

The University of Jordan
School of Engineering



Department	Course Name		Course Number	Semester
Mechanical Engineering	Aircraft Maintenance Systems		0994581	Summer
2025 Course Catalog Description				
Introduction, Reliability theory, Life testing, maintained systems, Integrated logistic support (ILS), Aircraft handling, Repair station requirements, Quality systems, Inventory control, Structural repair, Engine maintenance and overhaul, Maintenance of aircraft systems and instruments.				
Instructors				
Name	E-mail	Section	Office Hours	Lecture Time
Text Books				
	Text book 1		Text book 2	
Title	Aviation Maintenance Management			
Author(s)	H. A. Kinnison, T. Siddiqui			
Publisher, Year, Edition	2nd Edition, McGraw-Hill's			
References				
Books	1. U.S. Department of Transportation, Federal Aviation Regulatio, FAA. 2. U.S. Department of Transportation, Airframe & Powerplant General Handbook, FAA. 3. U.S. Department of Transportation, Airframe Handbook, FAA. 4. U.S. Department of Transportation, Powerplant Handbook, FAA. 5. Aircraft Systems I. Moir and A. Seabridge, 2 nd Edition. 6. Aircraft Systems, D. Lombardo, 2 nd Edition.			
Journals				
Internet links				
Prerequisites				
Prerequisites by topic	-			
Prerequisites by course	Engineering Math II for Aeronautical Engineering Students 0994202 + Aircraft structure I 0994481			
Co-requisites by course	Maintenance Practice V: Work Experience			
Prerequisite for	-			

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Topics Covered							
Week	Topics						Chapter in Text
1	Introduction, Development of Maintenance Programs, Definitions, Goals and Objectives						
2	Aviation Industry Certification Requirements, Documentation for Maintenance, Requirements for a Maintenance Program						
3	The Maintenance and Engineering Organization, Engineering						
4	Production and Planning Control, Technical Publication, Technical Training						
5	Computer Support, Line Maintenance,						
6	Hangar Maintenance, Maintenance Overhaul Shops						
7	Material Support, Quality Assurance, Quality Control						
8	Reliability						
9-16	Aircraft systems						
Mapping of Course Outcomes to ABET Student Outcomes							
SOs	Course Outcomes						
2,4,5	To provide students with a comprehensive knowledge of regulations, safety rules, procedures, methods about maintenance and servicing of aircraft systems with economic and managerial considerations and enable them to use this knowledge in practice.						
	To familiarize students with the basic working principles, functions, major components and technologies of aircraft systems.						
	Gain the skills of integrating components to the overall system.						
Evaluation							
Assessment Tools				Expected Due Date		Weight	
First Exam						25	
Second Exam						25	
Final Exam						50	
Contribution of Course to Meet the Professional Components							
This course is one of the first opportunities for engineering students to encounter the fundamental principles of design problem solving. It is an important prerequisite course for number of designs related-courses, which occur later in the programs of engineering students.							
Relationship to Student Outcomes							
SOs	1	2	3	4	5	6	7
Availability		X		X	X		
Relationship to Aeronautical Engineering Program Objectives (AEPOs)							
AEPO1	AEPO2		AEPO3		AEPO4		AEPO5

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ABET Student Outcomes (SOs)				
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics			
2	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			
3	An ability to communicate effectively with a range of audiences			
4	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			
5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives			
6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions			
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies			
Updated by ABET Committee, 2025				