

## **Geography 370 – Introduction to Geographic Information**

Fall 2020 (Tuesday-Thursdays, 3:00pm-4:15pm)

Instructor: *Prof. Javier A. Arce-Nazario*

Office Hours: *Mondays 5:20pm to 6:20pm, Tuesdays 4:15-5:15pm and by appointment.*

Geographic data is everywhere, and it is used across a variety of research areas and business endeavors. This course will introduce you to the tools and methods needed to obtain, manage, interpret and display spatial data.

### **LEARNING OBJECTIVES**

At the end of this class, you will not only know how to create digital geographic information, but you will also know how to look critically at maps and remotely sensed imagery and how to evaluate the sources of data and the assumptions that were used to make them. Your goals should be to:

- understand how geographic data is represented, and be comfortable with the different data models and coordinate systems
- develop a skillset allowing you to design maps and carry out simple spatial analyses
- become proficient in basic operations with GIS/Remote Sensing software tools

### **RECOMMENDED READING**

See course website <https://gisunc.github.io/GEOG370Fall2020/>

### **PREREQUISITES**

This is an introductory course, so there are no prerequisites. However, since this is an online course you will be required to have a working computer (Mac, PC or Linux) and internet access. Being patient and open-minded towards computers and technology will make your experience more pleasant.

### **COURSE PLAN**

This online course will have a combination of synchronous and asynchronous online teaching techniques. You are expected to attend the synchronous sessions and not to assume that the professor will record these synchronous lectures. Students are *not allowed* to record the zoom meetings, as your fellow students and the professor have not given consent to be recorded.

#### **- Synchronous sessions:**

- Introductory lectures: The course is divided into seven (7) sections. At the beginning of each of these sections the professor will present a lecture related to the learning objective of that section.
- Small group meetings: You will be assigned to a group of 20-22 students that will meet with the professor during lecture time (see schedule and roster to determine your group). The professor will be taking attendance during small group meetings, and during those meetings you are expected to present your recent work and answer questions about how you did your homework. The

professor will evaluate your work, your leadership and your creativity during these sessions. During the small group sessions, you might be presented with new exercises that assume that you have mastered the technique you were assigned. Attendance, participation and practice are all important for getting a good grade. You are not allowed to change groups. An unexcused absence from a small group meeting will lead to 50% being deducted from the homework that you were expected to present on that day.

\* Although occasional internet connection problems are expected, students should try their best to participate via Zoom with their cameras on. In case of trouble connecting, students can dial in by telephone. Students are encouraged to participate in sessions and ask questions, since through these conversations the class can learn the material better, and the professor can better understand the difficulties they might be experiencing. Your professor has a strong *Boricua* accent, so please feel free to ask him to repeat something if you do not understand him. He will not be offended; it is part of his identity.

The professor will address most questions during the synchronous sessions. If you submit a question by email or Sakai during offline hours, the professor will address the question for the whole class during the next live session (unless it is related to a personal matter).

- **Asynchronous sessions:** You will be required to read course material and watch videos related to theory and methods. The course webpage has the links to the Sakai resources with the data used in the videos. You need to be able to replicate what is done in the video, otherwise you will not understand how to complete the homework or the tests. The benefit of learning techniques with these step-by-step videos is that you can do them at your own pace and repeat them as many times as you want until you feel comfortable doing the exercise. If you do not practice the videos, do not expect to be able to do the homework or the practical tests. The professor and the teaching assistant are always happy to help during recitation/office hours; however you should demonstrate that you have attempted the videos before you ask for help with the technical aspects of a homework or test.
- **Recitations:** During recitation the professor or the TA will be available for questions related to the course. If you don't have any questions, you can use this allotted time to work on your homework and tutorial videos.

## REQUIREMENTS & GRADE BREAKDOWN

### Tests (25%)

At the beginning of each month, students will take a synchronous test (during the scheduled lecture time) covering both the theory and applied techniques. The theory will be assessed using a combination of multiple choice and short-answer questions. Students' comprehension

of applied techniques will be evaluated through exercises that require them to create a particular type of map or geographic data analysis, using the techniques presented in class. The professor will be on Zoom to answer questions during these tests.

### **Final exam (15%)**

During the official final exam time students will be tested on all the theory and applied techniques discussed in class.

### **Homework and presentations (55%)**

Most of the student's comprehension of the material will be assessed through homework which will be shared and presented to the rest of the class during the small group sessions. Students will create unique maps or analysis that they will share with other students. This is a very valuable part of the class, as other students learn about data and resources from other students, and the professor learns the interests of the students and can give direct feedback. The instruction and the deadlines for the [13+ homework exercises](#) can be found on the [course webpage](#). Turning your homework on time is important, and so 20% will be deducted per day for late submissions. It is even more important that you do not miss the small group sessions or fail to present your homework. At least 50% of your grade will be deducted from your homework if you do not show up to the small group session. During the small group session, be ready to explain how you did your homework and discuss the decisions that you made when designing the map.

### **Participation, leadership and collaboration (5%)**

It is expected that students will actively and respectfully participate in the class discussion and presentations.

Your projects and assignments will be turned in electronically via Sakai. 20% of any assignment's grade will be deducted per day when the assignment is late. If for some reason your internet access, your health, or other circumstances affect your ability to actively participate, please let the professor know about the situation.

Students taking this course agree to abide by the provisions of the University of North Carolina at Chapel Hill Honor Code.

**Final grades** will be assigned using the UNC plus/minus letter grade system:

A (93-100) A- (90-92.9) B+ (87-89.9) B (83-86.9) B- (80-82.9) C+ (77-79.9) C (73-76.9) C- (70-72.9) D+ (67-69.9) D (60-66.9) F (<60)

Note that the CV grade is still in use as an alternative to the incomplete grade ("IN") for students adversely affected by the public health emergency. Students may utilize a WCV grade for course drops specific to Covid-19.

### **Students with disabilities**

UNC facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in difficulties with accessing learning opportunities. All accommodations are coordinated through the Accessibility Resources and Service Office ([accessibility@unc.edu](mailto:accessibility@unc.edu)).

### Title IX Resources

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Please contact the Director of Title IX Compliance (Adrienne Allison – [Adrienne.allison@unc.edu](mailto:Adrienne.allison@unc.edu)), Report and Response Coordinators in the Equal Opportunity and Compliance Office ([reportandresponse@unc.edu](mailto:reportandresponse@unc.edu)), Counseling and Psychological Services (confidential), or the Gender Violence Services Coordinators ([gvsc@unc.edu](mailto:gvsc@unc.edu); confidential) to discuss your specific needs. Additional resources are available at [safe.unc.edu](http://safe.unc.edu).

Schedule: Check the [website](#) for details on each section and deadlines.

<https://gisunc.github.io/GEOG370Fall2020/>

Day	Activity
Tuesday, August 11, 2020	Live presentation Section 1
Thursday, August 13, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, August 18, 2020	Monday recitation (sec#701) presents homework
Thursday, August 20, 2020	Live presentation Section 2
Tuesday, August 25, 2020	Monday recitation (sec#701) presents homework
Thursday, August 27, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, September 1, 2020	Test 1
Thursday, September 3, 2020	Live presentation Section 3
Tuesday, September 8, 2020	Monday recitation (sec#701) presents homework
Thursday, September 10, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, September 15, 2020	Monday recitation (sec#701) presents homework
Thursday, September 17, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, September 22, 2020	Live presentation Section 4
Thursday, September 24, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, September 29, 2020	Monday recitation (sec#701) presents homework
Thursday, October 1, 2020	Test 2
Tuesday, October 6, 2020	Monday recitation (sec#701) presents homework
Thursday, October 8, 2020	Wednesday recitation (sec#702) presents homework

Tuesday, October 13, 2020	Live presentation Section 5
Thursday, October 15, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, October 20, 2020	Monday recitation (sec#701) presents homework
Thursday, October 22, 2020	Live presentation Section 6
Tuesday, October 27, 2020	Monday recitation (sec#701) presents homework
Thursday, October 29, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, November 3, 2020	Test 3
Thursday, November 5, 2020	Live presentation Section 7
Tuesday, November 10, 2020	Monday recitation (sec#701) presents homework
Thursday, November 12, 2020	Wednesday recitation (sec#702) presents homework
Tuesday, November 17, 2020	Live presentation (recap)
Final Exam (Check official calendar)	Final Exam