credits.		
Project topic offered:	<p>Project topics will usually be offered in the following areas depending on the availability of resource:</p> <ul style="list-style-type: none"> <li>• Structural engineering</li> <li>• Geotechnical engineering</li> <li>• Hydraulics and environmental engineering</li> <li>• Transportation and construction management</li> </ul> <p>Student should choose the direction of his/her final year project in one of the areas or any other direction related to the civil engineering.</p>		
Course Objectives:	<ol style="list-style-type: none"> <li>1. To allow students to complete a research and/or development project via an individual work or team work.</li> <li>2. To provide students with an opportunity of in-depth exploration of a particular topic in the civil engineering, and to allow them to illustrate their expertise in a chosen area.</li> <li>3. To further develop students' creativity and overall skills of problem formulation, development of appropriate solution methods, design and implementation of a final chosen solution.</li> <li>4. To develop students with the ability to write scientific report and present their research results.</li> </ol>		
Learning Outcomes (LO):	<p>Upon completion of this course, students should be able to:</p> <ol style="list-style-type: none"> <li>1. demonstrate their initiative and intellectual achievement, their comprehension of the chosen subject matter, and their capacity of employing the theoretical principles in practical situations;</li> <li>2. search for technical information from various resources, such as the library, research and technical literature, electronic database and the World Wide Web;</li> <li>3. be able to formulate engineering problems and develop appropriate solution methods to meet desired needs;</li> <li>4. understand the professional practices in the civil engineering and the impact of engineering solutions to the society;</li> <li>5. write scientific report and present their research work in a precise and coherent manner.</li> </ol>		

Texts & References:	Technical papers and references relevant to the selected topic.																																																																					
Project Allocation	<ol style="list-style-type: none"> <li>Eligibility for enrolling for FYP: Students who have a backlog of more than THREE subjects in the previous 6 semesters, are generally not eligible for enrolling for FYP of the current Academic Year.</li> <li>Number of choices: Students are required to give THREE choices of projects in the order of their preferences.</li> <li>Allotment of project: Normally, students will be allotted the project within their choices as far as possible. If there is any clash for a project, the criterion for allotment is based on merit (GPA) and the discretion of the supervisor(s).</li> </ol>																																																																					
Student Assessment:	<p>The progress report, the final report and oral presentation will be assessed individually and will contribute towards the final mark. The assessment scheme is shown below:</p> <p><b><u>Part 1. FYP Work &amp; Report (70 marks)</u></b></p> <p>Supervisor 50 (work: 25, progress report: 5, final report: 20) Examiner 20</p> <p><b><u>From Supervisor (25% continuous work)</u></b></p> <table border="1" data-bbox="475 898 1453 1182"> <thead> <tr> <th></th> <th>Item</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Motivation of independent work or idea</td> <td>3.75 %</td> </tr> <tr> <td>2</td> <td>Ability of searching related literatures and organizing related materials</td> <td>3.75 %</td> </tr> <tr> <td>3</td> <td>Ability of problem solving (e.g. analytical or numerical problem solving, design and perform of experiments)</td> <td>7.5 %</td> </tr> <tr> <td>4</td> <td>Ability of finishing assigned task on time</td> <td>7.5 %</td> </tr> <tr> <td>5</td> <td>Continuous reporting of progress of project</td> <td>2.5 %</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total</b></td> <td><b>25 %</b></td> </tr> </tbody> </table> <p><b><u>From Supervisor (5% Progress report)</u></b></p> <table border="1" data-bbox="475 1245 1453 1386"> <thead> <tr> <th></th> <th>Item</th> <th>%</th> </tr> </thead> <tbody> <tr> <td></td> <td>Whether the progress report was submitted on time;</td> <td>5%</td> </tr> <tr> <td></td> <td>Whether the progress shown in the report is satisfactory.</td> <td>5%</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total</b></td> <td><b>5%</b></td> </tr> </tbody> </table> <p><b><u>From Supervisor (20% Report)</u></b></p> <table border="1" data-bbox="475 1449 1453 1767"> <thead> <tr> <th></th> <th>Item</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Abstract, introduction and description of project</td> <td>2.0 %</td> </tr> <tr> <td>2</td> <td>Amount and quality of background research and use of literatures</td> <td>3.0 %</td> </tr> <tr> <td>3</td> <td>Description of methodology, technical content or empirical work</td> <td>5.0 %</td> </tr> <tr> <td>4</td> <td>Critical analysis and evaluation</td> <td>5.0 %</td> </tr> <tr> <td>5</td> <td>Conclusion, summary of achievements and list of references</td> <td>3.0 %</td> </tr> <tr> <td>6</td> <td>Report writing skill (i.e. format, grammar, figures etc)</td> <td>2.0 %</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Total</b></td> <td><b>20 %</b></td> </tr> </tbody> </table> <p><b><u>From Examiner (20% Report)</u></b></p> <table border="1" data-bbox="475 1830 1453 2018"> <thead> <tr> <th></th> <th>Item</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Abstract, introduction and description of project</td> <td>2.0 %</td> </tr> <tr> <td>2</td> <td>Amount and quality of background research and use of literatures</td> <td>3.0 %</td> </tr> <tr> <td>3</td> <td>Description of methodology, technical content or empirical work</td> <td>5.0 %</td> </tr> </tbody> </table>		Item	%	1	Motivation of independent work or idea	3.75 %	2	Ability of searching related literatures and organizing related materials	3.75 %	3	Ability of problem solving (e.g. analytical or numerical problem solving, design and perform of experiments)	7.5 %	4	Ability of finishing assigned task on time	7.5 %	5	Continuous reporting of progress of project	2.5 %	<b>Total</b>		<b>25 %</b>		Item	%		Whether the progress report was submitted on time;	5%		Whether the progress shown in the report is satisfactory.	5%	<b>Total</b>		<b>5%</b>		Item	%	1	Abstract, introduction and description of project	2.0 %	2	Amount and quality of background research and use of literatures	3.0 %	3	Description of methodology, technical content or empirical work	5.0 %	4	Critical analysis and evaluation	5.0 %	5	Conclusion, summary of achievements and list of references	3.0 %	6	Report writing skill (i.e. format, grammar, figures etc)	2.0 %	<b>Total</b>		<b>20 %</b>		Item	%	1	Abstract, introduction and description of project	2.0 %	2	Amount and quality of background research and use of literatures	3.0 %	3	Description of methodology, technical content or empirical work	5.0 %
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Test(s)														
Examination														
Others (please specify) <u>Work &amp; report</u>	✓	✓			✓					✓			✓	✓
Others (please specify) <u>Presentation &amp; Poster</u>				✓									✓	
Course Web: (if any)	<a href="http://www.fst.umac.mo/intranet/ce/fyp/index.html">http://www.fst.umac.mo/intranet/ce/fyp/index.html</a> UMMoodle ( <a href="http://webcourse.umac.mo/">http://webcourse.umac.mo/</a> ).													

Contribution to Programme Outcomes:	<b>Programme Outcomes</b>		<b>Contribution to POs</b>											
			Primary	Secondary										
	(a)	an ability to apply knowledge of mathematics, science, and engineering appropriate to the degree discipline	✓											
	(b)	an ability to design and conduct experiments, as well as to analyse and interpret data	✓											
	(c)	an ability to design a system, component or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability												
	(d)	an ability to function on multi-disciplinary teams												
	(e)	an ability to identify, formulate and solve engineering problems	✓											
	(f)	an ability to understand professional and ethical responsibility												
	(g)	an ability to communicate effectively	✓											
	(h)	an ability to understand the impact of engineering solutions in a global and societal context, especially the importance of health, safety and environmental considerations to both workers and the general public												
	(i)	an ability to stay abreast of contemporary issues	✓											
	(j)	an ability to recognise the need for, and to engage in life-long learning	✓											
	(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice appropriate to the degree discipline												
(l)	an ability to use the computer/IT tools relevant to the discipline along with an understanding of their processes and limitations	✓												
Course Instructor(s):	Faculty member(s) in the Department, and/or professional(s) from industry													
Percentage Content of:	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Mathematics and Basic Science</td> <td>Engineering Subjects</td> <td>Complementary Studies</td> <td colspan="2">Total</td> </tr> <tr> <td>20</td> <td>70</td> <td>10</td> <td colspan="2">100</td> </tr> </table>				Mathematics and Basic Science	Engineering Subjects	Complementary Studies	Total		20	70	10	100	
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Timetabled work in hours per week:	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Meeting</td> <td>Tutorial</td> <td>Laboratory</td> <td>Other: self-study</td> <td>Total</td> </tr> <tr> <td>2</td> <td>---</td> <td>---</td> <td>8</td> <td>10</td> </tr> </table>				Meeting	Tutorial	Laboratory	Other: self-study	Total	2	---	---	8	10
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