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

Course Title:	**Mechanical Drawing 1 (0,3, 0)**	**Course Number:**	110402445
Designation:	Compulsory	**Prerequisite(s):**	110400202
Instructor:	Dr. Mohammad A Gharaibeh	**E-mail:**	mohammada_fa@hu.edu.jo
Office Hours:	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
Total	**15**	**45**

*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
	General Engineering Student Outcomes	
(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	**M**
(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	**L**
(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	**L**
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	**H**
	H=High, **M**= Medium, **L**=Low	

Grading Plan:

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