

Course-based Program Handbook CGIT / MGIS



**Department of Geography
University of Calgary**

Graduate Certificate in Geospatial Information Technology (CGIT)

The CGIT program consists of **four courses** (12 units) that are typically offered in the Fall semester. These courses are often referred to as the “CGIT courses”.

GEOG680: Principles of Digital Cartography and Geovisualization

GEOG682: Fundamentals of Geographic Information Science

GEOG684: Fundamentals of Remote Sensing

GEOG686: Applied Statistics and Geospatial Analysis

The expected time for completion is four months (September to December of same year). The maximum time for completion is two years.

Combining CGIT with other Graduate Programs

Eligible students can pursue the CGIT program concurrently with Master of Arts (MA), Master of Science (MSc), Doctor of Philosophy (PhD), Master of Architecture (MArch), Master of Planning (MPlan), and Master of Landscape Architecture (MLA) programs at the University of Calgary.

Laddering from CGIT to MGIS

Graduates of the CGIT program who meet program requirements are eligible to apply for 12 units of ‘laddering’ credit towards the MGIS degree. Once the CGIT requirements are completed, students can apply directly through the GEOG ‘MGIS-DEG Laddering students only.’

Master of Geographic Information Systems (MGIS)

1. MGIS Degree Requirements

The MGIS program consists of **ten courses (30 units)**. The 3 required MGIS **core courses** listed below also show the relevant “CGIT course” that is associated with that MGIS core course. While the CGIT courses count as elective courses in the MGIS program, it is expected and highly recommended that MGIS students take the CGIT courses upon entering the MGIS program (please see Part B under section “Elective courses” below for further information).

Core courses (9 units)

GEOG 633 Research and Applications in Remote Sensing

GEOG 639 Advanced Spatial Analysis and Modelling

GEOG 647 Advanced Research and Applications in GIS

Core research / project-based courses (6 units)

GEOG 681 Geographic Information Systems Project: Theoretical Issues
(Must have completed GEOG 633, GEOG 639 and GEOG 647 before taking this course)

GEOG 683 Geographic Information Systems: Application
(Must have completed GEOG 681 before taking this course)

Note: GEOG 681 is typically taught in the Spring Term. GEOG 683 is typically taught in the Fall Term.

Note: To graduate, MGIS students must pass an **oral comprehensive examination** that is a course component in GEOG 683. Detailed information about the oral comprehensive examination will be provided to students by the instructor of GEOG 683. The oral comprehensive examination will consist of several rounds of questions based on course material in the MGIS program asked by an examination committee. This comprehensive examination is an important milestone in the MGIS program and students must be well prepared for this oral comprehensive examination.

Elective courses (15 units)

A. Students take 5 elective courses as part of the MGIS program (15 units)

B. CGIT courses (GEOG 680, GEOG 682, GEOG 684, GEOG 686) count toward electives. MGIS students are strongly encouraged and typically take these 4 CGIT courses as electives prior to taking the MGIS core courses.

MGIS students are automatically eligible to enroll in any CGIT course (GEOG 680, GEOG 682, GEOG 684, GEOG 686).

Below is a table showing each of the 3 core MGIS courses (required courses) and the corresponding CGIT course that is typically taken prior to that particular advanced course.

MGIS core course (required)	Corresponding CGIT course
GEOG 633	GEOG 684
GEOG 639	GEOG 686
GEOG 647	GEOG 682

Note: If an MGIS student believes that they have relevant background in geographic / geospatial information systems that will allow them to complete successfully a particular MGIS core course without first taking the associated CGIT course, then the following steps must be taken to obtain Consent of the Department. The student must consult with the instructor of the MGIS core course(s) for which the waiving of the relevant CGIT course is being requested and explain their relevant background to the instructor. The decision as to whether consent will be given to take an MGIS course without first completing successfully the associated CGIT course is entirely at the discretion of the Course Instructor of that MGIS core course. If consent is given, then the Course Instructor and student will inform both the program (geograd@ucalgary.ca) and the Graduate Program Director (geoggpdcourse@ucalgary.ca) of the decision. If permission is given, the student must be sure to still fulfill the elective requirements for MGIS program completion.

C. Electives can be taken in any program, including Geography, providing the course has Department of Geography approval (e.g., ENGO courses (Geomatic Engineering), ENEN courses (Environmental Engineering)).

D. Up to two elective courses (6 units) can be at the 500 level (e.g., GEOG 567: Introduction to Programming in Geographic Information System; GEOG 582: Technology, Society and Space; GEOG 587: Geospatial Project Management; GEOG 588: Urban GIS)

E. Electives must be approved by the Graduate Program Director. Courses taken outside the Department of Geography require the completion of a special form:
https://grad.ucalgary.ca/sites/default/files/teams/3/r_change_course_reg_202108.pdf

2. Course Progression in MGIS Program

The expected course progression and degree completion pathway for MGIS students is outlined below.

The University of Calgary has term-based registration for all course-based graduate programs, including the MGIS program. **Term-based registration has strict requirements of how many courses a student has to take in each term to maintain full-time status.** If for any reason, **you want to maintain full-time status in the program, then it is important that you review these requirements carefully** at the following Faculty of Graduate Studies web page:
<https://grad.ucalgary.ca/current-students/course-based-students/new-term-based-registration>

If international students have questions related to **immigration-related matters** (including student status requirements for immigration purposes), then they should contact **International Student Services (ISS)**: <https://www.ucalgary.ca/student-services/iss>

The following outlines the path to MGIS program completion in 16 months, which is how the program is designed to be taken.

- Students normally take the following 3 fundamental/basic courses (these courses provide the necessary background for the 3 core MGIS courses; students normally need to take each of these to receive the Consent of Department necessary to register into the corresponding more advanced core MGIS course, see next bullet point): GEOG 682, GEOG 684, GEOG 686
- All students must take the 3 core MGIS courses: GEOG 633, GEOG 639, GEOG 647
- All students must take the 2 project courses: GEOG 681, GEOG 683
- The above totals 8 courses, so students then have 2 courses (electives) to complete the 10 courses for the MGIS program. These electives must be approved by the Graduate Program Director. The most popular and highly recommended electives are GEOG 680, GEOG 588, GEOG567.

The timing of the completion pathway for the 8 courses listed in the first three bullet points above is (remember that 2 more approved electives are also required to meet program requirements):

Fall Term (first year): GEOG 682, GEOG 684, GEOG 686

Winter Term (first year): GEOG 633, GEOG 639, GEOG 647

Spring Term (first year): GEOG 681

Summer Term (first year): Official break term (scheduled break) Fall

Term (second year): GEOG 683

Information about some common elective courses:

**GEOG 680 is typically offered in the Fall Term, so normally this would be taken in fall term of the first year in program.

**GEOG 588 is typically offered in the Winter Term, so normally this would be taken in winter term of the first year in program.

**GEOG 567 is typically offered in the Fall Term. However, the material is quite advanced so students normally do not have adequate background to take this course in the first year in program, so the best time to take this course would normally be Fall Term of the second year in program.

3. Academic Standing

Poor academic standing is defined by one or both of the following conditions:

1. A student receives a "C+" or lower in any one course.
2. A student does not maintain an annual GPA of at least 3.00

A student who is in poor academic standing will normally be required to withdraw from the program.

When any instance of poor academic standing arises, the student's program must make a recommendation to Faculty of Graduate Studies. Programs can recommend that the student withdraw from the program or that the student stay in program. If the Dean of the Faculty of Graduate Studies determines that a student can remain in program, the student will be placed on academic probation. If a student who is on academic probation receives a grade of "C+" or below, they will normally be required to withdraw from their program. To be removed from academic probation, the student must meet any requirements set by the Dean of Graduate Studies when the probation began, and must complete one full semester in good academic standing.

If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript.

A student must have a cumulative GPA of at least 3.00 in order to graduate. Complete information is found in the [Graduate Calendar](#).

4. Course Schedule for CGIT and MGIS courses (Fall 2024 + Winter 2025)

Course	Term	Instructor
GEOG 680	Fall 2024	Darren Sjogren
GEOG 682	Fall 2024	Darren Bender
GEOG 684	Fall 2024	Darren Sjogren
GEOG 686	Fall 20234	John Yackel
GEOG 633	Winter 2025	Geoffrey Hay
GEOG 639	Winter 2025	TBA
GEOG 647	Winter 2025	Darren Bender

- GEOG 681 is offered in Spring Term.
- GEOG 683 is offered in Fall Term.

5. MGIS Degree Completion

For the MGIS Program, minimum completion time is one year. Expected time in program is 16 – 20 months. Maximum completion time is six years. Please review the earlier section on term-based registration for information on student status (e.g, full-time, part-time).

- For conferral of your degree, students must complete all program requirements by the dates stipulated in the academic calendar. **These dates change from year to year, so students must be sure to have current information.** The academic calendar is available here: <https://calendar.ucalgary.ca/uofcregs/acadsched>
- After the courses have been taken and program requirements have been completed, students should apply to graduate. Instructions are found at <https://www.ucalgary.ca/graduation/applying-graduate>.
- Additional important information on graduation (including on completion letters) is found at <https://grad.ucalgary.ca/current-students/registration/graduation>
- Any keys, lab cards and any other University property issued to the student must also be returned at degree completion.

Upcoming dates relevant to degree completion and convocation:

Winter 2025 conferral

- Deadline to apply for Winter convocation: January 15, 2025

- Deadline for completion of program requirements: December 31, 2024
- Winter convocation: February 13, 2025
- NOTE: Winter registration can be cancelled if degree requirements completed by Winter fee deadline (January 23, 2025).

6. Contact Information

Administrative Faculty

Graduate Program Director (GPD) (Course-based Programs): Dr. Victoria Fast
geoggpdcourse@ucalgary.ca

Head of Department of Geography: Dr. Andrea Freeman (geoghead@ucalgary.ca)

Administrative Staff

Graduate Program Advisor (GPA): Federica Gowen (geograd@ucalgary.ca)

GIS / Remote Sensing Technical Support: Chelsea Fitzpatrick (chelsea.fitzpatrick@ucalgary.ca)

Geography Graduate Student Association (geogsa@ucalgary.ca)

7. Who Do I Contact When I Have Questions?

Your Graduate Program Advisor is your first point of contact for administrative matters and the Graduate Program Director for academic matters.

Please allow three working days for a reply to an e-mail. We also kindly ask that you do not send multiple e-mails, or the same e-mail to different parties, as this slows down the progress of our work. We appreciate your patience and thank you for your understanding.

Program requirements General advising Administrative matters	Graduate Program Advisor (MGIS and CGIT) Federica Gowen (geograd@ucalgary.ca)
Program policies / regulations Other program-related and course-related matters	Graduate Program Director (Course-based programs) Dr. Victoria Fast (geoggpdcourse@ucalgary.ca)
Course information details Course permissions in certain cases	Course Instructors (see Department of Geography web page for contact information)
Software/Other technical concerns	Technical Support Chelsea Fitzpatrick (chelsea.fitzpatrick@ucalgary.ca)

Graduate student life	geogsa@ucalgary.ca
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7. University Student Support Services

1. The Faculty of Graduate Studies (FGS) provides student support services (e.g., information and counselling for academic matters, including an international specialist). Please see this web site for contact information: <https://grad.ucalgary.ca/services/student-services/student-support>
2. International Student Services (ISS) provides support for international students. Students who require advice about immigration-related matters must contact ISS, as the MGIS program **cannot** advise about immigration-related matters. Please see this web site for contact information: <https://www.ucalgary.ca/student-services/iss>

8. Nigel Waters Scholarship

The Nigel Waters Scholarship is a competitive scholarship for which MGIS students may apply. Please see the following link for information about this scholarship:
<https://iac01.ucalgary.ca/FGSA/Public/SpecificAward.aspx?AwardID=6304>

Note: For eligibility to apply for the Nigel Waters Scholarship, a student should have completed successfully at least 4 courses within the program.

The application package must include:

- Curriculum Vitae (CV)
- Transcript for University of Calgary courses (showing final grades)

The deadline for applications to be submitted to the MGIS program (geograd@ucalgary.ca) is May 15.