THE GEORGE WASHINGTON UNIVERSITY
Department of Statistics
Graduate Certificate Program in Applied Quantitative Risk Analysis

Essentials of Risk Analysis
Stat 6283 - Fall 2011

SYLLABUS

Instructor: Dr. Nozer Singpurwalla
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Office Hours: Wednesdays before class, by appointment only.
Lecture: Wednesdays 6:00-8:00pm, Room 612, GW Graduate Education Center, 950 N. Glebe Road, Arlington, VA 22203

Course Description: The material covered in this course is based on Chapters 4, 5, and 10 in Reliability and Risk: A Bayesian Perspective by N.D. Singpurwalla.

From Chapter 4, the material covered will include the notion of failure rate, mixtures of failure rates, the retrospective failure rate, failure models for multiple components, causal and cascading failures, and failure models indexed by multiple scales.

From Chapter 5, the material covered will be inference under failure models using data, expert testimonies, and subject matter knowledge. Life testing and failure data analysis.

From Chapter 10, the material covered will be on system reliability and survivability and Monte Carlo Methods in reliability analysis.

Prerequisites: Stat 6282
Learning Outcome: Upon completion of the course a student should be able to apply fundamental concepts from probability and statistics to the subject of risk analysis, and begin to apply these tools to real world applications.


Grading Policy: Your final grade will be determined by the following weighted average:

- Class Discussion 25%
- Homework 15%
- Midterm 25% (October 19, 2011)
- Final 35% (December 7, 2011)