

**Applied Mathematics 483**

**Computational Methods in Mathematical Finance**

Review of financial models, Monte-Carlo simulation, binomial and trinomial trees, finite-difference method, aspects of time series and parameter estimation, volatility modelling and estimation.

Course Hours: H(3-1T)

Prerequisite(s): [Applied Mathematics 481](#) and [491](#).

*Syllabus*

<u>Topics</u>	<u>Number of Hours</u>
Review of financial models	3
Monte-Carlo simulation and option pricing	8
Binomial and Trinomial trees for option pricing	8
Finite Difference methods for partial differential equations in finance	8
Time series analysis and parameter estimation	6
Applications	3
<b>TOTAL HOURS</b>	<b>36</b>

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