

University of
Lethbridge



Faculty of Arts & Science

Program Planning Guide

Departments: Biological Sciences, Chemistry and Biochemistry, and Economics

Calendar Year: 2013/2014

Name: _____

ID: _____

Bachelor of Science
Agricultural Biotechnology

Major in Agricultural Biotechnology:

www.uleth.ca/artsci/agricultural-biotechnology

Faculty of Arts and Science Student Program Services:

www.uleth.ca/artsci/advising
artsci.advising@uleth.ca
(403) 329-5106
SU060

Current and Past Program Planning Guides:

www.uleth.ca/ross/ppgs

Academic Calendar:

www.uleth.ca/ross/academic-calendar

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. Agricultural Biotechnology

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

Major Requirements (23 courses)

- _____ Agricultural Studies 1000 - The Evolution of Agriculture
- _____ Biochemistry 2000 - Introductory Biochemistry
- _____ Biology 1010 - Cellular Basis of Life
- _____ Biology 1020 - Diversity of Life
- _____ Biology 2000 - Principles of Genetics
- _____ Biology 2200 - Principles of Ecology
- _____ Biology 3000 - Gene Expression and Regulation
- _____ Biology 3105 - Signal Transduction
- _____ Biology 3210 - Experimental Methods in Molecular and Cellular Biology
- _____ Biology 3300 - Evolution
- _____ Biology 3400 - Principles of Microbiology
- _____ Biology 4100 - Advances in Agricultural Biotechnology
- _____ Chemistry 1000 - General Chemistry I
- _____ Chemistry 2000 - General Chemistry II
- _____ Chemistry 2500 - Organic Chemistry I
- _____ Chemistry 2600 - Organic Chemistry II
- _____ Economics 1010 - Introduction to Microeconomics
- _____ Economics 3300 - Agricultural Policy I

One of:

- _____ Biology 3005 - Genome Maintenance
- _____ Biology 3115 - Principles of Cell Growth

One of:

- _____ Biology 3420 - Animal Physiology
- _____ Biology 3460 - Plant Physiology

One of:

- _____ Economics 2150 - Economics of Agricultural Issues
- _____ Economics 2350 - Economics of Agricultural Markets I

One of:

- _____ Mathematics 1410 - Elementary Linear Algebra
- _____ Mathematics 1560 - Calculus I

One of:

- _____ Physics 1000 - Introduction to Physics I
- _____ Physics 1050 - Introduction to Biophysics

Other Courses (minimum 17 courses)

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

Recommended courses:

- Neuroscience 2600 - Brain and Behaviour
- Neuroscience 3600 - Fundamental Neurobiology
- Statistics 1770 - Introduction to Probability and Statistics

Notes

Students are advised to complete both Biology 3005 and Biology 3115 as part of their Agricultural Biotechnology major (only one of these is required).

A student who successfully completes this degree program and major may apply to the Alberta Institute of Agrologists (AIA) to be registered as a Professional Agrologist within Alberta. Students should contact the Coordinator of Agricultural Biotechnology early in the program for further information.

See also:

- Pre-Professional Transfer Programs
- Bachelor of Science - Biological Sciences
- Bachelor of Science - Biochemistry
- Bachelor of Science - Environmental Science

Completion of the General Liberal Education Requirement (GLER).

Only four courses (12.0 credit hours) in total may be counted from all courses offered by a single department. See the 2013/2014 Calendar, p. 88, 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).

1. _____ 7. _____

2. _____ 8. _____

3. _____ 9. _____

4. _____ 10. _____

5. _____ 11. _____

6. _____ 12. _____

Completion of at least 15 courses (45.0 credit hours) from disciplines offered by the Faculty of Arts and Science or the Faculty of Fine Arts at the 3000/4000 level, excluding Activity courses (labelled PHAC and MUSE).

1. _____ 9. _____

2. _____ 10. _____

3. _____ 11. _____

4. _____ 12. _____

5. _____ 13. _____

6. _____ 14. _____

7. _____ 15. _____

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 four Activity courses (i.e. courses labelled PHAC and MUSE; maximum 6.0 credit hours) may be completed for credit towards the degree, except for Kinesiology majors (not more than 10 Activity courses; 15.0 credit hours) and Music majors (not more than 8 Activity courses; 12.0 credit hours).

_____ Not more than four courses (12.0 credit hours) from disciplines offered outside the Faculty of Arts and Science or the Faculty of Fine Arts may be completed for credit towards the degree (i.e. labelled CDEV, CRED, EDUC, HLSC, MGT, NURS, and PUBH). Courses cross-listed between the Faculty of Arts and Science and another Faculty do not count towards this limit.

_____ **Residence requirement:**
Degree: at least 20 courses (60.0 credit hours) must be completed at the University of Lethbridge, including the last 10 courses (30.0 credit hours) completed for credit towards the degree.
Major: at least half of the courses required in the major must be completed at the University of Lethbridge.

Minor (Optional): _____

See the 2013/2014 Calendar, p. 143, for eligible minors.

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Concentration: Agricultural Business (Optional)

See the 2013/2014 Calendar, p. 110, 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 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 Agricultural Studies 1000 Biology 1020 Chemistry 1000 Economics 1010 Mathematics 1410 or Mathematics 1560</p>	<p>Year 1, Spring Biology 1010 Chemistry 2000 Physics 1000 or Physics 1050 GLER course GLER course</p>
<p>Year 2, Fall Biology 2000 Biology 2200 Chemistry 2500 Economics 2150 or Economics 2350 GLER course</p>	<p>Year 2, Spring Biochemistry 2000 Biology 3400 Chemistry 2600 Statistics 1770 (<i>recommended</i>) GLER course</p>
<p>Year 3, Fall Biology 3000 Biology 3005¹ Biology 3105 Economics 3300 Elective</p>	<p>Year 3, Spring Biology 3115¹ Biology 3300 Elective 3000/4000 level Elective 3000/4000 level Elective</p>
<p>Year 4, Fall Biology 3210 Biology 3420 or Biology 3460² Elective 3000/4000 level Elective Elective</p>	<p>Year 4, Spring Biology 4100 Elective 3000/4000 level Elective 3000/4000 level Elective Elective</p>

¹ Students are required to complete one of Biology 3005 or Biology 3115, but are advised to take both of these courses.

² Semester of offering may vary.

Note: Students choosing to complete requirements for the Concentration in Agricultural Business should choose those prescribed courses in place of Elective courses.

Students are strongly advised to consult with the Department of Biological Sciences and the Department of Chemistry and Biochemistry regarding the sequencing of the above 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 2013/2014 University of Lethbridge Calendar, Part 4 - Academic Regulations (p. 88) 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 2013/2014 University of Lethbridge Calendar, Part 14 - Courses, p. 307). 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 24 courses from any one discipline).

