

وزارة التعليم العالي والبحث العلمي
جهاز الإشراف والتقويم العلمي
دائرة ضمان الجودة والاعتماد الأكاديمي

استمارة وصف البرنامج الأكاديمي للكليات والمعاهد

للعام الدراسي ٢٠٢٣-٢٠٢٤

الجامعة : تكريت

الكلية/ المعهد: كلية هندسة العمليات النفطية

القسم العلمي : هندسة سيطرة المنظومات النفطية

تاريخ ملء الملف : ٢٠٢٣/١١/٢٥

التوقيع :

اسم المعاون العلمي : أ.م.د. عمر ياسين ضايح

التاريخ : ٢٠٢٣/١٢/٣

التوقيع :

اسم رئيس القسم : م. ياسين خضر ياسين

التاريخ : ٢٠٢٣/١١/٢٨

دقق الملف من قبل

شعبة ضمان الجودة والأداء الجامعي

اسم مدير شعبة ضمان الجودة والأداء الجامعي: م.م. أيوب إبراهيم محمد

التاريخ : ٢٠٢٣/١١/٢٨

التوقيع :

مصادقة السيد العميد

أ.م.د. غسان حمد عبد الله

٢٠٢٣/١٢/٣

التوقيع :



Ministry of Higher Education and Scientific Research – Iraq
Tikrit University
College of Petroleum Processes Engineering
Department of Petroleum Control Systems Engineering



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Engineering Drawing		Module Delivery
Module Type	BASIC		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	PCS115		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	
Administering Department	PCS	College	PPE
Module Leader	Yasin Kh. Yasin	e-mail	Yaseen.k@tu.edu.iq
Module Leader's Acad. Title	Asst. Lecturer	Module Leader's Qualification	MSc
Module Tutor	N/A	e-mail	N/A
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	<ol style="list-style-type: none"> 1. To emphasize the importance of drawing as a language for engineers 2. To develop skills in engineering drawing and drafting. 3. To develop skills in interpretation of engineering drawings 4. To develop skills in computer aided drafting and design.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>At the end of this course, students should be able to:</p> <ol style="list-style-type: none"> 1. Translate physical objects into paper and computer drawings and models. 2. Produce orthographic and three dimensional drawings of engineering components. 3. Use freehand, technical instruments and computer techniques for engineering drawing. 4. Apply the skills learnt in a modern, technology-intensive industry. Apply latest developments and current practices in all areas of graphic communication, CAD, functional drafting, material representation, shop processes, geometric tolerancing, electronic drafting and metrication. 5. Understand the expression of technical ideas or ideas of a practical nature. Interpret drawings that describe an objects physical shape completely and accurately, communicating engineering concepts to manufacturing. 6. Translate the ideas, rough sketches, specifications and calculations of engineers and designers into working plans that are used in making a product. Use both computer aided drafting and design (CADD) systems or manual drafting techniques as well as Engineering handbooks, tables and calculators to assist in solving technical problems. 7. Use preliminary information provided by engineers to prepare design layouts and make drawings of any part shown on the layout, giving dimensions, material, and any other information necessary to make the detailed drawing clear and complete.
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p><u>Part A – Introduction to engineering drawing (4 Hours)</u></p> <ul style="list-style-type: none"> • Drafting as a language of industry • Application of drawing in various fields • Engineering drawing in the production process • Drawing equipment including computer aided tools <p><u>Part B – Basic Drafting Skills (6 Hours)</u></p> <ul style="list-style-type: none"> • Standard drawing sizes and filing • Drawing format • Lines, circles and arc drawing • Freehand sketching • Computer aided drafting <p><u>Part C – Pictorial Drawings (8 Hours)</u></p> <ul style="list-style-type: none"> • Isometric Projection • Oblique Projection

	<ul style="list-style-type: none"> • Perspective projection • Computer aided drafting <p><u>Part D – Theory of shape descriptions(6 Hours)</u></p> <ul style="list-style-type: none"> • Orthographic Representations • One-, two- and three view drawings • Representation of common features • Computer aided drafting techniques <p><u>Part E – Dimensioning principles(6 Hours)</u></p> <ul style="list-style-type: none"> • Basic dimensioning • Dimensioning common features • Limits and tolerances • Fits and allowances • Surface texture • Computer aided drafting <p><u>Part F – Sections, auxiliary views and revolutions (8 hours)</u></p> <ul style="list-style-type: none"> • Sectional views • Primary and secondary auxiliary views • Revolutions • Computer aided drafting <p><u>Part G – Surface development and intersections (4 hours)</u></p> <ul style="list-style-type: none"> • Sheet metal development • The packaging industry • Development of flat, cylindrical, conical, spherical surfaces etc .
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>The main strategies that will be adopted in delivering this module are summarized as follows:</p> <ol style="list-style-type: none"> 1- Encourage the student's participation in the lecture explanation and solving exercises by rewarding those who answer correctly with bonus marks. 2- Encourage the students to pay high attention to the lecture explanation provided by the lecturer by making intentional simple mistakes during the lecture and reward those who find those mistakes and correct them quickly with bonus marks. 3- Acquiring feedback from students by stopping the explanation every 15 minutes to ask if there is any question or obscure part of the explanation. Then, ask a sample of the students to ensure that the explanation is understood and well received. 4- Instilling the spirit of competition among students by giving them extra assignments and asking them to complete those assignments in a given time. Those who complete the assignments before the deadline will be discussed to ensure there is no cheating. If no cheating is spotted, the students will be rewarded handsomely with extra marks.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	45	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	80	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5.7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Excises in drawing hall	14	20% (20)	Continuous	All
	Home Work	7	10% (10)	Continuous	All
	Midterm Exam	2hr	20% (20)	7	LO # 1,2,6 and 7
Summative assessment	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to engineering drawing
Week 2	Primary elements of drawings
Week 3	Geometrical Construction
Week 4	Dimensioning
Week 5	Tangency
Week 6	Loci applications
Week 7	Tangency and loci applications
Week 8,9	Introduction; Engineering Graphics as a language, Board Drawing vs. Computer- Aided Drawing, BIM- Revit, Introduction to AutoCAD Mechanical Environment.
Week 10	Layer creation in AutoCAD, Geometrical Constructions, View drawing in AutoCAD and

	sketching in Inventor, Drawing/Sketching and Editing Commands,
Week 11	Creating solid model of structures in Inventor, assembly modelling
Week 12,13	Exercises on Solid Model creation, Inspection tools of AutoCAD and Inventor Environments
Week 14,15	Building Information Modelling in Autodesk Revit, Architectural drawings, walls, doors, windows, lightening fixtures, roofs, floors, view creation in Revit, Animated 3D walkthrough of a model, creating 3D view camera perspective
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1.The fundamentals of engineering drawing /Thomas E. F. & Charles J.	Yes (Electronic Copy)
Recommended Texts	الرسم الهندسي / عبد الرسول الخفاف	No (Electronic Copy)
Websites	https://www.amazon.com/Engineering-Drawing-2nd-M-B-Shah/dp/8131710564	

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 is 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.