

University of
Lethbridge



Program Planning Guide

Department: Biological Sciences

Calendar Year: 2020/2021

Name: _____

ID: _____

Bachelor of Science
Biological Sciences

Major in Biological Sciences:

www.uleth.ca/artsci/biological-sciences

Academic Calendar:

www.uleth.ca/ross/academic-calendar

High School Admission Requirements:

www.uleth.ca/ross/admissions/undergrad/high-school

Current and Past Program Planning Guides:

www.uleth.ca/ross/ppgs

Faculty of Arts and Science Advising:

www.uleth.ca/artsci/advising
artsci.advising@uleth.ca
403-329-5106
M2102

Co-operative Education:

www.uleth.ca/artsci/coop

This is a planning guide and not a graduation check or guarantee of course offerings. You should have a program check done in your final year of studies. Students are responsible for the accuracy of their own programs. The guide should be used in conjunction with the University of Lethbridge Calendar, which is the final authority on all questions regarding program requirements and academic regulations. Contact an Academic Advisor in the Faculty of Arts and Science for advising information.

Name : _____

ID : _____

B.Sc. Biological Sciences

Completion of at least 40 courses (120.0 credit hours) with a grade point average of at least 2.00.

Major Requirements (23 courses)

Other Courses (minimum 17 courses)

- _____ 1. Biochemistry 2000 - Introductory Biochemistry
- _____ 2. Biology 1010 - Cellular Basis of Life
- _____ 3. Biology 1020 - Diversity of Life
- _____ 4. Biology 2000 - Principles of Genetics
- _____ 5. Biology 2150 - Biostatistics
- _____ 6. Biology 2200 - Principles of Ecology
- _____ 7. Biology 2300 - Cell Biology
- _____ 8. Biology 3300 - Evolution
- _____ 9. Biology 4500 - Seminars in Biological Sciences
- _____ 10. Chemistry 1000 - General Chemistry I
- _____ 11. Chemistry 2000 - General Chemistry II
- _____ 12. Chemistry 2500 - Organic Chemistry I
- _____ 13. **One of:**
 - _____ Mathematics 1410 - Elementary Linear Algebra
 - _____ Mathematics 1560 - Calculus I
 - _____ Mathematics 1565 - Accelerated Calculus I
- _____ 14. **One of:**
 - _____ Physics 1000 - Introduction to Physics I
 - _____ Physics 1050 - Introduction to Biophysics (preferred)
- _____ 15. **One of:**
 - _____ One course (3.0 credit hours) in English at the 1000 level or higher
 - _____ Writing 1000 - Introduction to Academic Writing

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. _____
- 13. _____
- 14. _____
- 15. _____
- 16. _____
- 17. _____

¹Six courses (15.0 credit hours) in Biology at the 3000 level, including two from each of the subfield lists (right).

- List 1 - Cellular and Molecular Biology**
16. _____ 17. _____
- List 2 - Organismal Biology**
18. _____ 19. _____
- List 3 - Ecology and Evolutionary Biology**
20. _____ 21. _____
- Two additional courses (6.0 credit hours) in Biology at the 4000 level.
22. _____ 23. _____

- List 1 - Cellular and Molecular Biology**
- | | | |
|--------------|--------------|--------------|
| Biology 3000 | Biology 3110 | Biology 3400 |
| Biology 3005 | Biology 3210 | |
- List 2 - Organismal Biology**
- | | | |
|--------------|--------------|--------------|
| Biology 3310 | Biology 3460 | Biology 3530 |
| Biology 3420 | Biology 3520 | Biology 3560 |
- List 3 - Ecology and Evolutionary Biology**
- | | | |
|--------------|--------------|--------------|
| Biology 3630 | Biology 3700 | Biology 3720 |
| Biology 3660 | Biology 3710 | |

Notes

¹Topics courses (Biology 3850) may be assigned to one of the Biological Sciences lists at the time of scheduling. Please refer to the current term timetable. Applied Studies, Independent Studies, and the Undergraduate Thesis may not be counted as part of the minimum requirements for the major; however, they are strongly encouraged for students taking courses beyond this minimum.

- See also:
- Bachelor of Science/Bachelor of Education - Biological Sciences/Science Education
 - Bachelor of Science/Bachelor of Management - Biological Sciences

Completion of the Liberal Education List Requirement (Lib Ed Requirement).

Only four courses (12.0 credit hours) in total may be counted from any one discipline toward the Lib Ed Requirement. Disciplines are identified by separate course subject codes.

Only four courses (12.0 credit hours) in total from the Faculty of Education (EDUC), Faculty of Health Sciences (ABHL, ADCS, HLSC, NURS, PUBH, and TREC), and the Dhillon School of Business (MGT) may be counted towards the Lib Ed Requirement.

See the 2020/2021 Calendar, p. 71, for more information.

LIST I: Fine Arts and Humanities Courses

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

LIST II: Social Science Courses

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

LIST III: Science Courses

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

Not more than 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) [0500 - 1999] for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE) and courses numbered in the range of 0520 to 0530.

- | | |
|----------|------------------|
| 1. _____ | 7. _____ |
| 2. _____ | 8. _____ |
| 3. _____ | 9. _____ |
| 4. _____ | 10. _____ |
| 5. _____ | 11. _____ |
| 6. _____ | 12. _____ (max.) |

Completion of at least 15 courses (45.0 credit hours) from disciplines offered by the Faculty of Arts and Science, Faculty of Fine Arts, or the School of Liberal Education at the 3000/4000 level, excluding Activity courses (labelled PHAC and MUSE). Out-of-faculty courses (i.e. labelled ABHL, ADCS, CDEV, CRED, EDUC, HLSC, MGT, NURS, PUBH, and TREC) will not meet this requirement.

- | | |
|----------|------------------|
| 1. _____ | 9. _____ |
| 2. _____ | 10. _____ |
| 3. _____ | 11. _____ |
| 4. _____ | 12. _____ |
| 5. _____ | 13. _____ |
| 6. _____ | 14. _____ |
| 7. _____ | 15. _____ (min.) |
| 8. _____ | |

____ Not more than five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.

____ Not more than five Disciplinary Credit Applied Studies courses (15.0 credit hours) may be completed for credit towards the degree. Students may, in addition, complete Applied Studies 2000, 2001, 2010, and 2011.

____ Not more than 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree.

Note: Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).

____ Not more than six credit hours in Activity courses (i.e. courses labelled PHAC and MUSE) may be completed for credit towards the degree, except for Kinesiology majors (not more than 15.0 credit hours) and Music majors (not more than 12.0 credit hours).

____ Not more than six courses (18.0 credit hours) from disciplines outside the Faculty of Arts and Science, Faculty of Fine Arts, or School of Liberal Education may be completed for credit towards the degree (i.e. labelled ABHL, ADCS, CDEV, CRED, EDUC, HLSC, MGT, NURS, PUBH, and TREC). Courses cross-listed between the Faculty of Arts and Science and another Faculty do not count towards this limit.

Residence requirement:

Degree: a minimum of 20 courses (60.0 credit hours) must be completed at the University of Lethbridge, including at least 10 courses (30.0 credit hours) from disciplines offered by the Faculty of Arts and Science, Faculty of Fine Arts, or School of Liberal Education at the 3000/4000 level.

Major: at least half of the courses required in the major must be completed at the University of Lethbridge.

Minor (Optional): _____
See the 2020/2021 Calendar, p. 267, for more information.

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

Concentration: _____ (Optional)
See the 2020/2021 Calendar, p. 91, for more information.

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

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 term. 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 Biology 1010 or Biology 1020 Chemistry 1000 English 1900 or Writing 1000 Mathematics Requirement Lib Ed Requirement course</p>	<p>Year 1, Spring Biology 1020 or Biology 1010 Chemistry 2000 Physics 1050 or Physics 1000 Lib Ed Requirement course Lib Ed Requirement course</p>
<p>Year 2, Fall Biology 2200 Biology 2300¹ Chemistry 2500 Lib Ed Requirement course Lib Ed Requirement course</p>	<p>Year 2, Spring Biochemistry 2000 Biology 2000 Biology 2150¹ Lib Ed Requirement course Lib Ed Requirement course</p>
<p>Year 3, Fall Biology 3000 level Biology 3000 level Biology 3000 level Elective Elective</p>	<p>Year 3, Spring Biology 3300 Biology 3000 level Biology 3000 level Elective 3000/4000 level Elective</p>
<p>Year 4, Fall Biology 3000 level Biology 4000 level Elective 3000/4000 level Elective 3000/4000 level Elective</p>	<p>Year 4, Spring Biology 4500 Biology 4000 level Elective 3000/4000 level Elective 3000/4000 level Elective</p>

¹ Term of offering may vary.

Note: Courses in **bold** in Years 1 and 2 of the sample sequence are prerequisite(s) for required courses and should be completed early in your program. Students are advised to review the prerequisites for electives courses within the major and plan accordingly.

Terms Used

Lib Ed Requirement course: A course that could count toward the Liberal Education List Requirement. You may use courses in your major towards this 12-course requirement. See the 2020/2021 University of Lethbridge Calendar, School of Liberal Education for complete information.

The School of Liberal Education 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 2020/2021 University of Lethbridge Calendar, Course Catalogue). LBED 1000 and 2000 may be used toward satisfying the Lib Ed Requirement.

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 24 courses from any one discipline).

