Honors Specialization in Actuarial Science Module (20.0 courses)

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

Last updated June 21, 2019

<table>
<thead>
<tr>
<th>Year 1 (5.0 Courses)</th>
<th>Graduation Requirements</th>
</tr>
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<tbody>
<tr>
<td>Calculus 1000A/B or 1500A/B</td>
<td><strong>Breadth Requirement:</strong></td>
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<tr>
<td>Calculus 1501A/B (recommended) or Calculus 1301A/B with a mark of 85%+</td>
<td>• At least 1.0 course from each of Category A, B, and C as listed in the Academic Calendar.</td>
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<tr>
<td>Math 1600A/B</td>
<td><strong>Essay Requirement:</strong></td>
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<tr>
<td>Economics 1021A/B and Economics 1022A/B</td>
<td>• 2.0 essay courses (1.0 must be senior course). Note that any modular essay course taken can be used towards this requirement.</td>
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<tr>
<td>0.5 other principal course</td>
<td><strong>Senior Courses:</strong></td>
</tr>
<tr>
<td>2.0 options</td>
<td>• 13.0 senior courses (numbered 2000-4999)</td>
</tr>
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**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 Honors Specialization Module:**
Complete first year (5.0 courses) with no failures including:
- Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3 principal courses:
  - Calculus 1000A/B or 1500A/B
  - Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85%
  - Mathematics 1600A/B Economics 1021A/B and Economics 1022A/B
  - 0.5 other principal course

**Recommended (but not required) first year courses:**
AS1021A/B, Business 1220, Philosophy 1200

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

**NOTE 2:** AM1413 may be substituted for the 1.0 Calculus course requirements and AM1411 A/B may be substituted for Mathematics 1600 A/B.

**NOTE 3:** Economics 1021A/B and Economics 1022A/B, if not taken in first year, must be completed in one of your upper years.

**MODULE (10.5 Courses)** #

| 3.5 courses: | 
| Actuarial Science 2553A/B, 2427A/B, 3424A/B, 3429A/B, 3431A/B, 4426F/G, 4842A/B, |
| 4.0 courses: | 
| Statistical Sciences 2503A/B, 2857A/B, 2858A/B, 2864A/B, 3657A/B, 3850A/B, 3858A/B, 3859A/B, |
| 1.5 courses: | 
| Financial Modeling 2555A/B, 2557A/B, 3520A/B, |
| 0.5 courses: | 
| Calculus 2402A/B ** |
| 0.5 course from: | 
| Stats 3843A/B, 3860A/B, 4850A/B, 4861A/B, 4864 A/B, |
| 0.5 courses Any additional Actuarial Science, Financial Modelling or Statistical Sciences courses at the 4000 level |

**Note:** Calculus 2402A/B may be replaced by (Calculus 2502A/B + Calculus 2503A/B). When such a replacement occurs, the module will include 11.0 courses.

**OPTIONS (4.5 Courses)**

This module may not be combined with any other module offered by the Department of Statistical and Actuarial Sciences.

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

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

**Notes:**
Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, up to 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).**

**Progression Requirements**
- Minimum cumulative modular average of 70%
- Minimum mark of 60% in each course of module
- Passing grade in each course

**Graduation Requirements**

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**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.

**Department Recommendation for order in which modular courses should be taken**

**Second Year**

- AS2553A Mathematics of Finance
- FM2555A Corporate Finance
- Calculus 2402A/B Calculus with Analysis for Statistics
- SS2857A Probability and Statistics I
- AS2427B Long Term Actuarial Mathematics I
- FM2557B Financial Markets & Investments
- SS2503B Advanced Mathematics for Statistical Applications
- SS2858B Probability & Statistics II
- SS2864B Statistical Programming*

* May be taken in fall term of 3rd year (2864 now offered both terms)

**Third Year**

- AS3429A Long Term Actuarial Mathematics II
- FM3520A Financial Modeling I
- SS3657A Intermediate Probability
- SS3859A Regression
- AS3424B Short Term Actuarial Mathematics I (Loss Models)
- AS3431B Long Term Actuarial Mathematics III
- SS3850B Statistical Learning
- SS3858B Mathematical Statistics

**Fourth Year**

- AS4426F Actuarial Practice I
- AS4824A Short Term Actuarial Mathematics II

0.5 courses from:

- SS3843A Intro to Study Design
- SS3860A Generalized Linear Models
- SS4850B Advanced Data Analysis
- SS4861B Time Series
- SS4864A/B Advanced Statistical Computing

0.5 course: Any additional Actuarial Science, Financial Modeling or Statistical Sciences Course at the 4000 level

* it is possible to complete this requirement in 3rd year