



**JORDAN UNIVERSITY OF SCIENCE & TECHNOLOGY
INDUSTRIAL ENGINEERING DEPARTMENT**

Course Number and Name	IE574 Reliability and Maintenance Management
Course Description	Concepts and methods for the design, testing, and estimation of component and system reliabilities. System configuration including parallel, series, combined and complex systems, and life testing. Maintenance management, maintenance materials management, total productive maintenance, predictive maintenance, proactive maintenance, and maintainability.
Credits and contact hours	3 Credit hours; 3 hours of lectures
Pre- or Co-requisites	IE441 Quality Control
Required/ Elective	Required

Text Book(s)	Ebeling, Charles, An introduction to reliability and maintainability, Waveland Press, 2005.
References	<ul style="list-style-type: none"> • Handout

Course Objectives	<ul style="list-style-type: none"> • To teach the students the basic concepts and theories in reliability and to enable them to use reliability as a factor in system design and analysis. • Appreciate the role of the maintenance department in the organization. • Identify and use systematic approaches for analyzing and solving maintenance related problems.
Measured Outcomes	3j

Topics	Evaluation	
Failure distributions and Reliability measures.	First Exam	30
Constant failure rate model.	Second Exam	30
Time dependent failure rate models.	Final Exam	40
Reliability of systems.		
State-dependent systems.		
Maintenance policies.		
Maintainability and availability		
Life testing.		