33:136:405 Risk Modeling

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Time and Place: Wednesday 10:20 AM — 1:20 PM, BRR-4073 (100 Rockefeller Rd.)

Schedule of Classes:

Week	***Topic***
1	Introduction to decision making under uncertainty
2	Review of linear optimization
3	Review of nonlinear optimization
4	Utility and dual utility theories
5	Mean-risk models
6	Mean-variance portfolio optimization
7	Value at risk
8	Average value at risk
9	Coherent measures of risk
10	Duality of coherent measures of risk
11	Stochastic dominance
12	Optimization with stochastic dominance constraints
13	Multistage risk models
14	Risk-averse dynamic programming

Prerequisites

Operations Management (33:136:386) or by permission of the instructor

Course Materials

The course is based on recent literature and uses lecture notes prepared by the instructor

Evaluation Criteria

The course grade will be based on the following components:

1. Homework assignments (30%)
2. Midterm exam (30%)
3. Final exam (40%)

Office Hours

Monday, 100 Rockafeller Rd., room 5182, time TBA.