



**The Hashemite University**  
**Faculty of Engineering**  
**Course Syllabus**  
**Department of Mechanical Engineering**

<b>Course Title:</b>	<b>Mechanical Drawing 1 (0,3, 0)</b>	<b>Course Number:</b>	110402445
<b>Designation:</b>	Compulsory	<b>Prerequisite(s):</b>	110400202
<b>Instructor:</b>	Dr. Mohammad A Gharaibeh	<b>E-mail:</b>	mohammada_fa@hu.edu.jo
<b>Office Hours:</b>	11:00 –1:00 Sunday/Tuesday		

**Course Description (catalog):** Parametric Mechanical Drawing, feature-based solid modeling with CREO Parametric software package.

**Textbook(s) and/or Other Supplementary Materials:**

1. Inside Pro/Engineer Wildfire, by D. Kelly, McGraw Hill
2. Pro/ENGINEER Wildfire Tutorial.

**Major Topics Covered:**

Topic	# Weeks	# Contact hours*
Learning the CREO Interface	1	3
Solid Modeling Part-1(Extrusions, Sketching and Cuts)	1	3
Solid Modeling Part-2(Revolves, Holes and Feature Modification)	1	3
Complex parts, Shells, Rips, Rounds, Chamfers and Datum Planes	2	6
Thin solids, Mirror, Pattern, Datum Axes/Planes	2	6
Sweeps, Blends and Helical Sweeps	2	6
MID EXAM	1	3
Assembly	3	9
Engineering Drawings	2	6
<b>Total</b>	<b>15</b>	<b>45</b>

\*Contact hours include lectures, quizzes and exams

**Specific Outcomes of Instruction (Course Learning Outcomes):**

After completing the course, the student will be able to:

1. Recognize the general functionality of Pro-Engineer feature-based solid modeling. **(k)**
2. Produce professional-quality solid models of mechanical components (parts). These models should reflect professionalism in the use of the following: solid features, layers, sweeps, blends, patterns and parametric relations. **(c,k)**
3. Produce professional-quality solid models of mechanical assemblies. These models should reflect professionalism in the use of the following: constraints, exploded views, assembly views and sections. **(c,k)**
4. Produce professional part drawings that are fully dimensioned with orthographic, auxiliary, and sectional views to describe solid objects. **(c,k)**
5. Produce professional assembly drawings that are fully dimensioned with orthographic, auxiliary, and sectional views to describe assemblies. **(c,k)**
6. Understand the importance of team working and cooperative learning. **(g,i)**

**Student Outcomes (SO) Addressed by the Course:**

#	Outcome Description	Contribution
<b>General Engineering Student Outcomes</b>		
(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	<b>M</b>
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	<b>L</b>
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
(i)	a recognition of the need for, and an ability to engage in life-long learning	<b>L</b>
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	<b>H</b>
<b>H=High, M= Medium, L=Low</b>		

<b>Grading Plan:</b>	Homework & quizzes	20%
	Mid-term Exam	30%
	Project	10%
	Final Exam	40%

**General Note:**

- A team project that involves part modeling and assembly is required.
- Before starting on your project you need to turn in a proposal showing what you intend to do.
- By the completion of the project, each student is required to turn in a report as well as the electronic files of the project.

**Prepared by :** Dr. Mohammad A Gharaibeh

**Date:** 11, Oct, 2020



