



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Data Science Department

DS330 Deep Learning - JNQF Level: 7

First Semester 2025-2026

Course Catalog

3 Credit Hours. This course offers an introduction to Deep Learning. It covers mathematical concepts, architectures, and training techniques for neural networks. Topics include perceptrons, multilayer networks, optimization, regularization, convolutional networks, attention mechanisms, and transfer learning, along with practical coding projects in Python and TensorFlow/Keras.

Teaching Method: On Campus

Text Book

Title	Understanding Deep Learning
Author(s)	Simon J.D. Prince
Edition	4th Edition
Short Name	Ref#1
Other Information	

Instructor

Name	Dr. Amera Al-Amery
Office Location	-
Office Hours	Sun : 11:00 - 12:00 Sun : 13:00 - 14:00 Tue : 11:00 - 12:00 Tue : 13:00 - 14:00 Wed : 13:00 - 14:00 Thu : 11:00 - 12:00
Email	ahalamery@just.edu.jo

Class Schedule & Room

Section 2:

Lecture Time: Sun, Tue, Thu : 14:00 - 15:00

Room: C3014

Prerequisites

Line Number	Course Name	Prerequisite Type
1782320	DS232 Machine Learning Laboratory	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Introduction	From Ref#1
Week 2	Supervised learning	From Ref#1
Week 3	Shallow neural networks 25	From Ref#1
Week 4	Deep neural networks	From Ref#1
Week 5	Loss functions	From Ref#1
Weeks 7, 8	Convolutional networks	From Ref#1
Week 9	Fitting models	From Ref#1
Week 10	Gradients and initialization	From Ref#1
Week 10	Measuring performance	From Ref#1
Week 12	Regularization	From Ref#1
Weeks 13, 14	Project	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Explain core deep learning concepts and various network architectures [1SO2] [1L7K1]	60%	First Exam, Second Exam, Project
Design and implement deep learning models using python packages [1SO6] [1L7S1]	20%	Final
Evaluate the performance of deep learning models on real-world data [1SO2] [1L7C2]	20%	Final

Relationship to Program Student Outcomes (Out of 100%)

SO1	SO2	SO3	SO4	SO5	SO6	MSO1	MSO2	MSO3	MSO4	MSO5	MSO6
	80				20						

Relationship to NQF Outcomes (Out of 100%)		
L7K1	L7S1	L7C2
60	20	20

Evaluation	
Assessment Tool	Weight
First Exam	20%
Second Exam	20%
Project	20%
Final	40%

Policy	
Attendance	Excellent attendance is expected. In accordance with university regulations, students missing more than 20% of total classes are subject to failure. No excuses will be accepted. If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed. Attendance will be recorded at the beginning or end of each class

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