Jordan University of Science and Technology

Faculty of Engineering

Aeronautical Engineering Department

AE204 Solid Modeling - JNQF Level: 7
First Semester 2023-2024

Course Catalog
2 Credit Hours. Study of parametric solid modeling as a design/drawing tool using software such as Pro-Engineer. Topics include the creation of three-dimensional solid models, assemblies, and renderings, as well as the generation of two-dimensional technical drawings from three-dimensional models.

Text Book	
Title	Creo Parametric 9.0 Tutorial
Author(s)	Roger Toogood
Edition	1st Edition
Short Name	Textbook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Class Handouts	Class Handouts	AE Department	1st Edition	

Instructor	
Name	**Dr. ABDALLAH ALMOMANI**
Office Location	N1- L2
Office Hours	Sun : 08:30 - 09:30 Sun : 10:30 - 11:30 Mon : 11:30 - 13:00 Tue : 08:30 - 09:30 Tue : 10:30 - 11:30 Wed : 11:30 - 13:00 Thu : 08:30 - 09:30
Email	amalmomani0@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Tue : 14:30 - 16:30 Room: LAB

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
252000	ME200 Engineering Drawing (A)	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Weeks 1, 2, 3, 4	Basics of Engineering Drawing	From **Textbook**, From **Class Handouts**
Week 5	Pro/ENGINEER's User Interface	From **Textbook**, From **Class Handouts**
Weeks 6, 7	Constraint-Based Sketching	From **Textbook**, From **Class Handouts**
Week 8	Extruding, Modifying, and Redefining Features	From **Textbook**, From **Class Handouts**
Week 9	Feature Construction Tools	From **Textbook**, From **Class Handouts**
Week 10	Revolved Features	From **Textbook**, From **Class Handouts**
Week 11	Creating a Pro/ENGINEER Drawing	From **Textbook**, From **Class Handouts**
Week 12	Sections and Advanced Drawing Views	From **Textbook**, From **Class Handouts**
Week 13	Swept and Blended Features	From **Textbook**, From **Class Handouts**
Week 14	Advanced Modeling Techniques	From **Textbook**, From **Class Handouts**
Week 15	Airplane Modeling	From **Textbook**, From **Class Handouts**
Week 16	Assembly Modeling	From **Textbook**, From **Class Handouts**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Apply parametric solid modeling techniques to create three-dimensional solid models, demonstrating proficiency in using design software such as Pro-Engineer. [1SO2] [1L7S1]	25%	
Demonstrate skills in assembling components and creating renderings using parametric solid modeling tools, showcasing the ability to construct complex assemblies in a virtual environment. [1SO2] [1L7S1]	25%	
Generate two-dimensional technical drawings from three-dimensional solid models, demonstrating the translation of virtual designs into detailed technical drawings. [1SO2] [1L7S1]	25%	
Apply principles of design and drawing to solve engineering problems, utilizing parametric solid modeling as a tool for effective visualization and communication in the design process. [1SO2] [1L7S1]	25%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
	100					

Relationship to NQF Outcomes (Out of 100%)
L7S1
100

Evaluation	
Assessment Tool	**Weight**
Midterm exam	30%
Homework	10%
Classwork	10%
Project	10%
Final Exam	40%

Policy	
Homework policy	Conceptual discussion is allowed. However, all substantive work must be your own

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