DCP 2001: Introduction to GIS I, Section 15CB

Fall 2023 | 3 Credits

Instructor:	**Azza Kamal, PhD, LEED AP ND** | Program in Sustainability and the Built Environment (SBE), and Department of Urban and Regional Planning College of Design, Construction and Planning (DCP) | University of Florida.
Instructor's Office:	ARCH 132 | UF Building #0268
Instructor's Contacts & Office Hours:	*Preferred:* Canvas email *Alternative:* O: (352) 294-1425 | azzakamal@ufl.edu R | 10:00 AM – 12:00 PM | or by appointment
Course Time & Location:	Tuesday | **Period 7-9** (1:55 - 4:55 PM) | WEIL 408D | UF Building #0024
Co/Prerequisite:	None
General Education Credit:	None
Final Exam Schedule:	There is no Final Exam in this class. Group's project will be presented at the end of the semester (check the detailed course schedule, pp 9 - 10).

IT IS IMPORTANT TO READ THIS ENTIRE SYLLABUS ON YOUR FIRST DAY OF CLASS

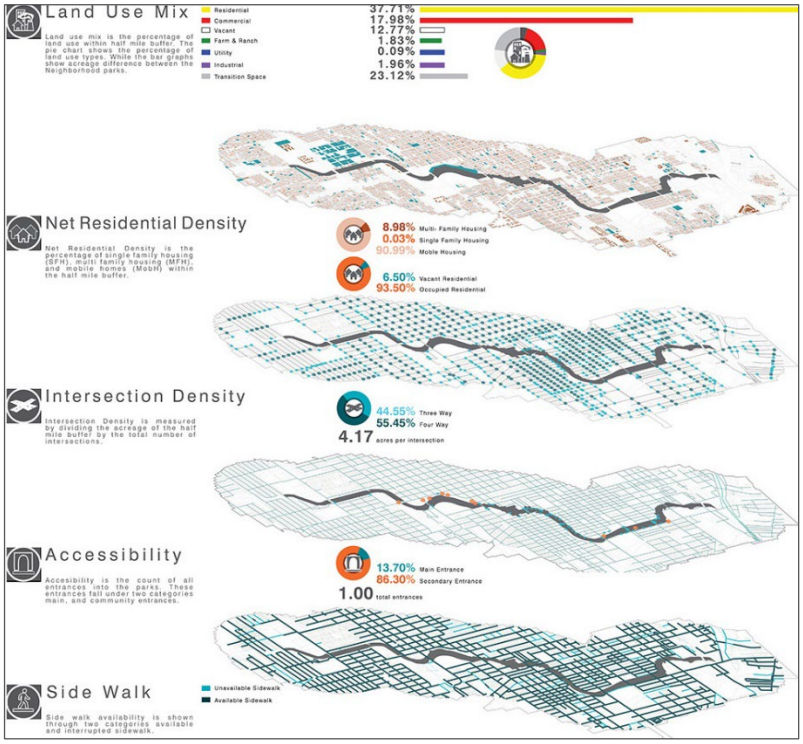
COURSE DESCRIPTION

Introduces concepts and theories associated with Geographic Information Systems (GIS) as related to **Geodesign**. Requires lectures, class assignments, and homework assignments.

COURSE OVERVIEW AND OBJECTIVES

This course provides an introduction to the fundamentals of Geographic Information Systems (GIS) and its application in sustainability, urban planning, landscape planning, the social sciences, or other students interested in a professional GIS curriculum. The course is presented in a lecture/laboratory format:

- The lectures focus on understanding the principles and rationale of GIS, show examples and applications, and discuss the use of GIS as a decision-making tool.
- The laboratory portion will provide students with weekly lab assignments and a team project that equips them with hands-on contact with GIS software products (ArcGIS Pro) and the applications of Geodesign Framework (a six-step models) in real-world projects.



Students: Laura Bustillo & Maria Hernandez (2016)

The goal of the course is to provide students with experiences in the design, development, analysis, and visualization of geographic data. Upon completion of the course, students should be able to:

1) Demonstrate an understanding of the theoretical and practical concepts used in GIS.
2) Manage spatial and non-spatial data management techniques for use in a GIS.
3) Conduct spatial and logical queries on geospatial data.
4) Describe and communicate analytical findings to a non-technical audience.
5) Demonstrate a working knowledge of GIS software capabilities.
6) Demonstrate the ability to design a process that utilizes GIS as a tool to facilitate decision-making.

STUDENT LEARNING OUTCOMES (SLO)

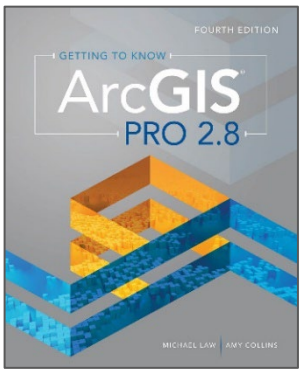
Upon completion of this course, successful students will be able to:

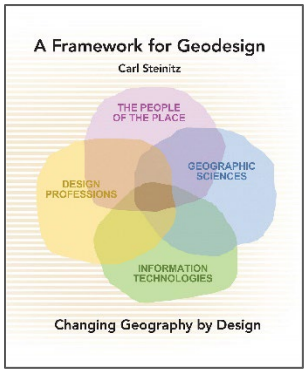
- Explore mapped data and comprehend fundamental concepts and practices of Geographic Information Systems (GIS).
- Apply basic graphic and data visualization concepts such as color themes and symbolization.
- Demonstrate organizational skills in file and database management.
- Develop and manage geodatabases.
- Apply GIS analysis to address geospatial problems and to answer the research questions.
- Demonstrate proficiency in the use of ArcGIS Pro tools and Geodesign models to explain, analyze, and evaluate a specific location-based problems and explore avenues for possible design solutions.

TEXTBOOKS AND READING

Required Book: Michael Law and Amy Collins (2021), Getting to Know ArcGIS Pro 2.8, 4th Edition, ESRI Press.

Recommended Book: Carl Steiniz (2012), A Framework for Geodesign: Changing Geography by Design, ESRI Press.
(on the Course Reserve) at The UF George A. Smathers Libraries.





- Various free publications identified for class assignments that will be supplied in via the UF Canvas e-Learning portal (https://lss.at.ufl.edu/). Readings will be comprised of online articles, book chapters, online media materials, or videos. Assignments may be supplied in class and/or via the UF Canvas e-Learning portal (https://lss.at.ufl.edu/). Students are expected to complete readings and review of these materials as advance preparation for class assignments.

ADDITIONAL EXPENSES

Not applicable. However, students are expected to procure and use their own mobile file storage and transfer device (e.g., USB thumb drive) or web-based service to present and share information in class.

INSTRUCTIONAL METHODS AND EXPECTATIONS

This course format includes lectures/ software demo, lab assignments, discussions and sharing reflections on assigned readings, previewing of multi-media materials, quizzes, and a group project. Student research, writing, and project development during and outside of class is also expected. The course may periodically include materials other than the lecture and readings, including online forums, videos and ESRI resources. Students are encouraged to take content and contextual notes about lectures, guest speakers, and videos, as these materials may also be of relevance and referenced on course assignments and projects.

- Student expectations of instructor: enthusiasm for the course; engaging lectures; application of knowledge through classroom activities and fieldwork; easy to access course materials; clear guidance and assessment rubric; openness and encouragement of critical thoughts and new ideas; constructive feedback, and reasonable flexibility to meet with students outside of class.
- Instructor expectations of students: compassionate curiosity; positive attention and intention; enthusiasm about learning new ideas and contribution to the learning environment, consistent attendance; punctual arrival; active participation in class discussions and activities; advance-reading and note preparation of assigned reading; on-time completion/submission of all assignments; proper citation management; professional attitude, adherence to proper netiquette and all University rules and regulations.

COURSE COMMUNICATIONS AND E-LEARNING/ CANVAS PORTAL

This class will be delivered through in-person instructions. The instructor will utilize the UF Canvas e-Learning portal as the primary medium to send announcements and to distribute course information, assignments, readings materials, resources, and grading. Students are responsible for checking Canvas portal regularly for announcements, course content, access to all supplemental readings, and to submit assignments and projects. Readings and changes to the syllabus will also be posted on Canvas.
Lecture slides will be posted on Canvas in advance of each scheduled lecture. Reviewing materials online is never a substitute for class attendance. Lecture posted on Canvas by instructor are not intended to be a complete study aid and should be viewed as supplementary to personal notes.

- **Canvas email is my preferred method of communication**. Please don't email me on my campus email, rather on Canvas email system. I will answer your email on the same system. Please allow up to 24 hours for a reply. Proper email etiquette is expected. It is your responsibility to ensure that you either login to Canvas to retrieve instructor's emails or have them set to be forwarded to your university's email account. To login to Canvas, provide your GatorLink username and password. If you are new to Canvas or have any problems with it, **please contact the Help Desk at 392-HELP**.
- It is your responsibility to submit assignments on time through Canvas. If you are having problems uploading your assignment to Canvas, you must immediately contact the Help Desk [392-HELP (4357) or helpdesk@ufl.edu] to report the problem and receive a ticket to document the problem. I can only extend the submittal deadline if you have contacted the Help Desk ahead of the assignment deadline and received a ticket. The Help Desk is available by phone and email 24 hours a day, 7 days a week.

WEEKLY PLAN

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Lecture and lab exercise & assignment			▪ Submit Quiz (Friday, 11:59 PM) ▪ Work on assignment	▪ Submit lab assignment (Sunday, 11:59 PM) ▪ Work on Final Project (teams)	

ASSIGNMENTS AND GRADING

According to Southern Association of Colleges and Schools Commission on Colleges [SACS] that our university abides by, one credit hour represents "not less than 1 hour of classroom or direct faculty instruction and a minimum of 2 hours out of class student work each week for approximately 15 weeks for one semester". Thus, **students are expected to spend approximately 9 hours every week for this 3-credit hour course**. This time is expected to be spent on the work required per week for completing lectures, videos, readings, quizzes, discussions, assignments, and semester project for this course. Please be sure to schedule the appropriate amount of time each week to devote to this class and the various assignments.

All grades will be posted in the Canvas gradebook. Any discrepancies with points displayed in the gradebook should be addressed directly with the instructor. Course grades will neither be curved, nor rounded up. *Any requests for extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.*

Assignments Points and Weights

Assignment	Points	Percent
Attendance, Punctuality, and Participation	100	10%
8 Lab Assignments & Exercises (8X45)	360	36%
8 Quizzes (8X 25 each)	200	20%
Semester Project: Multiple submissions (Teams)	340	34%
Total	**1000**	**100%**

Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Numeric Grade	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Quality Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0

Final student grades will follow University of Florida grades and grading policies.

- Undergraduate Students grading policy

SYSTEM REQUIREMENTS

The following are the minimum hardware requirements recommended for this course assignments and are seamlessly working with the software: ArcGIS Pro 2.8 or more updated ESRI release. A system check is assigned and available on Canvas that student must submit on the first week of class.

Item	Expected (and recommended)
CPU	Minimum: 2 cores, simultaneous multithreading Simultaneous multithreading, or hyperthreading, of CPUs typically features two threads per core. A multithreaded 2-core CPU will have four threads available for processing, while a multithreaded 6-core CPU will have 12 threads available for processing.
	Recommended: 4 cores
	Optimal: 10 cores
Platform	x64
Storage	Minimum: 32 GB of free space
	Recommended: 32 GB or more of free space on a solid-state drive (SSD)
Memory/RAM	Recommended: 32 GB
	Optimal: 64 GB or more
Dedicated (not shared) graphics memory	Recommended: 4 GB or more If you're using a notebook computer with an integrated GPU, consider increasing the system RAM to compensate for the usage of shared memory.
Visualization cache	The temporary visualization cache for ArcGIS Pro can consume up to 32 GB of space, if available, in the user-selected location. By default, the visualization cache is written to the user profile's \Local subfolder, so it does not roam with the user profile if roaming profiles are enabled by your system administrator.
DirectX*	Minimum: DirectX 11, feature level 11.0, Shader Model 5.0
OpenGL*	Minimum: OpenGL 4.3 with the ARB_clip_control and EXT_texture_compression_s3tc extensions
	Recommended: OpenGL 4.5 with the ARB_shader_draw_parameters, EXT_swap_control, EXT_texture_compression_s3tc, and EXT_texture_filter_anisotropic extensions
Screen resolution	1024x768 or higher
This is ESRI's recommended hardware for ArcGIS Pro 3.0 (if your computer has less RAM and does not meet these requirements, try to install ArcGIS Pro 2.9 or 2.8): https://pro.arcgis.com/en/pro-app/latest/get-started/arcgis-pro-system-requirements.htm	

CLASS POLICY AND EXPECTATIONS

Attendance Policy

You are expected to be an active participant in the class. Attendance is mandatory and participation is graded based on each class period (i.e., missing a multi-period day of class will count as multiple absences in accordance with the number of periods). Every class is comprised of 3 teaching periods. **Students may miss up to 4 teaching periods (not 4 classes)** without penalty. Students with **5 to 6 unexcused period absences will encounter a 10% grade reduction** (one letter grade) from their total semester grade. **7 or more periods of unexcused absences will result in failing this course**.

According to University policy, absences may be excused due to illness, religious holiday, emergency, death in the family, or participation in official University-sponsored athletic events or scholarly activities. Please inform the instructor of any anticipated absences as early as possible and be prepared to provide appropriate documentation. You are responsible for contacting a classmate to obtain notes on the materials covered.

Requirements for class attendance and **make-up exams, assignments, and other work** in this course are consistent with University policies as found at: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

If you encounter an emergency or illness that requires an extended absence, you may wish to ***contact the Dean of Students Office*** (202 Peabody Hall, 392- 1261) for assistance.

Failure to attend class regularly, consistent tardiness, and/or early departure will result in a significant negative impact on your attendance and class participation grades. Missing a substantive portion of a class, whether you arrive late or leave early without prior approval, will also be considered an unexcused absence. This means the following:

- Come to class on time and complete weekly readings and assignments prior to class discussions.
- Submit your work on time.
- Participate in class and be an active listener (i.e., listen, respond, ask questions, and make comments).

Attendance, Punctuality and Class Participation (Rubric)

Your engagement in, and contribution to and leading, class discussions is essential to the success of this course as both instructors and students benefit from learning from new perspectives. As such, you are expected to be well prepared for each class by keeping up with scheduled readings, completing assignments, and creatively contributing information and commentaries.

Critical thinking and problem solving require robust, informed conversation. If an interesting issue in sustainability and the applications of spatial analyses is receiving considerable attention in the audio or visual media, it may be discussed in class. Similarly, if there are issues, ideas, or readings that you want included in this course, please let the instructor know. This is your course, and together we will make every reasonable attempt to accommodate new ideas. Thus, you should plan to invest some of your time into finding material and reflecting on those new ideas. You are expected to participate via active listening and thoughtful discourse. The following rubric will be employed to assign class participation points:

Qualities	Preferred (4 pts)	Acceptable (3 pts)	Passing (1 pts)	Unacceptable (0 pts)
Punctuality	Arrives on time	Arrives less than 5 minutes late	Arrives 5-10 minutes late	Absent, or arrives more than 10 minutes late (w/o explanation)
Commentary	Comments are relevant and reflect understanding and good preparation	Comments are mostly relevant, but understanding may be slightly lacking	Comments are minimal and demonstrate poor preparation	No comments are made or disruption to others.
Demeanor	Clear enthusiasm	Not overly enthusiastic, but positive	Partially engaged, but not enthusiastic or positive	Disengaged, texting, online, et.

Personal Conduct Policies

Treat this course as you would a new job. Above all else, the classroom is a place of respect for people and ideas. You are expected to treat your fellow classmates, the instructor, guests, and others with respect, honesty, professionalism, and politeness. Please be on time and prepared to share your informed questions, impressions, and interpretations of the current week's materials. Tardiness is unacceptable and rude to both the instructor and your fellow classmates. If you need to leave class early, please let the instructor know ahead of time and sit nearer to the door so as not to disrupt class. A break will be provided approximately every 50 minutes for any multi-hour block. Students engaging in disruptive behavior will be asked to leave the class and will be marked absent for the day.

Netiquette – Communication Courtesy
All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats. Please refer to: http://biostat.ufl.edu/resources/e-learning-resources/e-learning-basics/etiquette-online/

Cell Phones
Cell phones and other electronic devices must be set to silent or vibrate mode during class. Cell phones must be put away during class time. Students who receive or make calls or text messages during class will be asked to leave and marked absent for the day.

Tablets & Laptops
You may use tablets or laptops to take notes, access course materials, and/or complete in-class assignments. If you are observed using your electronic device for social media, email, messaging, and/or other non-class uses, you will be asked to leave and marked absent for the day.

Make-Up Policies
There is no make-up policy for exams, quizzes, and in-class activities missed due to unexcused absences. If you are sick or have an emergency that prevents you from taking an exam at the scheduled time, it is your responsibility to contact the instructor as soon as possible. Documentation of the illness, or emergency date will be required. If you need to schedule a make-up exam, please email the instructor with a detailed explanation, and attach documentation. Make-up exams will be given at the instructor's discretion. Scheduling make-up exams is the responsibility of the student and should be done before the scheduled exam time.

If you have a serious emergency or life event, ***please contact the Dean of Students Office*** (www.dso.ufl.edu), and they will contact all of your instructors so that you do not have to provide documentation of the emergency/death in order to make-up exams and coursework. You and your instructor may work together to create a schedule for make-up coursework upon your return. See other sections of ***Class Policy and Expectations*** for more information.

Assignments and Submission Policy
Assignments will be opened on Canvas in advance of their due dates and must be submitted by their posted deadlines. It is your responsibility to ensure that each assignment has been successfully uploaded to Canvas for instructor grading. If you anticipate being unable to submit an assignment on time for an excusable reason, you must submit the assignment early or notify the instructor as early as possible. Extensions are not granted lightly and must be arranged in advance. *Otherwise,* ***late work will be marked down by 5% for each day it is late. No work will be accepted after 5 days*** without accepted excuse. The following is a summary of the expected coursework. Detailed guidance and assessment rubric for each will be available on Canvas throughout the semester:

Lab Assignments & Class Activities: ***34%*** *of Semester Grade*
Eight (8) lab assignment will be started in class and completed outside class time. Each assignment worth 45 point with a total of 340 points. You're expected to work up to 9 hours per week outside of class per university standards. Assignments are due on Canvas before the beginning of next class. Students will be evaluated based on their work performed in class and the submission on Canvas. Evaluation rubric will be included in each assignment.

Quizzes: ***20%*** *of Semester Grade*
Eight (8) quizzes are required to test your understanding of the principles, scopes, and areas of GIS covered throughout this semester. Each quiz worth 25 point with a total of 200 points (20% of the total semester grade) for all quizzes. Quizzes are not summative, rather focusses on the contents covered in the weeks preceding the quiz only. You have two attempts to re-take the first quiz, and one attempt for all subsequent quizzes, each is 30 minutes maximum.

Semester Project (teams): ***36%*** *of Semester Grade*
The final project is a significant checkpoint in this course, and it is **a team project (2-3 students each)**. It is an opportunity for the student to demonstrate they have a firm grasp of the foundations and technical skills in GIS and its applications in the context of Geodesign at local, city, and regional scales. The project topic will be selected by each team but must be corresponding to one of the broader themes the instructor will provide. The final project will be reviewed in class and on Canvas prior to the final presentation and submission. The project final report and presentation will include GIS data analysis, a detailed inventory of data used and sources, literature supporting the topic, analytical views, charts and graphics, and other supporting media, in addition to a bibliography. Project guidelines, expectations, and evaluation rubric will be available on Canvas. Students can earn up to 360 points (or 36% of the total semester grade).

UNIVERSITY POLICIES

Student Responsibilities

As a student at the University of Florida, you have committed yourself to uphold the *Honor Code*, which includes the following responsibilities as delineated at https://catalog.ufl.edu/UGRD/student-responsibilities/.

- Academic Honesty
  - Preamble
  - The Honor Pledge
  - Student Responsibility
  - Faculty Responsibility
  - Administration Responsibility
- Student Conduct Code
- Alcohol and Drugs
  - What the University Community Can Do to Prevent Alcohol Abuse and Drug Abuse
- Relations Between People and Groups
- Service to Others
- Standard of Ethical Conduct

Software Use

All faculty, staff and students at the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. As such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Students with Disabilities

Students requesting accommodation for disabilities must first register with the Disability Resource Center (DRC). The DRC coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services, and mediating faculty-student disability related issues.
Upon registering, the DRC will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. The DRC may be contacted by visiting 001 Reid Hall, calling 352-392-8565, or viewing www.dso.ufl.edu/drc/.

Religious Observances

Please inform the instructor of any religious holidays or other days of special religious significance that may interfere with your participation in this class so that appropriate accommodations can be made.

Sexual Harassment

Sexual harassment is reprehensible and will not be tolerated by the University. It subverts our academic mission and threatens the careers, educational experience, and well-being of students, faculty, and staff. The University will not tolerate behavior between, nor among, members of this community that creates an unacceptable working environment.

Special Consideration

The principle of equal treatment of all students is a fundamental guide in responding to requests for special consideration. No student shall be given an opportunity to improve a grade that is not made available to all members of the class. This policy is not intended to exclude reasonable accommodation of verified student disability, or the completion of work missed due to religious observance, verified illness, or absence due to circumstances beyond your control. Reconsideration of subjective judgments of a student's work will be done only if all students in the class can be and are given the same consideration.

Campus Accessibility Considerations

When driving onto campus, be aware of parking decal restrictions and visit http://www.parking.ufl.edu/. When riding transit or using other available commuting methods, visit http://parking.ufl.edu/transit-commuting/.

HELPFUL CAMPUS RESOURCES

Academic and Professional

- *Career Connections Center*, Reitz Union, 352-392-1601. Career assistance and counseling. https://career.ufl.edu/
- *E-Learning Technical Support*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://elearning.ufl.edu/student-help-faqs/
- *Library Support*. Provides various ways to receive assistance with respect to using the libraries or finding resources. http://cms.uflib.ufl.edu/ask
- *Teaching Center*, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/
- *Writing Studio, 302 Tigert Hall,* 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/
- *UF Information Technology | Computing Help Desk*, 352-392-HELP (4357) or e-mail to helpdesk@ufl.edu http://helpdesk.ufl.edu/

Health and Safety

- ***Dean of Students Office***, 202 Peabody Hall, 352-392-1261. Among other services, the DSO assists students who are experiencing situations that compromises their ability to attend classes. This includes family emergencies and medical issues (including mental health crises). https://www.dso.ufl.edu/care
- ***Sexual Assault Recovery Services*** *(SARS)*, Student Health Care Center, 352-392-1161. Sexual assault counseling.
- ***Student Health Care*** *Center.* Call 352-392-1161 for 24/7 health care information. https://shcc.ufl.edu/
- ***UF Health Shands Emergency Room / Trauma Center***, 1515 SW Archer Road, Gainesville, FL 32608, 352-733-0111. For immediate medical care call or go to the emergency room. https://ufhealth.org/emergency-room-trauma-center
- ***U Matter, We Care, U Matter***, multiple locations, 352-392-1575. If you or someone you know is in distress, please contact umatter@ufl.edu or visit the website to refer or report a concern and a team member will reach out to the student in distress. https://umatter.ufl.edu/
- ***University Counseling Center & Wellness Center***, 3190 Radio Rd., 392-1575. Personal and career counseling, as well as therapy for anxiety, stress, and mental health issues. http://www.counseling.ufl.edu/cwc/
- ***University Police Department***, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/

DCP 2001: COURSE SCHEDULE*

Detailed weekly plan, readings, quizzes, and course content will be available on Canvas throughput the semester

Week	Module	Details	Submissions (on Canvas)
Week 1 8/29	**Module 1** Introduction to GIS	**Course Introduction**, syllabus, ESRI products, Fundamentals of Geographic Information Systems (GIS), ArcGIS Pro downloads, and principles of Geodesign.	▪ Quiz 1 (Friday 11:59 PM) ▪ Lab assignment 1 (Sunday 11:59 PM)
Week 2 9/05		**ArcGIS Pro Portal; Data Types and Maps:** Geodatabase Shapefile (SHP) Database file (DBF)	
Week 3 9/12	**Module 2** Projections & Datum	**Map Projections:** Coordinate system, projections, and datum Add spatial reference "Define" tool vs. "Project" tool	▪ Quiz 2 (Friday 11:59 PM) ▪ Lab assignment 2 (Sunday 11:59 PM)
Week 4 9/19	**Module 3** Data Subsets	**Selecting A Subset of Data:** What is inside? What is nearby? Creating layer or file for data subset	▪ Quiz 3 (Friday 11:59 PM) ▪ Lab assignment 3 (Sunday 11:59 PM)
Week 5 9/26	**Module 4** Geospatial Relationships	**Exploring geospatial relationships:** Attribute table in spatial dataset Join table (Join and Relate) Table conversions	▪ Quiz 4 (Friday 11:59 PM) ▪ Lab assignment 4 (Sunday 11:59 PM)
Week 6 10/03	**Module 5** Map Manipulation	**Basics of Geoprocessing:** Clip, Buffer, Dissolve, Merge, Intersect, Union, Append **Intro to the Final Project and project teams**	▪ Quiz 5 (Friday 11:59 PM) ▪ Lab assignment 5 (Sunday 11:59 PM)
Week 7 10/10		**New/ Edits of Map elements:** Create/edit geographic features classes & shapefiles Point, Line, and Polygon (and defining projection) Geocoding address to create spatial data	
Week 8 10/17	**Module 6** Representation of Geospatial Data (I)	**Layout and Map Visualization and Sharing:** Creating Layout/ and multiple data frames essentials Components of Successful layout Importing graphics Exporting layouts	▪ Quiz 6 (Friday 11:59 PM) ▪ Lab assignment 6 (Sunday 11:59 PM) Names of team members (Sunday 11:59 PM)
Week 9 10/24	**Module 7** Sources of Geospatial Data	**Data and Resources for Geospatial Analysis** Sources of maps & data (US Census, Florida, etc.) **Guest Speaker: David Wasserman (Tentative)**	▪ Final Project (teams): Problem statement & Bibliography due (on Canvas: Sunday 11:59 PM)
Week 10 10/31	**Module 8** Raster Data	**Basics of Raster Data Analysis:** Vector to Raster conversion Heat map: Kernel Density Analysis Surface analysis **Guest Speaker: Jake Aalfs (Tentative)** **Discuss final project guidelines and structure**	▪ Quiz 7 (Sunday 11:59 PM) ▪ Lab assignment 7 (Sunday 11:59 PM)

Week 11 11/07	**Module 9** Suitability & Geodesign	**Suitability Analysis for Geodesign Models:** Defining suitability Attributes suitability Assigning weights "No Data" scoring **Suitability Analysis for Geodesign Models (continues):** Suitability Model Raster calculator	▪ Quiz 8 (Friday 11:59 PM) ▪ Lab assignment 8 (Sunday 11:59 PM) In class review of Methods and Data for the Final Project
Week 12 11/14	**Module 6 (Advanced)** Representation of Geospatial Data (II)	**Basics of Cartography; Map Visualization and Sharing:** Map types, basic elements of a map, and representation Creating a customized layout Symbology settings Importing and creating tables Data visualization, report, charts, graphs Hyperlinks, ArcGIS Online and story map	▪ Final Project (teams): Methods and data due (on Canvas: Sunday 11:59 PM)
Week 13 11/21	**Module 10** Final Project	**Review of Project Sections: In-class review of GIS functions performed, problem addressed, workflow, and anticipated outputs.**	Final Project (teams): (In-class review); No Canvas submission in this phase
Week 14 11/28		Work on the Final Project Report and StoryMap	
Week 15 12/05		**Final Project Presentation (StoryMap) and Report Submission (Group Assignment): Tuesday, 12/05**	

**Disclaimer: This schedule represents the basic and prospective plans and objectives for this course. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

Classes End: **December 6.**
Reading Days (No Classes): **Thursday and Friday, December 7 and 8**.