University of Lethbridge

Faculty of Arts & Science

Program Planning Guide

Department: Neuroscience

Calendar Year: 2014/2015

Name:_____

ID: _____

Major in Neuroscience:
www.uleth.ca/artsci/neuroscience

Academic Calendar:
www.uleth.ca/ross/academic-calendar

High School Prerequisites by Course:
www.uleth.ca/ross/hs_prereqs/course

Current and Past Program Planning Guides:
www.uleth.ca/ross/ppgs

Faculty of Arts and Science Student Program Services:
www.uleth.ca/artsci/advising
artsci.advising@uleth.ca
(403) 329-5106
SU060

Co-operative Education:
www.uleth.ca/artsci/coop

This is a planning guide and not a graduation check or guarantee of course offerings. You should have a program check done in your final year of studies. Students are responsible for the accuracy of their own programs. The guide should be used in conjunction with the University of Lethbridge Calendar, which is the final authority on all questions regarding program requirements and academic regulations. Contact an Academic Advisor in the Faculty of Arts and Science for advising information.

Bachelor of Science

Neuroscience

Name: _____ **ID:** _____

B.Sc. Neuroscience

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

Major Requirements (22 courses)

_____ Biology 1010 - Cellular Basis of Life
_____ Biology 1020 - Diversity of Life
_____ Biology 2000 - Principles of Genetics
_____ Neuroscience 2600 - Brain and Behaviour
_____ Neuroscience 3600 - Fundamental Neurobiology
_____ Psychology 2320 - Cognition and Perception: Thinking and Seeing
_____ Psychology 2700 - Behaviour and Evolution

Three of:

___ Biochemistry 2000 - Introductory Biochemistry
___ Biology 3000 - Gene Expression and Regulation
___ Biology 3105 - Signal Transduction
___ Biology 3310 - Developmental Biology
___ Biology 3400 - Principles of Microbiology
___ Neuroscience 3625 - Cellular and Molecular Neurobiology

One of:

___ Philosophy 2220 - Philosophy of Mind
___ Philosophy 2233 - Philosophy and the World View of Science: Earth and Life Sciences
___ [1]Philosophy 3270 - Theory of Knowledge
___ [1]Philosophy 3402 - Biomedical Ethics

One of:

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

One of:

___ Neuroscience 4630 - Neuroscience (Series)
___ Neuroscience 4980 - Applied Studies
___ Neuroscience 4990 - Independent Study
___ [2]Neuroscience 4995 - Undergraduate Thesis

One of:

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

One of:

___ Psychology 2030 - Methods and Statistics
___ 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 (see the 2014/2015 Calendar, List III: Science Courses, p. 90).

1._____ 2._____

One of the following groups (a or b):

a.

_____ 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 (See the 2014/2015 Calendar, List III: Science Courses, p. 90)

1._____ 2._____

Note: Students who choose this grouping may not choose Biochemistry 2000 as part of the "Three of" list left.

OR

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

Other Courses (minimum 18 courses)

1._____ 10._____
2._____ 11._____
3._____ 12._____
4._____ 13._____
5._____ 14._____
6._____ 15._____
7._____ 16._____
8._____ 17._____
9._____ 18._____

Notes

[1]*Prerequisite required: One of Philosophy 1000 or a 2000-level course (3.0 credit hours) in Philosophy.*

[2]*If Neuroscience 4995 (6.0 credit hours) 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 such course.*

It is strongly recommended that students who are planning to pursue graduate studies in the neurosciences consider the undergraduate thesis option and include Neuroscience 3605 and Psychology 3400 in their program.

See also:

- Bachelor of Science - Psychology

Completion of the General Liberal Education Requirement (GLER).
Only four courses (12.0 credit hours) in total may be counted from all courses offered by a single department. See the 2014/2015 Calendar, p. 88, for more information.

LIST I: Fine Arts and Humanities Courses

1._____ 3._____

2._____ 4._____

LIST II: Social Science Courses

1._____ 3._____

2._____ 4._____

LIST III: Science Courses

1._____ 3._____

2._____ 4._____

Not more than 12 courses (36.0 credit hours) may be completed at the 1000 level (or lower) [0500 - 1999] for credit towards the degree, excluding Activity courses (labelled PHAC and MUSE).

1._____ 7._____

2._____ 8._____

3._____ 9._____

4._____ 10._____

5._____ 11._____

6._____ 12._____ (max.)

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

1._____ 9._____

2._____ 10._____

3._____ 11._____

4._____ 12._____

5._____ 13._____

6._____ 14._____

7._____ 15._____ (min.)

8._____

____ Not more than five Independent Study courses (15.0 credit hours) may be completed for credit towards the degree.

____ Not more than five Disciplinary Credit Applied Studies courses (15.0 credit hours) may be completed for credit towards the degree. Students may, in addition, complete Applied Studies 2000, 2001, 2010, and 2011.

____ Not more than 24 courses (72.0 credit hours) may be completed from any one discipline for credit towards the degree.
Note: *Disciplines are identified by a specific course label (e.g. KNES, ASTR, and HIST are separate disciplines).*

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

____ Residence requirement:

Degree: at least 20 courses (60.0 credit hours) must be completed at the University of Lethbridge, including the last 10 courses (30.0 credit hours) completed for credit towards the degree.

Major: at least half of the courses required in the major must be completed at the University of Lethbridge.

Minor (Optional): _____
See the 2014/2015 Calendar, p. 143, for eligible minors.

1. _____ 4._____

2. _____ 5._____

3. _____ 6._____

Sample Sequencing Plan

Shown below is a sample sequence of courses for your degree. If you follow this plan, you should be able to graduate in four years, provided you complete five courses per semester. This is just one example of how you could complete your major and degree requirements; you may find that a different sequence works as well as this one.

Year 1, Fall	***Year 1, Spring***
Biology 1010	Biology 1020
Chemistry 1000	Chemistry 2000
Mathematics 1410 or Mathematics 1560	Neuroscience 2600
GLER course	English 1900 or Writing 1000
GLER course	GLER course
Year 2, Fall	***Year 2, Spring***
Chemistry 2500	Chemistry 2600
Biology 2000	Physics 1000 or Physics 1050
Psychology 2700	Psychology 2030 or Statistics 1770
Psychology 2320	GLER course
GLER course *(Philosophy 1000 recommended)*	GLER course
Year 3, Fall	***Year 3, Spring***
Neuroscience 3600	Philosophy requirement [2]
One "Three of:" List requirement [1]	One "Three of:" List requirement [1]
Elective 3000/4000 level	Elective 3000/4000 level
Elective 3000/4000 level	Elective 3000/4000 level
Elective	Elective
Year 4, Fall	***Year 4, Spring***
One "Three of:" List requirement [1]	Neuroscience or Psychology 3000/ 4000 level (Science)
Neuroscience or Psychology 3000/ 4000 level (Science)	One of: Neuroscience 4630, 4980, 4990, or 4995 [3]
Elective 3000/4000 level	Elective 3000/4000 level
Elective 3000/4000 level	Elective 3000/4000 level
Elective	Elective 3000/4000 level

Note: *The above sequence includes only courses from the second Chemistry group. Plan accordingly if you are interested in completing the courses from the first Chemistry group (see p. 3 of the Program Planning Guide).*

[1] *Students require Three of: Biochemistry 2000; Biology 3000, 3105, 3310, 3400; Neuroscience 3625. Semester of offering for these courses may vary. Please check with the Departments of Biological Sciences, Chemistry and Biochemistry, or Neuroscience, respectively.*

[2] *One of Philosophy 2220, 2233, 3270, or 3402 is required. Semester of offering may vary.*

[3] *As Neuroscience 4995 is a 6.0 credit course, students should register for it in the Fall.*

Terms Used

GLER course: A course that could count toward the General Liberal Education Requirement. You may use courses in your major towards this 12-course requirement. See the 2014/2015 University of Lethbridge Calendar, Part 4 - Academic Regulations (p. 88) for complete information.

The Faculty of Arts and Science offers Liberal Education 1000 and 2000, specifically designed to introduce first-year students to the wide scope of human knowledge and teach essential university success skills, critical thinking, and integrative thinking (see the 2014/2015 University of Lethbridge Calendar, Part 14 - Courses, p. 315). LBED 1000 and 2000 may be used toward satisfying the GLER.

Elective: A course that you may choose freely from all those available and applicable to your program. Use courses inside or outside your major, bearing in mind any restrictions that may apply (e.g., a maximum of 24 courses from any one discipline).

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