

PROGRAM PLANNING GUIDE

Name: _____

ID:

Bachelor of Science

Biological Sciences



Biological sciences delve into the world of living organisms — from microbes, to human beings, to entire ecosystems. It is the science of life on, under and above earth. Exploring the nature of life leads biologists out into the world where they study how organisms interact with their environment, how they function and how they evolved over time. The Department of Biological Sciences provides you with hands-on learning, moving you beyond textbooks and lectures to engaging research projects. Biology is a research-intensive science that can lead to a wide range of study areas, like environmental work, medicine, microbiology or agriculture.

What determines my program requirements?

Please refer to the Academic Calendar (www.ulethbridge.ca/ross/academic-calendar) for complete program information.

Calendar Year: 2026/2027 - Your calendar year is set to the academic year you are admitted (or readmitted) and you should follow the requirements for that year for the duration of your program.

Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Biological Sciences

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

Step-by-Step: www.ulethbridge.ca/ross/admissions/step-by-step

Where can I find information on courses?

Course Catalogue: www.ulethbridge.ca/ross/courses

Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

Register early! (March for Summer and Fall; November for Winter)

Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

Honours Thesis: www.ulethbridge.ca/ross/undergraduate-thesis

Double Major: www.ulethbridge.ca/ross/double-major

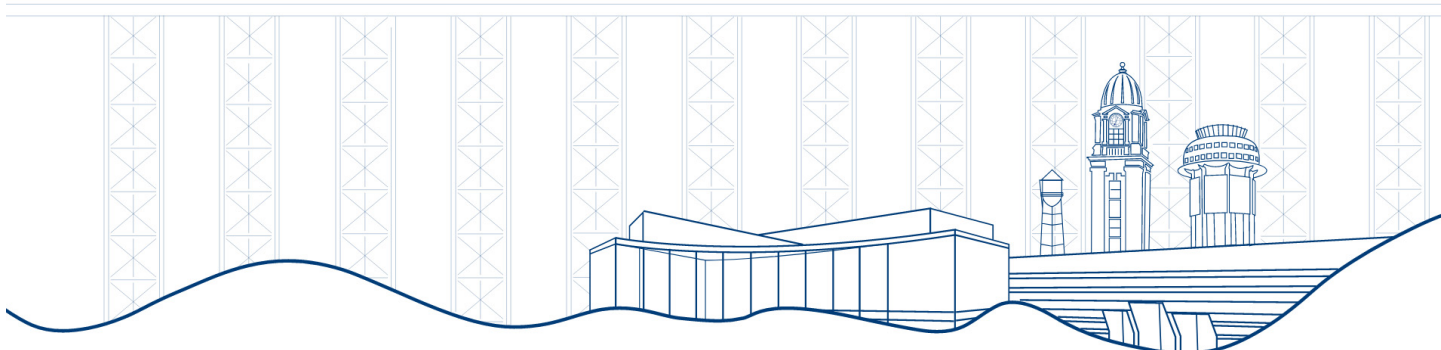
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



Version: February 17, 2026

Contact an Academic Advisor (www.ulethbridge.ca/ross/academic-advising) for advising information

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 ensuring they have met program requirements. This guide should be used in conjunction with the University of Lethbridge Academic Calendar, which is the final authority on program requirements and academic regulations.



Major Requirements (23 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
- _____ 16.-21.¹ Six courses (18.0 credit hours) in Biology at the 3000 level, including two from each of the subfield lists.
 - Two of (List 1 - Cellular and Molecular Biology):**
 - _____ Biochemistry 3100 - Proteins, Enzymes and Nucleic Acids
 - _____ Biochemistry 3700/Neuroscience 3700 - Introduction to Bioinformatics
 - _____ Biology 3000 - Gene Expression and Regulation
 - _____ Biology 3005 - Genomes
 - _____ Biology 3110 - Cell Signalling
 - _____ Biology 3210 - Experimental Methods in Molecular and Cellular Biology
 - _____ Biology 3400 - Principles of Microbiology
 - Two of (List 2 - Organismal Biology):**
 - _____ Biology 3310 - Developmental Biology
 - _____ Biology 3420 - Animal Physiology
 - _____ Biology 3460 - Plant Physiology
 - _____ Biology 3520 - Invertebrate Zoology
 - _____ Biology 3530 - Vertebrate Zoology
 - _____ Biology 3560 - Integrative Plant Biology
 - Two of (List 3 - Ecology and Evolutionary Biology):**
 - _____ Biology 3095/Geography 3095 - Advanced Biogeography
 - _____ Biology 3630 - Field Biology
 - _____ Biology 3660 - Field Botany
 - _____ Biology 3700 - Ecosystem Ecology
 - _____ Biology 3710 - Population Biology
 - _____ Biology 3720 - Community Ecology
- _____ 22.-23. Two additional courses (6.0 credit hours) in Biology at the 4000 level.
 - _____ 22. _____
 - _____ 23. _____

Notes

¹ Topics 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.

Electives (17 Courses)

_____ 24.-40. Seventeen additional courses (51.0 credit hours) chosen to complete program requirements

- _____ 24. _____
- _____ 25. _____
- _____ 26. _____
- _____ 27. _____
- _____ 28. _____
- _____ 29. _____
- _____ 30. _____
- _____ 31. _____
- _____ 32. _____
- _____ 33. _____
- _____ 34. _____
- _____ 35. _____
- _____ 36. _____
- _____ 37. _____
- _____ 38. _____
- _____ 39. _____
- _____ 40. _____

Optional Concentration: _____

Courses taken to complete the concentration will fill in as electives in the program requirements above.

For information about the optional concentrations, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

_____ 1.-5. Required Courses

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



Liberal Education List 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. Cross-listed courses count toward the limit for both disciplines (e.g. Geography 3225/Global Business 3225 counts toward the limit for Geography and Dhillon School of Business courses).

Only four courses (12.0 credit hours) in total from the Faculty of Education (EDUC), Faculty of Health Sciences (AMHC, HLSC, INHL, NURS, PUBH, and TREC), and the Dhillon School of Business (ACCT, AGEM, DGTR, FINC, GLBU, HRLR, IGBM, MGT, and MKTG) may be counted towards the Lib Ed Requirement.

To determine if a course has a Liberal Education designation, see School of Liberal Education in the 2026/2027 University of Lethbridge Undergraduate Calendar, www.ulethbridge.ca/ross/academic-calendar.

1.-4. List I: Fine Arts and Humanities

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

5.-8. List II: Social Science

- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____

9.-12. List III: Science

- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

General Requirements

- _____ A minimum of 40 courses (120.0 credit hours) with a GPA of at least 2.00.
- _____ A maximum of five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.
- _____ A maximum of 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.
- _____ A maximum of 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree. Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).
- _____ A maximum of 6.0 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).
- _____ A maximum of six courses (18.0 credit hours) from disciplines offered 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 ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC). Courses cross-listed between the Faculty of Arts and Science and another Faculty or School do not count towards this limit.
- _____ Residence requirement: 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. At least half of the courses required in the major must be completed at the University of Lethbridge.

A **maximum** of 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE) and courses numbered in the range of 0520 to 0530.

1.-12. Introductory Course Limit

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____
- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

A **minimum** of 15 courses (45.0 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, excluding Activity courses (labelled PHAC and MUSE). Out-of-faculty courses (i.e. labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC) will not meet this requirement.

1.-15. Senior Course Requirement

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

Optional Minor:

For information about minors see **Minors** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar. Consult with an Academic Advisor if you wish to add a minor to your program.

1.-6. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID:

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Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

First Year

Biology 1010

Biology 1020

Chemistry 1000

Chemistry 2000

One of: English 1900 or Writing 1000

One of: Physics 1050 or Physics 1000

Mathematics Requirement

Lib Ed Requirement course

Lib Ed Requirement course

Lib Ed Requirement course

Second Year

Biochemistry 2000

Biology 2000

Biology 2150

Biology 2200

Biology 2300

Chemistry 2500

Lib Ed Requirement course

Lib Ed Requirement course

Lib Ed Requirement course

Lib Ed Requirement course

Third Year

Biology 3300

Biology 3000 level

Biology 3000 level

Biology 3000 level

Biology 3000 level

Biology 3000 level

Elective 3000/4000 level

Elective

Elective

Elective

Fourth Year

Biology 4500

Biology 3000 level

Biology 4000 level

Biology 4000 level

Elective 3000/4000 level

Elective 3000/4000 level

Elective 3000/4000 level

Elective 3000/4000 level

Elective

Elective

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.

PROGRAM PLANNING GUIDE

Name: _____

ID:

Bachelor of Science

Environmental Science



Environmental scientists study the impact of these interactions on the biosphere, hydrosphere, lithosphere and atmosphere using an interdisciplinary and integrative approach. The major in environmental science will provide you with an appropriate background in the natural and physical sciences that is needed to understand how natural and man-made systems function. It will provide you with a broad perspective that is required to appreciate the role of humanity in global environmental change.

What determines my program requirements?

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Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Environmental Science

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

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Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

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Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

Honours Thesis: www.ulethbridge.ca/ross/undergraduate-thesis

Double Major: www.ulethbridge.ca/ross/double-major

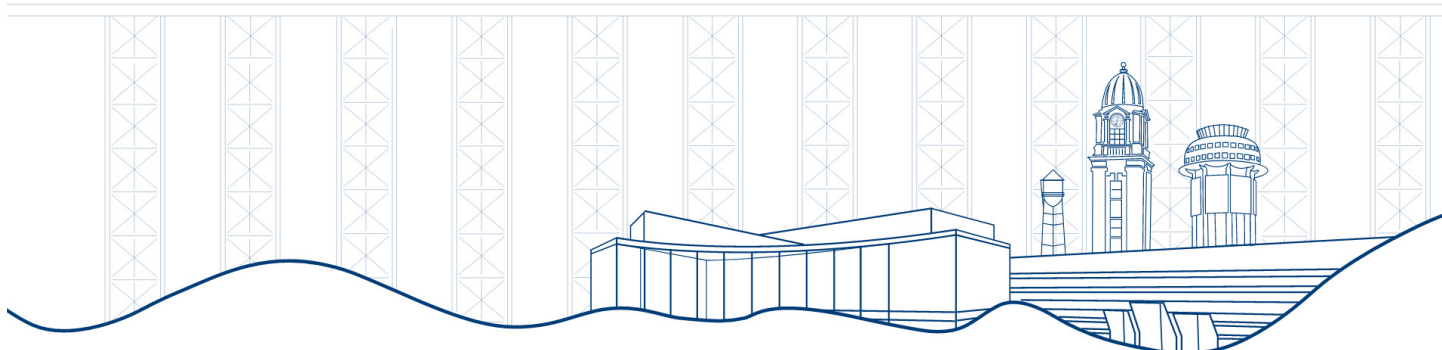
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



Version: February 17, 2026

Contact an Academic Advisor (www.ulethbridge.ca/ross/academic-advising) for advising information

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PROGRAM REQUIREMENTS (2026/2027)

Required courses and notes

Major Requirements (22 Courses)

- _____ 1. Biology 1010 - Cellular Basis of Life
- _____ 2. Biology 1020 - Diversity of Life
- _____ 3. Biology 2000 - Principles of Genetics
- _____ 4. Biology 2200 - Principles of Ecology
- _____ 5. Chemistry 1000 - General Chemistry I
- _____ 6. Chemistry 2000 - General Chemistry II
- _____ 7. Environmental Science 2000 - Fundamentals of Environmental Science
- _____ 8. Environmental Science 4010 - Current Events in Environmental Science
- _____ 9. Geography 1000 - Introduction to Physical Geography
- _____ 10. Geography 2030 - Geomorphology
- _____ 11. Geography 2300 - Weather and Climate
- _____ 12. Geography 2735 - Introduction to Geographical Information Science
- _____ 13. **One of:**
 - _____ Biology 2150 - Biostatistics
 - _____ Geography 2700 - Geographical Data and Analysis
- _____ 14. **One of:**
 - _____ Chemistry 2410 - Analytical Chemistry I
 - _____ Chemistry 2500 - Organic Chemistry I
- _____ 15. **One of:**
 - _____ Mathematics 1560 - Calculus I
 - _____ Mathematics 1565 - Accelerated Calculus I
- _____ 16-17. **Two of:**
 - _____ Geography 2065 - Physical Geology
 - _____ Geography 2090/Biology 2090 - Biogeography
 - _____ Geography 3060 - Glaciology and Glacial Geomorphology
 - _____ Geography 3080 - Soils
 - _____ Geography 3095/Biology 3095 - Advanced Biogeography
 - _____ Geography 3300 - Microclimatology
 - _____ Geography 3400 - Hydrology
 - _____ Geography 3440/Environmental Science 3440 - Wetlands
 - _____ Geography 3720 - Remote Sensing
 - _____ Geography 3735 - Analysis of Environmental Data
 - _____ Geography 3740 - Geographical Information Systems
- _____ 18-19. **Two of:**
 - _____ Geography 2090/Biology 2090 - Biogeography
 - _____ Geography 3095/Biology 3095 - Advanced Biogeography
 - _____ Biology 3300 - Evolution
 - _____ Biology 3460 - Plant Physiology
 - _____ Biology 3520 - Invertebrate Zoology
 - _____ Biology 3530 - Vertebrate Zoology
 - _____ Biology 3560 - Integrative Plant Biology
 - _____ Biology 3700 - Ecosystem Ecology
 - _____ Biology 3710 - Population Biology
 - _____ Biology 3720 - Community Ecology
- _____ 20-21. **Two of:**
 - _____ Biology 4605 - Conservation Biology
 - _____ Biology 4700 - Molecular Ecology
 - _____ Biology 4710 - Evolutionary and Ecological Modelling
 - _____ Biology 4740 - Behavioural Ecology
 - _____ Biology 4800 - Biology of Parasitism
 - _____ Biology 4825/Geography 4825 - Biogeochemistry
 - _____ Biology 4840/Geography 4840 - Limnology
 - _____ Geography 4030 - Advanced Physical Geography (Series)
 - _____ Geography 4060 - Agricultural Soil Management
 - _____ Geography 4400 - Advanced Hydrology
 - _____ Geography 4725 - Advanced Remote Sensing
 - _____ Geography 4740 - Advanced Geographical Information Systems

Name: _____

ID:

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- _____ 22. **One of:**
- _____ Biology 3630 - Field Biology
 - _____ Biology 3660 - Field Botany
 - _____ Geography 3710 - Field Techniques in the Earth Sciences
 - _____ ¹ Geography 3780 - Field Research in Geography
 - _____ Geography 3792 - Field Excursion in Physical Geography (Series)
 - _____ ² An approved field course

Technical Studies Term (5 courses)

The Technical Studies term should be taken after at least 20 university courses have been completed and prior to registration in the final 10 courses for the degree.

Students must have the college course selection approved by the Coordinator of Environmental Science. Students are not permitted to complete any courses in addition to the approved Lethbridge Polytechnic courses during the Technical Studies term. Further details are available from the Coordinator.

- _____ 23. Environmental Science unspecified 2000 level
- _____ 24. Environmental Science unspecified 2000 level
- _____ 25. Environmental Science unspecified 2000 level
- _____ 26. Environmental Science unspecified 3000 level
- _____ 27. Environmental Science unspecified 3000 level

Notes

¹ This course has a prerequisite or corequisite that is not required for the major.

² Must be approved by the Coordinator of Environmental Science.

Students may not receive credit for courses at the University of Lethbridge for which close equivalents have been taken at Lethbridge Polytechnic, and vice versa. Students must ensure that their course selection has been approved by the Coordinator of Environmental Science.

Electives (13 Courses)

- _____ 28.-40. Thirteen additional courses (39.0 credit hours) chosen to complete program requirements
- _____ 28. _____
 - _____ 29. _____
 - _____ 30. _____
 - _____ 31. _____
 - _____ 32. _____
 - _____ 33. _____
 - _____ 34. _____
 - _____ 35. _____
 - _____ 36. _____
 - _____ 37. _____
 - _____ 38. _____
 - _____ 39. _____
 - _____ 40. _____

Optional Concentration: _____

Courses taken to complete the concentration will fill in as electives in the program requirements above.

For information about the optional concentrations, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

- _____ 1.-5. **Required Courses**
- _____ 1. _____
 - _____ 2. _____
 - _____ 3. _____
 - _____ 4. _____
 - _____ 5. _____



Liberal Education List 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. Cross-listed courses count toward the limit for both disciplines (e.g. Geography 3225/Global Business 3225 counts toward the limit for Geography and Dhillon School of Business courses).

Only four courses (12.0 credit hours) in total from the Faculty of Education (EDUC), Faculty of Health Sciences (AMHC, HLSC, INHL, NURS, PUBH, and TREC), and the Dhillon School of Business (ACCT, AGEM, DGTR, FINC, GLBU, HRLR, IGBM, MGT, and MKTG) may be counted towards the Lib Ed Requirement.

To determine if a course has a Liberal Education designation, see School of Liberal Education in the 2026/2027 University of Lethbridge Undergraduate Calendar, www.ulethbridge.ca/ross/academic-calendar.

1-4. List I: Fine Arts and Humanities

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

5-8. List II: Social Science

- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____

9-12. List III: Science

- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

General Requirements

- _____ A minimum of 40 courses (120.0 credit hours) with a GPA of at least 2.00.
- _____ A maximum of five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.
- _____ A maximum of 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.
- _____ A maximum of 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree. Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).
- _____ A maximum of 6.0 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).
- _____ A maximum of six courses (18.0 credit hours) from disciplines offered 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 ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC). Courses cross-listed between the Faculty of Arts and Science and another Faculty or School do not count towards this limit.
- _____ Residence requirement: 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. At least half of the courses required in the major must be completed at the University of Lethbridge.

A **maximum** of 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE) and courses numbered in the range of 0520 to 0530.

1-12. Introductory Course Limit

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____
- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

A **minimum** of 15 courses (45.0 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, excluding Activity courses (labelled PHAC and MUSE). Out-of-faculty courses (i.e. labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC) will not meet this requirement.

1-15. Senior Course Requirement

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

Optional Minor:

For information about minors see **Minors** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar. Consult with an Academic Advisor if you wish to add a minor to your program.

1-6. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID:

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Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

First Year

Biology 1010
Biology 1020
Chemistry 1000
Chemistry 2000
Environmental Science 2000
Geography 1000
Mathematics requirement
Lib Ed Requirement course
Lib Ed Requirement course
Lib Ed Requirement course

Second Year

One of: **Biology 2150** or **Geography 2700**
Biology 2000
Biology 2200
One of: Chemistry 2410 or Chemistry 2500
Geography 2030
Geography 2300
Geography 2735
Geography list course
Lib Ed Requirement course
Lib Ed Requirement course

Third Year

Biology list course
Biology 3000/4000-level list course
Geography 3000/4000-level list course
Field course
Lib Ed Requirement course

Technical Studies Term (15.0 credit hours)

Students will receive credit for the following (upon successful completion and receipt of transcripts):

- 2 Environmental Science 3000-level science courses
- 3 Environmental Science 2000-level science courses

Fourth Year

Environmental Science 4010
Biology or Geography 4000-level list course
Biology or Geography 4000-level list course
Lib Ed Requirement course 3000/4000 level
Lib Ed Requirement course 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level

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 should complete Biology 1010, Biology 1020, Biology 2000, Biology 2200, Chemistry 1000, and Chemistry 2000 by the end of Year Two to be eligible to undertake the required Technical Studies Term in Year Three.

PROGRAM PLANNING GUIDE

Name: _____

ID:

Bachelor of Science

Agricultural Biotechnology



Agricultural biotechnology examines agriculture and the natural world, emphasizing the relationships between food production, the environment, science and society. As a multidisciplinary major, agricultural biotechnology takes full advantage of resources and course offerings in the Departments of Biological Sciences, Chemistry & Biochemistry and Economics. This multi-faceted approach allows you to explore new applications in science and develop fresh perspectives about how to address challenges in food production through changes in economics, production or diversification.

What determines my program requirements?

Please refer to the Academic Calendar (www.ulethbridge.ca/ross/academic-calendar) for complete program information.

Calendar Year: 2026/2027 - Your calendar year is set to the academic year you are admitted (or readmitted) and you should follow the requirements for that year for the duration of your program.

Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Agricultural Biotechnology

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

Step-by-Step: www.ulethbridge.ca/ross/admissions/step-by-step

Where can I find information on courses?

Course Catalogue: www.ulethbridge.ca/ross/courses

Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

Register early! (March for Summer and Fall; November for Winter)

Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

Honours Thesis: www.ulethbridge.ca/ross/undergraduate-thesis

Double Major: www.ulethbridge.ca/ross/double-major

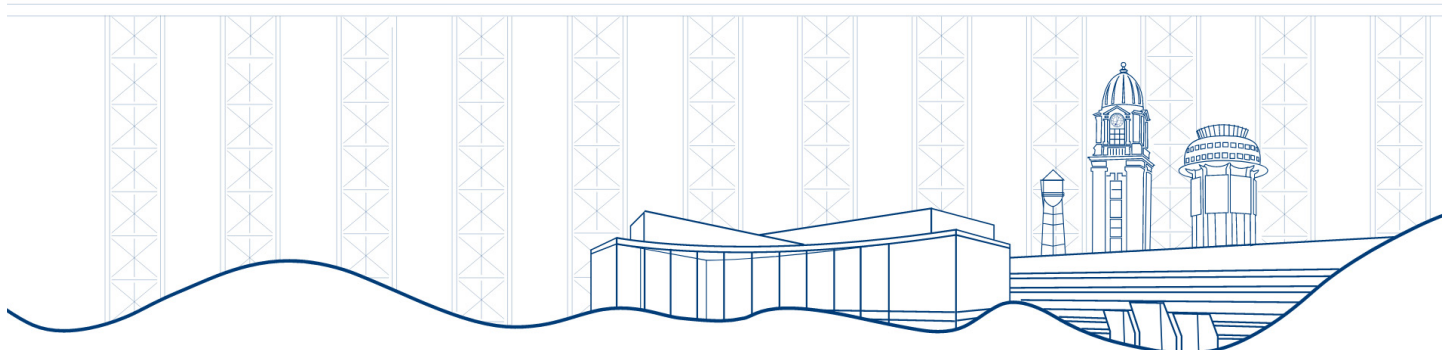
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



Version: February 17, 2026

Contact an Academic Advisor (www.ulethbridge.ca/ross/academic-advising) for advising information

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 ensuring they have met program requirements. This guide should be used in conjunction with the University of Lethbridge Academic Calendar, which is the final authority on program requirements and academic regulations.



PROGRAM REQUIREMENTS (2026/2027)

Required courses and notes

Name: _____

ID:

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Major Requirements (22 Courses)

- _____ 1. Agricultural Studies 1000 - The Evolution of Agriculture
- _____ 2. Biochemistry 2000 - Introductory Biochemistry
- _____ 3. Biology 1010 - Cellular Basis of Life
- _____ 4. Biology 1020 - Diversity of Life
- _____ 5. Biology 2000 - Principles of Genetics
- _____ 6. Biology 2150 - Biostatistics
- _____ 7. Biology 2200 - Principles of Ecology
- _____ 8. Biology 2300 - Cell Biology
- _____ 9. Biology 3210 - Experimental Methods in Molecular and Cellular Biology
- _____ 10. Biology 3400 - Principles of Microbiology
- _____ 11. Chemistry 1000 - General Chemistry I
- _____ 12. Chemistry 2000 - General Chemistry II
- _____ 13. Chemistry 2500 - Organic Chemistry I
- _____ 14. Economics 1010 - Introduction to Microeconomics
- _____ 15. Economics 3300 - Agricultural Policy I
- _____ 16.-17. **Two of:**
 - _____ Biology 3000 - Gene Expression and Regulation
 - _____ Biology 3005 - Genomes
 - _____ Biology 3110 - Cell Signalling
- _____ 18. **One of:**
 - _____ Biology 3420 - Animal Physiology
 - _____ Biology 3460 - Plant Physiology
- _____ 19. **One of:**
 - _____ Biology 4100 - Advances in Biotechnology
 - _____ Biology 4130 - Medical Genomics
- _____ 20. **One of:**
 - _____ Economics 2150 - Economics of Agricultural Issues
 - _____ Economics 2350 - Economics of Agricultural Markets I
- _____ 21. **One of:**
 - _____ Mathematics 1410 - Elementary Linear Algebra
 - _____ Mathematics 1560 - Calculus I
 - _____ Mathematics 1565 - Accelerated Calculus I
- _____ 22. **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.

Electives (18 Courses)

- _____ 23.-40. Eighteen additional courses (54.0 credit hours) chosen to complete program requirements

- _____ 23. _____
- _____ 24. _____
- _____ 25. _____
- _____ 26. _____
- _____ 27. _____
- _____ 28. _____
- _____ 29. _____
- _____ 30. _____
- _____ 31. _____
- _____ 32. _____
- _____ 33. _____
- _____ 34. _____
- _____ 35. _____
- _____ 36. _____
- _____ 37. _____
- _____ 38. _____
- _____ 39. _____
- _____ 40. _____

Optional Concentration: _____

Courses taken to complete the concentration will fill in as electives in the program requirements above.

For information about the optional concentrations, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

_____ 1.-5. Required Courses

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



Liberal Education List 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. Cross-listed courses count toward the limit for both disciplines (e.g. Geography 3225/Global Business 3225 counts toward the limit for Geography and Dhillon School of Business courses).

Only four courses (12.0 credit hours) in total from the Faculty of Education (EDUC), Faculty of Health Sciences (AMHC, HLSC, INHL, NURS, PUBH, and TREC), and the Dhillon School of Business (ACCT, AGEM, DGTR, FINC, GLBU, HRLR, IGBM, MGT, and MKTG) may be counted towards the Lib Ed Requirement.

To determine if a course has a Liberal Education designation, see School of Liberal Education in the 2026/2027 University of Lethbridge Undergraduate Calendar, www.ulethbridge.ca/ross/academic-calendar.

1.-4. List I: Fine Arts and Humanities

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

5.-8. List II: Social Science

- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____

9.-12. List III: Science

- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

General Requirements

- _____ A minimum of 40 courses (120.0 credit hours) with a GPA of at least 2.00.
- _____ A maximum of five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.
- _____ A maximum of 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.
- _____ A maximum of 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree. Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).
- _____ A maximum of 6.0 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).
- _____ A maximum of six courses (18.0 credit hours) from disciplines offered 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 ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC). Courses cross-listed between the Faculty of Arts and Science and another Faculty or School do not count towards this limit.
- _____ Residence requirement: 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. At least half of the courses required in the major must be completed at the University of Lethbridge.

A **maximum** of 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE) and courses numbered in the range of 0520 to 0530.

1.-12. Introductory Course Limit

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____
- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

A **minimum** of 15 courses (45.0 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, excluding Activity courses (labelled PHAC and MUSE). Out-of-faculty courses (i.e. labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC) will not meet this requirement.

1.-15. Senior Course Requirement

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

Optional Minor:

For information about minors see **Minors** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar. Consult with an Academic Advisor if you wish to add a minor to your program.

1.-6. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID:

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Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

First Year

Agricultural Studies 1000
Biology 1010
Biology 1020
Chemistry 1000
Chemistry 2000
Economics 1010
One of: Physics 1000 or Physics 1050
Mathematics Requirement
Lib Ed Requirement course
Lib Ed Requirement course

Second Year

Biochemistry 2000
Biology 2000
Biology 2150
Biology 2200
Biology 2300
Chemistry 2500
One of: Economics 2150 or Economics 2350
Lib Ed Requirement course
Lib Ed Requirement course
Elective

Third Year

Economics 3300
Biology 3210
Biology 3400
Biology 3000-level list course
Biology 3000-level list course
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective
Elective

Fourth Year

One of: Biology 3420 or Biology 3460
One of: Biology 4100 or Biology 4130
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective
Elective
Elective

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.

PROGRAM PLANNING GUIDE

Name: _____

ID:

Bachelor of Science

Agricultural Studies



Agricultural studies delves into the relationships between the social, economic, political and environmental factors that affect the agricultural sector — from farm level production to international policy. This broad range of perspectives will expand your understanding of issues such as policy development, the farm as a production unit and the environmental implications of land use. You'll also be exposed to the latest developments in genetic engineering, precision farming and animal nutrition, to name just a few.

What determines my program requirements?

Please refer to the Academic Calendar (www.ulethbridge.ca/ross/academic-calendar) for complete program information.

Calendar Year: 2026/2027 - Your calendar year is set to the academic year you are admitted (or readmitted) and you should follow the requirements for that year for the duration of your program.

Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Agricultural Studies

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

Step-by-Step: www.ulethbridge.ca/ross/admissions/step-by-step

Where can I find information on courses?

Course Catalogue: www.ulethbridge.ca/ross/courses

Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

Register early! (March for Summer and Fall; November for Winter)

Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

Honours Thesis: www.ulethbridge.ca/ross/undergraduate-thesis

Double Major: www.ulethbridge.ca/ross/double-major

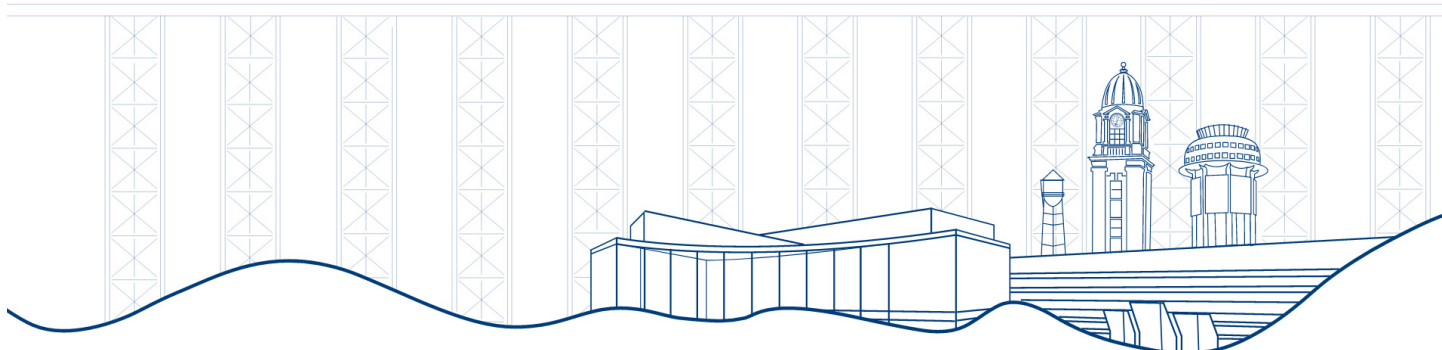
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



Version: February 17, 2026

Contact an Academic Advisor (www.ulethbridge.ca/ross/academic-advising) for advising information

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 ensuring they have met program requirements. This guide should be used in conjunction with the University of Lethbridge Academic Calendar, which is the final authority on program requirements and academic regulations.



Major Requirements (20 Courses)

- _____ 1. Agricultural Studies 1000 - The Evolution of Agriculture
- _____ 2. Agricultural Studies 3300 - Modelling of Agricultural Systems
- _____ 3. Agricultural Studies 4000 - Seminar in Agricultural Issues
- _____ 4. Agricultural Studies 4300 - Advanced Modelling of Agricultural Systems
- _____ 5. Biology 1010 - Cellular Basis of Life
- _____ 6. Biology 1020 - Diversity of Life
- _____ 7. Biology 2000 - Principles of Genetics
- _____ 8. Chemistry 1110 - Chemistry for Life Sciences I
- _____ 9. Economics 1010 - Introduction to Microeconomics
- _____ 10. Geography 1000 - Introduction to Physical Geography
- _____ 11. Statistics 1770 - Introduction to Probability and Statistics
- _____ 12. **One of:**
 - _____ Computer Science 1620 - Fundamentals of Programming I
 - _____ Mathematics 1010 - Introduction to Calculus
 - _____ Mathematics 1560 - Calculus I
 - _____ Mathematics 1565 - Accelerated Calculus I
 - _____ Physics 1050 - Introduction to Biophysics
- _____ 13.-18. Six courses (18.0 credit hours) from either subfield list (1. or 2.) below
- _____ 19.-20. Two courses (6.0 credit hours) from the other subfield list below
- _____ **REQ.** Four of the subfield courses (12.0 credit hours) must be at the 3000/4000 level

1. Biological Sciences

- _____ Biology 2090/Geography 2090
- _____ Biology 2150
- _____ Biology 2200
- _____ ¹ Biology 2300
- _____ Biology 3095/Geography 3095
- _____ Biology 3420
- _____ Biology 3460
- _____ Biology 3520
- _____ Biology 3530
- _____ Biology 3560
- _____ Biology 3700
- _____ Biology 3710
- _____ Biology 3720
- _____ Biology 4570
- _____ Chemistry 2120
- _____ Environmental Science 2000
- _____ Environmental Science 4010

2. Geography

- _____ Environmental Science 2000
- _____ Environmental Science 4010
- _____ Geography 2030
- _____ Geography 2065
- _____ Geography 2090/Biology 2090
- _____ Geography 2300
- _____ Geography 2700
- _____ Geography 2735
- _____ Geography 3075
- _____ Geography 3080
- _____ Geography 3095/Biology 3095
- _____ Geography 3210
- _____ Geography 3400
- _____ Geography 3440/Environmental Science 3440
- _____ Geography 3700
- _____ Geography 3710
- _____ Geography 3720
- _____ Geography 3735
- _____ Geography 3740
- _____ Geography 4060
- _____ Geography 4400
- _____ Geography 4725
- _____ Geography 4740

Technical Studies Term (5 courses)

The Technical Studies term should be taken after at least 20 university courses have been completed and prior to registration in the final 10 courses for the degree.

Students must have the college course selection approved by the Coordinator of Agricultural Studies. Further details are available from the Coordinator.

- _____ 21. Agricultural Studies unspecified 2000 level
- _____ 22. Agricultural Studies unspecified 2000 level
- _____ 23. Agricultural Studies unspecified 2000 level
- _____ 24. Agricultural Studies unspecified 3000 level
- _____ 25. Agricultural Studies unspecified 3000 level

Notes

¹ This course has a prerequisite or corequisite that is not required for the major.

Applied Studies, Independent Studies and Topics courses may be counted toward the subfield requirements provided they are (1) clearly related to one of the subfields and (2) they are approved by the Coordinator of Agricultural Studies.

Students may not receive credit for courses at the University of Lethbridge for which close equivalents have been taken at the college, and vice versa. Students must ensure that their course selection has been approved by the Coordinator of Agricultural Studies.

Students wishing to pursue the Concentration in Geographical Information Science must complete Geography 2735 among the eight courses required in the Geography subfield.

A student who successfully completes this 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 Studies early in the program for further information.

Electives (15 Courses)

- _____ 26.-40. Fifteen additional courses (45.0 credit hours) chosen to complete program requirements
 - _____ 26. _____
 - _____ 27. _____
 - _____ 28. _____
 - _____ 29. _____
 - _____ 30. _____
 - _____ 31. _____
 - _____ 32. _____
 - _____ 33. _____
 - _____ 34. _____
 - _____ 35. _____
 - _____ 36. _____
 - _____ 37. _____
 - _____ 38. _____
 - _____ 39. _____
 - _____ 40. _____

Optional Concentration: _____

Courses taken to complete the concentration will fill in as electives in the program requirements above.

For information about the optional concentrations, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

1.-5. Required Courses

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



Liberal Education List 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. Cross-listed courses count toward the limit for both disciplines (e.g. Geography 3225/Global Business 3225 counts toward the limit for Geography and Dhillon School of Business courses).

Only four courses (12.0 credit hours) in total from the Faculty of Education (EDUC), Faculty of Health Sciences (AMHC, HLSC, INHL, NURS, PUBH, and TREC), and the Dhillon School of Business (ACCT, AGEM, DGTR, FINC, GLBU, HRLR, IGBM, MGT, and MKTG) may be counted towards the Lib Ed Requirement.

To determine if a course has a Liberal Education designation, see School of Liberal Education in the 2026/2027 University of Lethbridge Undergraduate Calendar, www.ulethbridge.ca/ross/academic-calendar.

1-4. List I: Fine Arts and Humanities

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

5-8. List II: Social Science

- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____

9-12. List III: Science

- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

General Requirements

- _____ A minimum of 40 courses (120.0 credit hours) with a GPA of at least 2.00.
- _____ A maximum of five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.
- _____ A maximum of 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.
- _____ A maximum of 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree. Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).
- _____ A maximum of 6.0 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).
- _____ A maximum of six courses (18.0 credit hours) from disciplines offered 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 ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC). Courses cross-listed between the Faculty of Arts and Science and another Faculty or School do not count towards this limit.
- _____ Residence requirement: 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. At least half of the courses required in the major must be completed at the University of Lethbridge.

A **maximum** of 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE) and courses numbered in the range of 0520 to 0530.

1-12. Introductory Course Limit

- _____ 1. _____
- _____ 2. _____
- _____ 3. _____
- _____ 4. _____
- _____ 5. _____
- _____ 6. _____
- _____ 7. _____
- _____ 8. _____
- _____ 9. _____
- _____ 10. _____
- _____ 11. _____
- _____ 12. _____

A **minimum** of 15 courses (45.0 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, excluding Activity courses (labelled PHAC and MUSE). Out-of-faculty courses (i.e. labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, and TREC) will not meet this requirement.

1-15. Senior Course Requirement

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

Optional Minor:

For information about minors see **Minors** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar. Consult with an Academic Advisor if you wish to add a minor to your program.

1-6. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID:

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Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

First Year

Agricultural Studies 1000
Biology 1010
Biology 1020
Chemistry 1110
Economics 1010
Geography 1000
Statistics 1770
Secondary subfield course
Lib Ed Requirement course
Lib Ed Requirement course

Second Year

Biology 2000
Required Computer Science, Mathematics, or Physics course
Primary subfield course
Primary subfield course
Secondary subfield course
Lib Ed Requirement course
Elective
Elective
Elective
Elective

Third Year

Agricultural Studies 3300
Primary subfield course 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective

Technical Studies Term (15.0 credit hours)

Students will receive credit for the following (upon successful completion and receipt of transcripts):

- 2 Agricultural Studies 3000-level non-science courses
- 3 Agricultural Studies 2000-level non-science courses

Fourth Year

Agricultural Studies 4000
Agricultural Studies 4300
Primary subfield course 3000/4000 level
Primary subfield course 3000/4000 level
Primary subfield course 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective 3000/4000 level
Elective

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 and/or the Concentration in Geographical Information Systems should choose those prescribed courses in place of Elective courses or Lib Ed Requirement courses.



Calendar Year: 2026/2027

PROGRAM PLANNING GUIDE

Name: _____

ID:

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Post-Diploma Bachelor of Science

Environmental Science



Environmental scientists study the impact of these interactions on the biosphere, hydrosphere, lithosphere and atmosphere using an interdisciplinary and integrative approach. The major in environmental science will provide you with an appropriate background in the natural and physical sciences that is needed to understand how natural and man-made systems function. It will provide you with a broad perspective that is required to appreciate the role of humanity in global environmental change.

What determines my program requirements?

Please refer to the Academic Calendar (www.ulethbridge.ca/ross/academic-calendar) for complete program information.

Calendar Year: 2026/2027 - Your calendar year is set to the academic year you are admitted (or readmitted) and you should follow the requirements for that year for the duration of your program.

Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Environmental Science

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

Step-by-Step: www.ulethbridge.ca/ross/admissions/step-by-step

Where can I find information on courses?

Course Catalogue: www.ulethbridge.ca/ross/courses

Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

Register early! (March for Summer and Fall; November for Winter)

Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

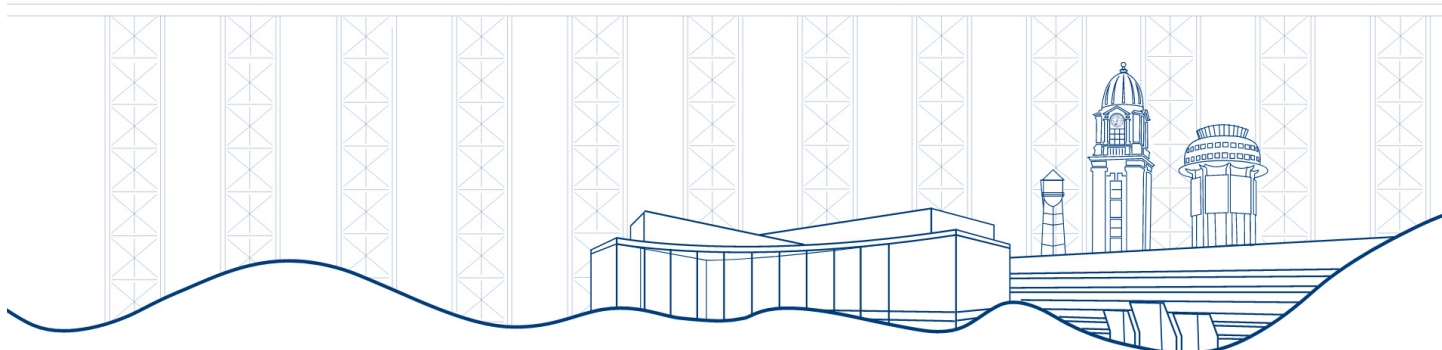
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



Version: February 17, 2026

Contact an Academic Advisor (www.ulethbridge.ca/ross/academic-advising) for advising information

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 ensuring they have met program requirements. This guide should be used in conjunction with the University of Lethbridge Academic Calendar, which is the final authority on program requirements and academic regulations.



Required courses and notes

Program Requirements (20 Courses)

Students must complete at least 20 courses (60.0 credit hours) from disciplines offered by the Faculty of Arts and Science, Faculty of Fine Arts, or School of Liberal Education (i.e. no courses labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, or TREC), as follows, with a minimum GPA of 2.00.

Required core (15 courses):

- _____ 1. Biology 1010 - Cellular Basis of Life
- _____ 2. Biology 2000 - Principles of Genetics
- _____ 3. Environmental Science 4010 - Current Events in Environmental Science
- _____ 4. Geography 2300 - Weather and Climate
- _____ 5. Geography 3740 - Geographical Information Systems
- _____ 6. **One of:**
 - _____ Biology 2150 - Biostatistics
 - _____ Geography 2700 - Geographical Data and Analysis
- _____ 7.-8. **Two of:**
 - _____ Biology 2090/Geography 2090 - Biogeography
 - _____ Biology 3095/Geography 3095 - Advanced Biogeography
 - _____ Biology 3300 - Evolution
 - _____ Biology 3460 - Plant Physiology
 - _____ Biology 3520 - Invertebrate Zoology
 - _____ Biology 3530 - Vertebrate Zoology
 - _____ Biology 3630 - Field Biology
 - _____ Biology 3660 - Field Botany
 - _____ Biology 3700 - Ecosystem Ecology
 - _____ Biology 3710 - Population Biology
 - _____ Biology 3720 - Community Ecology
- _____ 9.-10. **Two of:**
 - _____ Geography 3060 - Glaciology and Glacial Geomorphology
 - _____ Geography 3300 - Microclimatology
 - _____ Geography 3400 - Hydrology
 - _____ Geography 3440/Environmental Science 3440 - Wetlands
 - _____ Geography 3720 - Remote Sensing
 - _____ Geography 3735 - Analysis of Environmental Data
 - _____ Geography 3740 - Geographical Information Systems
- _____ 11.-12. **Two of:**
 - _____ Biology 4605 - Conservation Biology
 - _____ Biology 4700 - Molecular Ecology
 - _____ Biology 4710 - Evolutionary and Ecological Modelling
 - _____ Biology 4740 - Behavioural Ecology
 - _____ Biology 4800 - Biology of Parasitism
 - _____ Biology 4825/Geography 4825 - Biogeochemistry
 - _____ Biology 4840/Geography 4840 - Limnology
 - _____ Geography 4030 - Advanced Physical Geography (Series)
 - _____ Geography 4060 - Agricultural Soil Management
 - _____ Geography 4400 - Advanced Hydrology
 - _____ Geography 4725 - Advanced Remote Sensing
 - _____ Geography 4740 - Advanced Geographical Information Systems
- _____ 13.-14. Two lab-based courses (6.0 credit hours) in Chemistry at the 1000 level or above (preferably Chemistry 1110 - Chemistry for Life Sciences I and Chemistry 2120 - Chemistry for Life Sciences II)
 - _____ 13. _____
 - _____ 14. _____
- _____ 15. One additional course (3.0 credit hours) at the 3000 or 4000 level selected from any of the Biology or Geography courses indicated on the lists, above

Name: _____

ID:

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Electives (five courses):

- _____ 16.-18. Three courses (9.0 credit hours) from List I: Fine Arts and Humanities
 - _____ 16. _____
 - _____ 17. _____
 - _____ 18. _____
- _____ 19. One course (3.0 credit hours) from List II: Social Sciences
 - _____ _____
- _____ 20. One course (3.0 credit hours) from List I: Fine Arts and Humanities or List II: Social Sciences
 - _____ _____

Notes

Courses labeled as "electives" may be used towards a minor if a minor is chosen. Additional courses (apart from the core and elective courses) must be completed if a concentration is declared.

To determine if a given course has a Fine Arts and Humanities, Social Science, or Science designation, see List I: Fine Arts and Humanities Courses, List II: Social Science Courses, and List III: Science Courses (see **School of Liberal Education** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar).

No more than two Independent Study courses (3990 or 4990; 6.0 credit hours) may be counted towards the program.

Students may not take for credit those courses offered by Biological Sciences or Geography that have close equivalents in the college diploma program. These excluded courses include the following: Biology 1020, Biology 2200, Geography 1000, Geography 2065, Geography 2735, and Geography 3080.

Optional Concentration: Geographical Information Science

For information about the Geographical Information Science concentration, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

1.-5. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID: _____

Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

First Year

Biology 1010

One of: **Biology 2150** or **Geography 2700**

Biology 2000

¹**Chemistry 1110**

¹Chemistry 2120

Geography 2300

Geography 3740

Biology list course

Lib Ed Requirement course

Lib Ed Requirement course

Second Year

Environmental Science 4010

Biology or Geography 3000/4000 level

Biology or Geography 4000 level list course

Biology or Geography 4000 level list course

Biology list course

Geography list course

Geography list course

Lib Ed Requirement course

Lib Ed Requirement course

Lib Ed Requirement course

1. Preferred Chemistry courses.

Note: Courses in bold in 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.

PROGRAM PLANNING GUIDE

Name: _____

ID:

Post-Diploma Bachelor of Science

Agricultural Studies



Agricultural studies delves into the relationships between the social, economic, political and environmental factors that affect the agricultural sector — from farm level production to international policy. This broad range of perspectives will expand your understanding of issues such as policy development, the farm as a production unit and the environmental implications of land use. You'll also be exposed to the latest developments in genetic engineering, precision farming and animal nutrition, to name just a few.

What determines my program requirements?

Please refer to the Academic Calendar (www.ulethbridge.ca/ross/academic-calendar) for complete program information.

Calendar Year: 2026/2027 - Your calendar year is set to the academic year you are admitted (or readmitted) and you should follow the requirements for that year for the duration of your program.

Faculty/School: Faculty of Arts and Science (www.ulethbridge.ca/artsci)

Program(s): Bachelor of Science

Major(s): Agricultural Studies

Minor: A defined set of courses, designed to provide depth in a particular discipline, study in an interdisciplinary area, or focus on a theme-related topic. To learn more about optional minors see www.ulethbridge.ca/ross/minors.

Am I admissible to this program?

Admission: www.ulethbridge.ca/ross/admissions/undergrad

Transfer: www.ulethbridge.ca/ross/transfer-resources

When/How do I apply to the University?

Deadlines: www.ulethbridge.ca/ross/admissions/undergrad/deadlines

Step-by-Step: www.ulethbridge.ca/ross/admissions/step-by-step

Where can I find information on courses?

Course Catalogue: www.ulethbridge.ca/ross/courses

Registration Guide: www.ulethbridge.ca/ross/registration-guide

When can I register for classes?

Register early! (March for Summer and Fall; November for Winter)

Registration Dates: www.ulethbridge.ca/ross/registration-dates

How can I enhance my program?

Career Bridge: www.ulethbridge.ca/career-bridge

Co-op Education: www.ulethbridge.ca/career-bridge/co-operative-education

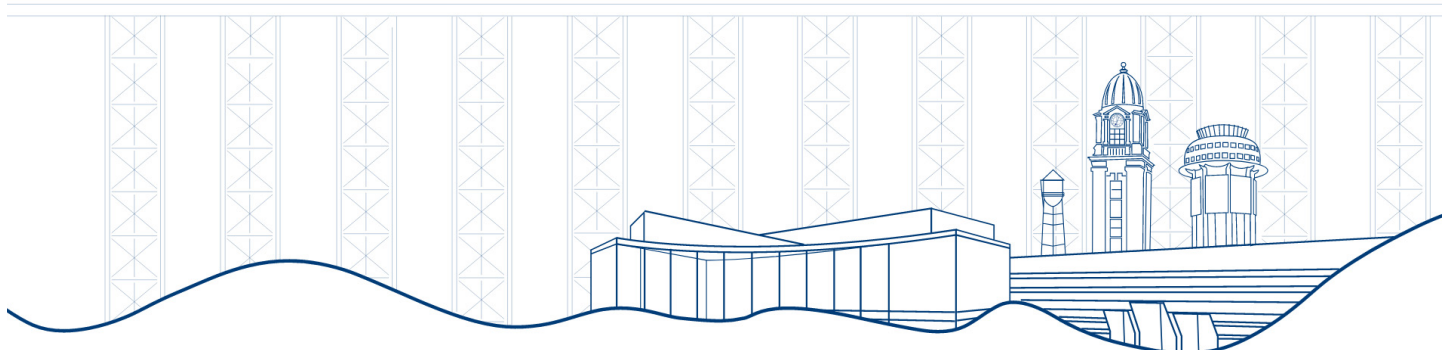
What supports are available to students?

Student Services: www.ulethbridge.ca/campus-life/student-services

Student Success Centre: www.ulethbridge.ca/student-success-centre

Accessible Learning: www.ulethbridge.ca/ross/alc

Counselling Services: www.ulethbridge.ca/counselling



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Program Requirements (20 Courses)

Students must complete at least 20 courses (60.0 credit hours) from disciplines offered by the Faculty of Arts and Science, Faculty of Fine Arts, or School of Liberal Education (i.e. no courses labelled ACCT, AGEM, AMHC, CDEV, CRED, DGTR, EDUC, FINC, GLBU, HLSC, HRLR, IGBM, INHL, MGT, MKTG, NURS, PUBH, or TREC), as follows, with a minimum GPA of 2.00.

Required core (11 courses):

- _____ 1. Agricultural Studies 1000 - The Evolution of Agriculture
- _____ 2. Agricultural Studies 3300 - Modelling of Agricultural Systems
- _____ 3. Agricultural Studies 4000 - Seminar in Agricultural Issues
- _____ 4. Biology 1010 - Cellular Basis of Life
- _____ 5. Economics 1010 - Introduction to Microeconomics
- _____ 6. Economics 3220 - Environmental Economics
- _____ 7. Economics 3300 - Agricultural Policy I
- _____ 8. Geography 3210 - Food Systems Analysis
- _____ 9. Statistics 1770 - Introduction to Probability and Statistics
- _____ 10. **One of:**
 - _____ Philosophy 2001 - Introduction to Ethics
 - _____ Philosophy 2236 - Environmental Philosophy
 - _____ Philosophy 3402 - Biomedical Ethics
- _____ 11. **One of:**
 - _____ English 1900 - Introduction to Language and Literature
 - _____ History 1000 - The Western World
 - _____ History 1200 - World History
 - _____ Philosophy 1000 - Introduction to Philosophy
 - _____ Religious Studies 1000 - Introduction to World Religions

12.-19. One of the following streams (a. or b.; eight courses):

a. Biological Sciences Stream

- _____ Biology 2000
- _____ Biology 2150
- _____ Biology 2200
- _____ Chemistry 1110
- _____ Chemistry 2120

Three of:

- _____ Biology 2090/Geography 2090
- _____ ¹ Biology 2300
- _____ Biology 3095/Geography 3095
- _____ Biology 3420
- _____ Biology 3460
- _____ Biology 3520
- _____ Biology 3530
- _____ Biology 3560
- _____ Biology 3700
- _____ Biology 3710
- _____ Biology 3720
- _____ Biology 4570
- _____ Environmental Science 2000
- _____ Environmental Science 4010

b. Geography Stream

Eight of:

- _____ Environmental Science 2000
- _____ Environmental Science 4010
- _____ Biology 2090/Geography 2090
- _____ Geography 2300
- _____ Geography 2700
- _____ Geography 2735
- _____ Geography 3075
- _____ Geography 3080
- _____ Geography 3095/Biology 3095
- _____ Geography 3400
- _____ Geography 3440/Environmental Science 3440
- _____ Geography 3700
- _____ Geography 3710
- _____ Geography 3720
- _____ Geography 3735
- _____ Geography 3740
- _____ Geography 4060
- _____ Geography 4400
- _____ Geography 4725
- _____ Geography 4740

Elective (one course):

- _____ 20. One additional course from List I: Fine Arts and Humanities Courses

Notes

¹ This course has a prerequisite or corequisite that is not required for the major.

Courses labeled as "electives" may be used towards a minor if a minor is chosen. Additional courses (apart from the core, stream, and elective courses) must be completed if a concentration is declared.

To determine if a given course has a Fine Arts and Humanities designation, see List I: Fine Arts and Humanities Courses (see **School of Liberal Education** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar).

No more than two Independent Study courses (3990 or 4990; 6.0 credit hours) may be counted towards the program.

Students may count a maximum of two Special Topics courses (i.e., Biology or Geography 3850 or 4850) towards the required stream provided they are (1) clearly related to the stream and (2) approved by the Coordinator of Agricultural Studies.

Students wishing to pursue the Concentration in Geographical Information Science must complete Geography 2735 among the eight courses required in the Geography Stream.

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 Studies early in the program for further information.

Optional Concentration:

For information about the optional concentrations, see **Faculty of Arts and Science** in the 2026/2027 University of Lethbridge Calendar, www.ulethbridge.ca/ross/academic-calendar.

1.-5. Required Courses

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



RECOMMENDED SEQUENCING PLAN (2026/2027)

Recommended Course Sequence

Name: _____

ID:

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Shown below is the recommended sequence of courses for your degree. Consult timetables for course offerings, prerequisites, and corequisites before registering each term as some courses may have limited offerings (ie. once a year, alternating years, or only offered in the Fall or Winter terms). Consult with an Academic Advisor in your faculty if you wish to alter this sequence with regard to the specifically listed courses.

Note that this sequence was prepared based on course scheduling at the time of publication and may change during your studies.

Biological Sciences Stream

First Year

Agricultural Studies 1000
Biology 1010
Biology 2000
Biology 2150
Chemistry 1110
Economics 1010
Chemistry 2120
One of: Philosophy 2001, Philosophy 2236, or Philosophy 3402
Statistics 1770
Biology Stream course

Second Year

Agricultural Studies 3300
Agricultural Studies 4000
Biology 2200
Economics 3220
Economics 3300
Geography 3210
One of: English 1900, History 1000, History 1200, Philosophy 1000, or Religious Studies 1000
Biology Stream course
Biology Stream course
Lib Ed Requirement course

Note: Courses in bold in 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 or in Geographical Information Science should contact the Program Coordinator and/or Arts and Science Student Program Services early in their program for assistance in planning sequencing for the required courses.

Geography Stream

First Year

Agricultural Studies 1000
Biology 1010
Economics 1010
Economics 3220
One of: Philosophy 2001, Philosophy 2236, or Philosophy 3402
Statistics 1770
Geography Stream course
Geography Stream course
Geography Stream course
Geography Stream course

Second Year

Agricultural Studies 3300
Agricultural Studies 4000
Economics 3300
Geography 3210
One of: English 1900, History 1000, History 1200, Philosophy 1000, or Religious Studies 1000
Geography Stream course
Geography Stream course
Geography Stream course
Geography Stream course
Lib Ed Requirement course

Note: Courses in bold in 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 or in Geographical Information Science should contact the Program Coordinator and/or Arts and Science Student Program Services early in their program for assistance in planning sequencing for the required courses.