

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Computer-Aided Drawing II		Module Delivery
Module Type	FE		<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	CIV12103		
ECTS Credits	4.00		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Makarim Noori Ali	e-mail	makarim.noori@muc.edu.iq
Module Leader's Acad. Title	Lecturer assistant	Module Leader's Qualification	MS.c..
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	0110/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CREQ 110	Semester	one
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Objectives أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 1. To develop problem-solving skills and an understanding of the basics of engineering drawings. 2. Develop the student's ability to deal with engineering drawing programs. 3. Enhancing the student's abilities to imagine geometric shapes and drawings and combine them with problems. 4. Develop students' abilities to imagine engineering problems and the possibility of representing and simulating them in two- and three-dimensional drawing formats.
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none"> 1. To have expertise in the software. 2. Learning AutoCAD to create precise and accurate designs of infrastructure projects such as bridges, buildings, and roads, allowing them to plan and execute cost-effective solutions. 3. A vast array of design tools and features help civil engineers accurately and efficiently produce detailed drawings. With these tools, engineers can quickly identify flaws and problems. 4. AutoCAD provides civil engineers with a common platform to collaborate with other professionals such as architects, contractors, and project managers. This coordination is crucial for any large-scale civil engineering project. 5. Learning 3D modeling capabilities makes it possible for civil engineers to create realistic representations of their designs. This allows them to visualize how the structures will look and function in real life, enabling them to make necessary modifications before construction begins.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p><u>Part A – Drawings Fundamentals</u></p> <p>Sketching basics: This includes the use of basic geometric shapes and lines, understanding scale and proportion, and freehand sketching techniques [4 hrs]</p> <p>orthographic projection: This involves creating two-dimensional drawings that depict the three-dimensional object from different views using techniques like first angle projection and third angle projection [6 hrs]</p> <p>Dimensioning and tolerancing: This is the process of specifying the exact size, shape, and location of features on a part or assembly, and the allowable variation that is acceptable during manufacture. [3 hrs]</p> <p>Section views: This involves creating drawings that show an internal part feature that is otherwise hidden from the external view. [3 hrs]</p> <p>Revision problem classes [4 hrs]</p> <p><u>Part B – computer-aided design (CAD) software Learning (Fundamentals</u>)</p>

	<p>Drawing Area: The drawing area is the workspace where create the designs. On an area represented by a rectangular grid with coordinate values. [1hrs]</p> <p>Identifying the command Line: and how to use a text-based interface where the student can enter commands to perform various tasks in AutoCAD. [4 hrs]</p> <p>Layers are like transparent sheets that students can draw on. They help organize the drawing by separating different elements of the design. [6 hrs].</p> <p>Drawing Tools: AutoCAD has a wide range of drawing tools for the student should learn, including lines, circles, arcs, polygons, and ellipses. [6 hr]</p> <p>Modify Tools: These tools allow to edit and modifying the drawings. By moving, rotating, scaling, stretching, mirroring, and trimming objects using the modified tools.[10].</p> <p>Dimensioning Tools: the student will recognize the tools that allow adding dimensions to the drawing. Such as adding linear dimensions, angular dimensions, and radial dimensions. [4 hr]</p> <p>Text Tools: Text tools allow to students to add annotations and labels to their drawings. By adding single-line text, multiline text, and text with special characters.[4 hr]</p> <p>Blocks: Blocks are reusable objects that maintain the students to create and insert into the drawing. They can be made up of multiple objects and can scale and rotate them as a single unit.[4 hr]</p> <p>Viewport: Students can make A viewport window into their drawing that they can use to display different parts of their design at different scales.[1 hr]</p>
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>The primary approach for teaching this module would be to promote active involvement of students in practice sessions, while simultaneously enhancing their ability to think critically. This would entail conducting classes, interactive tutorials, and incorporating straightforward exercises that involve fascinating drawing submittals to engage students.</p>

Student Workload (SWL) الحمل الدراسي للطالب محسوب ل 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	3
Total SWL (h/sem)	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 #5,
	Assignments	10	10% (10)	Continuous	LO #3, #4 and #5
	Projects / Lab.	10	10% (10)	Continuous	All
	Report	1	10% (10)	13	All
Summative assessment	Midterm Exam	2hr	10% (10)	7	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction – why we need to Learn Engineering Drawing
Week 2	Sketching basics
Week 3	orthographic projection
Week 4	Dimensioning and tolerancing
Week 5	Section views
Week 6	Introduction to AutoCAD
Week 7	Drawing Area
Week 8	Identifying the command Line
Week 9	Layers
Week 10	Drawing Tools
Week 11	Modify Tools
Week 12	Dimensioning Tools
Week 13	Text Tools
Week 14	Blocks
Week 15	Viewport
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المناهج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Introduction to installing AutoCAD
Week 2	Lab 2: Preparation Drawing Windows
Week 3	Lab 3 Applications Drawing Tools
Week 4	Lab 4: Applications Modifying Tools
Week 5	Lab 5: Application for Speed Submittals
Week 6	Lab 6: Preparation of full submittals
Week 7	Lab 7: Solution of complex Drawings

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	كتاب الرسم الهندسي لعبد الرسول الخفاف	Yes
Recommended Texts	Learn about AutoCAD: An Introduction to AutoCAD for Beginners	No
Websites	https://images-na.ssl-images-amazon.com/images/I/C1BxaOC0-IS.pdf	

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.