

 FLORIDA ATLANTIC UNIVERSITY	NEW COURSE PROPOSAL Undergraduate Programs		UUPC Approval <u>3-29-21</u> 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 4054	<i>(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)</i> Lab Code C	Type of Course <input type="checkbox"/> Lecture/Lab	Course Title Web GIS
Credits <i>(Review Provost Memorandum)</i> 3	Grading <i>(Select One Option)</i> Regular <input checked="" type="radio"/> Pass/Fail <input type="radio"/> Sat/UnSat <input type="radio"/>	Course Description <i>(Syllabus must be attached; Syllabus Checklist recommended; see Guidelines)</i> This course provides students with a comprehensive and up-to-date overview of Web GIS, including the basic concepts, principles, related fields and frontiers and the state-of-art technical skills to build Web GIS applications and the knowledge needed to choose from various Web GIS development options.	
Effective Date <i>(TERM & YEAR)</i> Fall 2021	Prerequisites, with minimum grade* GIS 4043C or equivalent.		
		Corequisites	Registration Controls <i>(Major, College, Level)</i>
*Default minimum passing grade is D-. Prereqs., Coreqs. & Reg. Controls are enforced for all sections of course			
WAC/Gordon Rule Course <input type="radio"/> Yes <input checked="" type="radio"/> No WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See WAC Guidelines .		Intellectual Foundations Program (General Education) Requirement <i>(Select One Option)</i> None General Education criteria must be indicated in the syllabus and approval attached to the proposal. See GE Guidelines .	
Minimum qualifications to teach course PhD in Geosciences or a related field			
Faculty Contact/Email/Phone ames Gammack-Clark /gammack@fau.edu		List/Attach comments from departments affected by new course N/A	
Approved by Department Chair _____ College Curriculum Chair <u>Jerry Haky</u> College Dean _____ UUPC Chair <u>Jerry Haky</u> Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____		Date _____ <u>2/22/2021</u> <u>3-18-21</u> <u>3/24/2021</u> <u>3-29-21</u> <u>3-29-21</u> _____ _____	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.



GIS 4054C - Web GIS

Geosciences Department
Fall 2021
3 Credit Hours

Instructor: Dr. Weibo Liu
Office Location: Boca, SE 410 (remotely through Webex)
Office Hours: Tuesday 2-4pm or by appointment
Phone Number: 561-297-4965
Email: liuw@fau.edu

COURSE DESCRIPTION

This course provides students with a comprehensive and up-to-date overview of Web GIS, including the basic concepts, principles, related fields and frontiers and the state-of-art technical skills to build Web GIS applications and the knowledge needed to choose from various Web GIS development options.

COURSE PREREQUISITES

Course Prerequisites: GIS 4043C or equivalent.

COURSE OBJECTIVES

Upon successful completion of this course, students will be able to:

1. Explain Web GIS concepts, principles, related fields, and frontiers. (CO:1)
2. Explain how to build Web GIS applications. (CO:2)
3. Identify the appropriate options for various Web GIS development. (CO:3)
4. Use mainstream enterprise (ESRI) development tools. (CO:4)
5. Use open source Web GIS development tools. (CO:5)

COURSE DELIVERY MODE

This is a fully online course accessible only through FAU's learning management system, Canvas. You must log into Canvas with your FAU ID and Password to access the materials and assignments in this course. If you do not know your FAU ID or Password, [contact OIT for help](#).

The course is organized into modules with due dates. Unless otherwise specified, each module begins on Monday at 12:00am, EST, and ends on Sunday at 11:59pm, EST. The course begins with the Start Here module, which will familiarize you with the organization and navigation of the course. You will open a new learning module to access the assigned reading materials, videos, presentations, and other relevant materials for each subsequent module.

TIME COMMITMENT PER CREDIT HOUR

This course has 3 credit hours. For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

REQUIRED TEXTS & COURSE SCHEDULE

In this course, you will need the following texts and/or materials:

- Pinde Fu, 2020, Getting to Know Web GIS (fourth edition). ESRI Press. Redlands, CA. ISBN: 9781589485921.
- Additional reading materials will be available on Canvas

WEEK	DATE	TOPIC	READING	TO DO
1	08.23	Course overview. Web GIS basics and applications	Chapter 1	Assignment #1
2	08.30	Hosted feature layers and storytelling with GIS	Chapter 2	Assignment #2
3	09.06	ArcGIS Experience Builder and ArcGIS Web AppBuilder	Chapter 3	Assignment #3

4	09.13	Mobile GIS	Chapter 4	Assignment #4
5	09.20 (Two weeks)	Spatiotemporal data and real-time GIS	Chapter 6	Assignment #5
6	10.04	3D web scenes	Chapter 7	Assignment #6
7	10.11	Midterm Exam		
8	10.18	Intro to HTML and CSS		Assignment #7
9	10.25 (Two weeks)	Web GIS programming with ArcGIS API for JavaScript	Chapter 10	Assignment #8
10	11.08	FOSS in Web GIS		Assignment #9
11	11.15	Tile layers and on-premises Web GIS	Chapter 5	Assignment #10
12	11.22	Spatial analysis and geoprocessing	Chapter 8	Assignment #11
13	11.29	Image service and online raster analysis	Chapter 9	Assignment #12
14	12.09	Final Exam		

MINIMUM TECHNOLOGY & COMPUTER REQUIREMENTS

HARDWARE & SOFTWARE REQUIREMENTS

Hardware

- Dependable computer
- Computer speakers
- Headset with microphone
- Webcam

Software

- [Microsoft 365 Suite](#)
- Reliable web browser (recommended [Chrome](#) or [Firefox](#))
- Canvas mobile app: Download instructions for [iOS device](#) or [Android device](#)
- [Adobe Reader](#)
- [Adobe Flash Player](#)
- Web application capabilities.

Internet Connection

- Recommended: Broadband Internet connection with a speed of 4 Mbps or higher.
- To function properly, Canvas requires a high-speed Internet connection (cable modem, DSL, satellite broadband, T1, etc.). The minimum Internet connection speed to access Canvas is a consistent 1.5 Mbps (megabits per second) or higher.
- [Check your Internet speed here.](#)

Other Technologies

- Web application capability

COMPUTER REQUIREMENTS

Basic Computer Specifications for Canvas

- Operating system: Windows 10 or macOS Sierra (or higher).
- [Specifications](#)

Peripherals

- A backup option should be available to minimize the loss of work. This can be an external hard drive, a USB drive, cloud storage, or your folder on the FAU servers.

Software

- Once logged in to Canvas make sure your Internet browser is compatible.
- Other software may be required for specific learning modules. If so, the necessary links to download and install will be provided within the applicable module.

MINIMUM TECHNICAL SKILLS REQUIREMENTS

The general and course-specific technical skills you must have to succeed in the course include but are not limited to:

- Use ArcGIS.
- Accessing Internet.
- Using Canvas (including taking tests, attaching documents, etc.).
- Using email with attachments.
- Creating and submitting files in commonly used word processing program formats such as Microsoft Office Tools.
- Copying and pasting functions.
- Downloading and installing software.
- Using presentation, graphics, and other programs.
- Posting and commenting in an online discussion.
- Searching the FAU library and websites.

TECHNICAL SUPPORT

In the online environment, technical issues are always possible (e.g., lost connection, hardware or software failure). Many of these can be resolved relatively quickly, but if you wait until the last minute before due dates, the chances of these glitches affecting your success are greatly increased. Please plan appropriately. If a problem occurs, it is essential you take immediate action to document the issue so your instructor can verify and take appropriate action to resolve the problem. Most issues in Canvas can be resolved by clicking on the “Help” tab located on the menu bar.

When a problem occurs, click “Help” to:

- Report a Problem
- Live Chat with Canvas Support
- Search Canvas Guides

Additional Technical Support

1. Contact the eLearning Success Advisor for assistance: 561-297-3590
2. If you can, make a Print Screen of the monitor when the problem occurs. Save the Print Screen as a .jpg file. If you are unfamiliar with creating a Print Screen file, see [Print Screen instructions](#).
3. Complete a [Help Desk ticket](#). Make sure you complete the form entirely and give a full description of your problem so the Help Desk staff will have the pertinent information in order to assist you properly. This includes:
 - a. Select “Canvas (Student)” for the Ticket Type.

- b. Input the Course ID.
 - c. In the Summary/Additional Details section, include your operating system, Internet browser, and Internet service provider (ISP).
 - d. Attach the Print Screen file, if available.
4. Send a message within Canvas to your instructor to notify him/her of the problem. Include all pertinent information of the incident (2b-d above).
5. If you do not have access to Canvas, send an email to your instructor with all pertinent information of the incident (2b-d above).
6. If you do not have access to a computer, call your instructor with all pertinent information of the incident. If he/she is not available, make sure you leave a detailed message.
7. If you do not hear back from the Help Desk or your instructor within a timely manner (48 hours), it is your responsibility to follow up with the appropriate person until you obtain a resolution.

COURSE ASSESSMENTS, ASSIGNMENTS & GRADING POLICY

GRADING CRITERIA

Introductions and Syllabus Quiz (0%)

You will post an introduction in the student introductions discussion board and take a syllabus quiz. You can take the syllabus quiz as many times as necessary to achieve 100%.

Lab Discussion Boards (0%)

As part of the course assignments, you will be asked to post an original submission to the discussion board and reply to at least two other students' posts with a substantive response. A substantive response adds value to the discussion by bringing new ideas, research, evidence, etc. to the conversation. "I agree," "Ditto" and the like are not acceptable replies. The rules of Netiquette must be followed. Replies are not texts with your friends. Full sentences, proper spelling, source citations, etc., are expected.

Ensure that postings contain detailed responses to each question and that course and chapter contents are applied in your discussion responses. For example, consider taking a new approach in presenting chapter content, cite new examples, present external research (paraphrase, avoid unnecessary and/or lengthy quotations; **do not plagiarize, cite references**). For maximum points, please reference external research or examples as well as the discussion rubrics.

All original posts for each module discussion board must be submitted by 11:59pm, EST, on Sunday. Responses to peers are due at 11:59pm, EST, on Sunday.

Assignments (72%, 6% for each assignment)

Assignments are based on textbook activities. You will be asked to apply what you have learned from the textbook and lecture content to create and submit a URL of the product, based on the instructions provided.

Midterm Exam (14%)

The midterm exam consists of material covered from Module 1 through Module 6 in short answer essay style exam as well as the building of a web app given specific requirements.

Final Exam (14%)

The final exam consists of material covered from Module 1 through Module 12 in short answer essay style exam as well as the building of a web app given specific requirements.

The instructor will calculate your grade based on the following weighted distribution:

Assessment	Total Points	Weight (%)
12 Lab Discussion Boards • Worth up to 0 points each.	0	0
12 Assignments • Worth up to 100 points each.	1200	72
1 Midterm Exam • Worth up to 100 points.	100	14
1 Final Exam • Worth up to 100 points.	100	14
TOTAL:	1400	100%

GRADE SCALE

Grade	Weight (%)
A	100 % – 93.0 %
A-	< 92.0% – 90.0 %
B+	< 89.0% – 85.0 %
B	< 84.0 % – 80.0 %

B-	< 79.0 % – 75.0 %
C+	< 74.0 % – 70.0 %
C	< 69.0 % – 65.0%
C-	< 64.0 % – 60.0%
D	< 59.0 % – 50.0%
F	< 61.0 % – 0.0%

ATTENDANCE

Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

LATE ASSIGNMENTS POLICY

Late Assignments Policy: Assignments will be deducted 5% for each day that they are late, unless arranged in advance and with good reason. Also, note that grades of Incomplete ("I") are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances.

MAKE-UP POLICY FOR TESTS

No make-up exams will be given

INCOMPLETE GRADE POLICY

The University policy states that a student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete (“I”). The assignment of the “I” grade is at the discretion of the instructor but is allowed only if the student is passing the course. A student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete (“I”). The assignment of the “I” grade is at the discretion of the instructor but is allowed only if the student is passing the course.

The specific time required to make up an incomplete grade is at the discretion of the instructor. However, all work required to satisfy an incomplete (“I”) grade must be completed within a period not exceeding one calendar year from the assignment of the incomplete grade. After one calendar year, the incomplete grade automatically becomes a failing (“F”) grade

COURSE POLICIES

CODE OF ACADEMIC INTEGRITY POLICY STATEMENT

Students at Florida Atlantic University should endeavor to maintain the highest ethical standards. Academic dishonesty is a serious breach of these ethical standards because it interferes with the University mission to provide a high-quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive to the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

PLAGIARISM

[Plagiarism](#) is unacceptable in the University community. Academic work must be an original work of your own thought, research, or self-expression. When students borrow ideas, wording, or organization from another source, they must acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass off such work as one's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized. This includes all discussion board posts, journal entries, wikis, and other written and oral presentation assignments. If in doubt, cite your source.

ONLINE ATTENDANCE POLICY

Since the course is online, you should access the course **at least three times per week** to ensure you do not miss pertinent postings, messages, or announcements. It is imperative that you meet course deadlines and stay active in discussion boards, group projects, etc. If you are experiencing major illness, absences due to University duties, or other large-scale issues, contact the instructor immediately to formulate a resolution.

NETIQUETTE

Due to the casual communication common in the online environment, students are sometimes tempted to relax their grammar, spelling, and/or professionalism. Please remember that you are adult students and professionals—your communication should be appropriate. For more in-depth information, please see the [FAU statement on netiquette](#).

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS) CENTER

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

UNIVERSITY APPROVED ABSENCE POLICY STATEMENT

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. It is the student's responsibility to notify the course instructor at least one week prior to missing any course assignment.

WITHDRAWALS

Any student who decides to drop is responsible for completing the proper paperwork required to withdraw from the course.

CLASSROOM ETIQUETTE/DISRUPTIVE BEHAVIOR POLICY STATEMENT

Disruptive behavior is defined in the FAU Student Code of Conduct as "... activities which interfere with the educational mission within classroom." Students who disrupt the educational experiences of other students and/or the instructor's course objectives in a face-to-face or online course are subject to disciplinary action. Such behavior impedes students' ability to learn

or an instructor's ability to teach. Disruptive behavior may include, but is not limited to non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

For more information, please see the [FAU Office of Student Conduct](#).

COMMUNICATION POLICY

EXPECTATIONS FOR STUDENTS

Announcements

You are responsible for reading all announcements posted by the instructor. Check the course announcements each time you log in.

Email/Video Conferencing

You are responsible for reading all your course email and responding in a timely manner.

Course-Related Questions

Post course-related questions to the FAQ discussion board. This allows other participants with the same question to benefit from the responses. Also, make sure you review this forum prior to posting a question. Someone may have already asked and answered the question in previous posts.

INSTRUCTOR'S PLAN FOR CLASSROOM RESPONSE TIME & FEEDBACK

Email/Video Conferencing Policy

Except for weekends and holidays, the instructor will typically respond to email (Canvas inbox or FAU email) within 48 hours. You should ask course-related questions in the FAQ discussion board. If you have questions of a personal nature, you should email the instructor.

Assignment Feedback Policy

The instructor will provide feedback on submitted assignments within one week of the submission date. Some assignments may require a longer review period, which the instructor will communicate to you.

Course-Related Questions Policy

Except weekends and holidays, the instructor will generally answer questions within 48 hours.

Electronic Communication Policy

In addition to the University's policy, please consider the following:

- Privacy, confidentiality, and security in all electronic communications.
- All electronic communication resources must be used for the course and in alignment with to the University mission.
- Prohibited use of false identity, false identity pseudonyms, or anonymous (sender's name or electronic identification is hidden).
- Access without consent.
- Disruption of services including introducing computer contaminants (viruses).
- Harassment of any kind.

Please see the Office of Information Technology's policies on [Cyber Security Awareness](#).

SUPPORT SERVICES & ONLINE RESOURCES

- [Center for eLearning and Student Success](#)
- [Counseling and Psychological Services](#)
- [FAU Libraries](#)
- [Freshmen Academic Advising Services](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Office of International Programs and Study Abroad](#)
- [Office of Undergraduate Research and Inquiry](#)
- [Student Accessibility Services](#)
- [University Center for Excellence in Writing](#)

FACULTY RIGHTS & RESPONSIBILITIES

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise.

To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.

- Recommend disciplinary action for students whose behavior may be judged as disruptive under the *Student Code of Conduct*.

SELECTED UNIVERSITY & COLLEGE POLICIES

ACCESSIBILITY POLICY STATEMENT

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations to properly execute coursework due to a disability, must register with Student Accessibility Services (SAS) located in the Boca Raton, Davie, and Jupiter campuses and follow all SAS procedures. For additional information, please consult [Student Accessibility Services](#).

Contact

- **Boca Raton:** (561) 297-3880
Fax: (561) 297-2184, TTY: 711
- **Davie:** (954) 236-1222
Fax: (954) 236-1123, TTY: 711
- **Jupiter:** (561) 799-8721
Fax: (561) 799-8721, TTY: 711

GRADE APPEAL PROCESS

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[Chapter 4 of the University Regulations](#) contains information on the grade appeals process.

RELIGIOUS ACCOMMODATION POLICY STATEMENT

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of

examinations and work assignments. For further information, please see [Academic Policies and Regulations](#).

UNIVERSITY APPROVED ABSENCE POLICY STATEMENT

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities. It is your responsibility to notify the instructor at least one week prior to missing any course assignment.

DROPS/WITHDRAWALS

You are responsible for completing the process of dropping or withdrawing from a course. Please click on the following link for more information on dropping and/or withdrawing from a course. Please consult the [FAU Registrar Office](#) for more information.

* * *

The instructor reserves the right to adjust this syllabus as necessary.