



Northern Technical University
College of Oil & Gas Techniques
Engineering/Kirkuk
Department of Renewable energy Techniques
Engineering



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Engineering Drawing		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	COGTEK 101		
ECTS Credits	8		
SWL (hr/sem)	200		
Module Level	1	Semester of Delivery	
Administration Department	RETE	College	College of Oil & Gas Techniques Engineering/Kirkuk
Module Leader	Naseer Tawfeeq Alwan	e-mail	naseer.t.alwan@ntu.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	Name (if available)	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	01/06/2023	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

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 1. Introducing the student to the importance of engineering drawing and its relationship to other engineering subjects. 2. Develop the student's mental abilities in drawing simple and complex shapes. 3. Expanding the horizons of the student's imagination of geometric shapes and identifying their components, parts, mechanics, and their working principle
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. To familiarize the student with the importance of engineering drawing 2. To teach the student how to imagine geometric shapes. 3. To distinguish the mechanical components and parts and their working principle.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p><u>Part A - Principles of drawing</u> To develop the student's mental ability to draw simple and complex shapes. The student learns how to develop a strategy and sequence for drawing and assembling and deconstructing geometric shapes.</p> <p><u>Part B - Orthographic Projections</u> The student learns to draw geometrical projections and set geometric dimensions.</p> <p><u>Part C - Cutting theory.</u> To develop the student's mental ability to draw simple and complex shapes Cutting theory- Shapes and lines of cuts by type of material.</p> <p><u>Part D - Drawing stereoscopic shapes using 3D graphics Instructions.</u> Prepare to use instructions in drawing three-dimensional geometric shapes and modifications of three-dimensional graphics.</p>

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p>Strategies</p>	<p>Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعاً

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	4.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	137	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	9.13
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	10% (10)	2, 7 and 13	LO #1, #5 and #6
	Assignments	5	10% (10)	3, 5, 8, 10 and 14	LO # 3, 4, 6, 7, and 10
	Projects / Lab. Report	10	20% (20)	Continuous	All
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO #1 - #4
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

	Material Covered
Week 1	Principles of drawing
Week 2	Title Block
Week 3	drawing geometric shapes, the basic
Week 4	Graphic Adjustments - Computer Graphics Aids
Week 5	Geometric line- Types of engineering drawing lines- Geometric operations- Dimensional placement.
Week 6	Orthographic Projections



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Week 7	Mid-term Exam
Week 8	Principle of First Angle Projection
Week 9	Principle of Third Angle Projection
Week 10	The conclusion of a third projection from Two known locations.
Week 11	Cutting theory- Shapes and lines of cuts by type of material.
Week 12	Drawing of projections cut from a specific site
Week 13	Drawing of partially cut elevations. Drawing of semi-cut elevations.
Week 14	3D Coordinates Drawing Using AutoCAD
Week 15	3D Solid Primitive Drawing Using AutoCAD
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الأسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to Principles of drawing Using AutoCAD
Week 2	Lab 2: drawing Title Block Using AutoCAD
Week 3	Lab 3: Drawing Commands with Exercise
Week 4	Lab 4: Drawing Aids Commands with Exercise
Week 5	Lab 5: Introduction to Edit Commands with Exercise
Week 6	Lab 6: Dimensions , Layers, Linetypes, Colors with Exercise
Week 7	Lab7: Orthographic Projections Using AutoCAD with Exercise
Week 8	Lab 8: First angle projection Using AutoCAD with Exercise
Week 9	Lab 9: Third angle projection Using AutoCAD with Exercise
Week 10	Lab 10: Construct the view, from the two given views Using AutoCAD with Exercise
Week 11	Lab11: Principles of sectioning Using AutoCAD with Exercise
Week 12	Lab 12: Full Section Drawing Using AutoCAD with Exercise
Week 13	Lab 13: Half Section Drawing Using AutoCAD with Exercise
Week14	Lab 14: 3D Coordinates Drawing Using AutoCAD with Exercise
Week 15	Lab 15: 3D Solid Primitive Drawing Using AutoCAD with Exercise
Week16	Preparatory week before the final Exam



Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Engineering Drawing Using AutoCAD	Yes
Recommended Texts	Ashleigh Fuller, Antonio Ramirez, Douglas Smith - Technical Drawing with AutoCAD 2017-SDC Publications (2017)	No
Websites	Basic Mechanical Drawing website tutorials	

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.