

University of  
Lethbridge



## Program Planning Guide

Name: \_\_\_\_\_

ID: \_\_\_\_\_

Calendar Year: 2022/2023

### Major in Applied Statistics:

[www.ulethbridge.ca/artsci/math-computer-science](http://www.ulethbridge.ca/artsci/math-computer-science)

### Academic Calendar:

[www.ulethbridge.ca/ross/academic-calendar](http://www.ulethbridge.ca/ross/academic-calendar)

### High School Admission Requirements:

[www.ulethbridge.ca/ross/admissions/undergrad/high-school](http://www.ulethbridge.ca/ross/admissions/undergrad/high-school)

### Current and Past Program Planning Guides:

[www.ulethbridge.ca/ross/ppgs](http://www.ulethbridge.ca/ross/ppgs)

### Co-operative Education:

[www.ulethbridge.ca/career-bridge/co-operative-education](http://www.ulethbridge.ca/career-bridge/co-operative-education)

### Faculty of Arts and Science Advising:

[www.ulethbridge.ca/artsci/advising](http://www.ulethbridge.ca/artsci/advising)  
artsci.advising@uleth.ca  
403-329-5106  
M2102

**Bachelor of Science**  
**Applied Statistics**

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](http://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 (21-23 courses)**

**Required courses (11 Courses):**

- \_\_\_\_\_ Computer Science 1620 - Fundamentals of Programming I
- \_\_\_\_\_ Mathematics 1410 - Elementary Linear Algebra
- \_\_\_\_\_ Statistics 1770 - Introduction to Probability and Statistics
- \_\_\_\_\_ Statistics 2200 - Survey Design and Analysis
- \_\_\_\_\_ Statistics 3500 - Mathematical Probability
- \_\_\_\_\_ Statistics 3510 - Mathematical Statistics
- \_\_\_\_\_ Statistics 3700 - Design and Analysis of Experiments

**One of:**

- \_\_\_\_\_ Mathematics 1560 - Calculus I
- \_\_\_\_\_ Mathematics 1565 - Accelerated Calculus I

**One of:**

- \_\_\_\_\_ Mathematics 2560 - Calculus II
- \_\_\_\_\_ Mathematics 2565 - Accelerated Calculus II

**One of:**

- \_\_\_\_\_ Statistics 2780 - Statistical Inference
- \_\_\_\_\_ Economics 2900 - Economics and Business Statistics
- \_\_\_\_\_ One course (3.0 credit hours) at the 4000 level in Statistics
- 1. \_\_\_\_\_

**Required Concentration:**

For the Major in Applied Statistics, all students must complete one of the following concentrations:

**Concentration in Economics (10 courses)**

- \_\_\_\_\_ Economics 1010 - Introduction to Microeconomics
- \_\_\_\_\_ Economics 1012 - Introduction to Macroeconomics
- \_\_\_\_\_ Economics 2750 - Quantitative Methods in Economics
- \_\_\_\_\_ Economics 3010 - Intermediate Microeconomic Theory
- \_\_\_\_\_ Economics 3012 - Intermediate Macroeconomic Theory
- \_\_\_\_\_ Economics 3950 - Econometrics I
- \_\_\_\_\_ Economics 4960 - Econometrics II
- \_\_\_\_\_ One additional course (3.0 credit hours) in Economics at the 3000/4000 level
- 1. \_\_\_\_\_
- \_\_\_\_\_ Two additional courses (6.0 credit hours) in Economics at the 4000 level
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

**Concentration in Geography (10 courses)**

- \_\_\_\_\_ Geography 1000 - Introduction to Physical Geography
- \_\_\_\_\_ Geography 1200 - Introduction to Human Geography
- \_\_\_\_\_ Geography 2210 - Spatial Organization of Economic Activity
- \_\_\_\_\_ Geography 2700 - Geographical Data and Analysis
- \_\_\_\_\_ Geography 2735 - Introduction to Geographical Information Science
- \_\_\_\_\_ Geography 3720 - Remote Sensing
- \_\_\_\_\_ Geography 3740 - Geographical Information Systems

**One of:**

- \_\_\_\_\_ Geography 2030 - Geomorphology
- \_\_\_\_\_ Geography 2300 - Weather and Climate

**One of:**

- \_\_\_\_\_ Geography 3735 - Analysis of Environmental Data
- \_\_\_\_\_ Geography 4725 - Advanced Remote Sensing
- \_\_\_\_\_ Geography 4740 - Advanced Geographical Information Systems
- \_\_\_\_\_ Remote Sensing 4650 - Physics of Remote Sensing
- \_\_\_\_\_ One additional course (3.0 credit hours) in Geography at the 3000/4000 level
- 1. \_\_\_\_\_

**Concentration in Psychology (12 courses)**

- \_\_\_\_\_ Psychology 1010 - Introduction to Psychology A: Evolution, Mechanisms, and Cognition/Perception
- \_\_\_\_\_ Psychology 1020 - Introduction to Psychology B: Developmental, Sociocultural, and Abnormal
- \_\_\_\_\_ Psychology 1030 - Methods and Statistics A
- \_\_\_\_\_ Psychology 2030 - Methods and Statistics B
- \_\_\_\_\_ Psychology 3400 - Advanced Research Design and Data Analysis
- \_\_\_\_\_ Four courses (12.0 credit hours) in Psychology or Neuroscience at the 2000 level
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- \_\_\_\_\_ Two additional courses (6.0 credit hours) in Psychology or Neuroscience at the 3000/4000 level
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- \_\_\_\_\_ One course (3.0 credit hours) in Psychology at the 4000 level
- 1. \_\_\_\_\_

**Other Courses (minimum 17-19 courses)**

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_
- 7. \_\_\_\_\_
- 8. \_\_\_\_\_
- 9. \_\_\_\_\_
- 10. \_\_\_\_\_
- 11. \_\_\_\_\_
- 12. \_\_\_\_\_
- 13. \_\_\_\_\_
- 14. \_\_\_\_\_
- 15. \_\_\_\_\_
- 16. \_\_\_\_\_
- 17. \_\_\_\_\_
- 18. \_\_\_\_\_
- 19. \_\_\_\_\_

**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 2022/2023 Calendar, p. 81, 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 2022/2023 Calendar, p. 323, 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.

<p><b>Year 1, Fall</b>  <b>Mathematics 1560 or Mathematics 1565</b>  <b>Statistics 1770</b>                      Concentration course                      Lib Ed Requirement course                      Lib Ed Requirement course</p>	<p><b>Year 1, Spring</b>                      Mathematics 1410  <b>Mathematics 2560 or Mathematics 2565</b>                      Concentration course                      Lib Ed Requirement course                      Lib Ed Requirement course</p>
<p><b>Year 2, Fall</b>                      Computer Science 1620                      Statistics 2200                      Concentration course                      Lib Ed Requirement course                      Elective</p>	<p><b>Year 2, Spring</b>  <b>Statistics 2780 or Economics 2900</b>                      Concentration course                      Lib Ed Requirement course                      Elective                      Elective</p>
<p><b>Year 3, Fall</b>                      Statistics 3500                      Concentration course                      Concentration course                      Elective 3000/4000 level                      Elective</p>	<p><b>Year 3, Spring</b>                      Statistics 3510                      Statistics 3700                      Concentration course                      Elective 3000/4000 level                      Elective</p>
<p><b>Year 4, Fall</b>                      Concentration course                      Concentration course                      Elective 3000/4000 level                      Elective 3000/4000 level                      Elective</p>	<p><b>Year 4, Spring</b>                      Statistics 4000 level<sup>1</sup>                      Concentration course                      Elective 3000/4000 level                      Elective 3000/4000 level                      Elective 3000/4000 level</p>

<sup>1</sup> 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.

The above sequence only lists 10 concentration courses (suitable for the Concentration in Geography or Economics). Students completing the 12-course Concentration in Psychology need to replace 2 Electives above with concentration courses.

