

## Subject Description Form

<b>Subject Code</b>	AMA253
<b>Subject Title</b>	Theory of Interest
<b>Credit Value</b>	3
<b>Level</b>	2
<b>Pre-requisite/ Co-requisite/ Exclusion</b>	Pre-requisites : Calculus (AMA140 or AMA150) or Introduction to Calculus and Linear Algebra (AMA211)
<b>Objectives</b>	To provide students with precise methods of valuing various fixed-income securities.
<b>Intended Learning Outcomes</b>	Upon satisfactory completion of the subject, students should be able to: <ol style="list-style-type: none"> <li>1. employ the elementary measures of interest;</li> <li>2. calculate interest or yield on investment or loan; formulate practical problems using equation of value upon evaluation data;</li> <li>3. evaluate basic annuities and general annuities;</li> <li>4. evaluate alternative loan repayment methods;</li> <li>5. illustrate the concept and measures of yield from investment;</li> <li>6. compare and contrast investment strategies of bonds and securities;</li> <li>7. value the ethical and social responsibility of an investment professional.</li> </ol>
<b>Subject Synopsis/ Indicative Syllabus</b>	<p><i>Measurement of interest</i> Simple interest, compound interest, accumulation function, nominal and effective interest and discount rates, force of interest, equation of value, unknown time and rate of interest, practical examples.</p> <p><i>Annuities</i> Basic annuities, annuity functions, valuation of discrete and continuous payment streams, varying annuities.</p> <p><i>Yield rates</i> Determination of yield rates, portfolio methods and investment year methods, general borrowing/lending models.</p> <p><i>Amortization schedules and sinking funds</i> Outstanding loan balance, amortization schedules, sinking funds, depreciation</p>
<b>Teaching/Learning Methodology</b>	The learning outcomes will be achieved through a combination of lectures, tutorials, interactions between the lecturers and students, in-class exercises and discussions, assignments, tests and the final examination.

<b>Assessment Methods in Alignment with Intended Learning Outcomes</b>	Specific assessment methods		% weighting		Intended subject learning outcomes to be assessed (Please tick as appropriate)						
					1	2	3	4	5	6	7
	a. Assignments		20%		√	√	√	√	√	√	√
	b. Tests		20%		√	√	√	√	√	√	
	c. Examination		60%		√	√	√	√	√	√	
	Total		100 %								
<p>The learning outcomes will be assessed by a combination of assignments, mid-term tests and the final examination.</p> <p>To pass this subject, students are required to obtain Grade D or above in <u>both</u> the Continuous Assessment and the Examination components.</p>											
<b>Student Study Effort Required</b>	Class contact:										
	▪ Lecture										28 Hrs.
	▪ Tutorial										14 Hrs.
	Other student study effort:										
	▪ Assignment										20 Hrs.
	▪ Self-study										58 Hrs.
	Total student study effort										120 Hrs.
<b>Reading List and References</b>	<p><u>Textbook:</u></p> <p>S.G. Kellison                      The Theory of Interest, 3<sup>rd</sup> Edition                      Irwin, 2009</p>										