**Geog2011/Geog2011L: Introduction to Geographic Information Science**

Fall 2021

**Instructor:** Dr. Jerry Shannon **Email:** jshannon@uga.edu

**Office:** 112 Geography-Geology

**Teaching Assistant:** Aidan Hysjulien **Email:** ahys@uga.edu

**Course GroupMe:** <https://groupme.com/join_group/69603926/VrPii6Ex>

**Office hours:** Schedule meetings at [https://calendly.com/jshannon75](https://calendly.com/jshannon75/officehours)

**Schedule:** Available via [Google Sheets](https://docs.google.com/spreadsheets/d/1-Z5fbTW5Bx3x1MRh0MwADbX5LSsu7ZQcjz8znCkeaj8/edit?usp=sharing)

**Weekly activity:** 10:20 Monday, room 300A, Geography-Geology

**Labs:** 12:50-2:45 PM Wednesday, room 321

***OR*** 12:50-2:45 PM Friday, room 321

**Overview**

In the last thirty years, Geographic Information Science (GIScience) has become an increasingly common lens for studying our social and natural worlds. Whether the issue is containing disease outbreaks, predicting the impacts of climate change, or optimizing business locations, GIScience provides vital insights for crucial issues. At the same time, geospatial data is also increasingly abundant, from where you buy your food to whom you connect with on social media. These provide new ways of understanding social behavior but also raise concerns about institutional power and the surveillance society. Maps themselves, once painstakingly created by hand by trained cartographers, now are easily created by almost anyone using geographic information systems (GIS) software. Careers in GIS are traditionally at the top of lists of fastest growing jobs. GIScience has reshaped the way we think about our world.

This course introduces you to the tools, data, and uses of GIScience in contemporary society. We will begin by talking about the basics of mapping, how we create (usually) two dimensional representations of the earth’s surface and what gets lost in the process. We’ll then talk about what makes a *good* map, both one that’s meaningful and well designed, as well as some of the ethical issues surrounding the use of maps and the collection of geospatial data. The massive amounts of geospatial data, from Twitter posts to satellite imagery, has prompted some to say we live in an era of “big data,” and we’ll try to understand what that means for spatial analysis. Lastly, we’ll look at the ways GIS is used inside and outside the academy, from mapping the world as it was a century ago to current applications in health, climate, and urban and environmental planning. By the end of the course, you’ll gain experience using a variety of GIScience tools to analyze spatial data and strengthen your understanding of the role spatial analysis plays throughout society.

One note on COVID-related matters. While the Board of Regents has moved us back to fully in-person instruction, cases in Athens and the surrounding region are high as we begin the semester. I ***strongly encourage*** you to get vaccinated if you have not already done so. I will also be masking in class as a courtesy to others and also encourage you to do so as the current delta variant is highly transmissable.

**Our instructional model**

This class is generally designed with a flipped classroom model, meaning that much course material is available online and we’ll be using the class “lecture” as a chance to interact with that material through a variety of activities. Here is the general pattern we’ll follow:

* Each week, you will need to participate in the Question of the Week (QOTW) discussion activity. These will largely ask you to respond to the week’s readings or related material (but not the week’s lectures). You’ll need to create an original post by ***Monday evening***.
* You are expected to attend the ***Monday activity at 10:10***, which will last roughly an hour.
* I will post video lectures related to each week’s topic, which count for the second hour of lecture. It’s your responsibility to watch those on your own time.
* Labs will meet weekly, focusing on the lab assignments. Attendance is optional but highly encouraged.
* You’ll need to complete a quiz on the week’s lecture material by ***Friday at 5 PM***. These will be graded pass/fail.

This schedule is a little complicated, but you should get the hang of it after a week or two.

**Texts and software**

A number of readings will be available for download on eLC. Weekly readings are posted on the course schedule (see the link above).

The other required text for this course is Mapping, Society, and Technology by Steve Manson et al. This book is free and available online: <http://open.lib.umn.edu/mapping/>

We will be using two GIS software platforms this semester:

1. ***ArcGIS Online*** is a web based mapping and data visualization system from ESRI, maker of the best selling desktop GIS software. ESRI provides free accounts for their online platform. It’s available at [https://www.arcgis.com/home](https://www.arcgis.com/home/index.html).
2. ***QGIS*** is an open-source, free desktop GIS software package. It is similar to ArcGIS, which is the (rather expensive) industry standard. It runs on pretty much every operating system. It’s available for download at <http://www.qgis.org>.

You will be able to access all this software in the lab, but it’s also all free for you to run/install on your computers.

**Online resources**

UGA’s [ELC system](http://elc.uga.edu) will be the main hub for course readings, interact on the discussion boards, and to turn in lab assignments. It’s also got links to everything you’ll need for the course. All course materials (syllabus, lecture slides, and assignments) are created on Google Drive, and links to each are posted on ELC.

The Internet is full of useful tips and tutorials for learning GIS. Every professional geospatial analyst spends time with tutorials and on message boards figuring out new skills and software, and you are encouraged to do the same as you work through assignments this semester. Some links will be included in the labs, but feel free to strike out on your own.

There’s also a course GroupMe for communication this semester. There’s a sign up link at the top of this syllabus.

**Assessment**

Class grades will be determined on a points system. You earn those points in multiple ways:

* Labs: **200 points** (5 labs, 40 points each). Note: Labs are generally due on Friday at 5 PM. The ELC system is sometimes down for maintenance on Friday evenings, so it’s good practice to get your labs in on time.
* Quizzes: **100 points**
  + You’ll receive 10 points for each quiz you “pass,” which means getting an 80% or higher, up to 100 points maximum. We will have about 13 quizzes total.
* Final take home exam: **30 points**
* Attendance: **30 points** 
  + Based on attendance at Monday classes
  + 30 points for > 60% attendance, 20 points for > 30%. If you’re not feeling well, stay home! I will be posting videos of each activity on ELC after they are done.
* QOTW participation: **40 points**
  + You will receive 40 points for > 80% completion, 30 points for > 60%, 20 points for > 30%.
* Small assignments: **40 points** 
  + Introductory survey: 5 points
  + Home point survey: 5 points
  + Lab 0: 10 points
  + QOTW recap: 10 points
  + Digitize Athens assignment: 10 points

Your grade will be based on how many of the possible points you earn.

**Attendance and participation**

This semester, you are expected to regularly attend the Monday activity time. Weekly quizzes and the lab assignments will also assess your progress through the course. Labs are optional, but they are the primary way to get assistance with lab assignments.

Should you become ill or have other circumstances that will significantly affect your ability to participate, please let Dr. Shannon and Aidan know as soon as possible. There are some options for flexibility, but this is much easier on the front end rather than weeks after the fact.

**Question of the week**

Each week I will post a question related to the week’s readings--a question of the week (QOTW) posted in the Discussion forums. These are low-stakes assessments designed to get us thinking about that week’s material. They are graded on a simple standard: they should address ***all parts of the question prompt*** for the week and be ***at least 100 words in length***. As long as you meet all these criteria, you’ll get full credit for the week.

Each week, a small group of students will be in charge of reading through the QOTW responses and identifying common themes and interesting insights from them. These will be shared at the next week’s Monday class meeting. You’ll sign up for a week to do this review on ELC.

**Contact Information**

Email is the best way to contact me, though I am also available at my office phone number. If I fail to initially respond in two business days, feel free to email me again. You can also email the TA, especially on issues related to the labs and final project.

If you’d like to meet with Dr. Shannon individually, click on the Calendly link at the top of this document to schedule an appointment.

**Late work**

All labs are due on the week assigned by Friday evenings at 5 pm unless otherwise noted. ***We will accept late lab assignments up to one week after the due date.*** All late submissions will be penalized by 10% of the total value of the assignment (e.g., 4 points on a 40 point lab). We will not accept any lab that is more than one week late.

QOTW posts and weekly quizzes are due when assigned and have no grace period unless you have made special arrangements with the instructor.

**Grade Disputes**

If you feel that an assignment or exam has not been graded fairly, ***contact me within a week of receiving the disputed grade.*** You should provide substantive reasons for your dispute, such as a justification for the response in question. I will respond to any such requests promptly.

If you’d like to review your answers for an exam or reading quiz, just go back to the Quizzes section of ELC, click on the arrow next to the exam/quiz name, and choose Submissions. Then click on Attempt 1. Your incorrect responses should be visible once I release them, when everyone has completed the quiz/exam.

**Lab videos**

As a part of your lab assignments, you’ll be requried to create short videos talking through your analysis. You may already have experience with screencasting, taking videos of your screen as you talk about it. UGA recommends the [Kaltura service](http://ctl.uga.edu/kaltura), which integrates well with ELC, and [Screencast-o-matic](https://screencast-o-matic.com/lp/screen-recording-video-editing/?utm_source=google&utm_medium=cpc&utm_campaign=recording&utm_term=screen%20capture%20software&gclid=Cj0KCQiAsJfhBRCaARIsAO68ZM53FpqUIBK0U2olhCrPnYelT6PgdtVadHmWN_hD5RGZQpj5xlC0gFEaAiS_EALw_wcB) also generally works well (and is free). Once you’ve created video content, you can upload to Kaltura or to YouTube and share a link with the assignment submission. If you would prefer to skip this aspect of the course, contact Dr. Shannon to arrange for an alternative activity.

**Scholastic Dishonesty**

Plagiarism is a serious offense anywhere, but especially so in a university environment. Any assignment that uses another's’ work without proper acknowledgement will be penalized. Plagiarism that is clearly intentional and extensive will result in a failing grade for the course. For more information on academic honesty policies at UGA, see <http://honesty.uga.edu>

**Responding to COVID symptoms and spread**Students showing COVID symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see <https://www.uhs.uga.edu/info/emergencies>.

If you test positive for COVID-19 at any time, you are required to report it throughthe DawgCheck Test Reporting Survey. We encourage you to stay at home if you become ill or until you have excluded COVID-19 as the cause of your symptoms. UGA adheres to current Georgia Department of Public Health (DPH) quarantine and isolation guidance and requires that it be followed. Follow the instructions provided to you when you report your positive test result in DawgCheck.

Students who are not fully vaccinated and have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 10 days. Those quarantining for 10 days must have been symptom-free throughout the monitoring period and continue self-monitoring for COVID-19 symptoms for a total of 14 days. You should report the need to quarantine on DawgCheck (https://dawgcheck.uga.edu/), and communicate directly with your faculty to coordinate your coursework while in quarantine. If you need additional help, reach out to Student Care and Outreach (sco@uga.edu) for assistance.

UGA also has several resources available to support your mental and emotional health. Find out more at <http://well-being.uga.edu>.

**Special Needs**

Any student with a documented disability condition should contact me at the beginning of the semester to arrange accommodations. Please note that these cannot be made retroactively. You may also wish to contact the Office of Disability Services at 542-8719, and/or the Learning Disability Center at 542-4589.