

**The University of Jordan**  
**School of Engineering**



Department	Course Name		Course Number	Semester
Mechanical Engineering	Experimentation		0904904	
2025 Course Catalog Description				
This course covers design of experiment, experiment conduction procedures, and analysis of experimental data. Various experiment design methods and their respective characteristics are studied.In particular, factorial and fractions of two-level, three-level, and mixed-level factorials designs are discussed in greater detail. Statistical methods of experimental data, robust statistics methods; reliability and accuracy of statistical modelling and data analysis are covered with computational examples. Individual projects on applications of material studied will be assigned.				
Instructors				
Name	E-mail	Section	Office Hours	Lecture Time
Prerequisites				
Prerequisites by topic				
Prerequisites by course	0904903			
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

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<b>Contribution of Course to Meet the Professional Components</b>									
<b>Relationship to Student Outcomes</b>									
<b>SOs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>		
<b>Availability</b>									
<b>Relationship to Aeronautical Engineering Program Objectives (AEPOs)</b>									
<b>AEPO1</b>		<b>AEPO2</b>		<b>AEPO3</b>		<b>AEPO4</b>		<b>AEPO5</b>	
<b>ABET Student Outcomes (SOs)</b>									
<b>1</b>	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics								
<b>2</b>	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								
<b>3</b>	An ability to communicate effectively with a range of audiences								
<b>4</b>	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								
<b>5</b>	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								
<b>6</b>	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions								
<b>7</b>	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies								
<b>Updated by ABET Committee, 2025</b>									