



Dr. V. N. Bedekar Institute of Management, Thane
Teaching Plan (MMS/PGDM)
Academic Year (2018-2019)

Programme Name: MMS

Semester: III

Name of the subject: Derivatives and risk management

Maximum marks: 100

No. of Sessions: 14

Name of the Faculty: Dr. Meenakshi Malhotra

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Weblink:

Learning Objectives:

1. To understand the concepts related to derivatives markets and gain in-depth knowledge of functioning of derivatives markets.
2. To learn the derivatives pricing and application of strategies for financial risk management.
3. To acquaint learners with the trading, clearing and settlement mechanism in derivatives markets.

Reference Books:

R1: Hull John C. - Options, Futures and other derivatives

R2: Shrivastava- Derivatives and Risk Management



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Plan:

Session No	Topics to be covered	Books referred/ Recommended/ References-Print/Articles/ News/Research papers/ Online database/ Software /Simulations used	Learning outcomes	Evaluation of Students understanding by MCQs, Quiz, Short Test
1	Introduction to Derivatives Economic functions of derivatives, application of derivatives – for risk management and speculation (Leveraging), basic terms and properties of options.	Hull John C. - Options, Futures and other derivatives http://www.moneycontrol.com/india/fnoquote/hcl-technologies/HCL02/2018-07-26 https://www.nseindia.com/	Understanding the basics of derivatives markets	MCQ, Presentation.
2	Properties of futures and forwards. Forwards and Futures Pricing and valuation - futures and forwards.	Hull John C. - Options, Futures and other derivatives http://www.moneycontrol.com/india/fnoquote/hcl-technologies/HCL02/2018-07-26 https://www.nseindia.com/	Understanding the process of pricing and valuation of forwards and futures	Quiz, Presentation, Case Study
3	Risk management using futures. Introduction to currencies, commodity and interest rate futures.	Hull John C. - Options, Futures and other derivatives https://www.investopedia.com/terms/i/interestrategyfuture.asp	Understanding the risk aspect of derivatives and types of future contract.	MCQ, Presentation
4	Mechanics and Properties of Options Co-relation with underlying assets, boundary conditions for options.	Hull John C. - Options, Futures and other derivatives Options Trading Strategies Module-NSE http://www.moneycontrol.com/india/fnoquote/hcl-technologies/HCL02/2018-07-26	Understanding mechanics of options	MCQ, Presentation
5	Put-call parity and its interpretation, synthetic options and risk free arbitrage	Options Trading (Advanced) Module- NSE Options Trading Strategies Module-NSE https://www.discoveroptions.com/mixed/content/educat	Understanding the concept of creating	Quiz, Presentation, Case Study



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		ion/articles/putcallparity.html	synthetic options	
6	Option Trading Strategies Directional strategies (Bull call spread, Bear put spread, Ladder, Ratio spreads), Non-directional strategy (butterfly, condor).	Shrivastava- Derivatives and Risk Management Options Trading Strategies Module-NSE	To understand pay off of each strategy	Presentation, Numerical case
7	Volatility based strategies (Straddle, Strangle, Calendar Spread), Hedging strategies (Protective put, covered call).	Shrivastava- Derivatives and Risk Management Options Trading Strategies Module-NSE http://www.theoptionsguide.com/condor.aspx	To understand pay off of each strategy	Presentation, Numerical case
8	Introduction to Options Valuation Binominal Model for valuation, risk neutral probabilities and their interpretation, binomial model's application for American options where the underlying pays the dividend.	Hull John C. - Options, Futures and other derivatives https://corporatefinanceinstitute.com/resources/knowledge/valuation/option-pricing-models/	Valuations of options and creating scenario analysis using Excel	MCQ, Presentation
9	Black and Scholes Model, log – normal distribution, interpreting the B & S formula, seeing options sensitivity to different variable.	Hull John C. - Options, Futures and other derivatives http://www.optiontradingpedia.com/free_black_scholes_model.htm https://corporatefinanceinstitute.com/resources/knowledge/valuation/option-pricing-models/	Valuations of options and creating scenario analysis using Excel	MCQ, Presentation
10	Risk Management Options sensitivity to the underlying, volatility, strike price, interest rate, time to expiration. Scenario analysis. Risk management using Greeks- Delta, Theta, Vega and Gamma risks of options.	Shrivastava- Derivatives and Risk Management https://www.quantinsti.com/blog/the-greeks-in-options-delta-gamma-theta-and-vega/	Understanding risk assessment methods	MCQ, Presentation
11	Understanding options Greeks for	Shrivastava- Derivatives and Risk Management	Understanding	Quiz, Presentation



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	various trading strategies (volatility and directional spreads), delta / dynamic hedging and relating the cost of Delta.	https://www.quantinsti.com/blog/the-greeks-in-options-delta-gamma-theta-and-vega/	Options Greeks	
12	Options Volatility Historical and implied volatility, volatility smile, term structure of volatility, some advance models of volatility estimation.	Shrivastava- Derivatives and Risk Management https://www.investopedia.com/university/optionvolatility/volatility3.asp	Understanding volatility	MCQ, Presentation
13	Value at risk, historical simulation, model building approach, stress testing and back testing.	Shrivastava- Derivatives and Risk Management https://www.investopedia.com/terms/s/stresstesting.asp https://www.investopedia.com/articles/04/092904.asp	Volatility and its relation to demand and supply of options	MCQ, Presentation
14	Trading, Clearing and Settlement in Derivatives Markets Meaning and concept, SEBI guidelines, Trading mechanism, learning mechanism role of NSCCL, settlement mechanism, types of settlement, accounting and taxation aspect of derivatives trade.	Shrivastava- Derivatives and Risk Management https://www.nseindia.com/	Understanding the process of trading, clearing and settlement	Group Discussion, Presentation

2. Practical Approach : Other activities (Atleast 4 distinct activities)

Sr. No.	Activity Name	Topic Coverd	Learning outcomes	Source
1	Academic Projects	Dummy Portfolio	Actual practical experience of	https://etportfolio.ind



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			trading and investment	iatimes.com/pw_portfolio.cms#/portfolio/
2	Group Discussion	Derivatives and other products comparison	Practical Knowledge and increase in class participation	
3	Business Quiz / Business News sharing	Trading and settlement in NSE, Greeks, Derivative Knowledge	Practical Knowledge and increase in class participation	https://economictimes.indiatimes.com/personal-finance
4	Videos / Simulation	Options, Derivatives, Valuation	Easy learning and concept clarity for students	https://www.youtube.com/watch?v=FLGRPYAtReo&t=1s
5	Use of Softwares and Labs	Portfolio development	Live Trading	https://www.moneycontrol.com/ https://login.axisdirect.in/
6	Presentation By students	All topics Group Presentation	Subject Knowledge and improvement in presentation skills.	



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Evaluation:

I) Internal:

Component	Details	Marks
Class Test	Option Trading Strategies	20
Presentation/Live project	Group Presentation on syllabus topics/ Live trading and investment	10
Participation/ Case Study	Quiz, Business news	5
Others	Attendance	5

Signature of Faculty

Signature of the Co-ordinator