



## 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/Education

### Faculty of Arts and Science: General Sciences

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#### About the General Major in the Sciences

The General Major in the Sciences is designed to provide a broad major that supports the ideal of liberal education without sacrificing focus and depth unduly. Students are strongly encouraged to choose Science disciplines that are school subject areas or are taught in the provincial curriculum.

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#### Co-operative Education in the Sciences

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.

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### Faculty of Education

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#### Choosing an Education Major

The Faculty of Education offers 11 different majors that correspond to teaching subjects in Alberta schools (see p. 163 in the 2011/2012 University of Lethbridge Calendar for a listing). In highly competitive teaching majors, the GPA for admission may be above the minimum requirements.

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#### Choosing Courses Outside the Major

Students sometimes find that their initial objective to teach only at the elementary level or only at the secondary school level is later modified—or even completely changed. Students are therefore encouraged to select courses that will prepare them for teaching in a variety of situations. Moreover, students should select courses that not only provide breadth and richness for the classroom but also provide the basis for the development of a teaching minor or specialization.

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#### Choosing an Education Minor

The Faculty of Education offers 19 minors (see p. 168 in the 2011/2012 University of Lethbridge Calendar for a listing). A minor consists of five non-Education courses (excluding those used in the major) and one curriculum and instruction Education course (to be completed after admission to the Faculty of Education). Students may use the same courses to fulfill the minor and the General Liberal Education Requirement (GLER).

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#### Choosing an Education Specialization

The Faculty of Education offers three specializations:

- Early Childhood Education
- Special/Inclusive Education
- Technology in Education

The specializations consist of four courses and corresponding Professional Semester III focus.

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#### Advantages of Completing a Minor and/or Specialization

Completing a minor and/or a specialization allows students to develop expertise in a second area of teaching and be more versatile and marketable as a graduating teacher. For more information, see the 2011/2012 University of Lethbridge Calendar, Part 8 - Education, Sections 7. Education Minors (p. 168) and 8. Education Specializations (p. 172).

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#### Where to Get Help

Students may contact an Academic Advisor in Student Program Services in the Faculty of Education (email: [edu.sps@uleth.ca](mailto:edu.sps@uleth.ca) | phone: 403-329-2254) or in the Faculty of Arts and Science (email: [artsci.advising@uleth.ca](mailto:artsci.advising@uleth.ca) | phone: 403-329-5106).

## General Major in the Sciences/ Science Education

# Bachelor of Science/Bachelor of Education

**Program Requirements** The B.Sc./B.Ed. Combined Degrees program with a General Major in the Sciences/Science Education requires 50 courses, including 30 Arts and Science courses and 20 Education courses. Courses for the General Major in the Sciences will be chosen from three separate disciplinary streams or subject areas. Sixteen courses are required in the major.

**Disciplinary Streams** You are required to do seven courses in your first disciplinary stream, which must be a school subject. Science-area school subjects that are eligible for selection are Biological Sciences, Chemistry, Physical Geography, or Physics. You are required to do four courses in your second disciplinary stream, which must also be a school subject. Choose one other area of Biological Sciences, Chemistry, Physical Geography, or Physics. You are further required to do four courses in a third disciplinary stream. In addition to the school subject Science areas above, other school subjects include Mathematics and Physical Education (Kinesiology). You may also choose non-school subjects which include Archaeology, Computer Science, Neuroscience, and Psychology. You should understand that the more school subjects that you include in your General Major, the better prepared you will be to teach. Your 16th course will be a 'Science in Human Affairs' course.

**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, Chemistry 2410. Unspecified credit (1XXX, 2XXX, etc.) is indicated by the subject name and the level of the course in parentheses, e.g., Biology (1000 level), Chemistry (2000 level).

**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 17 courses 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.

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**Program Worksheet**

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

**For a General Major in the Sciences, you must first choose three disciplinary streams from the following list:**

- Archaeology - all courses designated Science
- \* Biological Sciences - all Biology courses
- \* Chemistry - all courses (including courses in Biochemistry)
- Computer Science - all courses
- \* Geography - all courses designated Science (including courses in Geology)
- Kinesiology - all courses designated Science
- Mathematics - all courses (including courses in Statistics)
- Neuroscience - all courses
- \* Physics - all courses (including courses in Astronomy and Engineering)
- Psychology - all courses designated Science

*\*You must complete your first stream (at least seven courses) in Biological Sciences, Chemistry, Physical Geography, or Physics. You must also complete your second stream (at least four courses) in one other of these subjects.*

**Note:** See List III: Science Courses in the 2011/2012 Calendar, p. 85.

**Required courses:**

\_\_\_\_\_ 1-7. SEVEN courses in \_\_\_\_\_ (first disciplinary stream - choose Biological Sciences, Chemistry, Physical Geography, or Physics):

1. \_\_\_\_\_ 5. \_\_\_\_\_

2. \_\_\_\_\_ 6. \_\_\_\_\_

3. \_\_\_\_\_ 7. \_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_ 8-11. FOUR courses in \_\_\_\_\_ (second disciplinary stream: choose another of Biological Sciences, Chemistry, Physical Geography, or Physics):

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

\_\_\_\_\_ 12-15. FOUR courses in \_\_\_\_\_ (third disciplinary stream):

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

\_\_\_\_\_ 16. ONE 'Science in Human Affairs' course from the following list:

- \_\_\_\_\_ Biochemistry 2300 - Elements of Human Nutrition
- \_\_\_\_\_ Environmental Science 2000 - Fundamentals of Environmental Science
- \_\_\_\_\_ Philosophy 2233 - Philosophy and the World View of Science: Earth and Life Sciences
- \_\_\_\_\_ Philosophy 2234 - Philosophy and the World View of Science: Space, Time and Matter
- \_\_\_\_\_ Philosophy 3402 - Biomedical Ethics
- \_\_\_\_\_ Physics 2020 - The Physics of Everyday Life

**Note:** *Some of the above courses have prerequisites which may or may not be included in the major. Please check the current Calendar to make sure that you have the prerequisite for the course.*

*You may have chosen one of the above disciplines as one of your three disciplines for the General Major. If, for example, Physics is one of your disciplines, it would be logical for you to use Physics 2020 as your 'Science in Human Affairs' course. However, you must still take four Physics courses besides 2020. You cannot use the same course as both one of your four in the discipline and as your 'Science in Human Affairs' requirement.*

**Additional requirements for the General Major in the Sciences:**

\_\_\_\_\_ A. SIX courses out of the 16 required for the major must be at the 3000/4000 level:

- |          |          |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

## 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 five 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>                      Biology 1010                      Chemistry 1000                      Geography 1000                      Mathematics 1410 or                      Mathematics 1560 (<i>prerequisite</i>)                      GLER course</p>	<p><b>Year 1, Spring</b>                      Biology 1020                      Chemistry 2000                      Geography 2000 level (science)                      GLER course                      GLER course</p>
<p><b>Year 2, Fall</b>                      Biology 2000                      Biology 2200                      Chemistry 2500                      Education 2500<sup>1</sup>                      GLER course</p>	<p><b>Year 2, Spring</b>                      Biology 3000/4000 level                      Chemistry 2600                      Geography 3000/4000 level                      (science)                      GLER course                      GLER course</p>
<p><b>Year 3, Fall</b>                      Professional Semester I</p>	<p><b>Year 3, Spring</b>                      Biology 3000/4000 level                      Biology 3000/4000 level                      Science in Human Affairs course                      GLER course                      Elective 3000/4000 level</p>
<p><b>Year 4, Fall</b>                      Biology 3000/4000 level                      Geography 3000/4000 level                      (science)                      GLER course                      Science elective                      Elective 3000/4000 level</p>	<p><b>Year 4, Spring</b>                      Professional Semester II</p>
<p><b>Year 5, Fall</b>                      Professional Semester III*</p>	<p><b>Year 5, Spring</b>                      Science elective 3000/4000 level                      Education Foundation course                      Education elective                      Education elective                      Education elective</p>
<p>* Secondary Education is offered in Fall and Elementary Education in Spring. For Special Focus and Specialization options, please see Part 14 - Courses in the 2011/2012 University of Lethbridge Calendar.</p>	

<sup>1</sup> Education 2500 may also be taken in Spring or Summer semester.

Note: Biological Sciences, Chemistry, and Geography have been used for illustration purposes. Plan accordingly with the disciplinary streams of your choice.

### 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.

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 2011/2012 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 17 courses from any one department).

