

**Basic Information:**

Class: Geographic Data Analysis

Number: GEOG 300/594

Place: 420 Brooks

Time: Class—TR 2:30-3:45

Office hours—M 2:30-3:30, T 10:00-11:00 and by appointment

Contact: [Jamison.Conley@mail.wvu.edu](mailto:Jamison.Conley@mail.wvu.edu)

293-6352

347 Brooks Hall

This course is a first class for the quantitative analysis of geospatial data. There are no statistics prerequisites and I am not assuming you know any statistics, but you will, I hope, learn some statistics during this course. By the end of the semester, you will understand the characteristics of geographic data that present unique challenges for statistical analysis, know some of the methods used to analyze geographic data in a variety of contexts, and gain experience applying these methods in computer exercises using ArcGIS, Excel, and other software programs.

**Requirements:**

The textbook for this course is *Geographic Information Analysis* by David O'Sullivan and David Unwin. The readings will come from this book, although there will be material covered in class that is not in the book. There may be additional readings that I will hand out, especially for those taking the 594 version of this class.

There will be three exams in this course, two midterms and a final exam. The final exam will be comprehensive. Those taking GEOG 594 will have a different exam from those taking GEOG 300. Consistent with WVU guidelines, if you cannot take a regularly scheduled exam because of authorized University activities, you will have the opportunity to take a make-up exam at an alternate time. Make-up exams for absences due to any other reason will be at the discretion of the instructor.

In addition to the exams, there will be computer-based exercises for you to do. Hopefully, you will be able to finish most, if not all, of the exercises during the class periods, but some may need to be done as homework to stay on schedule. If this is the case, I will announce the due dates in class. Some of the exercises for those taking GEOG 594 will have additional questions beyond the GEOG 300 exercises.

Late assignments will be marked down one partial letter grade for every day that they are turned in after the due date. For example, an assignment that would get a B+ but is a day late will only get a B. If it is two days late, it gets a B-. Grading appeals must be submitted to me in writing (e-mail accepted) on the day the assignment or exam is returned.

The contribution of each of these components to the final grade is as follows:

Midterm 1:	20%
Midterm 2:	20%
Final exam:	25%
Lab exercises:	35%

The grading scale will be:

>= 90%	A
80-89.9%	B
70-79.9%	C
60-69.9%	D
< 60%	F

Contacting me. I strongly encourage you to come to my office hours. As the course instructor, my main goal is to help you learn, so if you have any questions about the material, or the class in general, you are more than welcome to come speak with me during office hours. If you are not available during that time, email me or ask me after class to set up an appointment. In addition, if my office door is open (even just open an inch), you can stop in without an appointment. I will be checking my email regularly during business hours (M-F 9am-5pm), and will reply as soon as I can. I may check email on evenings and weekends, but not as regularly, and may not have a chance to respond until the next business day.

Social Justice: West Virginia University is committed to social justice. I concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and nondiscrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class. Please advise me and make appropriate arrangement with Disability Services (293-6700).

Academic Dishonesty. The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, I will enforce rigorous standards of academic integrity in all aspects and assignments of this course. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the Student Conduct Code at <http://www.arc.wvu.edu/rightsa.html>. Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see me *before* the assignment is due to discuss the matter.

**Schedule:**

This schedule is preliminary, and may change depending on the needs of the class, and how fast we go through the material. Since this is a new schedule for a course that hasn't been offered in many years, please be flexible! There is already a little flexibility built into the schedule with an overflow day in the Tuesday of week 10. I currently have nothing planned for that day in case we need extra time on an earlier topic.

Week	Topic	Readings	Important dates
1	Basics of geographic data	Ch. 1	
2	The generic process of spatial analysis	Ch. 2	
3	What's special about spatial data?		
4	More on spatial data & midterm review (R)		
5	Midterm (T) & statistical description	A.1 to A.3	Midterm—Sept. 22
6	Non-spatial statistical tests used in geography	n/a	
7	Spatial patterns and geographic processes	Ch. 3	
8	Point pattern analysis	Ch. 4	
9	More on point pattern analysis		
10	Overflow day (T) & Midterm review (R)		
11	Midterm (T) & cluster analysis (R)	Ch. 5	Midterm—Nov. 3
12	More on cluster analysis		
13	Spatial autocorrelation	7.4-7.7	
Thanksgiving			
14	Field data and interpolation	8.1-8.3	
15	Regression & final exam review	9.1-9.2	
Finals week			Final—TBA