جامعة الإسراء
ISRA UNIVERSITY

Course Syllabus

According to JORDAN National Qualification Framework (JNQF)

Course Name: Engineering Drawing

Course Number: 4031201/403103

General Course Information:

Course title	**Engineering Drawing**
Course number	**4031201 /403103**
Credit hours	**3 credit hours**
Education type	**[Face-to-Face]**
Prerequisites/corequisites	**-**
Academic Program	**Civil engineering**
Program code	**03**
Faculty	**Engineering**
Department	**Civil engineering**
Level of course	**2nd year**
Academic year /semester	**First Semester 2021-2022**
Awarded qualification	**B.Sc**
Other department(s) involved in teaching the course	**-**
Language of instruction	**English**
Date of production/revision	**2021/2022**

Course Coordinator:

Coordinator's name	**Dr. Wissam Alkhadour**
Office No	**4207**
Office Phone extension number	
Office Hours	**Sun, Tue, [12:00-1:30] Thur. [11:00-1:00] Wed.[10:00-11:00]**
Email	**Wesam.alkhadour@iu.edu.jo**

Other Instructors:

Instructor name	**Eng. Sajida Al-ghnaneem**
Office No	
Office Phone extension number	
Office Hours	
Email	

Course Description *(English/Arabic)*:

English	This course introduces the student to computer-aided design/drafting with AutoCAD. The AutoCAD topics covered in this course include an introduction to AutoCAD features, starting and setting up drawings, point coordinate entry methods, creation of basic 2D drawing objects, layer management, linetypes and colors, selection sets, object snap modes, AutoSnap, polar tracking, object snap tracking, construction techniques, creating and managing text objects, editing geometry, display control, and drawing inquiry methods.
Arabic	أدوات الرسم الهندسي واستعمالاتها، كتابة الحروف والأرقام، رسم المماسات والعممية الهندسية، الإسقاطات الهندسية، الإسقاط المتعامد، الإسقاط المناظر، المقاطع، مقدمة في الهندسة الوصفية، الرسم المجسم، تطبيقات هندسية، الرسم بواسطة الحاسوب

Textbook: *Author(s), Title, Publisher, Edition, Year, Book website.*

Engineering Graphic with AutoCAD 2017, Bethume D. James; Pearson, Prentice Hall , Hew Jersey
https://www.pearson.com/uk/educators/higher-education-educators.html

References: *Author(s), Title, Publisher, Edition, Year, Book website.*

1. Instructor class notes and the lab exercise sheets. All class related materials will be available on E-learning.

Course Educational Objectives (CEOs):

1.	**Have a working knowledge and understanding of Computer Aided Drafting applications.**
2.	**Ability to draw orthographic projections and sections.**
3.	**Discover and develop their talents in the fields of Technical Drawing**

Intended Learning Outcomes (ILO's):

	Subject Intended learning outcomes (ILOs) describe what students are expected to know and be able to do at the end of the course. These outcomes are related to the knowledge, skill and competence that students acquire:	**Relationship to CEOs**	**Contribution to PLOs**	**Bloom Taxonomy Levels***	**Descriptors****
A	**Knowledge and Understanding:**				
A1	**The students will be able to explain and demonstrate dimensioning, orthographic projection concepts and techniques**	**1**	**7**	**1**	**K,C**
A2					
A3					
B	**Intellectual skills:**				
B1					
B2					
B3					
C	**Subject specific skills:**				
C1	**The students will be able use basic concepts of engineering drawing to develop engineering drawing.**	**3**	**7**	**3**	**K,C**
C2	**The students will be able to practice drawings through editing and plotting techniques.**	**1**	**7**	**3**	**K,C**
C3	**The students will be able to Produce 2D Orthographic Projections.**	**2**	**1**	**6**	**K**
C4					
D	**Transferable skills:**				
D1					

1. D2					
2. D3					

***Bloom Taxonomy Levels**

Level #	1	2	3	4	5	6
Level Name	Knowledge	Comprehension	Application	Analysis	Evaluation	Synthesis

**** Descriptor (National Qualification Framework Descriptors): K : Knowledge, S: Skill, C: Competency.**

Program Learning Outcome (PLOs):

Program Learning Outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviours that students acquire as they progress through the program. A graduate of the (CE) program will demonstrate:		Descriptors**		
		K	S	C
1.	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	K		
2.	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.			C
3.	An ability to communicate effectively with a range of audiences.		S	
4.	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.			C
5.	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.		S	
6.	An ability to develop and conduct appropriate experimentation, analyse and interpret data, and use engineering judgment to draw conclusions.		S	
7.	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	K		C

**** Descriptors according to the national qualifications framework (K: knowledge, S: skill, C: Competency)**

Weekly Schedule *(please choose the type of teaching)*

✓ **Face to Face**

□ **Hybrid** *(**2 Lectures** Face – To - Face **+1 Lecture** Asynchronous)*

□ **Hybrid (***1 **Lectures** Face – To - Face **+1 Lecture** Asynchronous)*

□ **Online** *(**2 Lectures** Synchronous **+1 lecture Asynchronous**)*

Week	First Hour (……..)	Second Hour (……..)	Third Hour (……..)	Ach. ILOs	Ach. PLOs	Descriptors*

1	**Course syllabus, Introduction to Engineering Drawing**	**Introduction to Engineering Drawing.**	**Introduction to Engineering Drawing.**	**A1**	**PLO7**	K,C
2	**Dimensioning**	**Dimensioning**	**Dimensioning.**	**A1**	**PLO7**	K,C
3	**basic concepts of AutoCAD tools**	**basic concepts of AutoCAD tools**	**basic concepts of AutoCAD tools**	**C1**	**PLO7**	K,C
4	**Introduction to AutoCAD features, starting and setting up drawings, working with drawings, drawing lines, erasing objects.**	**Introduction to AutoCAD features, starting and setting up drawings, working with drawings, drawing lines, erasing objects.**	**Introduction to AutoCAD features, starting and setting up drawings, working with drawings, drawing lines, erasing objects.**	**C1**	**PLO7**	K,C
5	**Drawing basic shapes, precision drawing using object snap and AutoSnap, geometric construction techniques**	**Drawing basic shapes, precision drawing using object snap and AutoSnap, geometric construction techniques**	**Drawing basic shapes, precision drawing using object snap and AutoSnap, geometric construction techniques**	**C2**	**PLO7**	K,C
6	**Creating and editing text in a drawing, creating and modifying text styles, and controlling the drawing display**	**Creating and editing text in a drawing, creating and modifying text styles, and controlling the drawing display**	**Creating and editing text in a drawing, creating and modifying text styles, and controlling the drawing display**	**C2**	**PLO7**	K,C
7	**Basic editing commands, grips and grip editing, creating arrays, grouping objects, obtaining information about the drawing**	**Basic editing commands, grips and grip editing, creating arrays, grouping objects, obtaining information about the drawing**	**Basic editing commands, grips and grip editing, creating arrays, grouping objects, obtaining information about the drawing**	**C2**	**PLO7**	K,C
8	**Object Construction and other Drawing Commands**	**Object Construction and other Drawing Commands**	**Object Construction and other Drawing Commands**	**C2**	**PLO7**	K,C
9	**Drawing different figures of engineering drawing.**	**Drawing different figures of engineering drawing.**	**Drawing different figures of engineering drawing.**	**C2**	**PLO7**	K,C
10	**Drawing different figures of engineering drawing.**	**Drawing different figures of engineering drawing.**	**Mid-Term Exam**	**C2**	**PLO7**	K,C

11	**Text, Planes, Layers and Hatching**	**Text, Planes, Layers and Hatching**	**Text, Planes, Layers and Hatching**	**C2**	**PLO7**	K,C
12	**Orthographic projection**	**Orthographic projection**	**Orthographic projection.**	**C3**	**PLO1**	K
13	**Produce 2D Orthographic Projections**	**Produce 2D Orthographic Projections**	**Produce 2D Orthographic Projections**	**C3**	**PLO1**	K
14	**Understand Section and Auxiliary Views**	**Understand Section and Auxiliary Views**	**Understand Section and Auxiliary Views**	**C3**	**PLO1**	K
15	**Final Exam**	**Final Exam**	**Final Exam**			

* **K: Knowledge, S: Skills, C: Competency**

Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- **Interactive videos**
- **✓Practice Labs**
- **Discussion Forums**
- **✓Quizzes**
- **Other Interactive online activities**
- **Reports**

Course Policies:

A- Attendance policies:

The maximum allowed absences is 15% of the lectures.

B- Absences from exams and handing in assignments on time:

Midterm exam can be retaken based on approval of excuse by the instructor's discretion.

Not handing assignment on time will incur penalties.

C- Academic Health and safety procedures

D- Honesty policy regarding cheating, plagiarism, and misbehaviour:

Cheating, plagiarism, misbehaviour will result in zero grade and further disciplinary actions may be taken.

E- Grading policy:

- All homework is to be posted online through the e-learning system.
- Exams will be marked within 72 hours and the marked exam papers will be handed to the students.
- Online Activities (Course Videos, Practice labs, Discussion Forums, Quizzes) **20%**
- Midterm **30%**
- Final Exam **50%**

F- Available university services that support achievement in the course: **E-Learning Platform, Labs, Library.**

Required equipment:

- **PC / Laptop with webcam and mic**
- **Internet Connection**
- **Access to the IU E-Learning Platform at:** https://elearn.iu.edu.jo/course/view.php?id=2107
- **E-learning plan**
- **Satisfaction questionnaires for online and face-to-face learning**
- **Software for e-learning**
- **Training**

Assessment Tools implemented in the course:

- ✓ Final Exam
- ✓ Midterm Exam
- ✓ Quizzes
- ✓ Homework
- ✓Practice Labs
- Discussion Forums
- Periodic reports for learning assessment
- Improvement plans for online or face-to-face teaching
- Others:…….

Responsible Persons and their Signatures:

Course Coordinator	**Dr. Wissam Alkhadour**	**Completed Date**	**13/ 11 / 2021**
		Signature	

Received by (Department Head)	**Dr.**	**Received Date**	**15/ 11 / 2021**
		Signature	