

## EEE 572 (Reliability & Maintainability of Electrical/Electronic Component & systems)

Introduction to reliability, availability, Elementary reliability theory. Application to power system and electronic components. Test characteristics of electrical and electronic components. Types of fault. Designing for higher reliability packaging, mounting, ventilation. Protection from humidity, dust. Functions of quality control and relationship to production, engineering purchasing and sales. Effectiveness of quality control, sampling plans and procedures. Applications to power and telecommunication systems. Application of reliability concepts to electronic, telecommunication, and power engineering system design. Component modes of failure and system reliability; typical failure distributions; design analysis of failure and system reliability. Maintenance: types, maintenance planning, frequency and intensity of inspection, optimal replacement/overhaul maintenance policy of equipment. Equipment replacement conditions, system design for ease of maintenance. Documentation requirements, Maintenance instrument requirements. Application to power systems and electronic/telecom networks and equipment.