



**Jordan University of Science and Technology**  
**Faculty of Architecture And Design**  
**City Planning And Design Department**

URP361 Geographic Information Systems (1)

First Semester 2024-2025

**Course Catalog**

3 Credit Hours. This course provides an introduction to Geographic Information Systems (GIS) and related technologies. It introduces students to the major principles and concepts pertinent to utilizing those systems in a variety of urban planning projects. The course covers basic principles and concepts of GIS, theory and tools of spatial analysis, and broad exposure to GIS applications. Contents include map visualization, nature of spatial data, data sources and acquisitions, spatial analysis and models, presentation of output and reports. The Course exposes students to wide-spread GIS software (ESRI Arch GIS) and provides hands-on practice in basic GIS functionalities.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	GIS Fundamentals:" A First Text on Geographic Information Systems".
<b>Author(s)</b>	Paul Bolstad
<b>Edition</b>	6th Edition
<b>Short Name</b>	Ref #1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Mastering ArcGIS Pro.	Maribeth H. Price	1st Edition	South Dakota School of Mines and Technology
Ref #3	Mapping Global Cities: GIS Methods in Urban Analysis	Ayse Pamuk	1st Edition	Redlands, Calif, ESRI Press

**Instructor**

Name	<b>Mrs. Deema Alshboul</b>
Office Location	A3 L-3 403

Office Hours	Sun : 08:00 - 08:30 Mon : 08:00 - 08:30 Mon : 14:30 - 16:00 Tue : 08:00 - 08:30 Wed : 08:00 - 08:30 Wed : 14:30 - 16:00 Thu : 08:00 - 09:00
Email	daalshboul2@just.edu.jo

Class Schedule & Room	
Section 1: Lecture Time: Sun, Tue : 08:30 - 11:30 Room: LAB	

Prerequisites		
Line Number	Course Name	Prerequisite Type
2222020	URP202 Introduction To Urban Planning	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to GIS and Spatial Thinking	From Ref #1
Week 2	Components of GIS	From Ref #1
Week 3	Coordinate Systems and Map Projections	From Ref #1, From Ref #2
Week 4	Spatial Data Models and Structures	From Ref #1, From Ref #2
Week 5	Data Collection and Input	From Ref #1, From Ref #2
Week 6	Digitization	From Ref #1, From Ref #2, From Ref #3
Week 7	Georeferencing and Resampling	From Ref #1, From Ref #2, From Ref #3
Week 8	Introduction to Cartography and Data Visualization	From Ref #2, From Ref #3
Week 9	Intermediate Cartography	From Ref #2, From Ref #3
Week 10	Geodatabase Management and Metadata	From Ref #1, From Ref #2

Weeks 11, 12	Introduction to Vector Data Model Analysis	From <b>Ref #1</b> , From <b>Ref #2</b> , From <b>Ref #3</b>
Weeks 13, 14	Introduction to Raster Data Model Analysis	From <b>Ref #1</b> , From <b>Ref #2</b> , From <b>Ref #3</b>

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Identifying GIS as a tool for spatial analysis to solve urban planning problems.	15%	
Describing different geospatial data types and sources.	15%	
Constructing and manipulating geospatial data.	15%	
Classifying geospatial data and figuring out available choices and techniques.	30%	
Creating effective cartography maps through a variety of display techniques.	25%	

Relationship to Program Student Outcomes (Out of 100%)											
K1	K2	K3	S1	S2	S3	S4	S5	C1	C2	C3	C4

Evaluation	
Assessment Tool	Weight
Mid-Exam	20%
Final Exam	20%

Policy	
Absences	Students are allowed a maximum of 20% absences with and without an accredited excuse.
Makeup Exam	Makeup exams will not be held without a valid reason.
Documentation	Students must prepare and submit a final portfolio (Soft and hard copy) documenting the final project completed during the semester.

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