Course Description Form

1. Course Name:	
Engineering Drawing	
2. Course Code:	
CIV046	
3. Semester / Year:	
Semester SECOND	
4. Description Preparation Date:	
1 / 2 / 2026	
5. Available Attendance Forms:	
Students that are interested in learning	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours per week / number of units (3 units)	
7. Course administrator's name (mention all, if more than one name)	
Dr WALEED KHALEEL NAIL waleed.khaleel@uowa.edu.iq	
8. Course Objectives	
Course Objectives	This course discusses the fundamental concepts of engineering graphics. It gives also an introduction to computer graphics using CAD software. The following topics are aimed to covered: 1- Drawing conventions such as standards, line types and dimensioning. 2- Drawing of inclined and curved surfaces. 3- Deducting the orthographic views from a pictorial. 4- Drawing full and half sections; deducting an orthographic view from given two views. 5- Pictorial sketching (isometric and oblique).
9. Teaching and Learning Strategies	
Strategy	1. Delivering physical lectures and discussion in the classroom to convey the scientific material to the student. 2. Directing questions and inquiries characterized by depth and accuracy. 3. Developing self-education by deducing solutions to the problems presented. 4. Solve class examples and give extracurricular assignments. 5. Field exercises within the university to apply theoretical exercises. 6. Performing specific tests for the material at the specified times. 7. Review the sources and books referred to by the subject teacher.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	3	Recognizing the value of engineering drawings as a language of communication.	Introduction and Instruments	Theoretically	1. Short exams. 2. Semester exams. 3. Extracurricular assignments
Week 2	3	Writing in Kufic script	Kufic letters	Theoretical + Applied	
Week 3	3	Deduce the nature of engineering drawings and the relationships between 2D and 3D drawings.	Principles of putting dimensions: Basic dimensions, the true dimensions, extension lines, lines of dimension	Theoretical + Applied	
Week 4 to Week 6	3	Understanding engineering processes	Geometric construction: Draw an arc touches two intersecting lines, draw arc touches two brackets, draw an arc touches a straight and passes a point, draw an ellipse, draw a hexagon, draw the quinary, draw shape with eight faces, sketching inverted arc, identify points of contact	Theoretical + Applied	
Week 7 to 9	3	Understand and infer orthographic object projections.	Projections: The theory of projection, the projection lines, oblique projection level, the vertical projection system, multiple projections, conclusion the third projected, draw curves and oblique surfaces on the projections	Theoretical + Applied	
Week 10 to 11	3	Visualize a wide range of organisms and draw diverse viewpoints.	Isometric: Projection by the first even angles, projection by the third even angles, draw circles on dimensional figure, draw oblique surfaces on dimensional	Theoretical + Applied	

			figure, Isometric drawing and its application		
Week 12 to 13	3	Comprehend and deduce section views	Sections: Introduction, types of sections and symmetrical sections, cutting lines, double sections, elevations sectioned, shapes sectioned	Theoretical + Applied	
Week 14 to 15	3	Producing 3D drawings using CAD software.	CAD Drawing: Introduction to AutoCAD software, control page in AutoCAD software, types of coordinate, the command line and applications, the modified commands, the help orders in drawing, the commands circle, rectangle, offset, the command layers array, scale and aligned, the command arc with all options, the command polyline with options , types of dimensions with application examples, the command text and its types, preparing and printing options with examples.	Theoretical + Applied	

11. Course Evaluation

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Quizzes	2	10% (10)	5 , 10	LO #3, 4, 5 and 6
Assignments	5	5% (5)	14	LO #3, 4,5,6 and 7
Projects / Lab.	15	15% (15)	Continuous	All
Online Assignments	1	10% (10)	Continuous	All
Midterm Exam	2hr	20 % (20)	7	LO #1 - 5
Final Exam	3hr	40% (40)	16	All
Total assessment		100% (100 Marks)		

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Engineering drawing by Abdul Rasul Al-Khafaf

Recommended books and references (scientific journals, reports…)	Interpreting Engineering Drawings, Jensen, C.H. and Helsel, G.D., 7th ed., Thomson Delmar Learning, 2007

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