

Programme	: M. Com	
Course Code	: COO 413	Title of the Course: Options and Interest Rate Derivatives.
Number of Credits	: 4	
Effective from AY	: 2018-19	

Prerequisites:	Students have studied B. Com and basic understanding of Derivatives Market.
Need, Description, and Objectives	This course presents and analyzes derivatives, such as Options and different types of Option Derivatives such as Swap options etc. These instruments have become extremely popular investment tools over the past several decades, as they allow one to tailor the amount and kind of risk one takes, be it risk associated with changes in interest rates, exchange rates, stock prices, commodity prices, inflation, weather, etc. They are used by institutions as well as investors, sometimes to hedge (reduce) unwanted risks, sometimes to take on additional risk motivated by views regarding future market movements. The course covers the major types of Derivatives such as Options, Swaps and Interest Rate Futures, and illustrates how they are used to achieve various Risk Management practices through Hedging, Speculation and Arbitrage techniques. The course is extensively concentrates the valuation and pricing of Options and using them in Risk Management practices of Corporates. The objectives of this course is to explore the use of Options and Swaps Instruments in Risk Management by Corporates and Financial Institutions such as Banks and Multinational companies. The students are expected to acquire the skills in pricing, hedging and trading strategies in Risk Management.

Content:	UNIT 1: Options Derivatives Meaning – Types of Options – Features of Options - Call Options – Put Options - Payoffs in Options–Moneyness in Options-Option Vs Futures-Option Positions –Option Margins–Trading Mechanism of Option Markets in NSE and BSE -Covered Call -Protective Puts – Put-Call Parity–Arbitrage with Put-Call Parity -Valuation of Options–Arbitrage in Put-Call Parity–(Including Practical Problems). UNIT 2: Pricing and Volatility Measurement Of Options Pricing of Options -Factors affecting thePricingof Options - Binomial Option Pricing Model (BOP) - One Way Model – Two WayModel – Multiple Model -Limitations of BOP– Black – Scholes Option Pricing Model (BSOP) – Significance – Limitations - Greek letters for Risk Measurement– Delta – Gamma – Theta – Vega – Rho – Hedging using Greek letters in Options -Option Trading Strategies - Spreads –Straddles – Strangles – Straps - Strips – (Including Practical Problems). UNIT 3: Interest Rate Futures And Forward RateAgreements Introduction – Short-term Interest Rate Futures – Contract Specifications and Settlement – Pricing Interest Rate Futures – Arbitrage with Interest Rate Futures –Cash and Carry – Reverse Cash and Carry – Long-term Interest RateFutures– Hedging – Long Hedge – Short Hedge – Forward Rate Agreements (FRA) – Quotes of FRA – FRA’s in Hedging. (Including Practical Problems). UNIT 4: Swaps.	12hours39 12hours 12hours 12hours
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	Introduction – Evolution Swap Market – Motives of Swaps – Interest Rate Swaps – Parties in Swap – Swap Rates – Valuation of Interest Rate Swap – Types of Interest Rate Swaps – Forward Swaps – Option on Swaps – Commodity Swaps– Equity Swaps Currency Swaps – Types of Currency Swaps – Pricing of Swaps - (Including Practical Problems) .	
Pedagogy:	The methodology used in the class will combine lectures, applications and case discussions. Lectures will address the assigned reading materials. The required readings, lecture notes, and the assigned home works and cases are intended to support learning objectives and will prepare the students adequately for the examinations. In addition to the lectures, review sessions will be scheduled to address assignments, end of chapter questions and in some occasions assigned cases.	
Reference / Readings:	1. Hull C. John, “Options, Futures and Other Derivatives”, Pearson Educations Publishers, 2016 2. David Thomas. W & Dubofsky Miller. Jr., Derivatives Valuation and Risk Management, Oxford University, Indian Edition. 2016 3. ND Vohra & BR Baghi, Futures and Options, Tata McGraw-Hill Publishing Company Ltd. 2016 4. Sunil K. Parameswaran, “Futures Markets: Theory and Practice” Tata-McGraw-Hill Publishing Company Ltd. 2016 5. D.C. Patwari, Financial Futures and Options, Jaico Publishing House. 2015 6. T.V. Somanathan, Derivatives, Tata McGraw-Hill Publishing Company Ltd. 2016 7. S.C. Gupta, Financial Derivatives: Theory, Concepts and Problems, Prentice Hall of India. 2017 8. International Financial management by S.P Srinivasan and Dr B. Janakiram, Published by Biztantra, New Delhi. 2015 9. Banking and Financial Markets in India by Niti Bhasin, New Century Publications. 2015 10. D. C. Patwari, Options and Futures- An Indian Perspective, Jaico Publishing House. 2015	
Learning Outcomes:	After having followed the course activities, the student will be able to: 1. Understanding the concept of Financial Options Derivatives, and its trading mechanism in India. 2. Understanding the Valuation, and Pricing of different types of Derivative products, with using an advanced pricing techniques. 3. To describe and analyze the price on Options using the Binomial Framework, the Black-Scholes framework, and various extensions thereof. This includes so basic knowledge of stochastic processes and various methods for pricing financial products. 4. To understand using Swap Contracts for international exposures of Multinational Companies. 5. Understanding the usage of Derivative Products in Risk Management through Arbitrage, Speculation and Hedging techniques. 6. Understanding the practical applications of Derivatives in Investment, Banking and Foretrade. 7. Acquire the knowledge of using pricing techniques in Research Applications and in Financial Engineering.	

