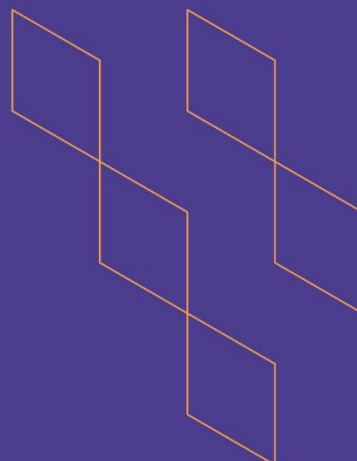




T-104
2022

Course Specification



Course Title: Geographic information system
Course Code: IS1763
Program: Computer Information Systems
Department: Computer Information Systems
College: Computer Science & Information Technology
Institution: Albaha University
Version: T104 – V2
Last Revision Date: January 19, 2023



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A. General information about the course:

Course Identification	
1. Credit hours:	3 Credit Hours (3, 0, 0) (Lecture, Lab, Tutorial) (3 Contact Hours)
2. Course type	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Track <input type="checkbox"/> Others <input type="checkbox"/>
b.	Required <input type="checkbox"/> Elective <input checked="" type="checkbox"/>
3. Level/year at which this course is offered:	Elective course (11 th Level/4 th Year)
4. Course general Description	
Geographic Information Systems (GIS) deals with the analysis and management of geographic information. This course offers an introduction to methods of managing and processing geographic information. Emphasis will be placed on the nature of geographic information, data models and structures for geographic information, geographic data input, data manipulation and data storage, spatial analytic and modelling techniques, and error analysis..	
5. Pre-requirements for this course (if any):	IS1002- Foundations of Information Systems
6. Co- requirements for this course (if any): None	
7. Course Main Objective(s)	
The main objective of this course is to develop students in Geographic Information Systems skills that recognize the theories of GIS, describe Geodatabases and Developing Geodatabases in Geographic Information Systems, apply and design the Spatial Analysis, Use of the GIS in order to equip the participant with the basic prerequisites of mapping data, apply the metadata and its management & linking databases with GIS and work both independently and collaboratively.	

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	30	100%
2.	E-learning		
3.	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	-
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
	Total	30





B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Recognize the theories of GIS.	K1	<ul style="list-style-type: none"> Lectures Assignments 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Midterm Final exam <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>
1.2	Describe Geodatabases and Developing Geodatabases in Geographic Information Systems.	K2	<ul style="list-style-type: none"> Lectures Class discussions 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Oral presentation Midterm Final exam <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>
2.0	Skills			
2.1	Apply and design the Spatial Analysis	S1	<ul style="list-style-type: none"> Lectures Class discussions 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Quiz Oral presentation Final exam <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>
2.2	Use of the GIS in order to equip the participant with the basic prerequisites of mapping data	S2	<ul style="list-style-type: none"> Lectures Assignments 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Quiz Final exam <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>
2.3	Apply the metadata and its management & linking databases with GIS	S4	<ul style="list-style-type: none"> Lectures Class discussions 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Midterm Final exam <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>
3.0	Values, autonomy, and responsibility			
3.1	Work both independently and collaboratively.	V1	<ul style="list-style-type: none"> Teamwork (smaller group) 	<p>Direct Assessment Tool</p> <ul style="list-style-type: none"> Oral Presentation Quiz <p>Indirect Assessment Tool</p> <p>Course Exit Survey</p>





C. Course Content

No	List of Topics	Contact Hours
1.	Introducing GIS	3
2.	information systems components	3
3.	Coordinate Systems and Map Projections	3
4.	catchment maps and coordinates	3
5.	Remote Sensing	3
6.	the spatial data model	3
7.	Edit spatial data	3
8.	data coding and create charts	3
9.	spatial analysis in information systems	3
10.	the functions and uses of information systems	3
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm	4	20%
2.	Quiz	6	10%
3.	Report, presentation, and Class discussions	10	10%
4.	Final Exam	11	60%
5.			

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	[1] GIS An Introduction to Mapping Technologies , Patrick McHaffie, Sungsoon Hwang, Cassie Follett,2023 [2]. An introduction to R for spatial analysis & mapping , Chris Brunson; Lex Comber , 2019
Supportive References	• http://www.acm.org/education/curricula/IS%202010%20ACM%20final.pdf
Electronic Materials	• Access to the Saudi Digital Library (SDL). • Using the learning management system of the university – Rafid System (https://lms.bu.edu.sa/). http:// www.esri.com/software/ http:// www.cadagazin.net/ http:// www.gisdevelopment.net/





Other Learning Materials None

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	A classroom or lecture hall with whiteboard for 25 students.
Technology equipment (projector, smart board, software)	<ul style="list-style-type: none"> • A digital image projection system with connection to desktop computer and laptop computer. • High speed Internet connection. • An instructor computer station.
Other equipment (depending on the nature of the specialty)	None

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	<ul style="list-style-type: none"> • Students • Faculty • Peer Reviewers • Program Leader • Course Coordinator 	<ul style="list-style-type: none"> • Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader (indirect) • Comprehensive Course report (where we can find information about teaching difficulties and action plan, ...)
Effectiveness of students assessment	<ul style="list-style-type: none"> • Students • Faculty • Peer Reviewers • Program Leader • Exam Evaluation Committee • Course Coordinator 	<ul style="list-style-type: none"> • Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader (indirect) • Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	<ul style="list-style-type: none"> • Students • Faculty • Peer Reviewers • Course Coordinator 	<ul style="list-style-type: none"> • Surveys (indirect) • Course evaluation by Peer Reviewers (indirect). • Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan, ...)
The extent to which CLOs have been achieved	<ul style="list-style-type: none"> • Faculty • Program Leader • Course Coordinator 	<ul style="list-style-type: none"> • Student Results (direct) • Comprehensive Course report (where we can find the CLO assessment results)
Other	None	None

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))





Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Curriculum Committee Meeting
REFERENCE NO.	
DATE	MARCH 28, 2023

