

Water 391: GIS and Water Resources

Spring 2020

Lecture: Wednesday 9-10

Lab: computer lab TNR 322 (Wednesday 10-12)

Prerequisites: NRES 250, 251; MATH 355, Hydrology or Population Dynamics

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Office hours (for student questions, concerns, or chats): 2-3 Mondays, 11:30-12:30 Thursdays

Comprehensive Final Exam: May 13th Wednesday at 8-10

Course is on canvas!!!

<https://www.uwsp.edu/canvas/Pages/default.aspx>

Course folder: <\\uwsp.edu\files\cnr\coursedata\water391>

Expectations: Understand basics of how to use a spreadsheet (i.e. excel) and college algebra and statistics.

Objectives: After completing the reading assignments and laboratories in this course you should be able to do the following:

1. Make a professional map in the correct projection
2. Edit raster and vector data
3. Obtain and interpret spatial water resource data
4. Develop spatial models

Online: You will have a short online lecture that introduces the purpose and main strategies for completing the lab. You need to complete this before you come to lab. To help keep you on task, there is a quiz associated with these online materials. Really, though you should want to watch the lab video, because it will make your experience in the lab much more enjoyable and you will better be able to learn the material.

Schedule: Readings and Topics are subject to change, so you must come to class

Week	Topic	Lab Assignment
1: Jan 20-24	Map Making	Lab and online quiz
2: Jan 37-31	Making Maps with Rasters	Lab and online quiz
3: Feb 3-7	Editing Shapefiles	Lab and online quiz
4: Feb 10-14	Watershed Delineation	Lab and online quiz
5: Feb 17-21	Watershed Delineation Part 2	Lab and online quiz
6: Feb 24-28	Advanced Raster Tools	Lab and online quiz
7: Mar 2-6	Advanced Raster Tools 2	Lab and online quiz
8: Mar 9-13	Practice for Midterm	Review Quiz
Mar 16-20	Spring Break (no class)	
9: March 23-27	Midterm	Midterm in class!!
10: Mar 30-Apr 3	Iterators	Lab and online quiz
11: Apr 6-10	Model Builder	Lab and online quiz prepare for class presentation

12: Apr 13-17	Proximity Comparison	Lab and online quiz and class presentation
13: Apr 20-24	Project Rubric Introduced	Work on project
14: Apr 27-May 1	Project	Class presentation on project (3-5 minutes)
15: May 4-8	Project	Class presentation on project (3-5 minutes)
May 13th	Final Exam 8-10	

Labs and online quizzes are due the Tuesday before the next class at 11 pm.

Policies and Procedures

I. UWSP Community Bill of Rights and Responsibilities

UWSP values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, a set of expectations have been developed for all students and instructors. This set of expectations is known as the Rights and Responsibilities document, and it is intended to help establish a positive living and learning environment at UWSP. For more information go to: <http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx>.

The Rights and Responsibilities document also includes the policies regarding academic misconduct, which can be found in Chapter 14. A direct link can be found here: <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>.

II. Americans with Disabilities Act

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information about UWSP's policies, check here: <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyinfo.pdf>.

If you have a disability and require classroom and/or exam accommodations, please register with the Disability Services Office and then contact me at the beginning of the course. I am happy to help in any way I can. For more information, please visit the Disability Services Office, located on the 6th floor of the Learning Resource Center (the Library). You can also find more information here: <http://www4.uwsp.edu/special/disability/>.

III. Attendance and Participation

Attending class meetings and arriving promptly are expectation for the course. If you must miss class, please email me. Participation expectations include having required readings completed before class, bringing necessary materials (course text, equipment for taking notes), listening attentively to others, being respectful of instructor and peers, contributing to class discussion/activities, and completing assignments by the due date. Participation points will be lost if you miss class, unless you have an excused absence. Absences are excused for students who have mandatory, academic, UWSP sponsored events (such as class fieldtrips, conference presentation) or students who are participating in a varsity level sport, which is organized and overseen by a UWSP coach (or coaching team).

- Student missing 3 or more labs will incur a 10% penalty from their final grade.
- **I expect professional behavior toward your classmates and instructor. Disruptive behavior may be considered anything other than paying attention and taking notes in class. Examples of disruptive behavior are as follows: habitually coming to class tardy, talking, sleeping in class, texting, reading the newspaper, and eating. Unusually you will be given a warning in the form of a written email. This may be followed by removal of your extra credit and/or a deduction of 10 percent of your final grade.**
- Use of phones for personal use in class will result in a deduction of 15 points per class.

IV. Exam/Test Policy

Tests are closed notes and closed book. You may not work with another individual during an exam. Makeup exams are scheduled for students who have mandatory, academic, UWSP sponsored events (such as class fieldtrips, conference presentation) or students who are participating in a varsity level sport which is organized and overseen by a UWSP coaching team. If you want to have an alternative exam time for these types of exception, then you must meet the following criteria: 1) have the sponsoring faculty member send me an email with the date, time, and nature of the event at least one week in advance of the exam; and 2) schedule an alternative time for the exam BEFORE the in-class exam time. Otherwise makeup exams are scheduled at the discretion of the instructor.

V. Grade Calculations

- I. Quizzes, 100 pts (lowest score dropped)
- II. Labs 20 pts: 200 pts
- III. Attendance/Participation 25
- IV. Model Builder Presentation 25 pts
- V. Project Presentation 25 pts
- VI. Final Exam/Project 75

Grade	Percent	Grade	Percent
A	94-100%	C	70-74%
A-	90-93%	C-	65-69%
B+	87-89%	D+	62-64%
B	83-86%	D	55-61%
B-	80-82%	F	< 55%
C+	75-79%		

VI. Lab Policies:

1. **Labs must be typed. Handwritten portions of the lab will be accepted at the discretion of your instructor.**
2. Messy labs with poor grammar and spelling errors may be docked up to 30%.
3. Incomplete labs and homework will be docked additional points. If the lab is missing several components, it may not be graded at all.
4. **Late Assignments:** *I will not accept more than two late labs per person. I do not accept labs after I have graded and handed them back (this includes other sections).*

VII. Lab Presentation:

1. Typesetting: Imbed your graphs and charts within your word document. Among other things, it reduces paper waste.
2. Page Numbers: Number your lab pages and answers to lab questions.
3. Units: Any quantity that has units associated with it, must have units reported.
4. **Graphs/Figures: All graphs should be labeled with units and the series data should be distinguishable and readable.**
5. Typesetting equations: All equations should be entered using the equation editor.
6. Answers: Your answers to questions should restate the questions within the lab package, so that when you study for exams you do not have refer
7. **Significant figures: data presented within charts should not have more significant figures than the data used to calculate the values.**
8. **Captions: All figures, charts, and tables should have captions. Generally, captions include the graph title and a brief description.**
9. **Presentation: Messy and incomplete labs may not be graded.**