The University of Jordan
School of Engineering

Department	Course Name	Course Number	Semester
Aircraft maintenance Engineering	Licensing Module 6: Materials & Hardware	0994155	Spring

2025 Course Catalog Description

Fasteners, Pipes and unions, Springs, Bearings, Transmissions, Control cables, Electrical cables and connectors, Aircraft materials-ferrous, Aircraft materials-nonferrous, Aircraft materials-composite and non-metallic, Corrosion.

Instructors

Name	E-mail	Sec	Office Hours		Lecture Time	
			Sunday	Tuesday		
MEng. Aasef Hamadneh	ahamadneh@joramco.com.jo		1:00-2:00	1:00-2:00		

Text Books

Title	Materials & Hardware	
Author(s)	EASA	
Publisher, Year, Edition	Issue 2 , 2024	

References

Books	
Journals	
Internet links	

Prerequisites

Prerequisites by topic	-
Prerequisites by course	-
Co-requisites by course	-
Prerequisite for	-

Topics Covered

Week	Topics	Chapter in Text
1	Fasteners,	Chapter 1
2	Pipes and unions,	Chapter 2
3-4	Springs, Bearings, Transmissions,	Chapter 3 ,4
5-6	Control cables, Electrical cables and connectors,	Chapter 4 ,6
6-7	Aircraft materials-ferrous,	Chapter 7
7-8	Aircraft materials-non ferrous,	Chapter 8
9-10	Aircraft materials-composite and non-metallic,	Chapter 9
11-14	Corrosion	Chapter 10
14-15	Corrosion	Chapter 10

Mapping of Course Outcomes to ABET Student Outcomes

SOs	Course Outcomes
2	Characteristics, properties and identification of common alloy steels used in aircraft;
4	Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft;

Evaluation

Assessment Tools	Expected Due Date	Weight
Projects		20%
Midterm Exam		30%
Final Exam		50%

Contribution of Course to Meet the Professional Components

Relationship to Student Outcomes

SOs	1	2	3	4	5	6	7
Availability		**X**		**X**			

Relationship to Aeronautical Engineering Program Objectives (AEPOs)

AEPO1	AEPO2	AEPO3	AEPO4	AEPO5

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 Curriculum Committee, 2025