H9DRM: Derivatives and Risk Managment

Module Code:		H9DRM				
Long Title		Derivatives and Risk Managment APPROVED				
Title		Derivatives and Risk Managment				
Module Level:		LEVEL 9				
EQF Level:		7				
EHEA Level:		Second Cycle				
Credits:		10				
Module Coordinator:		ORINA SHEERIN				
Module Author:		JULIA REYNOLDS				
Departments:		School of Business				
Specifications of the qualifications and experience required of staff						
Learning Outcomes						
On successful completion of this module the learner will be able to:						
#	Learning Outcome	ne Description				
L01	Demonstrate an adva	anced comprehension of the techniques used in the valuation of derivatives and the quantification of risk.				
LO2	Critically evaluate co and their application	luate contemporary academic and industry literature regarding derivative pricing models with particular emphasis on the deficiencies of models plication in complex scenarios.				
LO3	Select, categorise an themselves or used f	ategorise and appraise the risk management characteristics of each type of derivative studied, explaining how the derivatives may be hedged ves or used for the hedging of real world risk management problems.				
LO4	Develop a framework applied knowledge re	lop a framework to categorise and evaluate various portfolio risk measurement techniques and demonstrate a knowledge of the current theoretical and ed knowledge regarding their limitations				
Dependencies						
Module Recommendations						
No recommendations listed						
Co-requisite Modules						
No Co-requisite modules listed						
Entry requirements		There are no additional entry requirements for this module. The programme entry requirements apply.				

H9DRM: Derivatives and Risk Managment Module Content & Assessment Indicative Content **Derivatives and Future Markets** Forward contracts, Futures contracts, Options. Specification of a futures contract, Convergence of futures price to spot price, The operation of margin accounts. Forward vs. futures contracts Hedging strategies using futures Basic principles, Arguments for and against, Basis risk, Cross hedging, Stock index futures, Stack and roll. Determination of forward and futures prices Investment assets vs. consumption assets, Short selling, Assumptions and notation, Forward price for an investment asset, Known income, Known yield, Valuing forward contracts, Are forward prices and futures prices equal?, Futures prices of stock indices, Forward and futures contracts on currencies, Futures on commodities, The cost of carry, Delivery options, Futures prices and expected future spot prices. Swaps Mechanics of interest rate swaps, Valuation of interest rate swaps, Credit risk, Credit default swaps Mechanics of options markets Types of options, Option positions, Underlying assets, Specification of stock options, Trading, Commissions, Margin requirements. Properties of stock options Factors affecting option prices, Assumptions and notation, Upper and lower bounds for option prices, Put-call parity, Calls on a non-dividend-paying stock, Puts on a nondividend-paying stock, Effect of dividends. Trading strategies involving options Naked options, Hedges, Spreads, Combinations Binomial trees A one-step binomial model and a no-arbitrage argument, Risk-neutral valuation, Two-step binomial trees, A put example, American options, Delta, Matching volatility with u and d, The binomial tree formulas, Increasing the number of steps. The Black-Scholes-Merton model Lognormal property of stock prices, The distribution of the rate of return, The expected return, Volatility, The idea underlying the Black–Scholes–Merton differential equation, Derivation of the Black–Scholes–Merton differential equation, Risk-neutral valuation, Black–Scholes– Merton pricing formulas. Value at risk and expected shortfall The VaR and ES measures, Historical simulation, Model-building approach, The linear model, The quadratic model, Monte Carlo simulation, Comparison of approaches, Back testing, Principal components analysis % Assessment Breakdown 40.00% Coursework End of Module Assessment 60.00% Assessments **Full Time** Coursework Assessment Type: Continuous Assessment % of total: 40 1,3 Assessment Date: n/a Outcome addressed: Non-Marked: No Assessment Description: Candidates are required to complete one in-class test, which is a mix of theoretical and problem-based questions. The in-class examination will be worth 40% End of Module Assessment Assessment Type: Terminal Exam % of total: 60 Assessment Date: End-of-Semester Outcome addressed: 1.2.3.4 Non-Marked No Assessment Description:

Final Examination, which will consist of an Excel-based exam

No Workplace Assessmen

Reassessment Requirement

Repeat examination

Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

Reassessment Description

Repeat assessment of this module will consist of a repeat examination which will test all the learning outcomes.

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Module Workload							
Module Target Workload Hours 0 Hours							
Workload: Full Time							
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload			
Lecture	Classroom and demonstrations	36	Per Semester	3.00			
Directed Learning	Directed e-learning	36	Per Semester	3.00			
Independent Learning	Independent learning	178	Per Semester	14.83			
Total Weekly Contact Hours							

Module Resources					
Recommended Book Resources					
Hull J. C. (2018), Options, Fututres and Other Derivatives, 10th Ed. Pearson Prentice Hall.					
Supplementary Book Resources					
Hull, J. C. (2018), Risk Management and Financial Institutions, 5th Ed. Wiley.					
This module does not have any article/paper resources					
This module does not have any other resources					
Discussion Note:					