Course Description Form

1. Course Name: geographic information systems ng
2. Course Code: CSMM3212
3. Semester / Year: 2st semester / 2024-2025
4. Description Preparation Date: Feb. 2025
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
56
7. Course administrator's name (mention all, if more than one name)
Name: Lucturer . Dr. Ali Adel Saeid Email: ali.a.saeid@uotechnology.edu.iq

8. Course Objectives	
Course Objectives	1-Understing the concepts of geographic information systems **2-** Dealing with geographical sources such as paper maps, aerial photographs, satellite phot grapl

9. Teaching and Learning Strategies	
Strategy	Books, resources (internet and library), lectures reinforced with an illustrative example. The oretic present practical ideas to students (data show, electronic board)

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name
1	2 hrs classroom +2 hrs lab	1,3,5,6,7	Introduction, to define **GIS**
2	2 hrs classroom +2 hrs lab	1,3,5,6,7	GISystem , GScience , GIS application
3	2 hrs classroom +2 hrs lab	1,3,5,6,7	The real world and representation of it

4	2 hrs classroom +2 hrs lab	1,3,5,6,7	Models and modelling. Maps, database
5	2 hrs classroom +2 hrs lab	1,3,5,6,7	Spatial database and spatial analysis
6	2 hrs classroom +2 hrs lab	1,3,5,6,7	Computer representation of geographic information
7	2 hrs classroom +2 hrs lab	1,3,5,6,7	Vector representation
8	2 hrs classroom +2 hrs lab	1,3,5,6,7	Topology and spatial relationships
9	2 hrs classroom +2 hrs lab	1,3,5,6,7	Representation of geographic fields
10	2 hrs classroom +2 hrs lab	1,3,5,6,7	Representation of geographic objects
11	2 hrs classroom +2 hrs lab	1,3,5,6,7	GIS and spatial databases Linking GIS and DBMS
12	2 hrs classroom +2 hrs lab	1,3,5,6,7	Spatial database functionality Spatial referencing
13	2 hrs classroom +2 hrs lab	1,3,5,6,7	Coordinate systems Map projections
14	2 hrs classroom +2 hrs lab	1,3,5,6,7	point data transformation, Interpolating discrete data, Interpolating continuous data
15	2 hrs classroom +2 hrs lab	1,3,5,6,7	Course Exam

11. Course Evaluation

Final Exam (60%) Quizzes (10%) Laboratory (15%) Term Tests (15%)

12. Learning and Teaching Resources

Required textbooks (curricular books any)	-
Main references (sources)	prinsplies of gugraphic information systems
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	-https://www.esri.com/en-us/home -https://www.esri.com/en-us/what-is-gis/overview#:~:text=Ge %20system(s)%2C,what%20things%20are%20like %20there.(