

University of
Lethbridge



Program Planning Guide

Departments: Mathematics and Computer Science, Economics, Geography, and Psychology

Calendar Year: 2017/2018

Name: _____

ID: _____

Bachelor of Science
Applied Statistics

Major in Applied Statistics:

www.uleth.ca/artsci/math-computer-science

Academic Calendar:

www.uleth.ca/ross/academic-calendar

High School Admission Requirements:

www.uleth.ca/ross/admissions/undergrad/high-school

Current and Past Program Planning Guides:

www.uleth.ca/ross/ppgs

Faculty of Arts and Science Advising:

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.

Name : _____

ID : _____

B.Sc. Applied Statistics

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

Major Requirements (21 courses)

Required courses (11 courses)

- _____ 1. Computer Science 1620 - Fundamentals of Programming I
- _____ 2. Mathematics 1410 - Elementary Linear Algebra
- _____ 3. Statistics 1770 - Introduction to Probability and Statistics
- _____ 4. Statistics 2200 - Survey Design and Analysis
- _____ 5. Statistics 3500 - Mathematical Probability
- _____ 6. Statistics 3510 - Mathematical Statistics
- _____ 7. Statistics 3700 - Design and Analysis of Experiments
- _____ 8. Statistics 4990 - Independent Study
- _____ 9. **One of:**
 - _____ Mathematics 1560 - Calculus I
 - _____ Mathematics 1565 - Accelerated Calculus I
- _____ 10. **One of:**
 - _____ Mathematics 2560 - Calculus II
 - _____ Mathematics 2565 - Accelerated Calculus II
- _____ 11. **One of:**
 - _____ Statistics 2780 - Statistical Inference
 - _____ Economics 2900 - Economics and Business Statistics

Required Concentration (10 courses):

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

Concentration in Economics

- _____ 12. Economics 1010 - Introduction to Microeconomics
- _____ 13. Economics 1012 - Introduction to Macroeconomics
- _____ 14. Economics 2750 - Quantitative Methods in Economics
- _____ 15. Economics 3010 - Intermediate Microeconomic Theory
- _____ 16. Economics 3012 - Intermediate Macroeconomic Theory
- _____ 17. Economics 3950 - Econometrics I
- _____ 18. Economics 4960 - Econometrics II

One additional course (3.0 credit hours) in Economics at the 3000/4000 level

19. _____

Two additional courses (6.0 credit hours) in Economics at the 4000 level

20. _____ 21. _____

Concentration in Geography

- _____ 12. Geography 1000 - Introduction to Physical Geography
- _____ 13. Geography 1200 - Introduction to Human Geography
- _____ 14. Geography 2210 - Spatial Organization of Economic Activity
- _____ 15. Geography 2700 - Geographical Data and Analysis
- _____ 16. Geography 2735 - Introduction to Geographical Information Science
- _____ 17. Geography 3235 - Quantitative Models for Geographic Analysis
- _____ 18. Geography 4730 - Spatial Statistics
- _____ 19. **One of:**
 - _____ Geography 2030 - Geomorphology
 - _____ Geography 2300 - Weather and Climate

_____ 20. **One of:**

- _____ Geography 3740 - Geographical Information Systems
- _____ Geography 3750 - GIS Applications in Human Geography

One additional course (3.0 credit hours) in Geography at the 3000/4000 level

21. _____

Concentration in Psychology

- _____ 12. Psychology 1000 - Basic Concepts of Psychology
- _____ 13. Psychology 2030 - Methods and Statistics
- _____ 14. Psychology 3400 - Advanced Research Design and Data Analysis

Four courses (12.0 credit hours) in Psychology or Neuroscience at the 2000 level

15. _____ 16. _____

17. _____ 18. _____

Two additional courses (6.0 credit hours) in Psychology or Neuroscience at the 3000/4000 level

19. _____ 20. _____

One course (3.0 credit hours) in Psychology at the 4000 level

21. _____

Other Courses (minimum 19 courses)

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

Notes

It is strongly recommended that a student attain a grade of 'C' or higher in any course used to satisfy prerequisites for courses in Computer Science, Mathematics, and Statistics.

See also:

- Bachelor of Science - Mathematics

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) from each of the Faculties of Education (EDUC), Health Sciences (ADCS, HLSC, NURS, PUBH, and TREC), and Management (MGT) may be counted towards the Lib Ed Requirement.

See the 2017/2018 Calendar, p. 79, 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) and courses numbered in the range of 0520 to 0530.

- | | |
|----------|------------------|
| 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, 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 Arts and Science courses (30.0 credit hours) at the 3000/4000 level.

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

Minor (Optional): _____
See the 2017/2018 Calendar, p. 137, 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 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

**Mathematics 1560 or
Mathematics 1565
Statistics 1770**

Concentration course
Lib Ed Requirement course
Lib Ed Requirement course

Year 2, Fall

Computer Science 1620

**Statistics 2780 or
Economics 2900**

Concentration course
Lib Ed Requirement course
Elective

Year 3, Fall

Statistics 3500

Concentration course
Elective 3000/4000 level
Elective 3000/4000 level
Elective

Year 4, Fall

Concentration course
Concentration course
Elective 3000/4000 level
Elective 3000/4000 level
Elective

Year 1, Spring

Mathematics 1410
**Mathematics 2560 or
Mathematics 2565**

Concentration course
Lib Ed Requirement course
Lib Ed Requirement course

Year 2, Spring

Statistics 2200¹

Concentration course
Lib Ed Requirement course
Elective
Elective

Year 3, Spring

Statistics 3510

Statistics 3700
Concentration course
Elective 3000/4000 level
Elective

Year 4, Spring

Statistics 4990
Concentration course
Concentration course
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 electives courses within the major and plan accordingly.

Terms Used

Lib Ed Requirement course: A course that could count toward the Liberal Education List Requirement. You may use courses in your major towards this 12-course requirement. See the 2017/2018 University of Lethbridge Calendar, Part 4 - Academic Regulations 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 2017/2018 University of Lethbridge Calendar, Part 14 - Courses). LBED 1000 and 2000 may be used toward satisfying the Lib Ed Requirement.

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).

