COURSE PLAN

FIRST: BASIC INFORMATION

College

College	: Karak University College
Department	: Mechanical Engineering

Course

Course Title	: Mechanical drawing
Course Code	: 020209112
Credit Hours	: 2 (0 Theoretical, 2 Practical)
Prerequisite	:

Instructor

Name	: Eng . Qutaibah Ahmad Tarawneh
Office No.	:
Tel (Ext)	:
E-mail	: Q.tarawneh@bau.edu.jo
Office Hours	:

Class Times

Building	Day	Start Time	End Time	Room No.

Text Book

Title	: Pro/Engineer Software tutorials

References

1. K.L.Narayana, P.Kannaiah, K.Venkata Reddy, Machine Drawing 3rd edition, 2009

SECOND: PROFESSIONAL INFORMATION

COURSE DESCRIPTION

This course deals with the sectional views, sectioning in machine parts drawing, threads, bolted joints, studded, screw fastening, cotter, keyed, splinted joints, gears and bearing, detailing drawing, assembly drawing, reading and drawing diagrams tolerances, fittings and surface roughness.

COURSE OBJECTIVES

The main objectives of this course are to enable the student to do the following:

- Explain how to display lines and characters, dimension, projection method and tolerances in mechanical drawing.
- Explain how to drawing the basic parts used in mechines
- Explain how to drawing the assembly of parts including gear box and power transmission device.

COURSE LEARNING OUTCOMES

On successful completion of this course, students are expected to be able to:

CLO1. Explain symbols, lines and characters used in mechanical drawing

CLO2. Explain cross section and projection method including front projection, side projections and slope projection

CLO3. Explain and identify the types of tolerances on dimension and geometric

CLO4. Draw the basic element parts used in mechanics such as bolts, cotter, belt pulley, gear and coupling

CLO5. Draw the assembly of parts inclduing gear box, power transmission devices and gear pump

COURSE SYLLABUS

Week	Topic	Topic details	Related L.O. and reference (chapter)	Proposed assignments
1	Introduction	• Introduction to mechanical drawing • Lines and characters	CLO1	
2	Cross section drawing	• How to display a cross section • Types of cross secion	CLO2	
3	Projection	• How to display projection method • Three-dimensional shape from projection method	CLO2	
4	Diemsions	• How to dimension • Types of dimensions and dimensioning	CLO3	
5	Surface roguhnes	• How to display surface roughness • Types of the surface roughness including Ra, Rz and Rmax.	CLO3	
6	Dimensional tolerance	• Dimensional tolerance symbols. • Maximum allowable limits size and Minumum allowable limits size	CLO3	
7	Geometric tolerance	• Need and types of geometric tolerances • How to geometric tolerances	CLO3	
8	**Midterm Exam**			
9	Element part drawing	• Bolted joints • Studded; screw, fastening and cotter	CLO4	

Week	Topic	Topic details	Related L.O. and reference (chapter)	Proposed assignments
10	Element part drawing	• Introduction of belt pully • Types of belt pully • Drawing belt pulley	CLO4	
11	Element part drawing	• Introduction of gear • Types of gears • Drawing a gear	CLO4	
12	Element part drawing	• Introductin of coupling • Types of coupling • Drawing a coupling	CLO4	
13	Assembly drawing	• Introduction of clutch and parts of clutch • Role of clutch • Drawing clutch shaft	CLO5	
14	Assembly drawing	• Inroduction of power transmission and parts of power transmission devices. • Drawing power transmission devices.	CLO5	
15	Assembly drawing	• Introduction of parts of gear pump • Drawing a gear pump	CLO5	
16	**Final Exam**			

COURSE LEARNING RESOURCES

All course work is to be completed using a computer-aided drafting and design software. The software used for this course is AUTO CAD or Pro/ENGINEER wildfire 5.0.

ONLINE RESOURCES

{Write some useful websites related to the course and other material that help students to complete the course successfully.}

ASSESSMANT TOOLS

Write assessment tools that will be used to test students ability to understand the course material and gain the skills and competencies stated in learning outcomes

Assessment Tools	%
Quizzes and Homework	25%
Mid-term Exam	20%
Project	15%
Final Exam	40%

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance : Attendance will be checked each class. Students are expected to attend each lecture. University regulations will be strictly followed for students exceeding the maximum number of absences.

Homework & Quizzes : After completing each tutorial you need to do the homework problem corresponding to that tutorial in order to practice what you have learned. You are required to turn in the homework one day after it is assigned. Occasionally, short (10 to 15 minute) quizzes will be given during the lab session (about 2 to 3 quizzes throughout the semester).

Project : Each student is expected to do a project that involves part modeling and assembly Each student is expected to do the project on his own and he needs to start from scratch 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.

After the submission of your project files and report, there will be discussion of the projects where you will defend your approach, modeling technique and adherence to initial proposal

Class participation and behavior :

1) Classroom participation is a part of learning; it is only by asking questions and talking through ideas that you can come to fully understand the material.
2) Please do not engage in behavior which detracts from the ability of other students to learn. Such behaviors include arriving at class late, speaking or whispering while the instructor and students are discussing ideas or asking questions, reading messages.
newspapers in class, cell-phones ringing, etc.

GRADING SYSTEM

Example:

Average	Maximum	Minimum
Excellent	100%	90%
Very Good	89%	80%
Good	79%	70%
Satisfactory	69%	60%
Weak	59%	50%
Failed	49%	35%

REMARKS

{The instructor can add any comments and directives such as the attendance policy and topics related to ethics}

COURSE COORDINATOR

Course Coordinator	**Department Head:**
Signature:	**Signature:**
Date:	**Date:**