Subject Description Form

Subject Code	AMA354
Subject Title	Life Contingencies II
Credit Value	3
Level	3
Pre-requisite/ Co-requisite/ Exclusion	Pre-requisites: Further Calculus (AMA251) and Life Contingencies I (AMA353)
Objectives	To provide students with more sophisticated theory and applications in life insurance and pension.
Intended Learning Outcomes	Upon satisfactory completion of the subject, students should be able to: 1. master the fundamental concept of cash flow and loss, and their actuarial present values; 2. apply the concepts of reserves in real life situations and conduct their analysis; 3. command the joint life statuses and their insurances and life annuities; 4. construct and analyze multiple decrement table.
Subject Synopsis/ Indicative Syllabus	*Benefit reserves* Fully continuous and discrete benefit reserves, analysis of benefit reserves, benefit reserves at fractional durations, allocation of the risk to insurance years. *Multiple life functions* Joint-life status and last-survivor status, dependent life models, insurance and annuity benefits, special mortality assumptions. *Multiple decrement models* Random and deterministic survivorship groups, multi-life models, multiple decrement models.
Teaching/Learning Methodology	Learning outcomes 1 to 4 will be achieved through lectures, tutorials and interaction between the lecturers and students. All these learning outcomes will be assessed through in-class exercises and discussions, assignments, tests and final examination.

Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)			
		1	2	3	4
a. Assignments	20%	✓	✓	✓	✓
b. Tests	20%	✓	✓	✓	✓
c. Examination	60%	✓	✓	✓	✓
Total	100 %				

Continuous Assessment comprises of assignments and tests. A written examination is held at the end of the semester.

The learning outcomes will be assessed by a combination of in-class exercises, assignments, mid-term tests and final examination.

To pass this subject, students are required to obtain Grade D or above in **both** the Continuous Assessment and the Examination components.

Student Study Effort Required

Class contact:	
▪ Lecture	28 Hrs.
▪ Tutorial	14 Hrs.
Other student study effort:	
▪ Assignment	20 Hrs.
▪ Self-study	60 Hrs.
Total student study effort	122 Hrs.

Reading List and References

Textbook:

Bowers, N.L., Gerber, H.U., Hickman, J.C., Jones, D.A., and Nesbitt, C.J.	Actuarial Mathematics, 2nd Edition	Society of Actuaries, 1997

References:

Gerber, H.U.	Life Insurance Mathematics, 3rd Edition	Springer-Verlag, 1997
Jordan, C.W.	Life Contingencies	Society of Actuaries 1967