

Introduction to GIS

COURSE DESCRIPTION

UPPP 100 is an introduction to Geographic Information Systems (GIS) and its application in urban planning and the social sciences. The course is presented in a lecture/laboratory format. The lecture will take up the first hour of class and will help students understand fundamentals, show examples of application, and discuss the use of GIS as a decision-making tool in the urban planning context. The laboratory portion will take up the last hour and fifty minutes of the class and provide students with hands-on contact with GIS software, such as ArcGIS, that are used in the analysis of geographically-referenced data sets. Students will undertake a class project that applies GIS to a real world planning issue in our local community. By the end of the quarter, students will have working knowledge of GIS concepts and methods, and become proficient users of ArcGIS.

COURSE OBJECTIVES

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 demonstrate a working knowledge of GIS software capabilities.
5. Meet the prerequisite skill requirements of advanced GIS courses.

COURSE INFO

Friday

10:00 AM - 12:50 PM

MSTB 226

INSTRUCTOR INFO

**Deyanira Nevarez
Martinez, MS, MSGIST**

nevarezd@uci.edu

**Office Hours/Optional
Lab:**

MSTB 226

Thursday

10:00 AM - 11:00 AM or
by appointment

TEACHING ASSISTANT INFO

Aishwarya Borate

aborate@uci.edu

Office Hours:

TBD

TEXTBOOK & MATERIALS

1. GIS Tutorial 1: Basic Workbook ArcGIS 10.1 (Ed. 6, 2016)/ArcGIS 10.1 (Ed. 5, 2013), by Wilpen L. Gorr and Kristen S. Kurland
2. Access to ArcGIS 10.5
3. Storage Device with at least 4GB storage

COURSE SCHEDULE**UPPP 100 / FALL 2019**

*Assignments (Labs and Lecture Questions LQ) are due the week after they are assigned before the beginning of class (9:59 am).

WEEK	TOPIC	READINGS	ASSIGNMENT	DUE DATE	COMMENTS
1 09/27	Introduction	Gorr & Kurland Chapter 1	Assignment 1-1 & 1-2 LQ1	10/04	Go through the syllabus, briefly introduce partner organizations for class community project (more detailed intro week 3), and introduce course material. Students will be assigned to a group for final project.
2 10/04	Map Design	Gorr & Kurland Chapter 2 Miller, 2014	Assignment 2-1, 2-2, & 2-3 LQ2	10/11	
3 10/11	GIS Outputs	Gorr & Kurland Chapter 3	Assignment 3-1, 3-2, 3-3, & 3-4 LQ3	10/18	Today our community partners will do a presentation that will provide context on the City of Santa Ana, introduce their organization and counter mapping. We will have time for groups to meet with their assigned organization.
4 10/18	File Geodatabases	Gorr & Kurland Chapter 4	Assignment 4-1 and 4-2 LQ4	10/25	
5 10/25	Spatial Data	Gorr & Kurland Chapter 5	Assignment 5-1 & 5-2 LQ5	11/01	All groups have to meet with me and partner organization representatives by this date to report project progress. Depending on group progress an additional meeting might be scheduled.
6 11/01	Geoprocessing	Gorr & Kurland Chapter 6	Assignment 6-1, 6-2, & 6-3 LQ6	11/08	
7 11/08	Digitizing	Gorr & Kurland Chapter 7	Assignment 7-1 & 7-2 LQ7	11/15	
8 11/15	Geocoding	Gorr & Kurland Chapter 8	Assignment 8-1, 8-2, & 8-3 LQ8	11/22	
9 11/22	Spatial Analysis	Gorr & Kurland Chapter 9	Assignment 9-1, 9-2, & 9-3 LQ9	12/06	
10 12/06	Final Presentations				You will present your projects to your classmates, a panel of our community partners, and interested department faculty.

ATTENDANCE AND PARTICIPATION

Attendance and active participation in class discussions is a required part of this course. Successful participation requires you to complete the readings as homework and contribute to class discussion based on what you learned from the materials. The goal of active participation is to expand your understanding of the course material. Attendance will be tracked by sign-in sheet during class.

GRADE BREAKDOWN

Community Project: 15 pts (Based on final product, presentation, and group peer evaluation)

Lab 1 & LQ1: 5 pts

Lab 2 & LQ2: 10 pts

Lab 3 & LQ3: 10 pts

Lab 4 & LQ4: 10 pts

Lab 5 & LQ5: 10 pts

Lab 6 & LQ6: 10 pts

Lab 7 & LQ7: 10 pts

Lab 8 & LQ8: 10 pts

Lab 9 & LQ9: 10 pts

Total: 100 pts

* .5 points will be deducted from your final grade for every class you miss. Absences resulting from legitimate circumstances will not be deducted but arrangements need to be made with instructor prior to absence. Please do not be afraid to contact me to make arrangements.

COMMUNITY PROJECT

We will be tasked with creating maps for several local non-profits and community let groups in Santa Ana. You will be assigned to a team and your final will consist of a final product to be delivered to the organizations for use in their advocacy.

GRADE	PERCENTAGE
A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	60-66%
F	0-59%

COURSE POLICIES

Things Happen Clause

I have been an undergraduate student before and I understand that things happen and that you are all under a lot of pressure and because of this I have what I call the "things happen clause". Under this clause you are able to invoke a 3-day extension on any of your labs during the quarter no questions asked. This can only be used once and DOES NOT apply to our community project.

UCI ACADEMIC INTEGRITY POLICY

Academic misconduct, in its most basic form, is gaining or attempting to gain a grade, degree, or other academic accomplishment by any means other than through your own work. No student shall engage in any activity that involves attempting to receive a grade by means other than honest effort, and shall not aid another student who is attempting to do so. For more information, please view UCI's Academic Integrity [Policy](#) and [Procedures](#). You may also view a [flowchart](#) of the Process for Resolving Violations of Academic Integrity here.

TITLE IX

Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) Office by calling (949) 824-7273. In addition, UCI's Counseling Center can provide confidential, counseling support, (949) 824-6457. You can also report gender discrimination directly to the University's Title IX Office, (949) 824-5594. Reports to law enforcement can be made to UCI Public Safety, (949) 824-5223. For emergencies call 911.

Faculty and Teaching Assistants are required under the [UC Policy on Sexual Violence and Sexual Harassment](#) to inform the Title IX Office should they become aware that you or any other student has experienced sexual violence or sexual harassment.

ACCESSIBILITY AND ACCOMMODATION

UCI is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me or the teaching assistants, we are here to help you.

If you have a disability, or think you may have a disability, you may also want to meet with the Disability Services Center, to begin this conversation or request an official accommodation. You can find more information about UCI's Disability Services Center, including contact information, here:

<https://dsc.uci.edu/>. If you have already been approved for accommodations through the Office of Accessible Education, please meet with me so we can develop an implementation plan together.

ESRI SOFTWARE INSTALLATION INSTRUCTIONS

Students can download a student trial version of ArcGIS 10.x onto a personal computer for use outside of campus computer labs. UCI provides ARC GIS student licenses that are valid for a year. You can install the software on your computers by via the link provided below:

<https://www.oit.uci.edu/help/research-software/>

If you would like to work on campus, the software is available on various drop-in computer labs on campus. The ones closest to this class are SBSG 241 and SE I 206. As part of our campus license, ESRI makes available numerous free online classes that you can take, which are not a requirement of the course, but which can augment your learning on particular topics:

<http://training.esri.com/gateway/index.cfm?fa=aul.premiumCourses>

* Please note: ArcGIS DOES NOT RUN ON MACs. If you have a Mac, you will need to acquire a PC or use the computer labs, which are easily accessible on campus.