


Sub.	Course Description – توصيف مقرر دراسي – الموضوع	الموضوع	 كليات المعرفة ALMAAREFA COLLEGES
Date		التاريخ	

Course Code & No	IE302		رقم المقرر ورمزه
Course Name	Engineering Reliability		اسم المقرر
Credit Hours	3 (3+1+0)		عدد الساعات المعتمدة
Pre-requisite	STAT 103		المتطلب السابق

General Description	توصيف عام
Introduction to the concept of reliability; Failure distributions; Reliability characteristics; Estimation of system reliability both for the independent and dependent cases.	

Course Objectives	أهداف المقرر
<p>The course aims to provide the knowledge and skills to understand basic concepts of reliability, maintainability, and availability, failure distributions and their properties, system reliability models, including series, parallel and complex systems, reliability data analysis of test data.</p> <p>By the end of the course, each student should be able To</p> <ul style="list-style-type: none"> • Understand basic concepts of reliability and mathematical tools • Measure and calculate reliability for components/system • Design and improve reliability for components/system • Assess and test reliability for components/system 	

Course Outlines	مفردات المقرر
<ul style="list-style-type: none"> • Introduction to reliability • Reliability measures • Probability models (Exponential distribution, Weibull, normal, lognormal distributions) • Reliability of state-independent system • State-independent systems • Stress-strength model • Design for reliability • Reliability testing 	

Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 كليات المعرفة ALMAAREFA COLLEGES
Date		التاريخ	

References	المراجع
Required Textbooks An Introduction to Reliability and Maintainability Engineering, by C. E. Ebeling, McGraw-Hill Latest edition	
Essential References Materials An Introduction to Reliability and Maintainability Engineering, by C. E. Ebeling, McGraw-Hill Latest edition	