مركز الاعتماد وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

Course Syllabus

1	**Course title**	**Application of Artificial Intelligence in Chemical Engineering**
2	**Course number**	**0905585**
3	**Credit hours**	3
	Contact hours (theory, practical)	(3,0)
4	**Prerequisites/corequisites**	Students should pass 120 credit hours
5	**Program title**	B.Sc. in Chemical Engineering
6	**Program code**	5
7	**Awarding institution**	The University of Jordan
8	**School**	School of Engineering
9	**Department**	Department of Chemical Engineering
10	**Course level**	Fifth year
11	**Year of study and semester (s)**	1st semester
12	**Other department (s) involved in teaching the course**	No departments are involved in teaching the course
13	**Main teaching language**	English
14	**Delivery method**	☒Face to face learning ☐Blended ☐Fully online
15	**Online platforms(s)**	☐Moodle ☐Microsoft Teams ☐Skype ☐Zoom ☐Others……
16	**Issuing/Revision Date**	

17 Course Coordinator:

Name:	Contact hours:
Office number:	Phone number:
Email:	

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18 Other instructors:

Name: Office number: Phone number: Email: Contact hours: Name: Office number: Phone number: Email: Contact hours:

19 Course Description:

As stated in the approved study plan. This course provides an overview of the general artificial intelligence and machine learning approaches and techniques for solving chemical engineering problems. The course covers the concepts of the three main techniques of machine learning: supervised learning, unsupervised learning, and reinforcement learning, and their applications in chemical engineering.

20 Course aims and outcomes:

مركز الاعتماد وضمان الجودة

A- Aims:

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

SLOs / SLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)
1				
2				
3				
4				
5				
6				

21. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1							
	1.2							
	1.3							
2	2.1							
	2.2							
	2.3							
Week	**Lecture**	**Topic**	**Student Learning Outcome**	**Learning Methods (Face to Face/Blended/ Fully Online)**	**Platform**	**Synchronous / Asynchronous Lecturing**	**Evaluation Methods**	**Resources**
3	3.1							
	3.2							
	3.3							

4	4.1							
	4.2							
	4.3							
5	5.1							
	5.2							
	5.3							
6	6.1							
	6.2							
	6.3							
7	7.1							
	7.2							
	7.3							
8	8.1							
	8.2							
	8.3							
9	9.1							
	9.2							
	9.3							
10	10.1							
	10.2							
	10.3							
Week	**Lecture**	**Topic**	**Student Learning Outcome**	**Learning Methods (Face to Face/Blended/ Fully Online)**	**Platform**	**Synchronous / Asynchronous Lecturing**	**Evaluation Methods**	**Resources**
11	11.1							
	11.2							
	11.3							

12	12.1							
	12.2							
	12.3							
13	13.1							
	13.2							
	13.3							
14	14.1							
	14.2							
	14.3							
15	15.1							
	15.2							
	15.3							

22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform…etc):

24 Course Policies:

A- Attendance policies:

B- Absences from exams and submitting assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

F- Available university services that support achievement in the course:

25 References:

A- Required book(s), assigned reading and audio-visuals:

B- Recommended books, materials, and media:

26 Additional information:

Name of Course Coordinator: ----------Signature: ---------- Date: ----------
Head of Curriculum Committee/Department: ---------- Signature: ----------
Head of Department: ---------- Signature: ----------
Head of Curriculum Committee/Faculty: ---------- Signature: ----------
Dean: ---------- Signature: ----------