

**ETM 595 Risk Assessment and Management**  
**Fall 2018**

**Instructor:**

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**Course Data:** Hours: Wednesday 19:00-22:00  
Room: TBA

**Course Description**

**ETM 595 Risk Assessment and Management (3+0+0)3**

(Elective)

The course aims to address the risk associated to investment decisions. To this end, probability and statistics concepts are briefly reviewed and basic methods of decision making in uncertain environments are discussed and utility theory concepts are discussed. Then mean-variance portfolio theory, efficient market hypothesis, single- and multi-factor models, certainty equivalent analysis and the value at risk concept are studied.

**Course Objectives:** This course is designed to make ETM students conversant in the fundamentals of risk assessment and risk-based decision criteria, elementary approaches to financial risk, analysis of risk and uncertainty in engineering projects, and dynamic strategies to manage risks.

**Textbooks:**

- Luenberger, D.G., *Investment Science*, Oxford University Press, 1988. HG4515.2 .L84 1998

**Ref. Books:**

- Haimes, Y.Y., *Risk Modeling, Assessment and Management*, Wiley Series in Systems Engineering, John Wiley & Sons, Inc., 1998. T174.5 .H35 1998
- Evans, J.R. and D.L. Olson, *Introduction to Simulation and Risk Analysis*, Prentice Hall, 1998. HD30.213 .E93 1998
- Hertz, D. and H. Thomas, *Risk Analysis and its Applications*, John Wiley & Sons, 1983. HD61 .H42 1983
- Hertz, D. and H. Thomas, *Practical Risk Analysis: An Approach through Case Histories*, John Wiley & Sons, 1984. HD61 .H418 1984
- Dowd, K., *Beyond Value at Risk-The New Science of Risk Management*, John Wiley & Sons, 1998. HG6024.3 .D68 1998

**Class Policies:** Midterm: 35% of the final grade

Final exam: 35% of the final grade

Project: 30% of the final grade

Attendance to all exams and submission of the project is a must. Failure to do so results in an automatic F as the final grade.

**Class Website:** <http://karagoz.ie.boun.edu.tr/moodle/>