



Faculty: Faculty of Science	
Department: Physics	Program: Bachelor's Program
Semester: Second semester	Academic year: 2023/2024

Course Plan

First: Course Information

Course Name:	Electronics Laboratory		Course No. 0302297	
Credit Hours:	1 hrs	Theoretical	Practical	2
Prerequisite:	0302296	Class Number:	Lecture Time:	
Level in JNQF	7			
Course Nature:	<input type="checkbox"/> <i>Mandatory Faculty Requirement</i> <input type="checkbox"/> <i>Optional University Requirement</i> <input type="checkbox"/> <i>Mandatory University Requirement</i> <input type="checkbox"/> <i>Ancillary Course</i> <input type="checkbox"/> <i>Optional Specialty Requirement</i> <input checked="" type="checkbox"/> <i>Mandatory Specialization requirement</i>			
Type of Education:	<input checked="" type="checkbox"/> Fully Direct (Fully Face-to-Face Education) <input type="checkbox"/> Integrated Education (2 Face-to-Face + 1 Asynchronous) <input type="checkbox"/> Electronic Education Fully (1 Asynchronous + 2 Synchronous)			

Second: Instructor's Information

Course coordinator		
Instructor		
Name:	Office Number:	Email:
Office Hours:		

Third: Short Description of the Course

In this lab, the student performs several typical analog electronic experiments, such as oscilloscope, RC circuit, LRC circuit, Diode Basic characteristics, diode rectifier circuit, Zenner diode, diode limiter, transistor characteristics and CE transistor amplifier.

Fourth: Course objectives

Empty box for course objectives.

Fifth: Learning Outcomes

<i>Level descriptor according to (JNQF)</i>	<i>CILOs Code</i>	<i>CILOs</i> If any CILO will not be assessed in the course, mark NA.	<i>Associated PILOs Code</i> <i>Choose one PILO for each CILO*</i>	<i>Assessment method**</i> <i>Choose at least two methods</i>	<i>Scores out of 100</i> State the total score identified for each CILO	<i>Minimum acceptable Score/percentage (%)</i> <i>The percentage should not be less than 50% ***</i>
Knowledge	K1	Comprehend the physics principles related to physics of different types of semi conductive electronic components (P-type and N-type diodes and NPN transistor).	P. K1	Midterm exam Final exam	34	17 (50%)
	K2	To learn some typical applications for diodes (diode limiters/clamper and signal regulator) To learn some typical application for transistor as on/off switch and amplifier).	P. K1	Midterm exam Final exam	36	18 (50%)
	K3	Use words, diagrams, graphs and mathematics to communicate the experimental model.	P-K3	Midterm exam Final exam		
	K4	Identify all the relevant model limitations including idealization in the specific details.	P-K4	Midterm exam Final exam		
Skills	S1	Formulate plans designed to achieve maximum useful of advanced experiments	P. S1	Midterm exam Quiz	10	5 (53%)
	S2	Use the computer for analyzing and processing the experimental data				

	S3	Make predictions that can be compared with data as it is acquired during the experiment.				
	S4	Analyze data and give suggestion to improve the set up of experiments.	P. S1	Quiz Final	10	5 (50%)
	S5					
Competencies	C1	Justify and explain thinking of electronic experiments, in either written or oral form	P. C3	Assignment Final exam	10	5 (50%)
	C2	Develop a new techniques to demonstrate electronic problems.				
	C3	Explain how electronic developed communications and information systems.				
	C4					
	C5					

*Refer to document (CC-2023-02) and page 2 in document (CC-2023-01)

** Refer to document (CC-2023-05)

**80% of the students must achieve the minimum acceptable percentage or higher for each CLO

Sixth: Learning Source

Designated Book:	Manual: Electronic Lab	
Author:	Print: 6 th edition	Year: 2010
Additional Sources: Website:	Modern Physics, Kenneth S. Krane, 3rd Edition, 2012	
Teaching Type:	<input type="checkbox"/> Classroom <input checked="" type="checkbox"/> Laboratory <input type="checkbox"/> Workshop <input type="checkbox"/> MS Teams <input checked="" type="checkbox"/> Moodle	

Seventh: Course Structure

Lecture Date	Topics	Teaching Procedures*	Teaching Methods**	Covered CILOs	References***
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2	
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,C1;C2;	Pages 1-2
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5;	62-67
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,	67-71
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2, S1,S3;C1,C2	75-78
		Direct teaching	Lecturing Discussion Whiteboard Power point	S1,S3;C1,C2	84-86
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5;C1,C2	18-19 34-38

		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5	
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S2,S4;S5;C1,C2	202-204
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S5;C1,	211-218
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5;C1,C2	353-359
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5;C1,C2	406-413
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,	406-413
		Direct teaching	Lecturing Discussion Whiteboard Power point	K1,K2,S1,S3,S4;S5;C1,C2	401-406
21/1/2024 - 1/2/2024	Final Exam				

Education procedures: (Direct, synchronous, asynchronous). * * Refer to document (CC-2023-04) ***Reference: Pages of the book, number of the chapter, recorded lecture, video....)

Eighth: Assessment methods

Methods	Fully Electronic Education	Integrated Teaching	Direct Teaching	Specific Course Output to be measured										
				*State the score identified for each CILO for each method of assessment out of 100 **If any CILO will not be assessed in the course, mark NA.										
				K1	K2	S1	S2	S3	S4	C1	C2	C3	C4	C5
Mid-term Exam			35	15	15	5								
Final Exam			50	19	21				5	5				
Quiz1			5			5								
Quiz2			5						5					
Assignment			5							5				
Total out of 100			100	34	36	10			10	10				

* Refer to document (CC-2023-03)

Ninth: Course Policies

- Meeting the deadline for the lecture.
- Commitment to interaction and participation.
- Interactive lectures will be given through a platform (MS Teams).
- Duties and tests will be given through a platform (Moodle).
- Commitment to the right appearance with the proper background in front of the camera.
- University regulations for attendance and absence from lectures and examinations are in force.
- Academic Integrity: According to university regulations and instructions, fraud or moral impersonation is unacceptable and punishable.

Approval	Name	Date	Signature
Head of Department	Dr. Riad		
Faculty Dean	Dr. Aliaa Burqan		