

## GEOG3222 WAB Intro to GIS and Geomatics

### Course Syllabus

#### Course Description

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. **Credit Weight:** 0.5    **Cross-List(s):** Environmental Studies 2232

#### Faculty Information

Lisa TUTTY  
(Lecture)

**Office:** A143a (shared office – *must* book meeting time)

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

Email: [LTUTTY@lakeheadu.ca](mailto:LTUTTY@lakeheadu.ca) (use *your* College/University email please & add course code)

**Office Hours:** by appointment

**Course objective:** 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.

#### Course learning goals:

- 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.

#### Class Schedule

<b>Lectures</b>	Tuesdays and Thursdays	2:00-2:50	in K327
<b>Labs</b>	Fridays	1:00-3:50	in unknown TBA

No classes on: Monday, February 20, 2023 (Family Day)

Monday, February 27, 2023 - Friday, March 3, 2023 (Study Week)

Friday, April 7, 2021 (Good Friday)

Wednesday, April 12, 2023 - Thursday, April 13, 2023 (Winter Exam Study Break)

Exam Period runs April 14 - 24, 2023 (11 days) (*Includes two weekends*), with Monday, April 25, 2023 as a contingency date. This course will have an assigned time period for an exam. Further details to be released.

### Evaluation/List of Assessments

<b>Tests</b>  <b>Midterm test</b> <u>Tues 14 and Thurs 16 Feb IN CLASS</u> – 12.5% (multiple choice/'true and false'/'mix and match' + short answer)  <b>Lab test</b> – 15% held during the final lab period <u>Friday March 31<sup>st</sup> IN CLASS</u> , tests you on lab processes/skills/concepts  <b>Examination</b> – 12.5% (multiple choice/'true and false'/'mix and match' + short answer + long answer) <u>Date/time will be scheduled by the University</u>	<b>40%</b>
<b>Lab exercises and in-class exercises (ex. story map).</b> <ul style="list-style-type: none"> <li>• During lab time, class time and/or on your own time</li> <li>• Will be completed in ArcGIS online, and/or ArcGIS PRO, and/or ArcGIS Story Maps</li> <li>• Each lab exercise is worth the same amount</li> </ul>	<b>60%</b>
<b>Total</b>	<b>100%</b>

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%	Above average to excellent knowledge, ability to apply knowledge to situations
B	70 to 79%	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

Mark descriptions from Lakehead University. Students are advised to refer to the University Calendar to ensure that they have adequate grades and/or average to proceed in their program. Grades in this course are numerical (not letters).

### **Course policies on lateness and absence:**

Late **assignment** submissions may be accepted at the discretion of the instructor however the late penalty is 10% per day, including weekends. No late submissions after your classmates assignments have been marked. If you are registered with Accessibility Services please have your advisor contact me to negotiate any extensions. If you are ill/incapacitated/undergoing a serious circumstance (ex. death of an immediate family member) please follow the procedure at: <https://www.lakeheadu.ca/studentcentral/exams-grades/missed-exam-medical-personal> in order to request consideration for late assignments or missed tests. Please note that it is NOT possible to pass this course if you miss both the midterm test and the final exam.

**\*\*\*Important note:** if you miss the midterm test and receive consideration for it then the 12.5% will be redistributed to the final exam (making it worth 25% instead of 12.5%) as I do not do midterm rewrites. If you miss the midterm test and the final exam then you can NOT pass this course because you have simply missed too much material.

### **Land Acknowledgement**

LUGC acknowledges that the campuses in which our programs are located, are on traditional lands of Indigenous Peoples. Georgian College and Lakehead Orillia are situated on the traditional land of the Anishinaabeg people which include the Ojibwe, Odawa, and Pottawatomi nations, which are collectively known as the Three Fires Confederacy. The LUGC community is dedicated to honour the history of Indigenous Peoples and their culture. We are committed to a relationship with the First Nations, Métis, and Inuit Peoples and move forward in the spirit of reconciliation.

### 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	Assignments/Tests
Jan. 9 - 13	Introduction, databases	Lab 1 due Fri 20 Jan ( <i>before 11:59pm</i> )
Jan. 16 - 20	Map projections	Lab 2 due Fri 27 Jan
Jan. 23 - 27	Co-ordinate systems	Lab 3 due Fri 3 Feb
Jan 30 – Feb 3	Raster data	Lab 4 due Fri 10 Feb
Feb. 6 - 10	Vector data	Lab 5 due Fri 17 Feb
Feb 13-17	<b>Midterm test (Feb 14 and Feb 16)</b>	Lab 6 due Fri 24 Feb
(Feb 20 is Family Day holiday) Feb 21 - 24	Editing spatial data	Lab 7 due Fri 10 Mar
Feb 27 – Mar 3	<b>Reading Week</b>	
March 6 - 10	Geocoding	Lab 8 due Fri 17 Mar
March 13 - 17	Overlay and Vector Analysis	Lab 9 due Fri 24 Mar
March 20 - 24	Terrain and Raster Analysis	Lab 10 due Fri 31 Mar
March 27 - 31	Buffer and Least Cost Path Analysis	<b>Fri 31 Mar is our LAB TEST</b>
April 3 – 6 ( <i>Fri 7 Apr is Good Friday holiday</i> )	<i>Use the normally scheduled lecture time to work on your Story Maps on your own (at home)</i>	<b>No lab this week due to Good Friday</b>
April 10 - 11	<i>Use the normally scheduled lecture time to work on your Story Maps on your own (at home)</i>	<b>“Lab 11” Story Map due online Tues Apr 11</b>

### Expectations for Successful Participation

1. Attend every class and lab. Don't let the work pile up until test time and due dates, it gets overwhelming very quickly.
2. Check myCourseLink regularly for announcements and work assignments and course updates.
3. Ask questions if you need clarification (book yourself some student hours or ask on the Discussion Board or via email). Please ensure that you "sign" your email with your name and course number and send the email from your College or University account – I am teaching multiple courses).
4. Keep up with your course work, stay on top of it each week.
5. Submit your assignments by the deadline! You are strongly advised not to wait until the last minute to submit your assignments in case you have computer problems. Ten percent per day late penalty is a steep penalty, best to submit your work on time.

### 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](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.

### Whom to Contact

STUDENT ADVISING (NON-ACADEMIC)		
Becca Allan Advisor, Accessibility and Academic Success Services		Tel: 705-728-1968, Ext. 5373 <a href="mailto:Becca.Allan@GeorgianCollege.ca">Becca.Allan@GeorgianCollege.ca</a> (Georgian, Barrie) Room A143L

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

SCIENCE LABORATORY SUPPORT		
<b>Lakehead University</b> Laboratory Technician	Chase Moser	Tel: 705-728-1968, Ext. 1839 <a href="mailto:cmoser@lakeheadu.ca">cmoser@lakeheadu.ca</a> (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](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](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](mailto: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](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
<b>College has made the decision to close a campus or location <u>in the morning</u>:</b>	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 message
<b>College closes a campus(s) in the morning and <u>expects to re-open by 12:00 noon</u></b>	9:30 a.m.	By 10:00 a.m.	Only affects classes beginning at 12 noon or later
<b>Closure expected to continue <u>past 12:00 noon</u></b>	9:30 a.m.	By 10:00 a.m.	
<b>College intends to <u>re-open for evening classes</u> which commence at 5 p.m. or later</b>	2:30 p.m.	By 3:00 p.m.	
<b>College intends to <u>NOT re-open for evening classes</u>:</b>	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.