



**School of Environment and Geomatics**

**Geographic Information Systems (GIS) Program Policies**

<b>DATE(S):</b>		
1.	Next Policy Review:	2023/05/01
2.	Admissions & Standards Committee Approval:	2018/11/27
3.	Education Council Approval:	2018/12/11
4.	Effective:	2019/01/01
5.	Previous Revision(s):	

<b>CREDENTIAL(S):</b>	<b>Advanced Certificate, Advanced diploma (ADGIS), Bachelor’s degree (BGIS)</b>
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**PROGRAM OUTCOMES**

- acquire, import, manage and handle different spatial and non-spatial data
- explain how project management principles support successful GIS projects
- synthesize and visualize geospatial data into meaningful results
- implement processes to assess and document the source, history, quality and appropriate use of spatial and non-spatial information
- demonstrate proficiency managing, analyzing, and automating spatial data tools within GIS environment
- answer relevant questions effectively
- support a multi-stakeholder environment through engagement with GIS
- apply strategies that improve communication with the understanding of different audiences through collaboration, public speaking, presentation, technical writing and dialog
- explore new solutions; adapt new technology and trouble shooting
- exhibit positive, professional behaviors that maximize opportunities for improved relationships and career success

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Students in the Advanced Certificate, ADGIS and BGIS Programs are subject to the overall policies affecting all students at Selkirk College, with the following additions. College policies may be viewed on-line at the College website ([policies.selkirk.ca](http://policies.selkirk.ca))

**PART I: ADMISSIONS**

**A. ADMISSION REQUIREMENTS**

In addition to meeting the general admission requirements to Selkirk College, the applicant must meet the following program requirements to be considered fully-qualified:

1. Academic

- a) The minimum requirement for entry into the Advanced Certificate, ADGIS, or year 3 of the BGIS program is successful completion of 60 credits from a diploma/associate degree or applied/academic degree from an accredited post-secondary institution with an average GPA of at least 2.33.
- b) Successful completion ("C" grade) of a 100 or 200 level introductory statistics course is required for students planning to complete the BGIS.
- c) International students will be expected to provide documentation of English proficiency as per Policy 8611.
- d) Program Chairs will determine, in consultation with Assessment Services, which components of the CRT will be required and the cut off scores for each component, in order to verify an applicant's potential for success and program admission.

2. General

- a) Applicants must submit a completed application form and other required documents (i.e. secondary school and any post-secondary transcripts, application package) to the Registrar's office.
- b) Personal Reference (only ADGIS and BGIS)
  - (i) All applicants must have two academic or professional references. Students must ensure that referees complete and submit the form provided in the application package. Both references must indicate a favourable chance of applicant success in the program (i.e., must score over 3.5 in the reference answer rating system)
- c) Letter of intent (all programs)
  - (i) All applicants must complete a Letter of intent of 500 words or less that states their background and personal interest in the program. Applicants should highlight experience in GIS and/or computer skills in this letter. Demonstrated competency in computer hardware and software technology, including, spreadsheet use, word processing, computer graphics and presentations is recommended.

Note: An applicant with reasonable potential for success on the basis of work experience or other criteria may be admitted, notwithstanding some deficiency in prior formal education.

Program Chairs will determine, in consultation with Assessment Services, which components of the CRT will be required and the cut off scores for each component, in order to verify an applicant's potential for success and program admission.

Applicants with no accredited post-secondary credential may require academic upgrading prior to starting the program. They are urged to apply for the program at least one year in advance. All applicants wishing to enroll in the BGIS must have completed 60 post-secondary credits, as outlined in 1. a. above.

B. APPLICATION PROCESS

- 1. Before an applicant's file is considered to be complete, the following must have been received by the Admissions office:
  - a) completed application form;

- b) official transcripts of all relevant post-secondary education;
- c) official transcripts of high school grades will be required for applicants entering without a credential from an accredited post-secondary institution;
- d) completed Letter of Intent; and
- e) For ADGIS and BGIS, two personal reference forms completed by a current or previous instructor, counselor or employer, e.g., supervisor. Personal references should be submitted by the referee directly to the Admissions Office (photocopies are not acceptable).

- 2. Deadline for completing the application file is normally one month prior to the commencement of the program.
- 3. Late applications will be accepted if space is available.
- 4. Part time applications for the Advanced Certificate will be accepted.

C. ADVANCE OR TRANSFER CREDIT AND PRIOR LEARNING ASSESSMENT

- 1. A student may obtain credit for a maximum of 75% of program requirements by Transfer Credit, Advanced Placement, Prior Learning Assessment or combination thereof, with the exception of BGIS, which has a minimum residency requirement of 56 credits taken at Selkirk College in semesters one through 5; this generally includes the ADGIS 300 and 400 level courses.
- 2. Application for advanced credit is to be made prior to entry into the program and students are advised to attend all classes for which they are seeking advanced credit until the credit is formally approved.

D. RE-ENTRY INSTRUCTION

- 1. Students normally must complete the entire program within 24 calendar months of initial entry to qualify for a diploma. Re-entry applicants who cannot meet this deadline will be required to retake courses which have changed.
- 2. Re-entry is permitted only when space is available.
- 3. Students in good standing who must interrupt their program may apply to re-enter the program within one year of departure.
- 4. Students who fail to complete a course successfully may apply to re-enter the course the next time it is offered.
- 5. Priority for re-entry will be given as follows:
  - a) students who interrupted their program for illness or compassionate reasons; and
  - b) students who failed to meet program requirements for promotion.

**PART II: ASSESSMENT, PROMOTION AND GRADUATION**

A. ASSESSMENT

1. Grading

Grades and the calculation of the grade point average will be based on the Standard Academic and Career Grading table from *Policy 8612: Grading*. With the exception of GIS 320 – GIS Professional

Development and a 300 level COOP course which will be assigned a credit/no credit grade (CRG/NCG) as described in the Competency Based Grades table in Policy 8612: Grading. This non-grade status is recorded on the transcript and is not calculated in the grade point average. To view the grading tables see *Policy 8612: Grading*.

2. Types of Assessments

- a) Assessments will occur as specified in course outlines and will be more than two events per course.
- b) GIS 320 assessment occurs on a weekly basis. All activities in which students participate may be considered assessment events. Informal verbal and/or written feedback and formal, written feedback is regularly provided by the instructor or field supervisor. Formal, written performance appraisals are summaries of assessment events to date and there may be one or more of these events as well as the written feedback on the practicum project included in the assessment process.
- c) In both theory and lab courses assessment events will normally include assignments, presentations, reports, examinations, tests and quizzes. These will be specified in the course outlines.
- d) In the practicum, formal written appraisals will be given using a tool, which is based entirely on the stated performance criteria for the program practicum activity level and/or to write all exams in order to receive credit for the course.
- e) No single assessment can be worth more than 50% of the final grade of any course.
- f) Presentations will be required for GIS 492: BGIS thesis.
- g) Examinations
  1. The schedule for examinations will be published in the course outlines.
  2. Regulations for invigilated examinations at Selkirk College sites or other designated sites include the following:
    - (a) tests, quizzes, exams must be written at the scheduled appointment time when invigilation services are available;
    - (b) students leaving the exam room before the conclusion of the exam without the permission of the invigilator may forfeit their right to return and complete the exam;
    - (c) no books or other material may be brought into the examination room unless consent of the invigilator has been given;
    - (d) no material relating to the examination may be removed from the examination room. Under no circumstances may materials upon which answers are written be removed;
    - (e) making use of materials, books or notes without the approval of the invigilator, speaking or communicating in other ways with other students, or exposing written papers to the view of other students is not permitted;
    - (f) students in violation of the above items will be required to leave the examination room immediately and will forfeit the right to have the examination evaluated;
    - (g) any questions must be directed to the invigilator; and

(h) all completed tests must be returned to the instructor/invigilator and will be kept on file for the required time period.

3. Regulations pertinent to face-to-face laboratory and practicum testing will be according to course outline details and as previously described.

3. Supplemental Assessment(s)

- a) Supplemental final examinations/activities will only be considered upon written request by the student to the course instructor.
- b) At no time will the mark on a supplemental examination/activity exceed the equivalent of a "C" grade for the evaluative event.
- c) Normally, only one supplemental final examination/activity will be allowed in the program.

B. PROMOTION

- 1. Each semester must be completed with a Grade Point Average of 2.00 ("C" average) or better with no more than two grades below a "C" to continue into the next semester. GPA will be based on all grades for courses scheduled for a given year and semester as per the course calendar. All grades below a "C" grade must be raised to a satisfactory level in order to graduate (see below).
- 2. Students not eligible to continue to the next semester will not be permitted to upgrade any marks but must repeat all courses with grades below a "C" prior to proceeding to the next semester.
  - a) "C-" Grade: Students receiving a final grade of "C-" in prerequisite course will be required to withdraw from the following course if the "C-" grade is not improved to a "C" grade as specified below. C- grades can only be improved to a maximum grade of C. Students receiving a final grade of "C-" in a course must review their situation with the instructor within two weeks of receiving their grades to determine if there is a means of improving their grade to a "C". Normal means of improving a "C-" may include supplemental exams, additional field or classroom work, and/or repeating all or part of a course. Grades of "C-" must be upgraded as follows: The instructor must confirm in writing, the agreed upon means of improving the grade to a "C", as well as the date and time it will be completed. A grade of "C-" must be upgraded to a "C" no later than the 20th instructional day from the last day of the term or the entire course must be repeated. Students will be required to respond by letter or email if a C- grade is given after the winter term, where upgrading will be required in following September. Students have one opportunity to improve their grade before being required to retake the course.

C. GRADUATION

- 1. Credentials:
  - a) Advanced Certificate in Geomatics in the Workplace
  - b) Advanced Diploma in GIS
  - c) Bachelor's degree in GIS
- 2. Requirements: (see *Policy 8617: Graduation*)

**All programs:** All courses must have at least a "C" grade, except for GIS 320 which needs a "CRG" to be eligible for graduation.

Advanced Diploma in Geographic Information Systems (ADGIS) Program – Year 1						
Semester 1			Semester 2			
Course Code	Course	Credit	Course Code	Course	Credit	
GIS 302	Introduction to GIS	3	GIS 307	Remote Sensing in Resource Management	3	
GIS 303	GIS Analysis and Automation	3	GIS 313	Database Systems	3	
GIS 306	Introduction to Remote Sensing	3	GIS 314	Spatial Database Design and Development	3	
GIS 310	GIS Data Management	3	GIS 320	GIS Professional Development	1	
GIS 316	Introduction to CAD for GIS Professionals	3	GIS 321	New Media for GIS	3	
GIS 318	Cartography and Geovisualization	3				
GIS 323	Introduction to Global Navigation Satellite Systems and UAVs	3	GIS 325	Internet Mapping	3	
GIS 329	Principles of Programming	3	GIS 331	Advanced Topics in GIS	3	
GIS 390	Applied Research Methods	1				
<b>Total Semester Credits</b>		25	<b>Total Semester Credits</b>		19	
					<b>Total Year Credits</b>	44

Advanced Diploma in Geographic Information Systems (ADGIS) Program – Year 2						
Semester 3			Semester 4			
Course Code	Name	Credit	Course Code	Name	Credit	
GIS 491	Technical Project	3				
	OR					
COOP 301	Work Terms	6				
<b>Total Semester Credits</b>		3 or 6	<b>Total Semester Credits</b>			
					<b>Total Year Credits</b>	3 or 6

**BGIS:** All courses from the ADGIS program as listed above, plus 60 additional credits (normally, these credits would be earned previously to meet the admission requirements for entry to the program) are required plus the following:

Bachelor in Geographic Information Systems (BGIS) Program – Year 2						
Semester 5			Semester 6			
Course Code	Name	Credit	Course Code	Name	Credit	
GIS 427	Project Management	3	Elective 018	GIS-UAS Elective	3	
GIS 492	BGIS Thesis	6	GIS 435	Statistics and Spatial Data Management	3	
Elective 018	GIS-UAS Elective	3	GIS 437	Emerging Trends in GIS	3	
Elective 018	GIS-UAS Elective	3	Elective 018	GIS-UAS Elective	3	
Elective 018	GIS-UAS Elective	3				
<b>Total Semester Credits</b>		18	<b>Total Semester Credits</b>		12	
					<b>Total Year Credits</b>	30
					<b>Total Program Credits</b>	77 or 80

Note: Students completing the BGIS following the ADGIS will be deemed to have completed sufficient new work notwithstanding Policy 8617

Geomatics in the Workplace Advanced Certificate					
Winter 1			Spring 1		
Course Code	Name	Credit	Course Code	Name	Credit
GIS 302	Introduction to GIS	3	GIS 323	Introduction to Global Satellite Navigation Systems and UAV	3
GIS 305	Introduction to Remote Sensing using QGIS	3			
<b>Total Semester Credits</b>		6	<b>Total Semester Credits</b>		3
					<b>Total Year Credits</b>
					9

Geomatics in the Workplace Advanced Certificate		
Fall 1		
Course Code	Name	Credit
GIS 401	Introduction to LiDAR Remote Sensing and Applications	3
<b>Total Semester Credits</b>		3
<b>Total Year Credits</b>		3
<b>Total Program Credits</b>		12

**PART III: STUDENT CONDUCT** (See also College Policy 3400: Student Code of Conduct)

A. ATTENDANCE

1. Attendance at all scheduled laboratories, practicum experiences, examinations and other learning experiences is mandatory.
2. Students absent from any Advanced Diploma in GIS or BGIS course, for any reason, are responsible for the work they have missed. They must make up assignments as required.
3. Absences from learning experiences may preclude the student from meeting the requirements for that course.
4. Students claiming illness, accidents or compassionate reasons for absence from learning experiences must contact the instructor concerned as soon as possible.
5. Students are required to supply a medical professional certificate to substantiate claims of illness.
6. A student who must be absent from a practicum experience is responsible for notifying the agency and/or instructor at least one hour prior to the scheduled time for the experience to begin.

B. PROFESSIONAL REQUIREMENTS

1. Students enrolled in the Advanced Certificate will need to have access to their own Microsoft Windows 10 based computer with local administrator rights. This computer will need to be capable of running ESRI's ARCmap 10.6x software. These requirements are available from ESRI.COM
2. Should a student make inappropriate use of the equipment including theft or vandalism will be required to withdraw from the program.
3. Student behaviour in the physical or online classroom that disrupts the class, upsets the learning environment of other students or poses a threat to other persons in the learning environment is unacceptable. Students behaving in such a manner will be given a verbal warning for the first offence and placed on probation for the second offence. Any subsequent similar behaviour is grounds for the compulsory withdrawal from the course in question. Subsequent misconduct will result in the student being withdrawn from the program.
4. A student missing fifteen percent (15%) of the scheduled class sessions in any course will be deemed to have withdrawn from that course unless the student has provided the course instructor with a reason acceptable to that instructor.
5. Students are expected to be on time and prepared for all face-to-face classes prior to entering the classroom. Assigned materials are to be read by students; such materials and textbooks are not necessarily reviewed in class by the instructor.
6. The student is responsible for researching and obtaining notes of missed sessions. Instructors are not expected to give personal reviews to students who miss a class.

C. PROBATION

1. See *Policy 8619: Probation* for more information.

**Part IV COLLEGE POLICIES RELEVANT TO ACADEMIC AND STUDENT AFFAIRS:**

Policy 3400: Student Code of Conduct  
Policy 6010: Human Rights, Harassment, & Discrimination  
Policy 6030: Sexual Violence Prevention & Response  
Policy 6550: Protection of Privacy  
Policy 8400: Student Appeals  
Policy 8600: Pre-Admissions Basic Skills Assessment  
Policy 8611: Admission  
Policy 8612: Grading  
Policy 8613: Evaluation of Student Learning  
Policy 8614: Advanced Standing – Course Challenge, PLA, Transfer Credit  
Policy 8615: Standards of Academic Progress  
Policy 8616: Student Withdrawals and Refunds  
Policy 8617: Credentials and Graduation  
Policy 8618: Cheating and Plagiarism  
Policy 8619: Student Probation  
Policy 8620: Interdisciplinary Studies