



## 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: 2011/2012

Faculty: Arts & Science

### About the Post-Diploma Bachelor of Science in Environmental Science

The Departments of Biological Sciences and Geography jointly offer instruction leading to a post-diploma major in Environmental Science. This program is directed toward graduates of Lethbridge College, or another approved college, as indicated below. The curriculum for the post-diploma B.Sc. in Environmental Science is designed to provide complementary training in both Biological Sciences and Geography to students with previous technical training.

### Approved Two-Year College Diplomas

At the time of printing (March 2011), the following two-year college diplomas have been approved:

#### **Assiniboine Community College**

Land and Water Management

#### **Aurora College**

Natural Resources Technology

#### **Douglas College**

Associate in Science Degree (Environmental Science)

#### **Georgian College**

Environmental Technology

#### **Lakeland College**

Conservation and Restoration Ecology (formerly Conservation and Vegetation Management Technology)

Environmental Conservation and Reclamation

Environmental Protection Technology (formerly Environmental Monitoring and Compliance)

Natural Resources Technology (prior to 2006)

Wildlife and Fisheries Conservation

#### **Lethbridge College**

Environmental Assessment and Restoration (formerly Watershed Management)

Renewable Resource Management

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

Biological Sciences Technology (Renewable Resources Option)

#### **Nunavut Arctic College**

Environmental Technology

#### **Olds College**

*Note: New Olds College programs are currently under review*

Land and Water Resources

Land Resource Management (Land Classification and Reclamation) (prior to 2004)

Land Resource Management (Soil and Water Conservation) (prior to 2004)

#### **Selkirk College**

Integrated Environmental Planning Technology

Recreation, Fish and Wildlife 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 (AH154 | phone: 403-382-7154) for further information.

- Program Requirements**      The post-diploma B.Sc. degree with a major in Environmental Science requires 20 semester courses with a minimum cumulative grade point average of 2.00.
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- 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., Biology 1010, Geography 2535, etc. Unspecified credit (1XXX, 2XXX, etc.) is indicated by the subject name and level of the course in parentheses, e.g., Biology (1000 level), Geography (2000 level), etc.
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- 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 Biology 2000 is required in your program, you could not use Biology (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 :** \_\_\_\_\_

**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. At least three courses from List I - Fine Arts and Humanities courses:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

and

\_\_\_\_\_ b. At least 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 2011/2012 Calendar, Part 4, p. 85. List III: Science Courses will be satisfied via the major requirements listed below.

\_\_\_\_\_ 6-19.      14 courses for the Environmental Science major, as listed on page 3.

\_\_\_\_\_ 20.      ONE additional course at the 3000/4000 level:

\_\_\_\_\_

**Note:** Courses in Economics, Native American Studies, Philosophy, and Political Science may be of particular interest to Environmental Science students. There are many courses that complement an Environmental Science focus at the 2000 and 3000 level so be sure to take the prerequisites early in the program.

**Requirements for the Environmental Science Major:**

A minimum of 14 courses, including 10 courses in Biology and Geography, one course in Environmental Science, and three required cognates.

- \_\_\_ 1. Biology 1010 - Cellular Basis of Life
- \_\_\_ 2. Biology 2000 - Principles of Genetics
- \_\_\_ 3-4. TWO 3000- or 4000-level Biology courses chosen from among the Biological Sciences Department's List I (Cellular and Molecular Biology), List 2 (Organismal Biology) and List 3 (Ecology and Evolutionary Biology) (see the 2011/2012 Calendar, Part 7, Section 21.h., p. 120):
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
- \_\_\_ 5. ONE of:
  - \_\_\_ Biology 3300 - Evolution
  - \_\_\_ A 3000- or 4000-level Biology course chosen from the Biological Sciences Department's List 3 (Ecology and Evolutionary Biology) (see the 2011/2012 Calendar, Part 7, Section 21.h., p. 120):  
\_\_\_\_\_
- \_\_\_ 6. Environmental Science 4000 - Selected Studies in Environmental Science II (Series)
- \_\_\_ 7. Geography 2300 - Weather and Climate
- \_\_\_ 8. Geography 2535 - Introduction to Planning
- \_\_\_ 9. \*Geography 2735 - Introduction to Geographical Information Science
- \_\_\_ 10-11. TWO additional 3000- or 4000-level Geography or Geology courses, with a Science designation (see the 2011/2012 Calendar, Part 7, Section 20, p. 110 and Part 4, Section 11, List III: Science Courses, p. 87):
  - 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
- \_\_\_ 12-14. Three required cognates as follows:
 

TWO lab-based courses in Chemistry at or above the 1000 level, preferably:

  - \_\_\_ 1. Chemistry 1110 - Chemistry for Life Sciences I
  - \_\_\_ 2. Chemistry 2120 - Chemistry for Life Sciences II

ONE of:

  - \_\_\_ Physics 1000 - Introduction to Physics I
  - \_\_\_ Physics 1050 - Introduction to Biophysics (preferred)
  - \_\_\_ Statistics 1770 - Introduction to Probability and Statistics

*\*Students who have taken a similar course as part of their college diploma are invited to consult the Program Coordinator for Environmental Science in order to discuss an appropriate substitution for this course.*

**Note:** *Majors are advised to take one Independent Study or Applied Studies course. Not more than two Independent Study courses may be taken for credit toward the degree. Not more than one course that is not an Arts and Science course may be taken for credit toward the degree.*

Some courses are specifically excluded from the Post-Diploma B.Sc. Environmental Science program because close equivalents should have been included in the College Diploma. If any of these courses is required as a course prerequisite, students in the Post-Diploma B.Sc. Environmental Science program are considered to have met that requirement.

If your diploma content differs and there is a problem meeting prerequisites for required courses, consult the Program Coordinator for Environmental Science.

**Excluded Courses:**

- |   |   |
|---|---|
| Biology 1020 - Diversity of Life                    | Geography 2700 - Geographical Data and Analysis |
| Biology 2200 - Principles of Ecology                | Geography 3080 - Soils                          |
| Geography 1000 - Introduction to Physical Geography | Geology 2060 - Physical Geology                 |

**Note:** *Students who have completed another approved college diploma from a college other than Lethbridge College should consult the Program Coordinator for Environmental Science concerning possible adjustments to the above program requirements. See the 2011/2012 Calendar, p. 106.*

## 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.

### For students who begin the program in September

<p><b>Year 1, Fall</b>                      Biology 1010                      Chemistry 1110 <sup>1</sup>                      Geography 2300                      Physics 1050 or Physics 1000 or                      Statistics 1770 (<i>required cognate</i>)                      GLER course (List I)</p>	<p><b>Year 1, Spring</b>                      Biology 2000                      Chemistry 2120 <sup>1</sup>                      Geography 2735                      GLER course (List I)                      GLER course (List II)</p>
<p><b>Year 2, Fall</b>                      Biology 3000/4000 level                      Environmental Science 4000 <sup>3</sup>                      Geography 2535                      Geography or Geology 3000/4000                      level (science) <sup>2</sup>                      GLER course (List I)</p>	<p><b>Year 2, Spring</b>                      Biology 3300 or List 3 Biology                      3000/4000 level                      Biology 3000/4000 level                      Geography or Geology 3000/4000                      level (science) <sup>2</sup>                      GLER course (List I or II)                      Elective 3000/4000 level</p>

<sup>1</sup> Preferred Chemistry cognate.

<sup>2</sup> Students may not take Geography 3080 for credit.

<sup>3</sup> Semester of offering may vary.

### For students who begin the program in January

<p><b>Year 1, Spring</b>                      Biology 1010                      Geography 2735                      GLER course (List I)                      GLER course (List I)                      GLER course (List II)</p>	<p><b>Year 1, Fall</b>                      Biology 2000                      Chemistry 1110 <sup>1</sup>                      Geography 2300                      Physics 1050 or Physics 1000 or                      Statistics 1770 (<i>required cognate</i>)                      GLER course (List I)</p>
<p><b>Year 2, Spring</b>                      Chemistry 2120 <sup>1</sup>                      Biology 3300 or List 3 Biology                      3000/4000 level                      Biology 3000/4000 level                      Geography or Geology 3000/4000                      level (science) <sup>2</sup>                      Elective 3000/4000 level</p>	<p><b>Year 2, Fall</b>                      Biology 3000/4000 level                      Environmental Science 4000 <sup>3</sup>                      Geography 2535                      Geography or Geology 3000/4000                      level (science) <sup>2</sup>                      GLER course (List I or II)</p>

<sup>1</sup> Preferred Chemistry cognate.

<sup>2</sup> Students may not take Geography 3080 for credit.

<sup>3</sup> Semester of offering may vary.

### 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 2011/2012 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.

