



## Program Planning Guide

Current and past Program Planning Guides are available on the UofL website at [www.uleth.ca/ross/ppgs/ppg.html](http://www.uleth.ca/ross/ppgs/ppg.html)

Calendar Year: 2010/2011

Faculty: Arts & Science

### About the Concentration in Geographical Information Science for the Post-Diploma B.Sc. in Geography

Composed of both Geographical Information Systems and Remote Sensing, the University of Lethbridge's expanded concentration in Geographical Information Science gives students the expertise required for careers in forest management, oil and gas exploration, geotechnical consulting, agriculture, environmental consulting, urban and regional planning, geodemographics, health care delivery systems, park management, mining reclamation, and teaching. This area of study is one of the fastest growing within Geography; it is also a key to the discipline of Geography at the University of Lethbridge, where important research is conducted on global environmental change, water resources, and other areas of relevance to agriculture in particular. The Department of Geography offers instruction leading to a Bachelor of Science degree in Geography, with a Concentration in Geographical Information Science.

### Approved Two-Year College Diplomas

This post-diploma program is directed toward graduates of approved two-year college diploma programs in geography, geomatics, and land resource information systems. Graduates of other diploma programs in these areas will also be considered. At the time of printing (March 2010), the following two-year college diplomas have been approved:

#### **Assiniboine Community College**

GIS Environmental Technologies

#### **Lethbridge College**

Geomatics Engineering Technology

#### **Mount Royal University**

General Studies (Science-Geography)

#### **Northern Alberta Institute of Technology (NAIT)**

Geomatics Engineering Technology

#### **Olds College**

Geographical Information Systems (formerly Land Information Systems)

#### **Saskatchewan Institute of Applied Science and Technology (SIAST)**

Geomatics Technology

#### **Selkirk College**

Integrated Environmental Planning Technology

For a complete listing of approved diploma programs, see UofL's Post-Diploma Degree Programs website: [www.uleth.ca/postdiploma](http://www.uleth.ca/postdiploma)

### Co-operative Education

A Co-op option, requiring three work terms, is available. Students interested in the Co-operative Education/Internship program should contact the Coordinator of Co-operative Education in the Career Resources Centre (B610 | phone: 403-382-7154) for further information.

### Program Requirements

The post-diploma B.Sc. degree with a major in Geography and a Concentration in Geographical Information Science requires 20 semester courses with a minimum cumulative grade point average of 2.00.

### Residence Requirement

All 20 courses in the Post-Diploma program must be University of Lethbridge courses.

Geography, with a Concentration in Geographical Information Science

Post-Diploma Bachelor of Science

**Program Worksheet**

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Name: \_\_\_\_\_ ID: \_\_\_\_\_

**General Requirements:**

Successful completion of at least 20 courses (as indicated below) with a cumulative grade point average of at least 2.00:

\_\_\_\_ 1-5. Completion of FIVE courses from Lists I and II for the General Liberal Education Requirement as follows:

\_\_\_\_ a. Three courses from List I - Fine Arts and Humanities courses:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

and

\_\_\_\_ b. One course from List II - Social Science courses:

\_\_\_\_\_

and

\_\_\_\_ c. One additional course from List I or II:

\_\_\_\_\_

**Note:** For complete Lists I, II, and III for the General Liberal Education Requirement see the 2010/2011 Calendar, Part 4, p. 85. List III: Science Courses will be satisfied via the major requirements listed below.

\_\_\_\_ 6. One additional course at the 3000/4000 level:

\_\_\_\_\_

\_\_\_\_ 7-20. 14 courses for the Geography major with a Concentration in Geographical Information Science, as listed below.

**Major Requirements:**

\_\_\_\_ 7-8. TWO of:

\_\_\_\_ Environmental Science 2000 - Fundamentals of Environmental Science

\_\_\_\_ Geography 2030 - Geomorphology

\_\_\_\_ Geography 2300 - Weather and Climate

\_\_\_\_ 9. Geography 1200 - Introduction to Human Geography

\_\_\_\_ 10. Geography 2210 - Spatial Organization of Economic Activity

\_\_\_\_ 11. Geography 2700 - Geographical Data and Analysis

\_\_\_\_ 12. Geography 3740 - Geographical Information Systems

\_\_\_\_ 13-14. TWO of the following courses dealing with Geographic techniques:

\_\_\_\_ Geography 3235 - Quantitative Models for Geographic Analysis

\_\_\_\_ Geography 3700 - Cartography

\_\_\_\_ Geography 3710 - Field Techniques in the Earth Sciences

\_\_\_\_ Geography 3720 - Remote Sensing

\_\_\_\_ Geography 3750 - GIS Applications in Human Geography

\_\_\_\_ 15-16. TWO additional courses in Geography, Geology or Archaeology at the 3000 or 4000 level, with a Science designation, at least ONE of which must be taken at the 4000 level.

1. \_\_\_\_\_

2. \_\_\_\_\_ (4000 level)

- \_\_\_\_ 17-19. THREE of:
- \_\_\_\_ Geography 4400 - Hydrology II OR Geography 4415 - Integrated Watershed Management OR Geography 4750 - Glacial Processes, Measurements, and Models
  - \_\_\_\_ Geography 4700 - Advanced Computer Mapping
  - \_\_\_\_ Geography 4710 - Remote Sensing Field School
  - \_\_\_\_ Geography 4725 - Advanced Remote Sensing
  - \_\_\_\_ Geography 4730 - Spatial Statistics
  - \_\_\_\_ Geography 4740 - Advanced Geographical Information Systems
  - \_\_\_\_ Geography 4751 - Seminar in Spatial Modelling
  - \_\_\_\_ Geography 4752 - Seminar in Geographical Information Systems
  - \_\_\_\_ Geography 4753 - Seminar in Remote Sensing
- \_\_\_\_ 20. Required Cognate:
- \_\_\_\_ Computer Science 1620 - Fundamentals of Programming I

For students who complete all requirements, the Concentration in Geographical Information Science will be acknowledged on the official transcript.

**Note:** *Students may not take for credit courses that have close equivalents in their diploma program. Students should consult the Program Coordinator for Geography (Geographical Information Science Concentration) concerning possible adjustments to the above program requirements. Excluded courses include the following: Geography 1000 and Geography 2735.*

*It is strongly recommended that students take Geography 3720 - Remote Sensing as part of their degree program.*

### Sample Sequencing Plan

Shown below is a sample sequence of courses for your degree. If you follow this plan, you should be able to graduate in two years, provided you complete five courses per semester. This is just one example of how you could complete your major and degree requirements; you may find that a different sequence works as well as this one.

<p><b>Year 1, Fall</b> Two of: Environmental Science 2000, Geography 2030, Geography 2300 Geography 1200 GLER course (List I) GLER course (List II)</p> <p><b>Year 2, Fall</b> Geographical Techniques course Geographical Techniques course Geography, Geology, or Archaeology 3000/4000 level (science) GLER course (List I) GLER course (List I or II)</p>	<p><b>Year 1, Spring</b> Computer Science 1620 (<i>required cognate</i>) Geography 2210 Geography 2700 Geography 3740 GLER course (List I)</p> <p><b>Year 2, Spring</b> Geography, Geology, or Archaeology 3000/4000 level (science) Geography 4000-level list course Geography 4000-level list course Geography 4000-level list course Elective 3000/4000 level</p>
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### Terms Used

**GLER course:** A course that could count toward the General Liberal Education Requirement. You may use courses in your major towards this 12-course requirement. See the 2010/2011 University of Lethbridge Calendar, Part 4 - Academic Regulations (p. 85) for complete information.

**Elective:** A course that you may choose freely from all those available and applicable to your program. Use courses inside or outside your major, bearing in mind any restrictions that may apply (e.g., a maximum of 20 courses from any one department).

**Cognate:** A course from a related discipline deemed to complement the chosen area of study and to encompass knowledge and skills essential to that area.



**[www.ulethbridge.ca](http://www.ulethbridge.ca)**

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