

Subject Code: 1SC2040406	Subject Title: Financial Mathematics - II
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Course Objective:

- This is an introductory course in Financial Mathematics-II which provide a working knowledge of the Interest rate ,rate of return, dividends, Estimating Greek letters using Binomial model described in detail in the syllabus.

Teaching scheme (hours) per week		credit		Theory Marks		Practical Marks		Total
Theory	Tutorial	Theory	Tutorial	University Assessment	Cont. Assessment	University Assessment	Cont. Assessment	
4	1	4	1	60	40	-	-	100

Subject Contents			
Unit. No	Topic	Total Hours	Weight (%)
1	Interest rates and present value analysis, rate of return, continuously varying interest rates.	18	25
2	Variations in Blach-Scholes-Merton formulae to include constant dividends, discrete dividends, jump conditions, currency options.	18	25
3	Greek letters: Delta, Theta, Gamma, Vega, Rho, Phi, Binomial models for valuing European options, examples.	18	25
4	Binomial models for valuing American options, Estimating Greek letters using Binomial model, finite difference method, examples.	18	25

Course Outcome:

On successful completion of the course, students should be able to

- Students will be able to understand the concept of continuously varying interest rates.
- Students will be able to understand the concept of dividends and currency options.
- Students will be able to understand the concept of Binomial models for valuing European options and finite difference method.

List of References:

- P. Wilmott, S. Howison and J. Dewynne, The mathematics of financial derivatives, Cambridge Uni. Press, 1995.
- Sheldon M. Ross, An elementary introduction to mathematical finance, Cambridge Uni. Press, 2003.
- John C. Hull, Options, futures and other derivatives, 7th edition, Prentice Hall.
- Gupta S. L., Financial derivatives: theory, concepts and problems, Prentice Hall of India.