Program Planning Guide

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

**Calendar Year:** 2019/2020

**Name:** ____________________________

**ID:** ______________________________

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
M2102

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.
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
7. Statistics 3700 - Design and Analysis of Experiments
8. One of:
   - Mathematics 1560 - Calculus I
   - Mathematics 1565 - Accelerated Calculus I
9. One of:
   - Mathematics 2560 - Calculus II
   - Mathematics 2565 - Accelerated Calculus II
10. One of:
    - Statistics 2780 - Statistical Inference
    - Economics 2900 - Economics and Business
    - Statistics
11. One course (3.0 credit hours) at the 4000 level in 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
15. Economics 3010 - Intermediate Microeconomic 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

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

Two additional courses (6.0 credit hours) in Geography at the 3000/4000 level

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

Other Courses (minimum 19 courses)

1. __________________
2. __________________
3. __________________
4. __________________
5. __________________
6. __________________
7. __________________
8. __________________
9. __________________
10. __________________
11. __________________
12. __________________
13. __________________
14. __________________
15. __________________
16. __________________
17. __________________
18. __________________
19. __________________
20. __________________
21. __________________

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) 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 (MGT) may be counted towards the Lib Ed Requirement.

See the 2019/2020 Calendar, p. 83, 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, 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, ADCS, CDEV, CRED, EDUC, HLSC, MGT, NURS, PUBH, and TREC) will not meet this requirement.

1. ________________ 9. ________________
2. ________________ 10. ________________
3. ________________ 11. ________________
4. ________________ 12. ________________
5. ________________ 13. ________________
6. ________________ 14. ________________
7. ________________ 15. ________________ (min.)

Minor (Optional):
See the 2019/2020 Calendar, p. 277, for more information.

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.

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

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.

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 2019/2020 University of Lethbridge Calendar, School of Liberal Education for complete information.

The School of Liberal Education 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 2019/2020 University of Lethbridge Calendar, Course Catalogue). 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).