

Economic Analysis of Engineering Projects
ISE 561, Spring 2005

Contact Information:

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Textbook: An Elementary Introduction to Mathematical Finance: Options and Other Topics, Second ed., Sheldon Ross, Cambridge University Press, 2003

Course Objectives: To familiarize students with the concepts underlying the economic analysis of engineering projects.

Course Outcomes: An understanding of the following topics

- Interest rates and present value analysis
- Rate of returns
- Arbitrage and its use in Pricing
- The Arbitrage Theorem and its Applications
- Option Pricing Theory
- Optimization Models in Financial Engineering
- Solving Optimization Models by Dynamic Programming

- Value at Risk Calculations
- Pricing by Expected Utility
- Simulation Analysis of Exotic Options

Grades: Based on
20 percent: Homeworks
20 percent each: , 2 Midterm exams
40 percent: Final exam or Project