



Jordan University of Science and Technology
Faculty of Engineering
Biomedical Engineering Department

BME201 Introduction To Biomedical Engineering

First Semester 2023-2024

Course Catalog

2 Credit Hours. 3 Credit hours (3 h).Engineering profession and its applications in biomedicine, introductory lectures on the definition of biomedical engineering, its history, ethics and regulations with a scientific overview of the different topics : biomechanics, bioinstrumentation, medical imaging and physiological modeling, biomedical sensors and biomedical signal processing and biomicro and nanotechnology, Simultaneously the students will be instructed on principles of technical writing and will be asked to apply their knowledge on a group project about which they will be required to write a report and give an oral presentation.

Text Book

Title	The Biomedical Engineering Handbook.
Author(s)	Peterson, D.R., and Bronzino, J.D
Edition	4th Edition
Short Name	Ref#1
Other Information	-

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref#2	Ethics for Biomedical Engineers	Abdiel Foo, Wilson S. J., Bradley A.P., Gwee W., & Tam D. K	1st Edition	-

Class Schedule & Room

Section 1:

Lecture Time: Tue : 17:30 - 18:30

Room: متزامن الحضور منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
2001000	NE100 Introduction In Engineering	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to BME	
Week 2	BioMechanics, Writing a cover letter	
Week 3	Rhabilitation Engineering, Journal Paper Content	
Week 4	Biomaterials, Writing a resume	
Week 5	Tissue Engineering, Report Writing 1	
Week 6	Bioinstrumentation, Report Writing 2	
Week 7	Biomedical Sensors, Oral Presentation	
Week 8	Ethical Issues for BME	
Week 9	Biosignal Processing, Posters	
Week 10	Physiological Modeling, Referencing and citation	
Week 11	Medical Imaging, Group Presentations	
Week 12	Bioand Nanotechnology, Group Presentations	
Week 13	Fronteirs in Biomedical Engineering	
Week 14	Regulations and FDA Process, Group Posters	

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Get introduced to the field of biomedical engineering and the wide range of employment opportunities available. [1SO1, 1SO4]	20%	
Introduction to the variety of fields and specialties in biomedical engineering [1SO1]	20%	
Understand Biomedical Engineering Ethics [1SO4]	20%	
Learn the basic tools for technical communication skills [1SO3, 1SO4, 1SO7]	20%	
Encourage life long learning, foster teamwork [1SO3, 1SO4, 1SO5, 1SO7]	20%	

Relationship to Program Student Outcomes (Out of 100%)						
SO1	SO2	SO3	SO4	SO5	SO6	SO7
30		11.67	41.67	5		11.67

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