Honors Specialization in Actuarial Science Module (20.0 courses)

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

Last updated September 16, 2022

<table>
<thead>
<tr>
<th>Year 1 (5.0 Courses)</th>
<th>Graduation Requirements</th>
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</thead>
<tbody>
<tr>
<td>Calculus 1000A/B or 1500A/B</td>
<td>Breadth Requirement:</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>Essay Requirement:</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>Senior Courses:</td>
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<tr>
<td>2.0 options</td>
<td>• 13.0 senior courses (numbered 2000-4999)</td>
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<td>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)</td>
<td>Average Requirements:</td>
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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 1600A/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) #


1.5 courses: Financial Modeling 2555A/B, 2557A/B, 3520A/B.

0.5 courses: Calculus 2402A/B **

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

** 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.

# 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 (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 S2858), 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

Second Year

AS2553A Mathematics of Finance
FM2555A Corporate Finance
Calculus 2402A 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
DS3000B Introduction to Machine Learning
SS3858B Mathematical Statistics

Fourth Year

AS4426F Actuarial Practice I
AS4824A Short Term Actuarial Mathematics II
SS4861B Time Series

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