



Jordan University of Science and Technology
Faculty of Agriculture
Digital Agriculture Department

DA209 Introduction To Digital Agriculture

First Semester 2025-2026

Course Catalog

3 Credit Hours. This course introduces students to the fundamental principles and technologies underlying Digital Agriculture, focusing on how Information and Communication Technologies (ICT) and data-driven methods are transforming agricultural systems. The course provides a structured overview of digital agricultural ecosystems, data acquisition and transmission, cloud and edge computing in agriculture, big data analytics, and the use of AI and IoT for sustainable farming. Students will gain a comprehensive understanding of how digital systems improve agricultural efficiency, sustainability, and decision-making.

Teaching Method: On Campus

Text Book

Title	Digital Agriculture: An Introduction
Author(s)	Muhammad Azhar Iqbal
Edition	1st Edition
Short Name	Book1
Other Information	ISBN: 978-3-031-67679-6

Instructor

Name	Mr. Hasan Al Bzoor
Office Location	-
Office Hours	Sun : 14:00 - 16:00 Mon : 12:00 - 13:00 Tue : 11:00 - 12:00 Wed : 12:00 - 14:00
Email	hkalbzoor@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Mon, Wed : 09:00 - 10:30
 Room: C3014

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	Fundamentals of Digital Agriculture: Evolution, revolutions (Agri 1.0?5.0), driving factors, vision, and framework.	Chapter 1 From Book1
Weeks 3, 4	Digital Agriculture Ecosystem: Ecosystem concepts, IoT-based architecture, data flow (acquisition, transmission, storage, analytics).	Chapter 2 From Book1
Weeks 5, 6	Data Acquisition in Agriculture: RFID, sensors, sensor networks, smartphones, remote sensing, development boards (SBC, SBM).	Chapter 3 From Book1
Weeks 7, 8	Data Communication in Agriculture: Short-range, long-range, cellular, satellite, and broadband communication technologies.	Chapter 4 From Book1
Weeks 9, 10	Data Storage in Digital Agriculture: Agricultural Big Data, cloud computing, edge/fog computing applications.	Chapter 5 From Book1
Weeks 11, 12	Data Analytics in Agriculture: Statistical analysis, machine learning, NLP, and data visualization for agricultural Big Data.	Chapter 6 From Book1
Weeks 13, 14, 15	Impacts and Future Directions: Human?Computer Interaction, decision support systems, benefits of digital farming, and sustainability.	Chapter 7 From Book1

Policy

Exams	* Exams format May include multiple-choice, analytical, and short-answer questions. * Makeup exams require valid justification.
Attendance	* If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed. * University policies will be applied regarding attendance.
Assignments	Must be submitted on time; plagiarism is strictly prohibited.
Quizzes	Expect a pop-up quiz every week and be ready for it.
Communications	You are welcome to send me messages using the e-learning systems or email me to my JUST email address from your JUST email address. Social media messages and chats are not allowed.

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