

University of
Lethbridge



Program Planning Guide

Name: _____

ID: _____

Calendar Year: 2023/2024

Major in Neuroscience:

www.ulethbridge.ca/artsci/neuroscience

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
Neuroscience

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 (24 courses)

- _____ Biology 1010 - Cellular Basis of Life
- _____ Biology 1020 - Diversity of Life
- _____ Biology 2000 - Principles of Genetics
- _____ Neuroscience 2610 - Principles of Brain Structure and Function
- _____ Neuroscience 2620 - Principles of Behavioural Neuroscience
- _____ Neuroscience 3600 - Fundamental Neurobiology
- _____ Psychology 1010 - Introduction to Psychology A: Evolution, Mechanisms, and Cognition/Perception
- _____ Psychology 2330 - Learning and Cognition
- _____ Psychology 2700 - Behaviour and Evolution

Two of:

- _____ ¹ Biochemistry 2000 - Introductory Biochemistry
- _____ Neuroscience 3610 - Human Neuropsychology
- _____ Neuroscience 3615 - Functional Neuroanatomy
- _____ Neuroscience 3625 - Cellular and Molecular Neurobiology

One of:

- _____ Neuroscience 3645 - Cognitive Neuroscience I
- _____ Neuroscience 3655 - Cognitive Neuroscience II
- _____ Neuroscience 3660 - Neurobiological Basis of Learning and Memory in the Mammal
- _____ Neuroscience 3710 - Behaviour and the Evolution of Brains

One of:

- _____ Neuroscience 4630 - Neuroscience (Series)
- _____ Neuroscience 4980 - Applied Studies
- _____ Neuroscience 4990 - Independent Study
- _____ ² Neuroscience 4995 - Undergraduate Thesis (6.0 credit hours)

One of:

- _____ Philosophy 2220 - Philosophy of Mind
- _____ ³ Philosophy 3402 - Biomedical Ethics

One of:

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

One of:

- _____ One course (3.0 credit hours) in English at the 1000 level or higher
- _____ Writing 1000 - Introduction to Academic Writing

One of:

- _____ Neuroscience 3690 - Introduction to Programming and Statistics in MATLAB
- _____ ³ Psychology 2030 - Methods and Statistics B
- _____ Statistics 1770 - Introduction to Probability and Statistics

_____ Two courses (6.0 credit hours) in Neuroscience or Psychology at the 3000/4000 level with a Science designation (refer to the 2023/2024 University of Lethbridge Calendar, p. 83).

1. _____
2. _____

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

Stream a:¹

- _____ Biochemistry 2000 - Introductory Biochemistry
- _____ Chemistry 1110 - Chemistry for Life Sciences I
- _____ Chemistry 2120 - Chemistry for Life Sciences II
- _____ Two additional courses (6.0 credit hours) in Biology, Chemistry, Neuroscience, or Psychology at the 3000/4000 level with a Science Designation (refer to the 2023/2024 University of Lethbridge Calendar, p. 83)
- 1. _____
- 2. _____

Stream b:

- _____ Chemistry 1000 - General Chemistry I
- _____ Chemistry 2000 - General Chemistry II
- _____ Chemistry 2500 - Organic Chemistry I
- _____ Chemistry 2600 - Organic Chemistry II

One of:

- _____ Mathematics 1410 - Elementary Linear Algebra
- _____ Mathematics 1560 - Calculus I
- _____ Mathematics 1565 - Accelerated Calculus I

Notes

¹ Students may not choose Stream a. if Biochemistry 2000 was chosen as part of the "Two of" list.

² If Neuroscience 4995 is chosen, the requirement for two additional courses at the 3000/4000 level in Neuroscience or Psychology with a Science designation is reduced to one additional course.

³ This course has a prerequisite or corequisite that is not required for the major. See the Course Catalogue (p. 351) for more information.

Other Courses (minimum 16 courses)

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

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.

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

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.

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

_____ 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

Biology 1020 or Biology 1010
 Chemistry 1000
 Mathematics requirement
 Lib Ed Requirement course
 Lib Ed Requirement course

Year 2, Fall

Biology 2000
 Chemistry 2500
 Neuroscience 2610
 Lib Ed Requirement course
 Lib Ed Requirement course
(Philosophy 1000 recommended)

Year 3, Fall

Neuroscience 3600
 Psychology 2700
 Neuroscience list course
 Lib Ed Requirement course 3000/4000 level
 Elective 3000/4000 level

Year 4, Fall

Neuroscience 4000-level list course
 Neuroscience list course
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

Year 1, Spring

Biology 1010 or Biology 1020
 Chemistry 2000
 Psychology 1010
 English 1900 or Writing 1000
 Lib Ed Requirement course

Year 2, Spring

Chemistry 2600
 Neuroscience 2620
 Physics 1000 or Physics 1050
 Philosophy requirement
 Statistics requirement

Year 3, Spring

Psychology 2330
 Neuroscience list course
 Elective 3000/4000 level
 Elective 3000/4000 level
 Elective

Year 4, Spring

Neuroscience or Psychology 3000/4000 level (Science)
 Neuroscience or Psychology 3000/4000 level (Science)
 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.

The above sequence includes only courses from Stream b. Chemistry group. Plan accordingly if you are interested in completing the courses from Stream a. Chemistry group (see p. 3 of the Program Planning Guide).