



**Jordan University of Science and Technology**  
**Faculty of Engineering**  
**Civil Engineering Department**

CE505 Geographic Information System Gis (Lab) - JNQF Level: 7

Second Semester 2023-2024

**Course Catalog**

1 Credit Hours. ? The main objective of this course is to study and understand the theories of Geographic Information Science and their applications in civil engineering. ? Theories of GIS will be put into practice using the most advanced GIS system namely the software packages ArcGIS Desktop 9.3 and its extensions.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	"Getting to Know ArcGIS Desktop"
<b>Author(s)</b>	Ormsby, Napoleon, Burke, Groess, and Bowden.
<b>Edition</b>	2nd Edition
<b>Short Name</b>	Ref. 1
<b>Other Information</b>	ESRI Press.

**Instructor**

<b>Name</b>	<b>Dr. Samer Talози</b>
<b>Office Location</b>	C5 L1
<b>Office Hours</b>	
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**Class Schedule & Room**

Section 1:  
Lecture Time: Mon : 13:30 - 16:30  
Room: LAB

**Tentative List of Topics Covered**

Weeks	Topic	References
Week 1	Getting to know GIS	From <b>Ref. 1</b>
Week 2	Exploring ArcMap	<b>Chapter 3</b> From <b>Ref. 1</b>
Week 3	Exploring ArcCatalog	<b>Chapter 4</b> From <b>Ref. 1</b>
Week 4	Symbology	<b>Chapter 5</b> From <b>Ref. 1</b>
Week 6	Labeling features and rasters	<b>Chapter 7</b> From <b>Ref. 1</b>
Week 5	Classification of features and rasters	<b>Chapter 6</b> From <b>Ref. 1</b>
Week 7	Querying data	<b>Chapter 8</b> From <b>Ref. 1</b>
Week 8	Joining and relating tables	<b>Chapter 9</b> From <b>Ref. 1</b>
Week 9	Analyzing Feature Relationships: selecting by location	<b>Chapter 10</b> From <b>Ref. 1</b>
Week 10	Preparing data for analysis	<b>Chapter 10</b> From <b>Ref. 1</b>
Week 11	Analyzing Spatial Data	<b>Chapter 12</b> From <b>Ref. 1</b>
Week 12	Projecting data in ArcMap	<b>Chapter 13</b> From <b>Ref. 1</b>
Week 13	Various selected topics	<b>Or, handouts</b> From <b>Ref. 1</b>

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Civil engineering students will be able to distinguish Spatial Data using ArcGIS [1PI-4b] [1L7S1]	25%	Midterm Exam, Reports, Final Exam
Civil engineering students will be able to use the ArcGIS software to map spatial data [1PI-5a] [1L7S2]	25%	Midterm Exam, Reports, Final Exam
Civil engineering students will be able to analyze spatial relationships using the ArcGIS software [1PI-6a] [1L7S3]	25%	Midterm Exam, Reports, Final Exam
Civil engineering students will be able to generate GIS maps using the ArcGIS software [1PI-6b, 1PI-7a] [1L7S3]	25%	Midterm Exam, Reports

Relationship to Program Student Outcomes (Out of 100%)											
PI-1a	PI-2a	PI-2b	PI-2c	PI-2d	PI-3a	PI-4a	PI-4b	PI-5a	PI-6a	PI-6b	PI-7a
							25	25	25	12.5	12.5

Relationship to NQF Outcomes (Out of 100%)		
L7S1	L7S2	L7S3
25	25	50

Evaluation
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Assessment Tool	Weight
Midterm Exam	25%
Reports	25%
Final Exam	50%

Policy	
Reports	A report for select chapters is turned in the week after the chapter is finished.
Attendance	University rules will be adhered to.

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