

Course Description Form

1. Course Name:	Industrial Drawing
2. Course Code:	INDR245
3. Semester / Year:	First semester (autumn)/2024-2025
4. Description Preparation Date:	1/2/2025
5. Available Attendance Forms:	Combined (Attendance + distance education)
6. Number of Credit Hours (Total) / Number of Units (Total)	45 practical hours / 1.5 units
7. Course administrator's name (mention all, if more than one name)	Name: Hussain Abed Hammood Email: hu_hamood@uomosul.edu.iq

8. Course Objectives

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- Graduating agricultural engineers and researchers to serve the agricultural sector.
- Scientific cooperation with agricultural directorates and other parties with the aim of improving agricultural production in quantity and quality.
- Investing in modern technology in the field of Industrial Drawing in order to develop education, training and research programmed.
- Qualifying students to work according to the modern production system that relies on computers and information technology to operate.
- Preparing an advanced technical staff in the field of engineering design and drawing to meet the needs of society.

9. Teaching and Learning Strategies

theoretical:

- Interactive lecture.
- Brainstorming.
- Dialogue and discussion.
- Assigning tasks and reports.

practical:

- Assignment to draw a geometric shape in class within a specific period to reveal the student's skill ability.
- Assignment to draw geometric shapes at home with different degrees of difficulty to reveal the change in the student's skill ability.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3 Practical	a1: The student knows the importance of dimensions and them rules	An overview of industrial drawing and the rules for placing dimensions on objects in isometric perspective.	Practical lectures	Class and home assignments



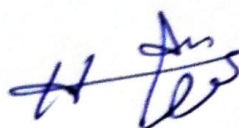
2	3 Practical	b1: The student draws the geometric dimensions	Dimensions on objects in geometric (isometric) perspective and the three projections	Practical lectures	Class and home assignments
3	3 Practical	b2: The student draws geometric sections in solids	Geometric sections in the isometric geometric perspective and setting dimensions on them	Practical lectures	Class and home assignments
4	3 Practical	b3: The student draws the sections in the projections	Sections in the projections and setting dimensions on them	Practical lectures	Class and home assignments
5	3 Practical	a2: Identify the symbols used to draw pipes	Pipes and their systems	Practical lectures	Class and home assignments
6	3 Practical	b4: The student draws the pipes using them geometric symbols	Drawing pipes using their geometric symbols	Practical lectures	Class and home assignments
7	3 Practical	b5: Test and determine the skill levels acquired by each student	First monthly exam	Engineering drawings that include the previous topics	Class test
8	3 Practical	a3: Identify joining metals using welding	Welding (join metals using welding)	Practical lectures	Class and home assignments
9	3 Practical	b6: The student draws the types of welding based on the symbols used to draw them	Symbols used in welding drawing	Practical lectures	Class and home assignments
10	3 Practical	a4: Identify the types of rivets and their uses in the agricultural field	rivets (join metals using rivets)	Practical lectures	Class and home assignments
11	3 Practical	a5: Identify the types of screws and their uses	The screws (join metals using screws)	Practical lectures	Class and home assignments
12	3 Practical	b7: The student draws screws and rivets using engineering symbols	Training on drawing rivets and screws	Practical lectures	Class and home assignments
13	3 Practical	a6: Identify electrical circuits and the symbols used in them	Electrical circuits	Practical lectures	Class and home assignments
14	3 Practical	b8: The student draws the symbols used in electrical circuits	Training on drawing electrical circuits	Practical lectures	Class and home assignments
15	3 Practical	b9: Test and determine the skill levels acquired by each student	Second monthly exam	Engineering drawings that include the previous topics	Class test

11. Course Evaluation


Seq.	Evaluating style	date	marks	Relative weight
1	Home works	Practical: week 1-14	10	10%
2	Monthly test 1	Week:7	10	10%
3	Monthly test 2	Week:15	10	10%
4	Class assignments	Week:1-14	10	10%
5	practical test	The week of the practical exam	20	20%
6	Final practical test	The week of the Practical exam	40	40%
	the total		100	100%

12. Learning and Teaching Resources


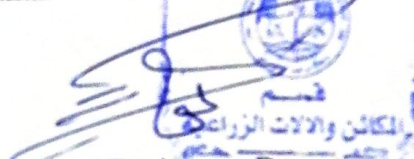
Required textbooks (curricular books, if any)	
Main references (sources)	Engineering drawing, Abdul Rasul Al Khafaf 1990
Recommended books and references (scientific journals, reports...)	Textbook of Engineering Drawing k. Venkata Reddy, 2008
Electronic References, Websites	https://www.youtube.com



Lecturer:
Husain Abed Hamood



Head of the Scientific Committee:
Professor Dr. Adil Ahmed Abdullah



Head of the Agricultural Machinery and Equipment Department:
Assistant Professor Nofal Issa Mohamed