

Department of Geography – Barrie Campus.

GEOG 2232 “Introduction to Geomatics and GIS”

Winter 2022: January - April

Course Syllabus

An introduction to the fundamental principles and techniques that comprise the field of geomatics, especially Geographic Information Systems (GIS). Topics include the collection and visualization of geographical data through various means, database construction and manipulation, and exposure to analog and digital spatial technologies, such as GPS, surveying and digital aerial photography.

Faculty Information

Lisa Tutty

Office: Orillia Campus, OR1037

Phone: 705-330-4008, ext. 2710 (office)

Email: LTUTTY@LakeheadU.ca

Office Hours: Wed & Fri 5:00-6:00pm-**Zoom**

Course Learning Outcomes

The course is intended to provide you with some experience of how to represent various types of spatial data in the form of visual displays which more readily communicate information than raw data. In addition you will be given grounding in GIS principles and techniques to spatial data analysis that can lead to further study in this useful field. At the end of this course you will be more sensitive to the value of a cartographically sound map and will have been initiated into the world of GIS.

-introduction to raster and vector-based GIS;

-develop a working knowledge of ArcGIS software;

-learn the underlying principles of GIS database construction;

-learn to diagnose and manage errors associated with GIS; and

-learn common spatial data analysis techniques.

Program information is on the *myCourseLink (Desire to Learn (D2L))* Lakehead University-Georgian College partnership course shell. Students are encouraged to review the program information.

Class Schedule

Lecture Available online on D2L (go through at your own pace)
 Lab Fridays 2:00-5:00 A114 (PANDEMIC PERMITTING)

No classes on: Monday, February 14, 2022 (Family Day)
 Monday, February 28, 2022 - Friday, Mar 4, 2022 (Study Week)

Exam Period runs April 11 - 24, 2022 (10 days), with Monday, April 25, 2021 as a contingency date. This course will have an assigned time period for an exam. Further details to be released. No exams will be held Apr 15-18 due to Easter Holidays.

Evaluation/List of Assessments

Midterm test 1 week of Feb 7th ONLINE – 10% *See note below**

(multiple choice/'true and false'/'mix and match' + short answer)

Midterm test 2 week of Mar 14th ONLINE – 10% *See note below**

(multiple choice/'true and false'/'mix and match' + short answer)

Lab Exercises WEEKLY – 50% (during lab time and on your own time), *includes lab test during final lab which is worth 15 of this 50.*

Examination – 30% *See note below** (multiple choice/'true and false'/'mix and match' + short answer + long answer) Date/time will be scheduled by the University for this ONLINE examination

A+	90 to 100%	Outstanding understanding of the course concepts including integration of materials and ideas, ability to apply knowledge to situations
A	80 to 89%	
B	70 to 79%	Above average to excellent knowledge, ability to apply knowledge to situations
C	60 to 69%	Satisfactory knowledge including ability to recognise and apply major course concepts, and to progress to next level of course
D	50 to 59%	Some grasp of course concepts; will likely encounter difficulty with higher levels
E	40 to 49%	Failed to meet minimum requirements of the course
F	1 to 39%	Failure
F	0	Failure resulting from academic dishonesty

Course Resources

Required: Chang, K., 2016. Introduction to Geographic Information Systems, 8th Edition (New York, NY: McGraw-Hill). Connect online access will allow you to do practice quizzes which are quite helpful. You need to buy Connect access with your textbook if you want that access, ex at the bookstore. **Here is the course on Connect:** <https://connect.mheducation.com/class/l-tutty-winter-2022-lu-barrie-campus>

Course textbooks can be ordered online through the [Lakehead University bookstore](http://bookstore.lakeheadu.ca/home) (<http://bookstore.lakeheadu.ca/home>). Purchases can be shipped to students' home addresses. For more information, contact [Lakehead University bookstore](http://bookstore.lakeheadu.ca/contact-us) (<http://bookstore.lakeheadu.ca/contact-us>).

Course policies on lateness and absence:

Late submissions for lab exercises may be accepted however the late penalty is 10% per day, including weekends. No late submissions after your classmates assignments have been marked.

*****Important note:** if you miss one midterm test and receive consideration for it then the 10% will be redistributed to the other midterm test (5%) and the final exam (5%) as I do not do rewrites. If you miss both midterm tests or one of them and the final exam then you can NOT pass this course because you have simply missed too much material. *Each of the midterm tests is available online for a whole week so there aren't a lot of valid reasons to miss them.*

Absences and lateness: *During the pandemic LU has temporarily been using the student self-declaration of illness – please check the D2L site to see whether this is still possible before getting the Certificate of Illness or Incapacitation completed.* <https://www.lakeheadu.ca/sites/default/files/uploads/3283/For%20Students-%20Self-Declaration%20of%20Illness.pdf> You may receive consideration for your late work (meaning no late penalty) if you submit the **Certificate of Illness or Incapacitation** (for all health related concerns) or an appropriate piece of documentation for other excuses (ex. certification from the funeral home for the death of a close relative). The proper documentation must be received as soon as possible after the missed deadline. For absences from a midterm test for reasons of illness use the **Certificate of Illness or Incapacitation**, for compassionate reasons or representing the university off-campus you will require written

documentation in order to be receive *potential consideration* for a marks redistribution (midterm) or assignment extension. The late penalty for assignments (without consideration as described above) is 10% per day late, including weekends. Late assignments should be submitted to Lisa via the D2L website. You may email copies of your documentation to Lisa but must submit proper paper copies when you return to class.

Missed Examinations Due to Illness: In cases where a student misses a formal examination due to an incapacitating illness, the student must have the **Certificate of Illness or Incapacitation** completed by a Medical Professional and submit the completed form to Enrolment Services no later than three (3) working days after the date of the original final examination. The **Certificate of Illness or Incapacitation** must be dated as seen by the Medical Professional no later than one (1) working day after the examination.

In other exceptional circumstances, official supporting documentation must be provided (e.g. copy of a death certificate or letter from the funeral home).

The **Certificate of Illness or Incapacitation** is the acceptable documentation for illness. It is available at:

https://www.lakeheadu.ca/sites/default/files/forms/Certificate%20of%20Illness_Incapacity.pdf

Please see the following for important information about missed exams:

<https://www.lakeheadu.ca/studentcentral/exams-grades/missed-exam-medical-personal>

Please know that I am very happy to help you! Don't sit and feel stuck. Email me, drop by office hours (Zoom), come to lab, ask questions! Don't worry – I am here to help you. I enjoy helping that is why I do this :)

Sequence of Topics

This is a tentative schedule of topics and is subject to change. The faculty reserves the right to change/alter the schedule of topics from time to time.

Week/Date	Key Topics	Assigned Readings	Assignments/Tests
One Jan. 10 - 14	Introduction, databases Lab 1	Chapter 1	
Two Jan. 17 - 21	Map projections Lab 2	Chapter 2.1-2.3	Lab 1 due Fri 21 Jan
Three Jan. 24 - 28	Co-ordinate systems Lab 3	Chapter 2.4-2.5	Lab 2 due Fri 28 Jan
Four 31 – Feb 4	Raster data Lab 4	Chapter 4	Lab 3 due Fri 4 Feb
Five Feb 7 - 11	Lab 5		Midterm test 1 (10%); Lab test due Fri 11 Feb
Six Feb 14 - 18	Vector data Lab 6	Chapter 3	Lab 5 due Fri 18 Feb
Seven Feb 21 – 25	Editing Lab 7	Chapter 5, Chapter 7	Lab 6 due Fri 25 Feb
Study Week: February 28 to Mar 4, 2022			
Eight March 7 - 11	Geocoding Lab 8	Chapter 16	Lab 7 due Fri 11 Mar
Nine March 14 - 18	Lab 9		Midterm test 2 (10%); Lab 8 due Fri 18 Mar
Ten March 21 - 25	Overlay and Vector analysis Lab 10	Chapter 11, Chapter 17	Lab 9 due Fri 25 Mar
Eleven 28 - April 1	Terrain and Raster analysis Lab 11	Chapter 12, Chapter 13, Chapter 14	Lab 10 due Fri 1 Apr
Twelve April 4 - 8	Story Maps LAB TEST		Lab 11 and Story Map due Fri 8 Apr Lab Test (15%)
Exam Period April 11 - 24, 2022	<i>Exam contingency date is Apr 25</i>		Final Exam (30%) to be scheduled by the Uni

Final day of classes (Lakehead University Academic Schedule) is Saturday, April 9, 2022.

Expectations for Successful Participation

1. Attend every class (and if you cannot, ask a learning partner to help you catch up) – lecture and especially lab.
2. Check myCourseLink regularly for announcements, reading and work assignments and course updates.
3. Ask questions if you need clarification (in class; via email; or by telephone). Email will receive a speedier response to questions than leaving a voicemail message. Please ensure that you “sign” your email with your name and course number as I am teaching numerous classes this term.
4. Keep up with your course work. Read the designated material and complete the assigned homework so that you can come to class prepared. Stay on top of your work, don’t let it pile up and become overwhelming.
5. Submit your assignments by the deadline! You are strongly advised not to wait until the last minute to submit your tests and assignments in case you have computer problems.

Academic and Student Code of Conduct Policies

- Academic and student policies and procedures for those enrolled in the Lakehead-Georgian programs can be found on the [Lakehead-Georgian Student Portal](#).
- All Lakehead-Georgian programs will follow the Lakehead Regulations as list in the Lakehead University [Academic Calendar](#) (http://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&loaduseredit_s=False). The University Regulations include but are not limited to Registration, Examinations, Reappraisals and Academic Appeals, Special Examinations, Academic Misconduct, Withdrawal, and Timely Feedback. Additional Faculty Regulations may also apply. Please review the Academic Calendar.
- The Lakehead University [Student Code of Conduct - Academic Integrity](#) (<https://www.lakeheadu.ca/students/student-life/student-conduct>) will apply to all Lakehead-Georgian students regardless of campus of study.
- The Lakehead University [Student Code of Conduct - Appeals](#) (<https://www.lakeheadu.ca/students/student-life/student-conduct>) will apply to all Lakehead-Georgian students regardless of campus of study.
- The Georgian College [Student Code of Conduct](#) (<http://www.georgiancollege.ca/student-code-of-conduct/>) will apply to the Lakehead-Georgian students studying at the Barrie campus. Additional campus policies of [Sexual Violence Procedure and Protocol](#) (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/sexual-violence>), Alcohol, Drugs and Tobacco (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/alcohol-drugs-and-tobacco>), and [Information Technology Acceptable Use Procedure](#)

(<http://www.georgiancollege.ca/wp-content/uploads/2-117IT-acceptable-use.pdf>) also apply.

- The Lakehead University [Student Code of Conduct – Non-Academic](https://www.lakeheadu.ca/students/student-life/student-conduct) (<https://www.lakeheadu.ca/students/student-life/student-conduct>) will apply to the Lakehead-Georgian students studying at the Orillia campus.

Plagiarism and Academic Dishonesty

A breach of Academic Integrity is a serious offence. The principle of Academic Integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should view the [Student Code of Conduct -Academic Integrity](https://www.lakeheadu.ca/students/student-life/student-conduct) (<https://www.lakeheadu.ca/students/student-life/student-conduct>) for a full description of academic offences, procedures when Academic Integrity breaches are suspected and sanctions for breaches of Academic Integrity.

No formal division of the class into groups will be made for labs or assignments, though it is acknowledged you will likely work together at times. Individual (and unique) submissions are expected for each lab exercise and assignment. I expect you to read and understand the University's policy on plagiarism.

Neat 15 minute exercise from Cardiff University (Avoiding plagiarism):

<https://ilrb.cf.ac.uk/plagiarism/tutorial/>

Whom to Contact

STUDENT ADVISING (NON-ACADEMIC)	
Becca Allan Advisor, Accessibility and Academic Success Services	Tel: 705-728-1968, Ext. 5373 Becca.Allan@GeorgianCollege.ca (Georgian, Barrie) Room A143L

ENVIRONMENTAL SUSTAINABILITY		
Lakehead University Department Chair	Dr. Sreekumari Kurissery	Tel: 705-330-4008, Ext. 2629 skurrisse@lakeheadu.ca (Lakehead, Orillia) Room OA 3010
Georgian College Program Coordinator	Samantha Sullivan Sauer	Tel: 705-728-1968, Ext. 6280 samantha.sullivansauer@georgiancollege.ca (Georgian, Barrie) Room A143K
Georgian College Program Assistant	Jacqueline Huggard	Tel: 705-728-1968, Ext. 5225 jacqueline.huggard@georgiancollege.ca (Georgian, Barrie) Room A143L

SCIENCE LABORATORY SUPPORT		
Lakehead University Laboratory Technician	Chase Moser	Tel: 705-728-1968, Ext. 1839 cmoser@lakeheadu.ca (Georgian, Barrie) Room A143Q

Student Services and Supports

Student Advisors (<https://georgiancollege.sharepoint.com/sites/student/Student-Services/StudentAdvisors/SitePages/Home.aspx>)

- Help students build both academic and personal resilience so that they can flourish at Georgian and beyond
- Provide individual, group and web-based advising sessions
- Are housed within the academic areas
- To book an appointment with your advisor go to the **Student Portal (preferred)** or call **705-728-1968 Ext. 1307**

Library (<http://library.georgiancollege.ca/main>)

Customer Service

- Off campus access

Research help

- Help finding books, articles and credible sources.
- Using specialty databases.
- Creating a search strategy.

Academic Success (<https://library.georgiancollege.ca/help/contact-academic-success/>)

Writing Centre (http://library.georgiancollege.ca/writing_centre)

- Improve your writing.
- Help with citing sources and laying out your paper.

Math Centre (http://library.georgiancollege.ca/math_centre)

- Make sense of math questions.
- Understand concepts and develop skills.

Tutors (<http://library.georgiancollege.ca/tutoring>)

- Further understand course content.
- Build your study practices.

Accessibility Services (<https://www.georgiancollege.ca/student-life/student-services/accessibility-services/>)

If you are a student experiencing a disability who may require academic accommodations and have not yet registered with Accessibility Services, please contact their office at 705-722-1523, email studentsuccess@georgiancollege.ca, or visit their offices in B110. You must be registered with Accessibility Services to access academic accommodations. Support for those students whose success at college may be affected by a disability include:

- Ongoing support from our Accessibility Advisors including arranging a confidential psychoeducational assessment where required
- Training in the use of specialized computer technology
- Classroom and test accommodations

Testing Services (<http://www.georgiancollege.ca/student-life/student-services/testing/>)

- Accommodated testing
- Missed/Makeup testing
- Proctoring services are also available for external and Ontario Learn exams

Counselling (<http://www.georgiancollege.ca/student-life/student-services/counselling/>)

- Free, confidential counselling is available to all students
- Walk in counselling is available on a daily basis Monday to Friday

Career Success (<http://www.georgiancollege.ca/student-life/student-services/co-op-and-career-services/>)

Career assessments and exploring options

- Job search workshops
- Labour market information
- Resume/cover letter help
- Interview practice
- Graduate employment information
 - Links to job postings and online resource

Campus Safety and Security Syllabus Addendum

Emergency Evacuation (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/fire>)

- Evacuate buildings when a fire alarm is activated or an official announcement is given. Review [evacuation guidelines](https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/fire). (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/fire>)
- Students requiring assistance in emergency situations must inform their faculty during the first week of class.
- Familiarize yourself with all fire exit doors of classrooms and buildings you may occupy.
- Do not re-enter a building until instructions are given by the Fire Department or college personnel.

Lockdown (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/lockdown>)

- Lockdown is initiated when there is a potential or actual violent incident on campus that could result in a serious injury or threat to life.
- Students can download the new Safe@Georgian app to stay updated on Campus Safety and Security information including lockdown.
- Familiarize yourself with the [College Lockdown procedure](https://www.georgiancollege.ca/wp-content/uploads/Lockdown.pdf) (<https://www.georgiancollege.ca/wp-content/uploads/Lockdown.pdf>)
- Lockdown tests occur each semester.

Resources:

- [Get Out, Hide, Fight Lockdown Video](http://youtu.be/JA8cckMbVDk) (<http://youtu.be/JA8cckMbVDk>)
- [Lockdown quick reference sheet](http://www.georgiancollege.ca/wp-content/uploads/COM-15-416_LockdownProcedure_Signage_FVR3_print.pdf) (http://www.georgiancollege.ca/wp-content/uploads/COM-15-416_LockdownProcedure_Signage_FVR3_print.pdf)
- Lockdown Model – Get Out, Hide, Fight: Lockdown Tools and Tactics and FAQs.

Unscheduled Campus Closure (<https://www.georgiancollege.ca/about-georgian/campus-safety-services/tab/campus-closures>)

Resources:

- [How to find out if your campus is closed](http://www.georgiancollege.ca/about-georgian/campus-safety-services/#how-to-find-out-if-your-campus-is-closed) (<http://www.georgiancollege.ca/about-georgian/campus-safety-services/#how-to-find-out-if-your-campus-is-closed>)
- [Unscheduled Campus Closure Procedure](https://www.georgiancollege.ca/wp-content/uploads/2-102Unscheduled-college-closure-2018.02.10.pdf) (<https://www.georgiancollege.ca/wp-content/uploads/2-102Unscheduled-college-closure-2018.02.10.pdf>)

Timing of Closures/Notification:

Closure	Decision	Communication / Notification*	Notes
College has made the decision to close a campus or location <u>in the morning</u> :	6:00 a.m.	By 6:30 a.m.	If re-opening for noon or evening classes is being considered, this will be mentioned in the message
College closes a campus(s) in the morning and <u>expects to re-open by 12:00 noon</u>	9:30 a.m.	By 10:00 a.m.	Only affects classes beginning at 12 noon or later
Closure expected to continue <u>past 12:00 noon</u>	9:30 a.m.	By 10:00 a.m.	
College intends to <u>re-open for evening classes</u> which commence at 5 p.m. or later	2:30 p.m.	By 3:00 p.m.	
College intends to <u>NOT re-open for evening classes</u> :	2:30 p.m.	By 3:00 p.m.	

*Notification will be made via:

- Georgian social media (Facebook, Twitter)
- Safe@Georgian app
- Georgian website (homepage)
- Recorded message when you call into Barrie campus at 705-728-1968
- Student or employee portal
- Georgian email account
- Radio and television announcements through local and regional media

Note: We only announce the names of campuses that are closed. If your campus is not named in a closure, it's open.