Course Description

1. Course Name :ENGINEERING DRAWING

2. Course Code: ENG014

3. Semester / Year: Second Semester / 2026

4. Date of preparation of this description :14/3/2026

5. Available Attendance Modes: Bologna Process

6. Total Study Hours / Total Units: SSWL 125 + USSWL -; ECTS 5

7. Course Coordinator Name: (Ali Awad Diab) (Nidaa Habeeb Ibrahim)

8. **Course Objectives**

The module aims to provide students with a solid understanding of the fundamental concepts and techniques of linear algebra. This includes the study of linear equations. Students will also learn how to apply these concepts to solve real-world problems in various fields such as engineering, physics, economics, and computer science. By the end of the module, students should be able to manipulate and analyze mathematical models using linear algebraic tools and communicate their findings effectively.	**Aims**

9. Teaching and Learning Strategy

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 types of simple experiments involving some sampling activities that are interesting to the students.	Strategy

10. Course Structure

Assessment Method	Learning Method	Topic	Intended Learning Outcomes	Hours	Week
امتحانات صفية، واجبات بيتية	attendance	Engineering Drawing	Introduction and Instruments	3 3	1 2

Course Description

Class Work exams, Home Work			Kufic letters1.		
			Principles of putting dimensions: Basic dimensions, the true dimensions, extension lines, lines of dimension.	3 3	3 4 to 6
			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.	3 3	4 to 6 4 to 6
			ProjectionsThe 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.	3 3 3 3	7 to 9 7 to 9 7 to 9
			Isometric Projection by the first even angles, projection by the third even angles, draw circles on dimensional figure, draw oblique surfaces on dimensional figure, Isometric drawing and its application.	3 3 3 3	7 to 9 10 to 11 10 to 11 10 to 11

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			Sections: Introduction, types of sections and symmetrical sections, cutting lines, doublesections, elevations sectioned, shapes sectioned.	3	12 & 14
			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.		15 & 14
Examination Questions			final Exam		

11. Course Evaluation

Midterm Exam = 10%

Quizzes = 10%

Course Description

In-class Assignments = 10% **Assignments = 10%** **Attendance = 10%** **Final Exam = 50**%

12. Learning and Teaching Resources

-	Required Textbooks (Methodology, if any)
1. New Headway Plus Intermediate Student Book, Liz and Hohn Soars, 2006, Oxford University Press. 2. Writing in Paragraphs, Dorothy E Zemach and Calos Islam, 2010, Macmillan.	Main References (Sources)
-	Supportive Books and References (Scientific Journals, Reports, ...)
• News - Biomedical Engineering at the University of Michigan (umich.edu) • Websites TED-Ed – YouTube • BBC Learning English - 6 Minute English	Electronic References, Internet Sites