

Subject Code	AF5351
Subject Title	Derivatives Securities
Credit Value	3
Level	5
Normal Duration	One Semester
Pre-requisite / Co-requisite/ Exclusion	Pre-requisite: Investments (AF5344)
Role and Purposes	This subject contributes to the achievement of the Master of Finance Programme Outcomes by enabling students to solve asset management/corporate finance problems (Outcome 2).
Subject Learning Outcomes	Upon completion of the subject, students will be able to: <ul style="list-style-type: none"> a. have an in-depth understanding of the derivative assets such as options, futures, and forwards; b. price and formulate different trading strategies of derivatives traded in the financial market; c. use derivative assets in hedging and trading from the perspectives of a corporate treasurer or trader; and d. construct and price complex derivative financial instruments.
Subject Synopsis/ Indicative Syllabus	<p>Derivative Assets and Markets Characteristics of forward, futures, options and swaps; market structures and conventions.</p> <p>Pricing and Trading Strategies of Futures Properties of forward and futures prices; forward and futures pricing model; futures trading strategies.</p> <p>Pricing and Trading Strategies of Options The Binomial model; the Black-Scholes Model: assumptions, adjustments and applications; option trading strategies including spreads, straddles, straps and strips.</p> <p>Hedging and Trading Strategies for Options and Futures Hedging concepts; types of hedges; determination of hedge ratios.</p>
Teaching/Learning Methodology	Most of the material will be covered in a lecture format but class participation is strongly recommended for students to obtain the most out of this course.

Assessment Methods in Alignment with Intended Learning Outcomes

To assess whether the students achieved the learning outcomes of this subject, the focus of mid-term examination will be on the use and the principle of pricing of forward and futures. Students are also required to do a group project to demonstrate their in-depth understanding of various derivative instruments. The final examination will have an emphasis on the pricing and formulation of the trading strategies of derivative instruments and the usage of derivative securities in the hedging and trading from a corporate treasurer or trader's perspective.

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d		
1. Mid-term Test	20%	✓	✓	✓			
2. Individual Essay	15%	✓					
3. Group Project	10%	✓	✓	✓	✓		
4. Participation	5%	✓	✓	✓	✓		
5. Final Examination	50%	✓	✓	✓	✓		
Total	100 %						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Mid-term Test – 1 hour 30 minutes closed book examination with compulsory questions covering the intended learning outcome.

Individual Essay – Each student is required to submit two individual essays. The objective is to test students' abilities to apply subject knowledge to a practical situation.

Group Project – Students are required to apply techniques to process and analyze information from financial statements of a listed company as part of the decision making in certain business context such as credit analysis and equity analysis.

Final Exam – 3 hours closed book examination with compulsory questions covering the intended learning outcome.

Note: To pass this subject, students are required to obtain Grade D or above in BOTH the Continuous Assessment and Examination components. In addition, the specific requirements on individual assessment components discussed above could be adjusted based on the pedagogical needs of subject lecturers.

Student Study Effort Expected	Class contact:	
	▪ Seminars	39 Hrs.
	Other student study effort:	
	▪ On average, students are expected to spend around 8 hours (for seven week block mode) for reading materials/ textbook and to answer questions and solve numerical problems a weekly basis.	56 Hrs.
	▪ Group project discussions and preparation	22 Hrs.
	Total student study effort	117 Hrs.
Reading List and References	<p><u>Indicative Reading</u></p> <p>Chance, D., & Brooks, R., <i>An Introduction to Derivatives and Risk Management</i>, 10th edition, Cengage, 2015.</p> <p>Hull, J., <i>Fundamentals of Futures, Options Markets</i>, 9th edition, Pearson, 2016.</p> <p>Black, F., & Scholes, M. (1973) "The pricing of options and corporate liabilities", <i>Journal of Political Economy</i> 3, 637-654.</p> <p>Merton, R. C. (1973) "The theory of rational option pricing", <i>Bell Journal of Economics and Management Sciences</i> 4, 141-183.</p> <p>Cox, J. C., Ross, S. A., & Rubenstein, M. (1979) "Option pricing: A simplified approach", <i>Journal of Financial Economics</i> 7, 229-263.</p> <p>Statman, M. (2009) "Regulating financial markets: Protecting us from ourselves and others", <i>Financial Analysts Journal</i>, vol. 65, 3, 1-10.</p>	