

The University of Jordan
School of Engineering



Department		Course Name		Course Number	Semester
Mechanical Engineering		Optimization		0904902	
2025 Course Catalog Description					
Optimization and its use in engineering design, analysis, and operation. Problem formulation, classical solution techniques, and heuristic approaches, and their applications to the disciplines within engineering.					
Instructors					
Name		E-mail	Section	Office Hours	Lecture Time
Prerequisites					
Prerequisites by topic					
Prerequisites by course		0904901			
Co-requisites by course					
Prerequisite for					
Topics Covered					
Week	Topics				
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Evaluation					
Assessment Tools			Expected Due Date		Weight
Contribution of Course to Meet the Professional Components					

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Relationship to Student Outcomes							
SOs	1	2	3	4	5	6	7
Availability							
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 ABET Committee, 2025							