

 FLORIDA ATLANTIC UNIVERSITY	NEW COURSE PROPOSAL Graduate Programs		UGPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Geosciences College Science <i>(To obtain a course number, contact erudolph@fau.edu)</i>		
Prefix GIS Number 6116	<i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i> Lab Code	Type of Course Lecture/Lab	Course Title Geospatial Databases
Credits <i>(Review Provost Memorandum)</i> 3	Grading <i>(Select One Option)</i> Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/>	Course Description <i>(Syllabus must be attached; see Guidelines)</i> Geospatial databases provide the functions of storing, managing and querying geospatial data, and are essential component of Geographical Information System (GIS). This course covers the fundamental principles, techniques and methodologies for designing and implementing a geospatial database and querying and geoprocessing in geospatial databases. Students will get hands-on experience via labs and projects.	
Effective Date <i>(TERM & YEAR)</i> Spring 2019	Prerequisites GIS 4043C/5051C or equivalent	Corequisites NONE	Registration Controls <i>(Major, College, Level)</i>
<i>Prerequisites, Corequisites and Registration Controls are enforced for all sections of course</i>			
Minimum qualifications needed to teach course: Member of the FAU graduate faculty and has a terminal degree in the subject area (or a closely related field.)		List textbook information in syllabus or here PostGIS in Action, 2nd Edition by Regina O. Obe and Leo S. Hsu (ISBN: 9781617291395)	
Faculty Contact/Email/Phone Weibo Liu/liuw@fau.edu/5612974965		List/Attach comments from departments affected by new course	

Approved by Department Chair _____ College Curriculum Chair _____ College Dean _____ UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____	Date 2/16/2018 3-8-18 3-8-18 3-28-18 3/28/18 3/28/18
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Email this form and syllabus to UGPC@fau.edu one week before the UGPC meeting.

GRADUATE COLLEGE

MAR 08 2018

Received

Florida Atlantic University
Geosciences Department

GIS 6116 Geospatial Databases
Spring 2019
3 Credit Hours

Instructor: Dr. Weibo Liu
Office Location: SE 410
Office Hours: Monday, 2-4 pm or by appointment.
Contact Phone Number: 561-297-4965
Email: liuw@fau.edu
Class Meetings: W 6:00-8:50 pm, SE 483

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Course Objectives

The first is to introduce the fundamental theories of data management in geospatial databases to develop a strong conceptual understanding of geospatial database design and implementation. The second is to obtain hands-on experience with mainstream open source and enterprise spatial database management systems (DBMS) such as PostgreSQL/PostGIS, and use Structured Query Language (SQL) to create and manipulate databases.

Textbook

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2. Additional reading materials will be available on Canvas.

GRADUATE COLLEGE

MAR 08 2018

Tentative Course Schedule

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WEEK	DATE	TOPIC	READING	TO DO
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2	01.17	Relational Database Concepts and Theory		Assignment #2
3	01.24	Intro to PostGIS Spatial Data Types	Chapter 1 & 2	
4	01.31	Spatial Reference System	Chapter 3 - 5	Assignment #3

		Spatial Query		
5	02.07	Geometry and Geography Functions	Chapter 6	
6	02.14	Raster processing	Chapter 7 & 12	Assignment #4
7	02.21	Midterm Exam		
8	02.28	Geometry Relationships	Chapter 9 & 10	
9	03.07	Spring Break (no class)		
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11	03.21	Building and Using Topologies	Chapter 13 & 14	
12	03.28	Working with Esri's Desktop Geodatabases		Assignment #6
13	04.04	Enterprise Geodatabase Administration		Assignment #7
14	04.11	AAG Conference (final project/no class)		
15	04.18	Data Management in an Enterprise Geodatabase		Assignment #8
16	04.26	Final Exam		

Contents are subject to change.

Final Project: Every student will develop a final project which account for 20% of course grade. A one-to two-page description of the final project will be due on March 28th. As we approach the deadline, I will set up some class time to discuss potential topics for the final projects. Also feel free to schedule a meeting with me to discuss plans for your final project. The term paper and code for the project will be due in the final week; a digital version of all materials will be required.

Grading Policy

Your final grade will be based on the following weighted distribution.

Eight Assignments	40%
Midterm Exam	20%
Final Exam	20%
Final Project	20%

Grade Scale:

total points	100-93	92-90	89-85	84-80	79-75	74-70	69-65	64-60	59-50	<50
Grade	A	A-	B+	B	B-	C+	C	C-	D	F

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Academic Advising Services:	http://www.fau.edu/freshmanadvising
FAU Libraries Website:	http://www.fau.edu/library
Center for Learning and Student Success Website:	http://www.fau.edu/class
University Center for Excellence in Writing:	http://www.fau.edu/UCEW
Math Learning Center:	http://www.math.fau.edu/MLC
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