هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission
اعتماد
NCAAA
2024
TP-153

Course Specification

(Bachelor)

Course Title:	**Engineering Drawing**
Course Code:	**COE2101**
Program:	**Bachelor of Construction Engineering**
Department:	**Civil and Environmental Engineering Department**
College:	**College of Engineering and Computing in Al-Qunfudhah**
Institution:	**UMM Al-Qura University**
Version:	**4**
Last Revision Date:	**March 2025**

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (.....2...)					
2. Course type					
A.	☐University	☒ College	☐Department	☐Track	Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (...3/2.....)					
4. Course General Description:					
Introduction to drawing basics, types of lines, 2D and 3D manual drawings, isometric and pictorial drawings, orthographic views, sections and free hand sketch skills. Using AutoCAD software for engineering drawing.					
5. Pre-requirements for this course (if any)**:**					
Passed first year					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					
By the completion of the course, the student should be able to: **7.1 list the different types of engineering drawings and the standard engineering drawing formats** **7.2 interpret the symbols in the drawings** **7.3 communicate dimensions properly and handle Computer based information.** **7.4 identify and interpret the line conventions used on engineering drawings** **7.5 define common terms, symbols, legends, notes and abbreviations used on engineering drawings** **7.6 form an orthographic drawing Engineering**					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100
2	E-learning		
3	Hybrid		

No	Mode of Instruction	Contact Hours	Percentage
	• Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	0
2.	**Laboratory/Studio**	60
3.	**Field**	0
4.	**Tutorial**	0
5.	**Others (specify)**	0
Total		**60**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	list the different types of engineering drawings and the standard engineering drawing formats	**K1**	Interactive learning Self-directed learning	Midterm, Final
1.2	define common terms, symbols, legends, notes and abbreviations used on engineering drawings	**K2**	Interactive learning Self-directed learning	Midterm, Final
...				
2.0	**Skills**			
2.1	identify and interpret the line conventions used on engineering drawings	**S1**	Interactive learning Self-directed learning	Assignments, Quiz, Lab, Midterm and

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
				Final exams
2.2	Interpret the symbols in the drawings	**S2**	Interactive learning Self-directed learning	Assignments, Quiz, Lab, Midterm and Final exams
2.3	Communicate dimensions properly and handle Computer based information	**S1**	Interactive learning Self-directed learning	Assignments, Quiz, Lab, Midterm and Final exams
2.4	form an orthographic drawing Engineering	**S1**	Interactive learning Self-directed learning	Assignments, Quiz, Lab, Midterm and Final exams
...				
3.0	**Values, autonomy, and responsibility**			
3.1				
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Drawing equipment (T-Square, Set of Squares, protractor, compass, Board clips, ruler,)	**2**
2.	Drawing principles (line types, sheet sizes, Title blocks, Drawings scales	**2**
3.	Geometric construction (Geometric construction on lines, arcs and scales	**4**
4.	First angle and third angle projections	**4**
5.	Pictorial projection (pictorial presentation of point, line and surface, and solids.	**4**
6	Midterm Exam	**4**
7.	Multi-views projection (projection – views of point, views of solids-layout of views)	**2**
8.	Isometric and oblique sketching of solids	**2**

9.	Extracting the missing view from a set of given views	4
10.	Sectioning and section view (sections and types- full, half and partial sections- special sections- hatching)	2
11.	Lab (AutoCAD applications)	30
Total		60

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignments	Each week	10%
2.	Quiz	3,9,12	10%
3.	Mid term exam.	7	20%
4.	Lab exam.	15	20%
5.	Final exam.	16 or 17	40%
...			

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	• Scott Onstott, "AutoCAD 2018 and AutoCAD LT 2018 Essentials", Sybex Inc.,U.S., August 2017. • Lakhwinder Pal Singh, Harwinder Singh, "Engineering Drawing, Principles and Applications". Cambridge University Press; 1st edition (June 2021)
Supportive References	Thomas E. French, McGraw "Principles of Engineering Drawing". Hill Higher Education,"14th ed., 2003.
Electronic Materials	• Electronic materials of the required reference and its PowerPoints slides • Umm Al-Qura LMS related contents
Other Learning Materials	Computer software and internet.

2. Required Facilities and equipment

Items	Resources

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture rooms with a capacity of at least 20 students and fitted with multimedia projector and a computer.
Technology equipment (projector, smart board, software)	Data show, Smart Board
Other equipment (depending on the nature of the specialty)	**None**

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect: Analyzing the results of the following surveys Course Evaluation Survey(CES), Program Evaluation Survey (PES), Student Experience Survey (SES)
Effectiveness of Students assessment	Examination Committee	Direct: Peer review of examination papers and review or double check a minimum of three or 10% of answer papers.
Quality of learning resources	Faculty	Direct: Course Report
The extent to which CLOs have been achieved	Faculty	Direct and Indirect: Course report
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Civil and Environmental Engineering Department Council in Al-Qunfudah**
REFERENCE NO.	**The fifteenth session of the academic year 1446**
DATE	**01/05/2025**