

# GEOGRAPHY 2220A

## Geographic Information Science I

### Fall 2013

#### LECTURE INFORMATION

Lecture: Tuesday 2:30 - 4:30 pm, Location: NS-1

Labs: (1) Thursday 9:30 - 11:30 am, GISc Lab (SSC. 1316A)  
(2) Thursday 12:30 - 2:30 pm, GISc Lab (SSC. 1316A)  
(3) Wednesday 2:30 – 4:30 pm, GISc Lab (SSC. 1316A)

**\*\*Labs start the 2<sup>nd</sup> week of classes (Sept. 16)**

#### INSTRUCTOR INFORMATION

**Instructor:** Sandra Kulon, Office: SSC. 1410

**Contact:** Tel: (519) 661-2111 ext. 80963; E-mail: [skulon2@uwo.ca](mailto:skulon2@uwo.ca)

**Office hours:** Tuesday 10:30am - 12:30pm or by appointment (SSC. 1410)

**Teaching Assistants (TAs):** Lab Support: Kathy Tang [ktang28@uwo.ca](mailto:ktang28@uwo.ca)

TBD, Department of Geography

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#### COURSE DESCRIPTION

Fundamental concepts, geographic information representation and spatial data entry. Basic spatial analysis and remote sensing. Practical skills developed through use of Geographic Information Systems (GIS). 2 lecture hours, 2 laboratory hours, 0.5 course.

**Anti-requisite(s):** The former Geography 280a/b.

**Prerequisite(s):** 1.0 course from [Geography1100](#), [1300A/B](#), [1400F/G](#), [1500F/G](#), [2131A/B](#), [2153A/B](#) (taken after September 2012), or the former Geography 020E; or completion of the second year of the Civil and Environmental Engineering, International Development Option; or enrollment in the Major in Physical Geography or in any Environmental Science module or in an Honors Earth Science Program for Professional Registration.

“Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.”

#### REQUIRED TEXT

Bolstad, Paul, 2008. **GIS Fundamentals: First Text on Geographic Information System (4th Ed.)**, Eider Press, White Lake, MN, USA. 620 p. (ISBN 13: 978-0-9717647-2-9).

#### METHODS OF EVALUATION:

Attendance/Participation 10%

Lab Assignments (5 labs total, 7% each), 35%

Midterm Test, 20%, (1 hour 50 min., Tuesday October 15, 2:30-4:20pm, NS-1)

Final Exam, 35%, (3 hours, Time and place TBA)

### 1. Attendance:

Attendance is required for all lectures and lab sessions. Attendance may be taken at any time.

### 2. Labs:

You should take advantage of the lab hours by staying in the lab session since the TAs will be there to help. Because of space and equipment constraints it will be difficult to arrange an alternative lab if you miss your regular lab. Assignments will be given and collected during the lab hours and marked by the TAs. You should observe all the due dates for assignments.

**Assignments are due at the BEGINNING OF THE LAB PERIOD.**

**The penalty of a late assignment is 5% per day.**

Missed assignment will receive no mark. In case of extreme circumstances, the instructor may allow extension provided that the student submits proper documentation. If you need accommodation of more than 10% of the total grade, you must obtain permission from the Dean's office and provide sufficient documentation. See Policy here:

[https://studentservices.uwo.ca/secure/medical\\_accommodations\\_link\\_for\\_OOR.pdf](https://studentservices.uwo.ca/secure/medical_accommodations_link_for_OOR.pdf)

**\*\*\*All labs should be completed individually.** For this course, the labs are not group projects. If two students submit identical or near identical answers for an assignment or parts of the assignment both students will receive a mark of zero for the entire assignment. The statement "we have worked as a group and therefore submitted identical answers" cannot be used as an excuse. According to the University's and the department's regulations and procedures, we have to report any plagiarism to the departmental chair, then to the Dean's office. This may be reflected on your transcripts.

You are advised to read the academic calendar to familiarize yourself with the University's regulations and procedures concerning grades and penalties. Scholastic offences are taken seriously and you may read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_undergrad.pdf)

### 3. Exams:

**\*\*\*\*No electronic devices will be allowed during tests and examinations\*\*\*\***

If you will miss the mid-term test under extreme circumstances, you must obtain permission from the Dean's office and provide sufficient documentation. When I receive the permission from the Dean's office, your final exam will account for 55%. If you miss the midterm with no good reason, you will receive no mark for the midterm. Make-up exams will be given for the final exam only under extreme circumstances. If you consider that you have grounds to write the final exam on an alternate date, you must follow the procedure established by the Dean's Office and complete the appropriate forms. You must obtain permission from the Dean's office and provide sufficient documentation. In addition, you must inform the instructor at least 2 days in advance before the final exam.

**For information on Accommodation for Medical Illness, please see:**

[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf)

*Downloadable Student Medical Certificate (SMC):*

<https://studentservices.uwo.ca> under the Medical Documentation heading

Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department.

#### 4. Final grade:

A student will not receive a final grade higher than 60% in the course if his/her weighted average on the two exams is less than 45% or his/her weighted average on the assignments is less than 45%.

#### 5. Additional Information:

*Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 (<http://www.sdc.uwo.ca/>) for any specific question regarding an accommodation.*

*If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit <http://www.uwo.ca/uwocom/mentalhealth/> for more information on these resources and on mental health.*

### COURSE MATERIALS

Every student should have at least one USB memory key or portable hard drive for storing data and results, or the student should plan to e-mail their data at the end of each class period. The machines in the lab classroom are not reliable as data repositories, so plan to take the data with you.

You will be given a limited number of free print credits for this course. If you need to, you may purchase more credits for printing using the b/w laser printer and color laser printer in the SDAL (SSC 1425) or the GIS Lab (SSC 1316). So make sure you check your print balance often. Consult your TAs for details.

### COURSE SCHEDULE (Subject to minor changes)

	Lecture Dates	Lecture Topics	Labs Assigned	Lab Due Dates
Week 1	Sept. 10	Lecture 1- GIS Overview		
Week 2	Sept.17	Lecture 2- GIS Data Models (Vector)	Lab 1	
Week 3	Sept. 24	Lecture 3- GIS Data Models (Raster)		
Week 4	Oct. 1	Lecture 4- Map projections and coordinate systems	Lab 2	Lab 1- Due
Week 5	Oct. 8	Lecture 5 – Data Collection (GPS)		
Week 6	Oct. 15	<b>Midterm Test(20%)</b>	Lab 3	Lab 2- Due
Week 7	Oct.22	Lecture 8 – Spatial Analysis (Vector)		
Week 8	Oct. 29	Lecture 7- Spatial Analysis (Raster)	Study Break- No Labs	

Week 9	Nov. 5	Lecture 8- Spatial Analysis (Raster) cont.	Lab 4	Lab 3- Due
Week 10	Nov. 12	Lecture 9 – Spatial Data Modeling (MCDA)		
Week 11	Nov. 19	Lecture bhb10 – Spatial Data Modeling Continued (MCDA)	Lab 5	Lab 4- Due
Week 12	Nov. 26	Lecture 11 – Remote Sensing/GIS Application		
Week 13	Dec. 3	GIS Applications/ Review		Lab 5- Due

*Classes End: December 6, 2013*