Jordan University of Science and Technology

Faculty of Engineering

Biomedical Engineering Department

BME521 Digital Image Processing - JNQF Level: 7

Second Semester 2022-2023

Course Catalog
3 Credit Hours. Two-dimensional discrete systems, design of two-dimensional filters, digital image processing, human perception of images, color models, picture processing, sampling and data compression, picture enhancement, restoration and analysis, hardware and software implementation.

Instructor	
Name	**Dr. Areen Al-Bashir**
Office Location	C5 L-1
Office Hours	Sun : 11:30 - 13:00 Mon : 10:00 - 11:30 Tue : 08:00 - 08:30 Wed : 10:00 - 11:30 Wed : 13:00 - 14:00
Email	akbashir@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 08:30 - 10:00 Room: M2010 Section 2: Lecture Time: Sun, Tue, Thu : 14:30 - 15:30 Room: LAB

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
282300	BME230 Tools For Biomedical Engineers	Prerequisite / Study
284211	BME421 Digital Signal Processing	Prerequisite / Study

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Develop experience in using computers to process images. [1L7S1]	20%	
Understand basic principles of medical imaging [1L7K1]	5%	
Learn how to enhance images in the spatial domain [1L7K1]	10%	
Learn how to enhance images in the frequency domain [1L7K1]	10%	
Understand how to restore images after degradation and adding noise [1L7K1]	10%	
Develop experience in interpreting images and extracting features and objects fro an image [1L7S2]	10%	
Understand the basic principles and techniques for image compression [1L7K1]	10%	
Writing and Developing image processing codes [1L7S3]	15%	
Encourage Long Life Learning, foster team work and enhance students communication skills [1L7C3]	10%	

Relationship to Program Student Outcomes (Out of 100%)																		
A	B	C	D	E	F	G	H	I	J	K	L	M	SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7

Relationship to NQF Outcomes (Out of 100%)				
L7K1	L7S1	L7S2	L7S3	L7C3
45	20	10	15	10

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