Jordan University of Science and Technology
Faculty of Agriculture
Natural Resources & Environment Department

NR361 Geographical Information Systems (Gis) - JNQF Level: 7

Second Semester 2023-2024

Course Catalog

3 Credit Hours. Basic concepts of GIS, data models and structure, data entry and system output, data management and quality, mapping concepts, cartography, spatial analysis in GIS, definition of the global signature system, GIS uses. (Prerequisite: Math 102A, NR 202)

Teaching Method: On Campus

Text Book

Title	Getting Started with Geographic Information Systems
Author(s)	Clarke, K. C
Edition	5th Edition
Short Name	GIS Ref #1
Other Information	

Instructor

Name	**Prof. Mohammad Alhamad**
Office Location	C1L3
Office Hours	
Email	malhamad@just.edu.jo

Class Schedule & Room

Section 1:
  Lecture Time: Sun, Tue : 12:30 - 13:30
  Room: C5020

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2	An introduction to GIS & GISci	From **GIS Ref #1**
Weeks 3, 4	Cartographic concepts for GIS	From **GIS Ref #1**
Weeks 5, 6	Maps as numbers	From **GIS Ref #1**
Weeks 7, 8	Getting the map into computer	From **GIS Ref #1**
Week 9	Making maps with GIS	From **GIS Ref #1**
Week 10	What is where	From **GIS Ref #1**
Week 11	Why is it there	From **GIS Ref #1**
Weeks 12, 13	Spatial analysis and terrain analysis	From **GIS Ref #1**
Week 14	GIS applications	From **GIS Ref #1**
Week 15	GPS	From **GIS Ref #1**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Gain a basic, practical understanding of GIS concepts, techniques and real world applications [1PLO2, 1PLO3, 1PLO5, 1PLO6, 1PLO9] [1L7K1]	10%	
Understand the basic concepts of geography necessary to efficiently and accurately use GIS technology [1PLO3, 1PLO5, 1PLO6, 1PLO8, 1PLO9] [1L7K1]	10%	
make maps with GIS [1PLO3, 1PLO5, 1PLO6, 1PLO8, 1PLO9] [1L7S2]	10%	
Identify the main data models and structures used in GIS [1PLO3, 1PLO5, 1PLO6, 1PLO8, 1PLO9] [1L7K1]	10%	
Understand concepts of entities and attributes in GIS and methods of data collection and entries [1PLO3, 1PLO5, 1PLO6, 1PLO8, 1PLO9] [1L7S1, 1L7S2]	10%	
Manipulate data base management unit and its link to spatial data and inquires [1PLO3, 1PLO5, 1PLO6] [1L7S2]	10%	
Understand some spatial interpolation methods [1PLO3, 1PLO5, 1PLO6] [1L7S1]	10%	
Know different formant of spatial terrain analysis [1PLO3, 1PLO6, 1PLO7] [1L7S1]	10%	
Understand the practical applications of GIS [1PLO3, 1PLO6, 1PLO7] [1L7C1]	10%	
Know how to collect data by GPS & integration within GIS [1PLO5] [1L7K1, 1L7S1]	10%	

Relationship to Program Student Outcomes (Out of 100%)								
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9
	2	23.33		26.67	23.33	6.67	8	10

Relationship to NQF Outcomes (Out of 100%)			
L7K1	L7S1	L7S2	L7C1
35	30	25	10

Policy	
Grading	First Exam: 15% Essay & multiple choice questions test Second Exam: 15% Essay & multiple choice questions test Lab Mid: 5% Lab test Lab Reports 5% Reports Lab Project 10% Student project Lab Final 10 % Lab test Final Exam 40% Essay & multiple choice questions test
cheating	Prohibited and is subjected to punishment according to university regulations
Attendance	Students are expected to attend all class meeting regularly. A 20% absent rate (excused and unexcused) will prevent student from attending and taking exams and will be assigned an F (failure) grade
Participation and class activities and engagement	Participation and class engagement is highly encouraged
Withdrawal	Student can withdraw from the course in accordance with the timeline defined by the university regulations

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