Appendix: Topics in the ISyE 6XXX "Systems Monitoring and Prognostics"

The advent of sensor technology has prompted a growing interest in the development of methodologies that effectively utilize sensory information to formulate accurate decisions, especially in the areas of assessing the condition/health of a system and/or its components, failure predictions and reliability. This course provides a general understanding of sensor technologies and their uses in condition monitoring, modeling of condition-base signals using stochastic and statistical methods, fault diagnostics, and failure prognostics.

- Introduction to sensor technologies and sensing mechanisms
- Basic understanding of signal processing and data acquisition
- Condition monitoring techniques and their applications
- Physical reliability models
- Degradation modeling
- Prognostics Applications