

ESE 540: Reliability Theory
Syllabus (Fall 2017)

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Learning Objective: To introduce students to the theory and practice of reliable system design and evaluation.

Coverage

- (1) Introduction
- (2) Reliability of Systems and Components
- (3) System Analysis
- (4) Lifetime Distributions
- (5) Repairable Systems
- (6) Warranties
- (7) Preventive Maintenance & Inspection
- (8) Software Reliability
- (9) Event and Fault Trees
- (10) Error Detection and Corrections
in communication systems
- (11) Case Studies

Text: L. Leemis, Reliability: Probabilistic Models and Statistical Methods, Prentice-Hall, (1st or 2nd edition). Also get a copy (paperback available) of Inviting Disaster by James Chiles.

Grading: Exam 1 (20 points), Exam 2 (20 points), Two Case Study Essays (10 points each), Portfolio (20 points) and Exam 3 (20 points).

The portfolio is a collection of five original reliability problems and solutions created by students.

Note: *If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge you to contact the staff in the Disabled Student*

Services office (DSS) 631-632-6748. DSS will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation of disability are confidential.