



## Course Syllabus

1	<b>Course title</b>	Mechatronics Engineering Skills and Ethics	
2	<b>Course number</b>	0908101	
3	<b>Credit hours</b>	2	2
	<b>Contact hours (theory, practical)</b>	2 theoretical hours	
4	<b>Prerequisites/corequisites</b>	None	
5	<b>Program title</b>	B.Sc. in Mechatronics Engineering	
6	<b>Program code</b>	0908101	
7	<b>Awarding institution</b>	The University of Jordan	
8	<b>School</b>	School of Engineering	
9	<b>Department</b>	Mechatronics Engineering Department	
10	<b>Course level</b>	First Year	
11	<b>Year of study and semester (s)</b>	2022/2023 First semester	
12	<b>Other department (s) involved in teaching the course</b>	None	
13	<b>Main teaching language</b>	English	
14	<b>Delivery method</b>	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	<b>Online platforms(s)</b>	<input checked="" type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	<b>Issuing/Revision Date</b>	5/10/2022	

### 17 Course Coordinator:

Name: Dr. Musa AlYaman

Contact hours: Sunday 9:30-10:30, Monday 9:30-10:00

Office number: 202 Mechatronics Engineering Department

Phone number: : 5355000 Ext. 23032

Email: [m.alyaman@ju.edu.jo](mailto:m.alyaman@ju.edu.jo)



### 18 Other instructors:

None

### 19 Course Description:

This course covers several topics history of engineering, Mechatronics engineering evolution and relationship with other disciplines. Planning and management, types of engineering, engineering design, engineering ethics such as codes of ethics and honour, responsibilities to employers and society. The proper use of engineering tools including computers and computer simulations, as well as tools for inventive problem solving, creative and critical thinking including mind mapping, teamwork skills, an introduction to project management. Technical writing such as structure of technical reports, writing process, writing style, grammar, punctuation, and usage. Requirements of effective presentations.

### 20 Course aims and outcomes:

#### A- Aims:

The course motivates the student to acquire the knowledge, skills and attitudes necessary to succeed in an engineering profession, and helps building teamwork, communication skills and ethical responsibility.

#### B- Students Learning Outcomes (SLOs):

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

SLOs	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)
SLOs of the course							
1. Recognize the role of engineering design and engineering analysis in economy and society							X
2. Appreciate the importance of multidisciplinary teamwork in engineering practice					X		
3. Understand the ethical and social responsibility of engineers				X			
4. Recognize the importance of written and oral communication in the engineering profession			X				

## 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	Day/Date
1	1.1	Course Overview	3,4,5 and 7	Face to face		Synchronous		Monday 10/10/2022
	1.2	Course Introduction	3,4,5 and 7	Face to face		Synchronous		Wednesday 12/10/2022
	1.3							
2	2.1	Chapter 1 (Definition and History)	3,4,5 and 7	Face to face		Synchronous		Monday 17/10/2022
	2.2	Chapter 1 (Definition and History)	3,4,5 and 7	Face to face		Synchronous		Wednesday 19/10/2022
	2.3						Assignment 1 Available 11:30	Thursday 20/10/2022
Week	Lecture	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Day/Date
3	3.1	Chapter 2 (Mechatronics Engineering)	3,4,5 and 7	Face to face		Synchronous		Monday 24/10/2022
	3.2	Chapter 2 (Mechatronics Engineering)	3,4,5 and 7	Face to face		Synchronous	Assignment 1 Due: 23:30	Wednesday 26/10/2022
	3.3						Assignment 2 Available 11:30	Thursday 27/10/2022
4	4.1	Chapter 3 (Statistics and Ethics)	3,4,5 and 7	Face to face		Synchronous		Monday 31/10/2022

	4.2	Chapter 3 (Statistics and Ethics)	3,4,5 and 7	Face to face		Synchronous	Assignment 2 Due: 23:30	Wednesday 2/11/2022
	4.3						Assignment 3 Available 11:30	Thursday 3/11/2022
5	5.1	Chapter 3 (Statistics and Ethics)	3,4,5 and 7	Face to face		Synchronous		Monday 7/11/2022
	5.2	Chapter 4 (Classroom Skills)	3,4,5 and 7	Face to face		Synchronous	Assignment 3 Due: 23:30	Wednesday 9/11/2022
	5.3						Assignment 4 Available 11:30	Thursday 10/11/2022
6	6.1	Chapter 4 (Classroom Skills)	3,4,5 and 7	Face to face		Synchronous		Monday 14/11/2022
	6.2	Chapter 5 (Problem Solving)	3,4,5 and 7	Face to face		Synchronous	Assignment 4 Due: 23:30	Wednesday 16/11/2022
	6.3						Assignment 5 Available 11:30	Thursday 17/11/2022
7	7.1	Chapter 5 (Problem Solving)	3,4,5 and 7	Face to face		Synchronous		Monday 21/11/2022
	7.2	Chapter 6 (Design Skills)	3,4,5 and 7	Face to face		Synchronous		Wednesday 23/11/2022
	7.3							

8	8.1	<b>Mid Term Chapters (1-5)</b>	3,4,5 and 7	Face to face		Synchronous	<b>Mid Exam 8:30-9:30 am</b>	Monday 28/11/2022
	8.2	Mid Term Discussion	3,4,5 and 7	Face to face		Synchronous	Assignment 5 Due: 23:30	Wednesday 30/11/2022
	8.3						Assignment 6 Available 11:30	Thursday 1/12/2022
9	9.1	Chapter 6 <b>(Design Skills)</b>	3,4,5 and 7	Face to face		Synchronous		Monday 5/12/2022
	9.2	Chapter 7 <b>(Project Management)</b>	3,4,5 and 7	Face to face		Synchronous	Assignment 6 Due: 23:30	Wednesday 7/12/2022
	9.3						Assignment 7 Available 11:30	Thursday 8/12/2022
<b>Week</b>	<b>Lecture</b>	<b>Topic</b>	<b>Student Learning Outcome</b>	<b>Learning Methods (Face to Face/Blended/ Fully Online)</b>	<b>Platform</b>	<b>Synchronous / Asynchronous Lecturing</b>	<b>Evaluation Methods</b>	<b>Day/Date</b>
10	10.1	<b>MS Project</b>	3,4,5 and 7	Face to face		Synchronous	<b>Project Available : 13:30</b>	Monday 12/12/2022
	10.2	<b>MS Word</b>	3,4,5 and 7	Face to face		Synchronous	Assignment 7 Due: 23:30	Wednesday 14/12/2022
	10.3						Assignment 8 Available 11:30	Thursday 15/12/2022
11	11.1	<b>MS Excel</b>	3,4,5 and 7	Face to face		Synchronous		Monday 19/12/2022
	11.2	Chapter 8 <b>(Teamwork)</b>	3,4,5 and 7	Face to face		Synchronous	Assignment 8 Due: 23:30	Wednesday 21/12/2022
	11.3							

12	12.1	Chapter 8 (Teamwork)	3,4,5 and 7	Face to face		Synchronous		Monday 26/12/2023
	12.2	Chapter 9 (Communication Skills)	3,4,5 and 7	Face to face		Synchronous		Wednesday 28/12/2023
	12.3							
13	13.1	Chapter 9 (Communication Skills)	3,4,5 and 7	Face to face		Synchronous	<b>Project Due:13:30</b>	Monday 2/1/2023
	13.2	Chapter 9 (Communication Skills)	3,4,5 and 7	Face to face		Synchronous		Wednesday 4/1/2023
	13.3							
14	14.1	Course Feedback	3,4,5 and 7	Face to face		Synchronous		Monday 9/1/2023
	14.2	Marks Feedback	3,4,5 and 7	Face to face		Synchronous		Wednesday 11/1/2023
	14.3							
15	15.1	Course Discussion and Feedback	3,4,5 and 7	Face to face		Synchronous		Monday 16/1/2023
	15.2							Wednesday 18/1/2023
	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
Assignments	16	Eight Assignments	3,4,5 and 7		Moodle
Project	10	Chapter 7 & MS Project & MS Word	3,4,5 and 7	10 <sup>th</sup> week	Moodle
Midterm Exam	24	Chapters 1-5	3,4,5 and 7	8 <sup>th</sup> week	Moodle
Final Exam	50	All topics	3,4,5 and 7		Moodle

## 23 Course Requirements

**Each student should have a computer (with MS Project, MS Excel, and MS Word installed) and internet connection.**

## 24 Course Policies:

### A- Attendance policies:

Students are expected to attend EVERY CLASS SESSION and they are responsible for all materials, announcements, schedule changes, etc., discussed in class

### B- Absences from exams and submitting assignments on time:

There will be no make-up exams for any exam or missed assignment, which will be taken during the course. Exceptions to this rule is restricted only to the following cases:

- Death of only first order relatives (father, mother, sister, or brother).
- Hospital entry (inpatient) during the time of the examination.

Any other cases will be given the zero mark in the corresponding exam or assignment.

### C- Health and safety procedures:

Students are responsible for:

- Keeping themselves informed of conditions affecting their health and safety;



- Participating in safety training programs;
- Following to health and safety practices in their workplace, classroom;
- Advising of or reporting unsafe practices or serious hazards in the classroom or laboratory.

**D- Honesty policy regarding cheating, plagiarism, misbehavior:**

Follow the UoJ guidelines that providing definitions, procedures, and recommendations for promotion and violation of academic honesty and integrity.

**E- Grading policy:**

Follow the UoJ guidelines that providing definitions of undergraduate grading policy

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

Text book, class handouts, and an access to Personal Computer with office software

**25 References:**

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

Engineering Fundamentals: An Introduction to Engineering. 4th ed. By S. Moaveni, (2011). Cengage Learning

**B- Recommended books, materials, and media:**

Exploring Engineering: An Introduction to Engineering and Design. 2nd edition by P. Kosky, R. Balmer, W. Keat and G. Wise. (2010). Elsevier Inc.

**26 Additional information:**





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Name of Course Coordinator: Dr. Musa AlYaman-----Signature: ----- Date: 5/10/2022
Head of Curriculum Committee/Department: ----- Signature: ----- ---
Head of Department: ----- Signature: ----- -
Head of Curriculum Committee/Faculty: ----- Signature: ----- -
Dean: ----- Signature: -----