

**Subject Description Form**

<b>Subject Code</b>	AF3625 (for 42470, 42477 and 42479)
<b>Subject Title</b>	Engineering Economics
<b>Credit Value</b>	3
<b>Level</b>	3
<b>Normal Duration</b>	1-semester
<b>Exclusion</b>	AF2618
<b>Objectives</b>	This subject aims to equip students with <ol style="list-style-type: none"> <li>1. The fundamental concepts of micro- and macroeconomics related to the engineering industry;</li> <li>2. The fundamental understanding of finance and costing for engineering operations, budgetary planning and control.</li> </ol>
<b>Intended Subject Learning Outcomes</b>	<b>Upon successful completion of this subject, students will be able to:</b> <ol style="list-style-type: none"> <li>1. Understand how the relevant economic factors shape the environment within which an engineering company operates;</li> <li>2. Evaluate the financial condition of a company based on the financial statements;</li> <li>3. Apply the basic cost accounting techniques in the planning and control of engineering and production activities.</li> </ol>
<b>Contribution of the Subject to the Attainment of the Programme Outcomes</b>	<b>Programme Outcomes:</b> <b>(for 42470 and 42479)</b> <u>Category A: Professional/academic knowledge and skills</u> <ul style="list-style-type: none"> <li>• Programme Outcome 6.</li> </ul> <u>Category B: Attributes for all-roundedness</u> <ul style="list-style-type: none"> <li>• Programme Outcomes 7, 9 and 10.</li> </ul> <b>(for 42477)</b> <u>Category B: Attributes for all-roundedness</u> <ul style="list-style-type: none"> <li>• Programme Outcomes 6, 7, 8 and 10.</li> </ul>
<b>Subject Synopsis/ Indicative Syllabus</b>	<u>Economic Environment of a Firm</u> <b>Microeconomic Factors</b> Scarcity, choice and opportunity cost; Demand, supply and price; Profit-maximizing behavior of the firm; Organization of industry: perfect competition and monopoly  <b>Macroeconomic Factors</b> International trade and globalization  <u>Accounting and Engineering Economics</u> Financial statements; Financial ratio analysis; Return on investment; Composition of cost; Cost-volume-profit analysis; Accounting profit versus economic profit  <u>Fundamentals of Budgetary Planning and Control</u> Principle types of budgets for production and service operations; Approaches to budgeting and the budgeting process; Investment and source of finance; Cost of capital; Evaluation of investment alternatives

<b>Teaching/ Learning Methodology</b>	The two-hour lecture each week focuses on the introduction and explanation of key concepts of Engineering Economics. The one-hour tutorial provides students with directed studies to enhance their self-learning capacities. Individual and group activities including discussions and presentations are conducted to facilitate students' understanding and application of the concepts they have learned to tackling real-life problems in Engineering Economics.																																										
<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	<table border="1" data-bbox="469 353 1425 853"> <thead> <tr> <th rowspan="2">Specific Assessment Methods/Tasks</th> <th rowspan="2">% Weighting</th> <th colspan="3">Intended Subject Learning Outcomes to be Assessed (Please tick as appropriate)</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>Continuous Assessment</td> <td>50%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>1. In-class activities</td> <td>15%</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>2. Written assignments</td> <td>15%</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>3. Test</td> <td>20%</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Final Examination</td> <td>50%</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Total</td> <td>100 %</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p data-bbox="469 869 1425 936">To pass this subject, students are required to obtain Grade D or above in <b>both</b> the Continuous Assessment and Examination components.</p>					Specific Assessment Methods/Tasks	% Weighting	Intended Subject Learning Outcomes to be Assessed (Please tick as appropriate)			1	2	3	Continuous Assessment	50%				1. In-class activities	15%	√	√	√	2. Written assignments	15%	√	√	√	3. Test	20%	√	√	√	Final Examination	50%	√	√	√	Total	100 %			
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<b>Student Study Effort Required</b>	<b>Class contact:</b>																																										
	• Lecture				26 Hours																																						
	• Tutorial				13 Hours																																						
	<b>Other student study effort:</b>																																										
	• Study and self-learning				48 Hours																																						
	• Presentation preparation and written assignments				18 Hours																																						
	<b>Total student study effort:</b>				<b>105 Hours</b>																																						
<b>Reading List and References</b>	<p data-bbox="469 1373 802 1395"><b>Recommended Textbooks</b></p> <ol data-bbox="469 1429 1417 1485" style="list-style-type: none"> <li>Parkin and Bade, <i>Foundations of Microeconomics</i>, 8<sup>th</sup> ed., Pearson, 2018.</li> <li>Sullivan, Wicks and Koelling, <i>Engineering Economy</i>, 16<sup>th</sup> ed., Pearson, 2014.</li> </ol> <p data-bbox="469 1518 611 1541"><b>References</b></p> <ol data-bbox="469 1574 1417 1697" style="list-style-type: none"> <li>Drury, Colin, <i>Management and Cost Accounting</i>, 10<sup>th</sup> ed., Cengage Learning, 2018.</li> <li>Robert H. Frank, <i>The Economic Naturalist: Why Economics Explain Almost Everything?</i>, Basic Books, 2007.</li> </ol>																																										
<b>Last Updated</b>	July 2018																																										
<b>Prepared by</b>	School of Accounting and Finance																																										