

Subject Description Form

Subject Code	AMA4951
Subject Title	Capstone Project
Credit Value	6
Level	4
Pre-requisite	Nil
Objectives	This subject is to foster the students' initiative and capability in applying theoretical principles, in organizing and executing the work and in presenting the methodology, arguments and findings in a well-documented report. It provides the opportunity for students to explore their own capabilities of working independently on some substantial problems.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Carry out their own study and learn independently for problem solving and solution seeking; b. integrate knowledge and techniques in various disciplines to formulate mathematical and statistical models for real-life investment and finance problems with a critical awareness of the appropriateness of competing models; c. integrate knowledge and techniques in various disciplines in the analysis of real-life mathematical and statistical models and to discuss and assess critically the appropriateness of analysis methods used; d. interpret analysis results and make recommendations for actions based on analysis results; e. work independently; f. write well-structured report for analysis results and present analysis results effectively.
Subject Synopsis/ Indicative Syllabus	<p>Students will initiate the project by themselves. They are normally expected to contact local industry for real-life problems and together with the supervisor to materialize them into project topics. The nature of the project should be applied through theoretical research with practical prospect. The project should contain a fair amount of effort in analyzing and interpreting the data/information obtained, using the principles and techniques learnt from various related subjects.</p> <p>A project proposal will be required that students will identify the theme of study, suggest the plan of collecting data/information and propose the methodology of analyzing problem with justification.</p> <p>Oral presentation sessions will be arranged for students to report their work and findings. Class participation in the form of questions and discussions will be promoted.</p>

	<p>The final report is expected to include problem identification, relevant data, methodology of analysis, solutions, implementation, interpretations, conclusions, and so on.</p> <p>Independent research, critical thinking, and creativity will be encouraged.</p>																																															
Teaching/Learning Methodology	<p>Each student will be assigned a project supervisor.</p> <p>The student should meet the supervisor at least twice a month.</p> <p>While the basic knowledge and techniques are learned via various subjects, students are required to learn some specific techniques by themselves independently with minimum guidance from the supervisor.</p>																																															
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1"> <thead> <tr> <th rowspan="2">Specific assessment methods/tasks</th> <th rowspan="2">% weighting</th> <th colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>1. Interim report</td> <td>10%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td>✓</td> <td></td> </tr> <tr> <td>2. Oral presentation</td> <td>30%</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> <tr> <td>3. Written report</td> <td>60%</td> <td>✓</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> <td></td> </tr> </tbody> </table> <p>The project will be assessed by the student's supervisor and an independent assessor who is a staff member not formally involved in the work of the project. Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: The subject focuses on knowledge, skill and understanding of Capstone Project, thus, Project-based assessment is the most appropriate assessment method, including 60% written report. Moreover, 10% worth of interim report and 30% oral presentation as a component of continuous assessment so as to assess students' ability in constructing case study models for real world problems and presenting results of the analyses.</p>		Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c	d	e	f	1. Interim report	10%	✓	✓	✓		✓		2. Oral presentation	30%	✓	✓	✓	✓	✓	✓	3. Written report	60%	✓	✓	✓	✓	✓	✓	Total	100 %						
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Student Study Effort Expected	<p>Class contact:</p> <ul style="list-style-type: none"> ▪ Lecture ▪ Consultation <p>Other student study effort:</p> <ul style="list-style-type: none"> ▪ Self study <p>Total student study effort</p>	<p>26 Hrs.</p> <p>52 Hrs.</p> <p>140 Hrs.</p> <p>218 Hrs.</p>																																														
Reading List and References	<p><u>References:</u> Ross, S.M. Simulation 5th edition Academic Press 2012</p>																																															

	Hull, J.C.	Options, futures and other derivatives 8 th edition	Prentice Hall 2011
	Greene, W.H.	Econometric Analysis 7 th edition	Prentice Hall 2011