

University of
Lethbridge



Program Planning Guide

Name: _____

ID: _____

Calendar Year: 2023/2024

Major in Remote Sensing:

www.ulethbridge.ca/artsci/remote-sensing

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
Remote Sensing

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 (21 courses)

Other Courses (minimum 19 courses)

- _____ Computer Science 1620 - Fundamentals of Programming I
- _____ Geography 1000 - Introduction to Physical Geography
- _____ Geography 2030 - Geomorphology
- _____ Geography 2300 - Weather and Climate
- _____ Geography 2700 - Geographical Data and Analysis
- _____ Geography 2735 - Introduction to Geographical Information Science
- _____ Geography 3720 - Remote Sensing
- _____ Geography 4725 - Advanced Remote Sensing
- _____ Mathematics 1410 - Elementary Linear Algebra
- _____ Physics 2000 - Introduction to Physics II
- _____ Physics 2120 - Introduction to Physics III
- _____ Physics 2130 - Waves, Optics and Sound
- _____ Physics 2925 - Introduction to Experimental Physics
- _____ Physics 3650 - Optics
- _____ Remote Sensing 4650 - Physics of Remote Sensing

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One of:

- _____ Geography 4710 - Remote Sensing Field Techniques
- _____ Geography 4751 - Spatial Modelling
- _____ Geography 4753 - Seminar in Remote Sensing

One of:

- _____ Mathematics 1560 - Calculus I
- _____ Mathematics 1565 - Accelerated Calculus I (recommended)

One of:

- _____ Mathematics 2560 - Calculus II
- _____ Mathematics 2565 - Accelerated Calculus II (recommended)

One of the following Streams (a. or b.):

a. Standard Stream:

- _____ Mathematics 2570 - Calculus III
- _____ Mathematics 2580 - Calculus IV

b. Accelerated Stream:

- _____ Mathematics 2575 - Accelerated Calculus III (recommended)
- _____ One additional course (3.0 credit hours) in Mathematics

One of:

- _____ Physics 1000 - Introduction to Physics I
- _____ Physics 1050 - Introduction to Biophysics
- _____ Engineering 2060 - Engineering Mechanics

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.

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

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

Geography 1000
 Mathematics 1410
Mathematics 1560 or Mathematics 1565
Physics 1000 or Physics 1050
 Lib Ed Requirement course

Year 2, Fall

Geography 2030
 Geography 2300
 Geography 2700
Mathematics 2570 or Mathematics 2575
Physics 2120

Year 3, Fall

Geography 3720
 Physics 3650¹
 Lib Ed Requirement course
 Lib Ed Requirement course
 Elective 3000/4000 level

Year 4, Fall

Remote Sensing 4650¹
 One of: Geography 4710¹, 4751¹, or 4753¹
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective 3000/4000 level

Year 1, Spring

Computer Science 1620
 Geography 2735
Mathematics 2560 or Mathematics 2565
Physics 2000
 Lib Ed Requirement course

Year 2, Spring

Mathematics 2580 or an additional course in MATH
Physics 2130
 Lib Ed Requirement course
 Lib Ed Requirement course
 Lib Ed Requirement course

Year 3, Spring

Physics 2925
 Lib Ed Requirement course
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

Year 4, Spring

Geography 4725¹
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective 3000/4000 level

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.