



Module (Course Syllabus) Catalogue 2022-2023

College/ Institute	Erbil technology college	
Department	Surveying	
Module Name	Engineering Drawing (Autocad)	
Module Code	END204	
Semester	Second	
Credits	6	
Module type	Prerequisite <input type="checkbox"/>	Core <input type="checkbox"/> Assist. <input checked="" type="checkbox"/>
Weekly hours	5	
Weekly hours (Theory)	(0)hr Class	()hr Workload
Weekly hours (Practical)	(5)hr Class	(158)hr Workload
Lecturer (Theory)	-	
E-Mail & Mobile NO.	-	
Lecturer (Practical)(cad)	Muhsin khalid Khdir	
E-Mail & Mobile NO.	muhsin.khdir@epu.edu.iq / 07504514785	
Lecturer (Practical)(studio)	Muhsin khalid Khdir	
E-Mail & Mobile NO.	muhsin.khdir@epu.edu.iq / 07504514785	

Course Book

<p>Course Description</p>	<ul style="list-style-type: none"> ▪ Drawing is commonly used for communication in engineering, industry, proper exposure to drawing helps the students to translate different ideas into practice acquisition of skill will produce a drawing to represent a given object with sufficient knowledge to understand and interpret for drawing is regarded a pre- requisite for technician engineer -General Language which it uses by (Engineers, surveyor, designer, planner, Artist, etc.) and other peoples which make and design the Building or space or any type of construction. ▪ Drawing as any Language has symbols, shapes, size and material for any drawing, these symbols are unified internationally for drawing and it has special standards for drawing. ▪ Students can develop this area when they graduated in Civil or survey department. ▪The students are going to be able to understand and apply the concept of Engineering Drawing and how to draw an engineering Drawing by using tools. They will be capable to use tools and instruments using in laboratory. ▪ With developing the Technology Also the Drawing is Developed to (CAD) or Computer-Aided-Design Which help the designer to print out very Quickly and high Quality of Printing with limited time..
<p>Course objectives</p>	<ul style="list-style-type: none"> ▪ Students should understand the principle and most useful characteristics of Drawing. ▪Understanding and reading different types of drawing. ▪Introduce all types of Lines from engineering drawing. ▪Accuracy and Techniques in drawing.
<p>Student's obligation</p>	<p>Student must take practical Lectures and exams according to institute exam policies. During this, students have to Draw sheets at hall. These Drawings are account for students' overall marks. The student attendance the drawing hall once per week for 3 hours to the lecture and the students are bringing requirement tools and keep the drawing hall clean and protect furniture. Student obligation is complete the daily sheets in the hall and another at</p>

	home.	
Required Learning Materials	The subject is taught based on Practical lectures and applications.	
Assessment scheme	40% Sheets (Class + Home). 4% Quiz. 16% Mid Term (Practical). 40% Final.	
Specific learning outcome:	At the end of course the student can understand - Students ability to Introduce all types of engineering drawing and using all tools with high Quality technique and suitable time. - Students ability to perform basic sketching techniques. - Students ability to Draw Projection and Isometric drawing. - Students ability to Dimension for the drawing. - Students ability to Draw regular form as (pentagon, hexagon, ellipse... Etc.).	
Course References:	Fundamental of engineering Drawing _by :Warren J. Luzadder -Technical Drawing by: Goetsch nelson chalk - جامعه التكنولوجيه // الرسم الهندسي / عبد الرسول الخفاف	
Course topics (Theory)	Week	Learning Outcome
<i>Bisect a given arc.</i>	1 st	
• <i>Bisect a given angle.</i>	2 nd	
• <i>Dividing a line into equal parts.</i>	3 rd	
• <i>Finding centre of given circle.</i>	4 th	
• <i>Drawing a curve of a given radius tangent to two circle from outside.</i>	5 th	
• <i>Drawing a curve of a given radius tangent to two circle from inside.</i>	6 th	

• <i>Drawing a curve of a given radius tangent to two circle from inside and outside.</i>	7th	
• <i>drawing hexagon inside a given circle.</i>	8th	
• <i>drawing hexagon using 30 - 60 triangle.</i>	9th	
• <i>drawing a regular pentagon inside a given circle.</i>	10 th	
• <i>drawing a regular pentagon inside a given Side.</i>	11th	
• <i>drawing Ellipse.</i>	12 th	
Practical Topics	Week	Learning Outcome
Introduction and user interface	1 st	
Working with line	2 nd	
Working with lines with angle,	3 rd	
Polygon, rectangle and ellipse	4 th	
Polyline, arc, trim, extend commands	5th	
Move, drag, explode commands	6 th	
Copy, mirror commands	7th	
Fillet, chamfer commands	8th	
Offset, rotate commands	9th	
Scale, array commands	10 th	
Divide, measure, area commands	11th	
Working with text	12 th	
Learning dimensioning and leader	13 th	
Working with layer	14 th	
Working with hatch	15 th	

Questions Example Design

- Notes :** 1- All dimensions on figures are in (mm),and draw all figures in scale (1:1)
2- Don't draw the Border for the sheet.
3- All assisting lines are required, don't erase.
4- Locate your answer on the sheet as shown :

Q1-A	Q2	Q3
FACE 1	FACE 2	

Q1 :

- 1- Draw a regular **Ellipse** to scale 1:2 if the Mainer axis =20 and the Major = 40.
2- Redraw figure (1) , using geometric operation.

(20 Marks)

(25 Marks)

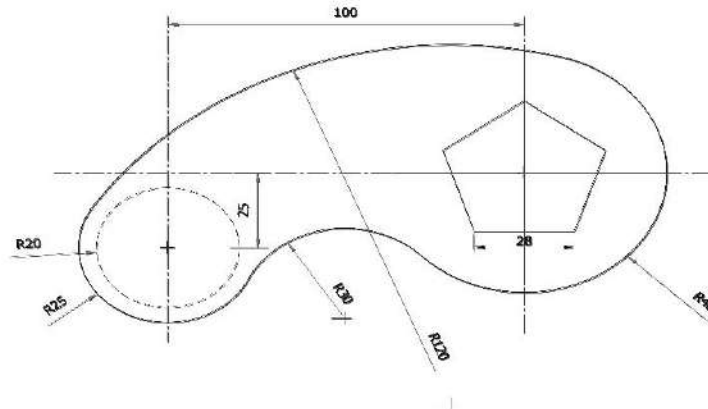


Figure (1)

Q2 :

Re Draw the Isometric of Figure (2)

(30 Marks)

Q3 :

DRAW THE (TOP VIEW ----- FRONT VIEW ---- SIDE VIEW) OF FIGURE (2) .

(25 Marks)

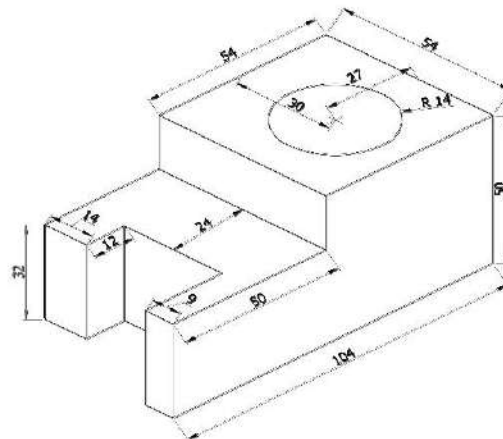
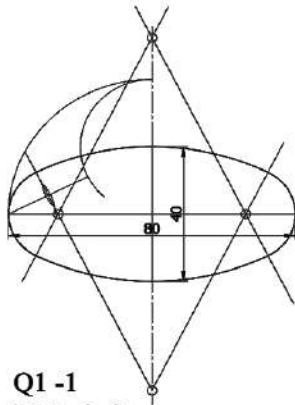


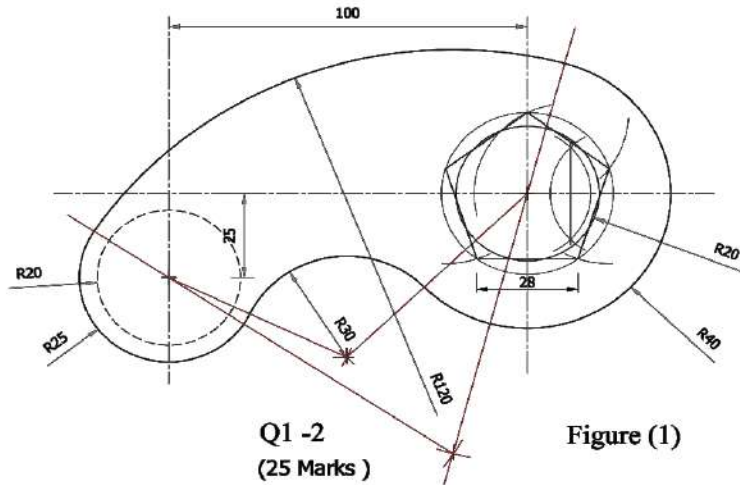
Figure (2)

Notes

1- All dimensions on figures are in (mm) 2- All assisting lines are required, don't erase.

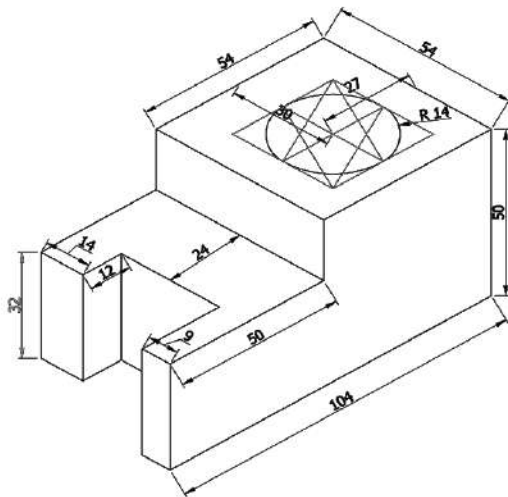


Q1 -1
(20 Marks)

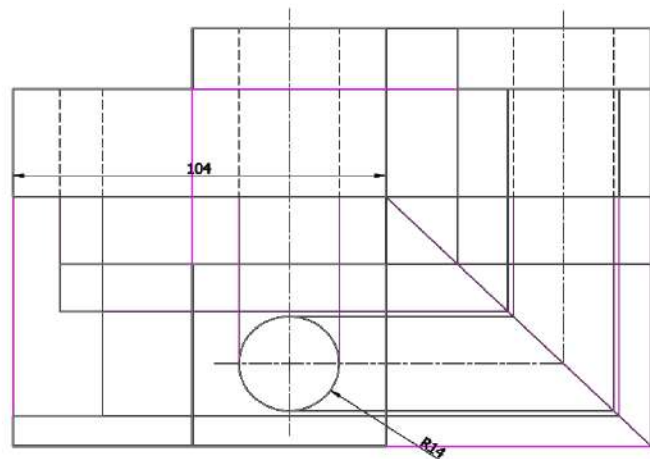


Q1 -2
(25 Marks)

Figure (1)



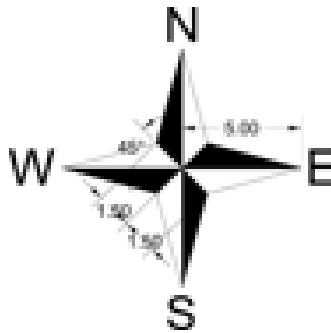
Q2 Figure (2)
(30 Marks)



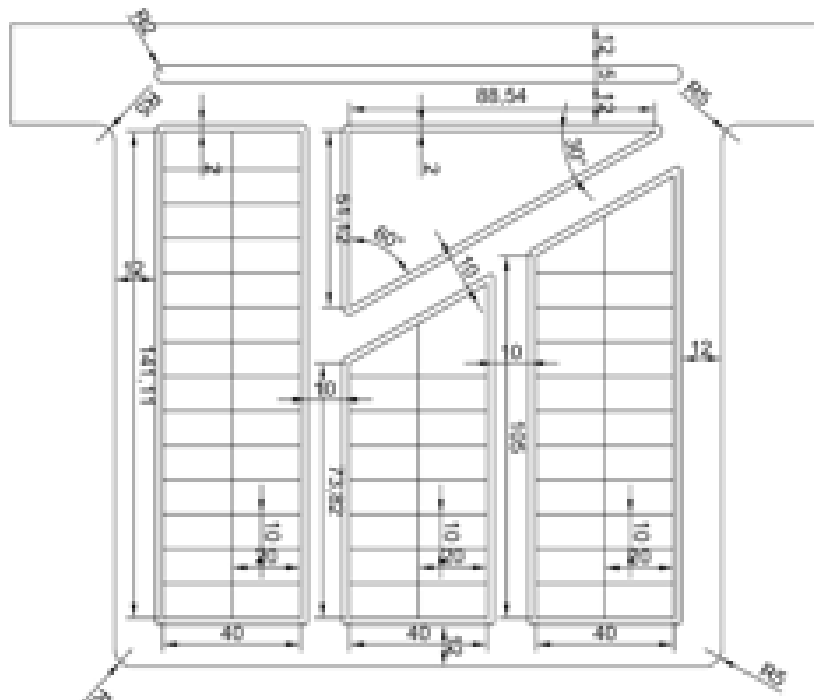
Q3 Figure (2)
(25 Marks)

Engineering drawing (autocad questions)

Q1: Draw following north arrow, use dimensions as shown in the figure (20 Marks)



Q1: Draw following site plan, use dimensions as shown in the figure (80 Marks)



Extra notes:

External Evaluator

This course book is reviewed by (Sadeq Ramazan Younis) as he is lecturer in Mechanical

department in Hawler Institute. He assessed and approved all content of the Engineering Drawing subject as he admitted the course book is almost covered the several terms of Engineering Drawing in both theoretical and practical aspects. The course can be presented in the classes for entire curriculum year.

Sadeq Ramazan Younis
signature
