



Masters of Business Administration (MBA) – Semester - 3 Course Teaching Plan

Course Title: Derivatives

Course Code: 340032303

Course Credit: 4

1. Introduction to the Course:

This is a course that covers a range of topics in contemporary finance. Specifically, the course examines the pricing and use of financial derivatives, including options, forwards, futures, swaps and credit derivatives in risk management. The course will extensively focus on the theory and applications of risk management tools.

2. Course Objectives:

The objectives of this course are:

- To explore the use of basic types of derivative instruments and hybrids in the context of financial risk management by firms and financial institutions.
- Students are expected to develop competencies in pricing, hedging and trading strategies in future and option.

3. Course Learning Outcome:

CLO1. Demonstrate an understanding of the risk management approaches, and techniques, Describe and explain the fundamental features of a range of key financial derivatives instruments

CLO 2 Ability to solve problems requiring pricing derivative instruments and hedge market risk based on numerical data and current market trends.

CLO3 Ability to devise risk management strategies and solutions based on a detailed analysis of risk assessment and associated factors.

CLO 4 Ability to understand the risk management needs of clients and effectively communicate solutions comprising financial derivatives.

CLO 5 Ability to work independently or as part of a team to develop optimal strategies integrating financial derivative instruments.

4. CLO –PO Mapping Matrix

	PO1	PO2	PO3	PO4	PO5
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CLO1	3	2	1	3	1
CLO2	3	3	2	1	2
CLO3	3	3	3	2	3
CLO4	2	2	3	2	3
CLO5	2	2	3	2	3

Correlation levels: 3= 'High', 2='Medium', 1='Low' and '-'= No correlation

5. Session Plan (45 Hours)

Unit 1	
Session No. 1-2	Introduction to risk management: (Only theory) •Defining and managing risk •Upside and downside risks •Commodity price risk •Interest rate risk •Approaches to risk management
Session No. 3-4	Introduction to derivatives: •Defining derivatives and derivative markets •Spot v/s Derivatives markets •Forward, Futures, Options, Swaps •Uses of derivatives Derivatives Market: •International and Indian derivatives market •Derivative exchanges •Trading system and types of traders
Unit II	
Session No. 5-7	Forward Contracts: •Meaning, purpose, advantages and problems •Pricing of commodity forward contracts (Theory and numerical). •Interest rate forwards (Theory and numerical).
Session No. 8-12	Future Contracts: •Meaning, difference between forward and future contracts •Specifications of future contracts •Closing the position (Theory and numerical). •Margins and marking-to-market (Theory and numerical). •Cost of Carry Models (Theory and numerical). •Price quotes, settlement price, open interest •Types of orders
Unit III	

Sessi on No. 13-20	Hedging, Speculation and Arbitrage using Futures: •Basis risk. Factors affecting basis risk •Single stock futures and Stock Index Futures (Theory and numerical). •Commodity futures (Theory and numerical).
	Unit IV
Sessi on No. 20-25	Fundamentals of Options: •Options issued by corporations (introduction) •Meaning of options contract, options terminologies •Moneyness in options (ITM, ATM, OTM) (Theory and numerical). •Factors affecting Options premium Exchange-traded options
Sessi on No. 26-27	Call and Put options. (Theory and numerical). Options Trading Strategies: Theory) •Uncovered •Covered •Spread •Combination
	Unit-V
Sessi on No. 28-35	Put-Call Parity: (Theory and numerical). •Risk free security •Put-call relationship Black and Scholes Pricing Model
Sessi on No. 36-38	Binomial Options Pricing Model: (Theory and numerical). •Binomial Options Pricing model for call and put options •Single period binomial options pricing model
Sessi on No. 39	Greeks in Options (only theory): •Risks in options trading •Characteristics of options hedging •Greeks in options hedging: delta, gamma, theta, Vega, rho
Sessi on No. 40	SWAPS (Only theory): •Swaps: meaning, types, terminologies •Forward swaps •Swaptions •Equity swaps •Commodity swaps

6. Assessment Scheme:

Specific assessment method	% Weightage	Theory	Practical
Exam	50%	√	√
Assignment I	25%		√
Assignment II	25%	√	√

7. Educational Resources

Educational Resources	Description
i. Text Book	Derivatives and Risk Management ,Sundaram Janakiramanan Pearson Education, Latest Edition
ii. Reference Book	Derivatives and Risk Management, Rajiv Srivastava, Oxford University, Latest Edition
iii. Journals/ Magazine/periodicals	Journals: Indian Journal of Finance International Journal of Financial Markets and Derivatives ICFAI journal of Derivative Market Magazines and Periodicals: Financial Express Business Today Business India Business World Finance India Treasury Management Financial Risk Management
iv. Course related important Web links	1. www.nseindia.com 2. www.bseindia.com 3. www.sebi.gov.in 4. www.moneycontrol.com
v. Books	Traders, Guns And Money: Known's And Unknowns In The Dazzling World Of Derivatives By Satyajit Das