Jordan University of Science and Technology
Faculty of Engineering
Industrial Engineering Department

IE560 Reliability And Maintenance Management

Summer Semester 2019-2020

Course Catalog
3 Credit Hours. 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.

Text Book	
Title	An introduction to reliability and maintainability
Author(s)	Charles Ebeling
Edition	2nd Edition
Short Name	An introduction to reliability and maintainability
Other Information	

Instructor	
Name	**Dr. Hazem Smadi**
Office Location	-
Office Hours	
Email	hjsmadi@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Mon, Tue, Wed : 11:30 - 13:00 Room: منصة الكترونية

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
294431	IE443 Quality Control	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Weeks 1, 2	Failure distributions and Reliability measures.	
Weeks 3, 4	Constant failure rate model	
Weeks 5, 6	Time dependent failure rate models	
Weeks 7, 8	Reliability of systems	
Weeks 9, 10	State-dependent systems	
Weeks 11, 12	Maintenance policies.	
Weeks 13, 14	Maintainability and availability	
Weeks 15, 16	Life testing	

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics [1SLO1]	30%	
an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors [1SLO2]	30%	
an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts [1SLO4]	40%	

Relationship to Program Student Outcomes (Out of 100%)						
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7
30	30		40			

Evaluation	
Assessment Tool	**Weight**
Exam I	30%
Exam II	30%
Final Exam	40%

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