## Year 1 (5.0 Courses)

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Calculus 1000A/B or 1500A/B</td>
</tr>
<tr>
<td>Calculus 1501A/B (recommended) or Calculus 1301A/B with a mark of at 85%</td>
</tr>
<tr>
<td>Mathematics 1600A/B</td>
</tr>
<tr>
<td>Computer Science 1026A/B and Computer Science 1027A/B</td>
</tr>
<tr>
<td>0.5 other principal course</td>
</tr>
</tbody>
</table>

2.0 options

**NOTE:** At least 1.0 course must be chosen from two of Category A, B, and C as listed in the Academic Calendar (e.g. 1.0 from A and 1.0 from C)

### Admission to the Major Module:

Complete first year (5.0 courses) with no failures including:

- Minimum grade of 60% in each of:
  - Calculus 1000A/B or Calculus 1500A/B
  - Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85%
  - Mathematics 1600A/B
  - Computer Science 1026 A/B (min 65%) and 1027 A/B (min 65%)
  - 0.5 other principal course

Recommended (but not required) first year courses: DS 1000A/B or Statistics 1023A/B.

**NOTE 1:** If not taken in first year, Math 1600A/B must be completed prior to the second term of second year.

**NOTE 2:** AM1412A/B and AM1414A/B may be substituted for the 1.0 Calculus course requirements and AM1411A/B may be substituted for Mathematics 1600A/B.

### MODULE is a joint program with CS: 7.0 courses

3.5 courses: DS2000A/B, CS2210A/B, 2211A/B, 2212A/B/Y, SS2857A/B, 2858A/B, 2864A/B,  
0.5 courses from: Computer Science 2214A/B, Mathematics 2151A/B, 2155F/G  
3.0 courses: DS3000A/B, SS3843A/B, 3859A/B, 3860 A/B, CS3319A/B, 3340A/B.

# Module shown is as per current calendar year. You may complete module using current calendar year or using calendar in effect in year of module entry.

### OPTIONS (8.0) Courses for a 4 year Degree

These may also include any additional module other than Applied Statistics **.

If taking another module that includes an intro stats course (anti-req to SS2858), please consult with other department regarding course substitution.

** Consult Computer Science (CS) department if considering a CS module.

Also, you must complete any additional module with a minimum 60% average.

** Notes:

- ** A 3 year degree (DS major only) requires only 3 optional courses.
- Courses common to more than one module take required substitution. However, if both modules are from faculty of science, a maximum of 1.0 courses explicitly required for each module can be counted towards both modules.
- 2nd Degree students should meet with a faculty counsellor to review other degree requirements (e.g. other than modular courses needed)

## 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)

### Average Requirements for a general degree **:

- Minimum cumulative overall average of 60%
- Minimum cumulative modular average of 60% in the major 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.

### Notes:

- ** honors degree (with double major) requires a 70% average within each module, with no Ds in any modular course
- To graduate with either a 4 year general or honors BSc degree, at least 11.0 of your 20.0 courses must be taken from the Faculty of Science
- To graduate with a 3 year BSc degree, at least 8.0 of your 15.0 courses must be taken from the Faculty of Science.

## Department Recommendation for order in which modular courses should be taken:

**Second Year**

- DS2000A/B Introduction to Data Science  
- CS2210A/B Data Structure and Algorithms  
- CS2211A/B Software Tools and Systems Programming  
- SS2857A Probability and Statistics I  
- CS2212B Intro to Software Engineering **  
- CS2214B Discrete Structures for Computing  
- SS2858B Probability & Statistics II  
- SS2864B Statistical Programming (now offered both terms)

** can defer to either term of year 3 if course conflict (2019/20) or otherwise

** Third Year**

- CS3319A Databases I  
- SS3843A Introduction to Study Design  
- SS3859A Regression  
- DS3000B Introduction to Machine Learning (now offered in both terms)  
- CS3340B Analysis of Algorithms I  
- SS3860A/B Generalized Linear Models

**Fourth Year**

Any modular courses not yet completed