



Program Planning Guide

Current and past Program Planning Guides are available on the UofL website at www.uleth.ca/ross/ppgs/ppg.html

Calendar Year: 2010/2011

Faculty: Arts & Science

About the Department of Geography

The Department of Geography pursues excellence in teaching and research in the closely related areas of Geography, Geology, Archaeology, and Urban and Regional Studies, all of which deal with the human and natural environment, and spatial analysis. The Department of Geography also administers the multidisciplinary majors in Archaeology and Geography (B.A. and B.Sc.) and in Urban and Regional Studies (B.A.), and, with the Department of Mathematics and Computer Science, the multidisciplinary major in Computer Science and Geographical Information Science (B.Sc.).

About the Geography Major

The Department offers instruction leading to a Bachelor of Arts (B.A.) or a Bachelor of Science (B.Sc.) degree with a major in Geography. Students may also choose Geography as one of their majors for a B.Asc. degree. The Department also offers M.A., M.Sc., and Ph.D. degree programs in Geography and Archaeology.

Core Geography Courses

Building on its disciplinary strengths, the Department offers a set of core courses which are an essential introduction to the breadth of the discipline, and presents a variety of more advanced courses which represent the expertise of the faculty. Courses in Physical Geography and those involving geographical techniques are Science courses, while those in Human Geography are Social Science courses.

Archaeology 1000

Archaeology 1000, an introductory course required of all Geography majors, opens to more advanced courses falling within the two main themes of Old-World and New-World archaeology.

Geography Courses for Non-Majors

While the curriculum is geared mainly to Geography major programs, the Department is also committed to enhancing the study of Geography, Geology and Archaeology throughout the University, and to providing courses which fulfill the General Liberal Education Requirement. The introductory courses (Geography 1000, Geography 1200, Geography 2535, Archaeology 1000) are open to all students of the University, and two service courses are offered, without prerequisites, for students in other programs where a knowledge of world regional geography (Geography 2000) or the geography of Canada (Geography 2600) is required.

Concentration in Geographical Information Science

Geography majors in the B.A., B.Sc., and B.Asc. degree programs may declare a Concentration in Geographical Information Science (GIS). The GIS Concentration is also available to applicants choosing a major in Agricultural Studies (B.Sc. or Post-Diploma B.Sc. only), Archaeology and Geography, Environmental Science (B.Sc. only), or Urban and Regional Studies.

Career Opportunities

Professional occupations in Geographical Information Science are growing rapidly in Canada and around the world. There is an ever-increasing demand for skilled professionals with an advanced level of GIS education. Our Geographical Information Science program is designed to provide both the specialized problem-solving skills and broad spatial modelling background that are required for decision support in fields as diverse as environmental management, urban planning, infrastructure design and marketing. Geography majors graduating from the University of Lethbridge with a Concentration in Geographical Information Science have career possibilities in a number of exciting and dynamic occupations that specialize in marketing, environmental science, civil engineering consulting, forestry management or energy transmission, to name only a few. As a University of Lethbridge student you will have access to advanced technologies and research expertise, and gain practical skills using state-of-the-art software.

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 B.A. degree with a major in Geography requires 40 semester courses, including a minimum of 20 courses (13 core courses plus seven cognates) in the major. A maximum of 20 courses in Geography (including Geology) is allowed. The Department of Geography offers courses in Geography, Geology, and Archaeology. For the B.A., you will emphasize Geography courses that are designated "Social Science" (i.e., courses not on List III: Science Courses, p. 85 in the 2010/2011 Calendar). Geography majors in the B.A. program may declare a Concentration in Geographical Information Science (see page 3 of this program guide for details).

Transfer Credit Remember that you may use both University of Lethbridge credit and credit transferred from another college or university to meet degree and major requirements. Transfer credit may be either specified or unspecified. Specified credit is indicated on your transcript by the subject name and the specific number of the course, e.g., Geography 1000, 2210, etc. Unspecified credit (1XXX, 2XXX, etc.) is indicated by the subject name and level of the course in parentheses, e.g., Geography (1000 level), Geography (2000 level), etc.

Unspecified Course Credit Unspecified course credit means that the University of Lethbridge does not offer the same course you transferred in, but we recognize it and treat it as a regular course. An unspecified course would count as one of your maximum of 20 from one department, but it could not meet a specific course requirement. For example, if Geography 2700 is required in your program, you could not use Geography (2000 level) to fulfill that requirement. Students with unspecified transfer credit need to consult an Academic Advisor to establish how the transfer credit fits in the degree program. This should be done as soon as possible after transfer credit is awarded.

Program Worksheet

Name : _____ **ID :** _____

Required courses:

- _____ 1. Geography 1000 - Introduction to Physical Geography
- _____ 2. Geography 1200 - Introduction to Human Geography
- _____ 3. Geography 2030 - Geomorphology
- _____ 4. Geography 2210 - Spatial Organization of Economic Activity
- _____ 5. Geography 2300 - Weather and Climate
- _____ 6. Geography 2700 - Geographical Data and Analysis
- _____ 7. Geography 2735 - Introduction to Geographical Information Science
- _____ 8-10. At least THREE courses from the following list of courses dealing with geographical techniques:
 - _____ Archaeology 3300 - Archaeological Field Work (Series)
 - _____ Geography 3235 - Quantitative Models for Geographic Analysis
 - _____ Geography 3700 - Cartography
 - _____ Geography 3710 - Field Techniques in the Earth Sciences
 - _____ Geography 3720 - Remote Sensing
 - _____ Geography 3740 - Geographical Information Systems
 - _____ Geography 3750 - GIS Applications in Human Geography
 - _____ Geography 3780 - Field School
 - _____ Geography 4730 - Spatial Statistics
- _____ 11-13. At least THREE additional courses in Geography, Geology or Archaeology at the 3000/4000 level, with at least one at the 4000 level. Courses may be selected from the list in requirements 8-10, above:
 - 1. _____
 - 2. _____
 - 3. _____ (4000 level)

Required cognates:

- _____ 14. Archaeology 1000 - Introduction to Archaeology
- _____ 15. Environmental Science 2000 - Fundamentals of Environmental Science
- _____ 16. ONE of:
 - _____ Statistics 1770 - Introduction to Probability and Statistics
 - _____ Psychology 2030 - Methods and Statistics
 - _____ Sociology 2130 - Social Statistics
 - _____ An equivalent course
- _____ 17. ONE of:
 - _____ Computer Science 1000 - Introduction to Computer Science
 - _____ Computer Science 1620 - Computer Science 1620*
 - _____ Management 2060 - Introduction to Information Technology
- _____ 18-19. TWO non-science (1000 level or higher) courses from the offerings in Anthropology, Economics, Native American Studies (excluding Blackfoot and Cree), Political Science, and Sociology:
 - 1. _____ (1000 level or higher)
 - 2. _____ (1000 level or higher)
- _____ 20. ONE non-science (2000 level or higher) cognate course from the offerings in Anthropology, Economics, Native American Studies (excluding Blackfoot and Cree), Political Science, and Sociology:
 - 1. _____ (2000 level or higher)

**Students choosing the Concentration in Geographical Information Science must complete Computer Science 1620.*

Concentration: Geographical Information Science

Geography majors in the B.A. degree program may declare a Concentration in Geographical Information Science.

Required courses for the Concentration in Geographical Information Science include:

- _____ 1. One additional course from the list in requirements 8-10, above (geographical techniques)
- _____ 2-4. 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 4740 - Advanced Geographical Information Systems
 - _____ Geography 4751 - Seminar in Spatial Modelling
 - _____ Geography 4752 - Seminar in Geographical Information Systems
 - _____ Geography 4753 - Seminar in Remote Sensing

**Prerequisite required: Geography 3400*

- _____ 5. Required Cognate:
 - _____ Computer Science 1620 - Fundamentals of Programming I (see requirements 17-19, above)

Note: *Students may not double count Geography courses required for the Concentration in Geographical Information Science in fulfilling requirements for the major in Geography.*

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

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 four 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>Year 1, Fall Geography 1200 Required Computer Science cognate Required cognate¹ GLER course GLER course</p>	<p>Year 1, Spring Geography 1000 Archaeology 1000 (<i>required cognate</i>) Required cognate¹ Required Statistics cognate GLER course</p>
<p>Year 2, Fall Environmental Science 2000 (<i>required cognate</i>) Geography 2030 Geography 2700 Required cognate¹ GLER course</p>	<p>Year 2, Spring Geography 2210 Geography 2300 Geography 2735 Elective Elective</p>
<p>Year 3, Fall Geographical Techniques course Geographical Techniques course Elective 3000/4000 level Elective Elective</p>	<p>Year 3, Spring Geographical Techniques course Elective 3000/4000 level Elective Elective Elective</p>
<p>Year 4, Fall Geography, Geology, or Archaeology 3000/4000 level Elective 3000/4000 level Elective Elective</p>	<p>Year 4, Spring Geography, Geology, or Archaeology 3000/4000 level Geography, Geology, or Archaeology 4000 level Elective 3000/4000 level Elective Elective</p>

¹ Required cognates must be chosen from offerings in Anthropology, Economics, Native American Studies (excluding Blackfoot and Cree), Political Science, and Sociology.

Note: Additional requirements for the Concentration in Geographical Information Science should be taken in place of 'Electives' in Years 3 and 4 as appropriate.

Students considering entry to a graduate program in Geography are advised to complete Geography 4900. They should also complete a 4000-level Independent Study course in Geography in their final year.

Reminder: B.A. students should choose Geography courses and electives that are designated non-science (see Part 4, Section 11, List I: Fine Arts and Humanities and List II: Social Sciences, in the 2010/2011 Calendar) in order to meet the degree requirement for a minimum of 25 non-science courses.

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.

The Faculty of Arts and Science offers Liberal Education 1000 and 2000, specifically designed to introduce first-year students to the wide scope of human knowledge and teach essential university success skills, critical thinking, and integrative thinking (see the 2010/2011 University of Lethbridge Calendar, Part 14 - Courses, p. 306). LBED 1000 and 2000 may be used toward satisfying the GLER.

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.