



**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**  
Pilani Campus

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**  
**INSTRUCTION DIVISION**  
**FIRST SEMESTER 2015-16**  
**Course Handout Part II**

Date: 30/07/2015

In addition to Part-I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

**Course No. : ECON F354/ FIN F311**  
**Course Title : DERIVATIVES & RISK MANAGEMENT**  
**Instructor-in-charge : ARUN KUMAR VAISH**

**1. Scope & Objective:**

The objective of the course is to provide knowledge about derivatives and mechanics of derivative market. The course includes understanding of interest rate, term structure, and time value of money, pricing of bonds, computation of yield, bond-price volatility, duration, modified duration and convexity. The course covers option pricing and the variables affecting option pricing. Students are exposed to various types of risks namely Market Risk, Credit Risk, Operational Risk, Liquidity risk & Model Risk.

**2. Text book:**

Rajiv Srivastava: Derivatives & Risk Management. Oxford University Press

**3. Reference books:**

R1. Futures, Options and Other Derivatives by John C Hull, 7th Edition

**4. Course Plan:**

Lecture No.	Learning Objectives	Topics to be covered	Reference (Chapter number)
1-4	Overview of Derivatives	Basic financial calculations, interest rates: simple, compounding, nominal and effective	Class notes
5-7	Brief overview of derivative markets and instruments.	<ul style="list-style-type: none"><li>Markets, players and instruments Types of risks – price risk, interest rate risk, exchange rate risk, etc.</li><li>Derivatives – Product, Participants and Functions.</li><li>Types of derivatives: Exchange Traded and Over-the-Counter Derivatives.</li><li>OTC vs. Exchange-Traded Derivatives. (Benefits of an Exchange-Traded and Clearing House Guaranteed Model)</li><li>Cost and Benefits of Derivatives</li><li>Derivative markets in India</li></ul>	Chapter-1



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8-20,	Determination of Forwards/futures prices, Swaps and Option prices.	Pricing and cost of carry in case of future & forwards. Binomial option pricing & Black Scholes option pricing formula prices.	Class notes+ Ch.2-4 and 8-12
21-30	Risks and mitigation/hedging techniques	Types of risks. Risk management using forward & futures. Hedging.	Class notes+ Chapter-12-16 & 20
31-42	Introduction to fixed income securities. Learning relationship between bond price and yield.	Concept of interest rates, time value of money, concept of discounting, annuities & term-structure. Bonds basics and dynamics of bond price. Forward rates and its role in anticipating term structure. Various determinants of bond prices: term, yield and coupon	Class notes

### 6. Evaluation Component

S. No.	Evaluation Component	Duration	Max. Marks	Date & Time	Remarks
1	Mid-Semester Examination		30	7/10 10:00 - 11:30 AM	OB
2	Surprise Quizzes		20		CB
3	Case Study /Article Presentations Or Project		10		
4	Comprehensive Examination		40	5/12 FN	CB

7. **Chamber Consultation Hour:** 11 AM -Wednesday

8. **Notice:** All notices will be displayed on **Economics & Finance Notice Board.**

Instructor-In-Charge



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