

University of
Lethbridge



Program Planning Guide

Name: _____

ID: _____

Calendar Year: 2023/2024

Major in Agricultural Biotechnology:

www.ulethbridge.ca/artsci/agricultural-biotechnology

Academic Calendar:

www.ulethbridge.ca/ross/academic-calendar

High School Admission Requirements:

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

Current and Past Program Planning Guides:

www.ulethbridge.ca/ross/ppgs

Co-operative Education:

www.ulethbridge.ca/career-bridge/co-operative-education

Faculty of Arts and Science Advising:

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

Bachelor of Science
Agricultural Biotechnology

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 (www.ulethbridge.ca/ross/academic-advising) for advising information.

Name : _____**ID :** _____**Program Requirements**

Completion of at least 40 courses (120.0 credit hours) with cumulative and graduation grade point averages of at least 2.00.

Major Requirements (22 courses)**Other Courses (minimum 18 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 2150 - Biostatistics
- _____ Biology 2200 - Principles of Ecology
- _____ Biology 2300 - Cell Biology
- _____ Biology 3210 - Experimental Methods in Molecular and Cellular Biology
- _____ Biology 3400 - Principles of Microbiology
- _____ Chemistry 1000 - General Chemistry I
- _____ Chemistry 2000 - General Chemistry II
- _____ Chemistry 2500 - Organic Chemistry I
- _____ Economics 1010 - Introduction to Microeconomics
- _____ Economics 3300 - Agricultural Policy I

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Two of:

- _____ Biology 3000 - Gene Expression and Regulation
- _____ Biology 3005 - Genomes
- _____ Biology 3110 - Cell Signalling

One of:

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

One of:

- _____ Biology 4100 - Advances in Biotechnology
- _____ Biology 4130 - Medical Genomics

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
- _____ Mathematics 1565 - Accelerated Calculus I

One of:

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

Notes:

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.

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 (ACCT, AGEM, FINC, HRLR, IGBM, IMGT, MGT, and MKTG) may be counted towards the Lib Ed Requirement.

See the 2023/2024 Calendar, p. 83, for more information.

_____ Four Fine Arts and Humanities courses:

1. _____
2. _____
3. _____
4. _____

_____ Four Social Science courses:

1. _____
2. _____
3. _____
4. _____

_____ Four Science courses:

1. _____
2. _____
3. _____
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.

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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, ACCT, ADCS, AGEM, CDEV, CRED, EDUC, FINC, HLSC, HRLR, IGBM, IMGT, MGT, MKTG, NURS, PUBH, and TREC) will not meet this requirement.

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_____ 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.

_____ 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, ACCT, ADCS, AGEM, CDEV, CRED, EDUC, FINC, HLSC, HRLR, IGBM, IMGT, MGT, MKTG, 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.

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

_____ **Minor (Optional):** _____
See the 2023/2024 Calendar, p. 331, for more information.

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6. _____

_____ **Concentration: Agricultural Business (Optional)**
See the 2023/2024 Calendar, p. 99, for more information.

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2. _____
3. _____
4. _____
5. _____

Sample Sequencing Plan

Shown below is a sample sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each 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.

Year 1, Fall

Agricultural Studies 1000
Biology 1010 or Biology 1020
Chemistry 1000
Economics 1010
Mathematics Requirement

Year 2, Fall

Biology 2150
Biology 2200
Chemistry 2500
 Economics 2150 or Economics 2350
 Lib Ed Requirement course

Year 3, Fall

Economics 3300
 Biology 3000-level list course
 Elective 3000/4000 level
 Elective
 Elective

Year 4, Fall

Biology 3210
Biology 3420 or Biology 3460¹
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

Year 1, Spring

Biology 1020 or Biology 1010
Chemistry 2000
 Physics 1000 or Physics 1050
 Lib Ed Requirement course
 Lib Ed Requirement course

Year 2, Spring

Biochemistry 2000
Biology 2000
Biology 2300
 Lib Ed Requirement course
 Elective

Year 3, Spring

Biology 3400
 Biology 3000-level list course
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

Year 4, Spring

Biology 4100¹ or Biology 4130¹
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

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 elective courses within the major and plan accordingly.

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.