MODULE DESCRIPTION FORM

نموذج وصف الرسم الهندسي

Module Information معلومات المادة الدراسية					
Module Title	**Engineering Drawing**			**Module Delivery**	
Module Type	Basic			☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	**PE122**				
ECTS Credits	**4**				
SSWL (hr/sem)	**63**				
USWL (hr/sem)	**37**				
SWL (hr/sem)	**100**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	PENG		**College**	Type College Code	
Module Leader	**Oday Ibraheem Abdullah**		**e-mail**	**oday.abdullah@alnaji-uni.edu.iq**	
Module Leader's Acad. Title	**Prof.**		**Module Leader's Qualification**	**PHD**	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date			**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. The aim of this course is to introduce students the basic concepts and the use of engineering drawing and descriptive geometry in the design and manufacturing field. 2. The students acquaint with the basic knowledge and skills in engineering drawings and the capability to read and interpret blue prints for manufacturing. 3. The students can also develop an understanding of 2D and 3D computer aided drafting with the requirements of good engineering drawings and be able to apply them to their work.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Bisect a rectangular line. 2. Divide the line into several equal lines. 3. Draw a line parallel to another straight line. 4. Bisecting an angle into two equal halves. 5. Divide an angle into a number of equal parts. 6. Move angle. 7. Draw a regular pentagon. 8. Draw a pentagon outside a circle. 9. Draw a pentagon inside a given circle. 10. Draw a hexagon outside a circle. 11. Draw a hexagon inside a circle. 12. Draw an octagonal shape.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Part A - Applied Geometry+ (point ,line plane represented) Dimensions & lettering, drawing paper layout, Lines in engineering drawing, Various exercises for training in drawing types of lines, Orthographic Drawing & sketching. Bisect a rectangular line, Divide the line into several equal lines, Draw a line parallel to another straight line, Bisecting an angle into two equal halves, Divide an angle into a number of equal parts, Move angle, Draw a regular pentagon, Draw a pentagon outside a circle, Draw a pentagon inside a given circle, Draw a hexagon outside a circle, Draw a hexagon inside a circle, Draw an octagonal shape. Part B- Draw an arc tangent to two straight lines, draw an arc tangent to an arc and a straight line, draw an arc that touches two other arcs, Steps to draw an oval from knowing the lengths of two perpendicular sides, draw an ellipse using the four-center method.
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	-Lectures -Tutorials. -Homework and Assignments. -Tests and Exams. -Students learn about the different drawing tools, instruments, and software (AutoCAD) used in creating engineering drawings.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	37	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	2.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**100**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	6	10% (10)	1-12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	1.5hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	• Understand the reason behind studying engineering Drawing and its main applications. Introduction, instructions and their use + (*general concepts of Descriptive geometry*)
Week 2	• Dimensions & lettering. • Drawing paper layout. • Lines in engineering drawing +*(Definitions of point, line, plane, types of even angles and types of planes Descriptive geometry*)
Week 3	• Various exercises for training in drawing types of lines. • Orthographic Drawing & sketching. • Bisect a rectangular line. • Divide the line into several equal lines.+ *(Point representation in the binary and triple plane Descriptive geometry*)
Week 4	• Draw a line parallel to another straight line. • Bisecting an angle into two equal halves. • Divide an angle into a number of equal parts.+ *(Special cases of a point representation of descriptive geometry)*

Week 5	• Draw an arc tangent to two straight lines. • Draw an arc tangent to an arc and a straight line.*+(Representation of the rectilinear case and the special representation of the rectilinear descriptive geometry)*
Week 6	• Draw an arc that touches two other arcs. • Steps to draw an oval from knowing the lengths of two perpendicular sides *+ Plane representation (descriptive geometry)*
Week 7	• Draw an ellipse using the four-center method. *+Special cases of level representation (descriptive geometry)*
Week 8	• Multiple exercises applications for engineering operations.
Week 9	• Multiple exercises applications for engineering operations.
Week 10	• Drawing the six projections
Week 11	• Drawing the six projections
Week 12	• Projection in the first corner.*+ AutoCAD program (basics) descriptive engineering*
Week 13	• Projection into the third corner. *AutoCAD program (its role in facilitating the representation of shapes) descriptive engineering*
Week 14	*AutoCAD program (the most important commands used in the program theoretically) descriptive geometry*
Week 15	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Text book (descriptive geometry) Abd-alrasool Alkhaffaf, Engineering Drawing , second Edition,1990.	Yes
Recommended Texts	• Abd-alrasool Alkhaffaf, Engineering Drawing , second Edition,1990. • David A. Madsin, Engineering Drawing and Design, fifth Edition, 2012.	No

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria

Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.