Honors Specialization in Data Science Module (20.0 courses)

This is a guide only. For complete information, see the online Academic Calendar

Last updated: March 14th, 2022

Admission Requirements
- Complete first year (5.0 coursers) with no failures.
- Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3.0 principal courses.

Graduation Requirements

Breadth Requirement:
- At least 1.0 course from each of Category A, B, and C as listed in the Academic Calendar.

Essay Requirement:
- 2.0 essay courses (1.0 must be senior course). Note that any modular essay course taken can be used towards this requirement.

Senior Courses:
- 13.0 senior courses (numbered 2000-4999) for a 4 yr degree.

Graduation Requirements (cont.)

Average Requirements:
- Minimum overall average of 65% on the 20.0 courses.
- Minimum cumulative modular average of 70% and a minimum mark of 60% in each course of the module.
- Passing grade in each course.
- Minimum cumulative modular average of 60% in any additional Major or Minor module completed.

Residency Requirement:
- The majority of your modular courses must be completed at Western. Please check academic calendar for other residency requirements.

Note: To graduate with an Honors BSc, at least 11.0 of your 20.0 courses must be taken from the Faculty of Science.

Typical Stream

A. Fall term (September to December)

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
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</thead>
<tbody>
<tr>
<td>CA 1000: Calculus I¹</td>
<td>CS 2210: Data Structures and Algorithms</td>
<td>DS 3000: Intro to Machine Learning</td>
<td>DS 4999 Z: Thesis⁴</td>
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<td>MA 1600: Linear Algebra I</td>
<td>CS 2211: Systems Programming</td>
<td>CS 3319: Databases I</td>
<td>SS 4850: Advanced Data Analysis</td>
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<td>CS 1026: CS Fundamentals I²</td>
<td>CS 2214: Discrete Structures</td>
<td>SS 3843: Intro to Study Design</td>
<td>Optional Modular course</td>
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<tr>
<td>Electives / Breadth requirements</td>
<td>SS 2857: Probability and Statistics I</td>
<td>SS 3859: Regression</td>
<td>Optional Modular course</td>
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B. Winter term (January to April)

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<th>First Year</th>
<th>Second Year</th>
<th>Third Year</th>
<th>Fourth Year</th>
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<tbody>
<tr>
<td>CA 1501: Calculus II³</td>
<td>DS 2000: Intro to Data Science</td>
<td>CS 3340: Analysis of Algorithms</td>
<td>Optional Modular course</td>
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<tr>
<td>CS 1027: CS Fundamentals II</td>
<td>DS 2212: Intro Software Engineering</td>
<td>SS 3860: Generalized Linear Models</td>
<td>Optional Modular course</td>
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<td>other principal course (e.g., DS1000)</td>
<td>SS 2864: Statistical Programming</td>
<td>Optional Modular course</td>
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<td>SS 2858: Probability and Statistics II</td>
<td>SS 4960: Business Skill for Data Science</td>
<td>Optional Modular course</td>
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Required first year principal courses
- Modular course (10.0 courses)
- Electives or other modules

Additional Notes:
1. or Calculus 1500A/B
2. or Data Science 1200A/B
3. or Calculus 1301A/B with a mark of >85%

Students interested in Statistics graduate programs should also take SS3657A & SS3858B.

Optional Modular courses
- CS 3346: Artificial Intelligence I
- CS 4442: Artificial Intelligence II
- CS 3377: Software Project Management
- CS 4411: Databases II
- CS 4416: Data Science II
- CS 4417: Unstructured Data
- CS 4418: Intro to Visual Analytics
- SS 4860: Advanced Regression
- SS 4864: Advanced Statistical Computing
- SS 4960: Business Skill for Data Science

Any 3rd or 4th year course from DS, CS, or SS.