Unit Description Form

Course Description Form

Faculty of Engineering / Department of

Unit Information

Course Information

Unit Title	**Electronic**	**Unit delivery**	
Unit Type	**fundamental**	☒ نظريه ☒ حاضر ☐ المختبر ☐ تعليمي ☐ عملي ☐ Seminar	
Unit Code	BME-31-02		
ECTS Credits	**8**		
SWL (ساعة / SEM)	**30 hours**		

Unit level	3	**Delivery Semester**	2
Department of Administration	Biomedical	**College**	Engineering
Unit Commander	Eng. Ali Mohamed Abdel Sada	**E-mail Address**	ali.muhamed@uowa.edu.iq
Title of Unit Commander	Assistant Lecturer	**Unit Commander Qualifications**	Master
Unit Teacher	M.M	**E-mail Address**	
Peer Reviewer Name	name	**E-mail Address**	E-mail Address
Date of accreditation of the Scientific Committee	26/9/2024	**Version number**	1.0

Relationship with other units

Relationship with other subjects

Prerequisites Unit	No	**Semester**	
Common Requirements Unit	No	**Semester**	

Unit objectives, learning outcomes and how-to contents Course objectives, learning outcomes and instructional contents	
Objectives of the Unit Course Objectives	**1Understand the basics of electronics: Learn basic principles such as electric current, voltage, resistance, and circuit connection.** **Study of electronic components: The study of components such as resistors, capacitors, diodes, transistors, and integrated circuits.** **Electronic circuit design: Learn how to design simple and complex electronic circuits for specific needs.** **Use electronic measuring instruments: Learn how to use devices such as an oseloscope and meter to measure voltage, current, and frequency.** **Electronic circuit performance analysis: the ability to test circuits and examine their performance using various measurement tools.**
Unit Learning Outcomes Learning outcomes of the course	**They are the basic principles of electronics: know how different electronic circuits work.** **Electronic circuit design: The ability to design circuits using basic components such as resistors and transistors.** **Conduct hands-on experiments: Learn how to use tools and software to help design and test circuits.** **Circuit analysis: The ability to calculate the values of components in electronic circuits and analyze their behavior.** **Use measuring instruments: Learn how to use instruments such as the Ossiloscop to measure electrical signals.**
Indicative Contents Indicative Contents	1Introduction to Electronics: Fundamentals such as electricity, voltage, current, and resistance. Basic components in electronics: such as resistors, capacitors, transistors, and integrated circuits. Basic electrical circuits: the study of circuits such as circuits of resistors in series or in parallel. Digital and analogue circuits: the difference between analogue and digital circuits and how to use them. Tools and software used in electronics: such as oscilloscopes, circuit simulators, and software such as Multisim.

Learning and Teaching Strategies Learning and Teaching Strategies	
Strategies	Hands-on learning: Conduct hands-on experiments using electronic components to design and test circuits. Project-based education: Assigning students to electronic circuit design projects in certain areas. Using Simulators: Training students to use software such as Multisim to simulate circuit designs. Interactive discussions: Discuss practical cases and challenges in the design of electronic circuits. Continuous evaluation: through practical and theoretical tests to examine understanding and apply knowledge in projects.

Student Workload (SWL) The student's academic load is calculated for 15 weeks			
SWL منظم (h / sem) Regular academic load of the student during the semester	20	**SWL regulator(h/s)** Regular student load per week	5
SWL غير منظم (h / sem) Irregular academic load of the student during the semester	10	**Unregulated SWL (h/s)** Irregular student academic load per week	5
SWL إجمالى (h / sem) The student's total academic load during the semester	30		

Unit Evaluation Course Evaluation					
	As	**Time/Number**	**Weight (tags)**	**Week due**	**Related learning outcomes**
Formative Assessment	**Contests**	2	10% (10)	5, 10	LO #1 , 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO #3 , 4, 6 and 7
	Projects /Laboratory.	1	10% (10)	continuous	every
	report	1	10% (10)	13	LO #5 , 8 and 10
Final Assessment	**Midterm Exam**	2 hr	10% (10)	7	LO #1-7
	Final Exam	2 hours	50% (50)	16	every
	Overall Rating		100% (100 degree)		

Delivery Plan (Weekly Curriculum) Theoretical Weekly Curriculum	
week	**Covered Material**
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	

Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources

Learning and Teaching Resources

	text	Available in the library?
Required texts	Clinical Biochemistry, (8 editions), by Leipencotts	Yes
Recommended texts		Yes
Websites		

Grading chart

Grading chart

group	degree	Appreciation	Tags (%)	definition
An-Najah Group (50 - 100)	**A -** Excellent	privilege	90 - 100	Outstanding Performance
	B - Very Good	Very good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Proper work with noticeable errors
	D - Satisfactory	medium	60 - 69	Fair but with significant shortcomings
	E - sufficient	Acceptable	50 - 59	The work meets the minimum standards
Group failure (0 – 49)	**FX -** Failed	Deposit (in (processing	(45-49)	More work required but credit granted
	F - Failed	Failure	(0-44)	Large amount of work required

Note: Signs that are more than 0.5 decimal places greater than or below the full mark will be rounded higher or lower (for example, a score of 54.5 will be rounded to 55, while a mark of 54.4 will be rounded to 54. The university has a policy of not tolerating "imminent traffic failure", so the only modification to the marks granted by the original mark(s) will be the automatic rounding described above.