

# 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 15, 2023

Year 1 (5.0 Courses)	Graduation Requirements
<p>Calculus 1000A/B or 1500A/B</p> <p>Calculus 1501A/B (<b>recommended</b>) or Calculus 1301A/B with a mark of 85%+</p> <p>Math 1600A/B</p> <p>Economics 1021A/B and Economics 1022A/B</p> <p>0.5 other principal course</p> <p>2.0 options</p> <p><b>NOTE:</b> 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)</p>	<p><b>Breadth Requirement:</b></p> <ul style="list-style-type: none"> <li>At least 1.0 course from each of Category A, B, and C as listed in the Academic Calendar.</li> </ul> <p><b>Essay Requirement:</b></p> <ul style="list-style-type: none"> <li>2.0 essay courses (1.0 must be senior course). Note that any modular essay course taken can be used towards this requirement</li> </ul> <p><b>Senior Courses:</b></p> <ul style="list-style-type: none"> <li>13.0 senior courses (numbered 2000-4999)</li> </ul> <p><b>Average Requirements:</b></p> <ul style="list-style-type: none"> <li>Minimum overall average of 65% on the 20.0 courses</li> <li>Minimum cumulative modular average of 70% and a minimum mark of 60% in each course of the module</li> <li>Passing grade in each course</li> <li>Minimum cumulative modular average of 60% in any additional Major or Minor module completed</li> </ul> <p><b>Residency Requirement:</b></p> <ul style="list-style-type: none"> <li>The majority of your modular courses must be completed at Western. Please check academic calendar for other residency requirements.</li> </ul> <p><b>Note:</b> To graduate with an Honors BSc, at least 11.0 of your 20.0 courses must be taken from the Faculty of Science.</p>
<p><b>Admission to Honors Specialization Module:</b> Complete first year (5.0 courses) with no failures including:</p> <ul style="list-style-type: none"> <li>Minimum average of 70% on 3.0 principal courses with no mark less than 60% in any of the 3 principal courses: <ul style="list-style-type: none"> <li>Calculus 1000A/B or 1500A/B</li> <li>Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85%</li> <li>Mathematics 1600A/B Economics 1021A/B and Economics 1022A/B</li> <li>0.5 other principal course</li> </ul> </li> </ul> <p><b>Recommended (but not required) first year courses:</b> AS1021A/B, Business 1220, Philosophy 1200</p> <p><b>NOTE 1:</b> If not taken in first year, Math 1600A/B must be completed prior to the second term of second year.</p> <p><b>NOTE 2:</b> AM1413 may be substituted for the 1.0 Calculus course requirements and AM1411 A/B may be substituted for Mathematics 1600 A/B.</p> <p><b>NOTE 3:</b> Economics 1021A/B and Economics 1022A/B, if not taken in first year, must be completed in one of your upper years.</p>	<p><b>Department Recommendation for order in which modular courses should be taken</b></p> <p><b>Second Year</b></p> <p>AS2553A Mathematics of Finance  FM2555A Corporate Finance  Calculus 2402A Calculus with Analysis for Statistics  SS2857A Probability and Statistics I</p> <p>AS2427B Long Term Actuarial Mathematics I  FM2557B Financial Markets &amp; Investments  SS2503B Advanced Mathematics for Statistical Applications  SS2858B Probability &amp; Statistics II  SS2864B Statistical Programming</p>
<p><b>MODULE (10.5 Courses) #</b>  <b>3.5 courses:</b> Actuarial Science 2553A/B, 2427A/B, 3424A/B,3429A/B, 3431A/B, 4426F/G, 4824A/B.  <b>4.5 courses:</b> Statistical Sciences 2503A/B, 2857A/B, 2858A/B, 2864A/B, 3657A/B, 3858A/B, 3859A/B, 4861A/B, DS 3000A/B.  <b>1.5 courses:</b> Financial Modeling 2555A/B, 2557A/B, 3520A/B.  <b>0.5 courses:</b> Calculus 2402A/B **  <b>0.5 courses</b> Any additional Actuarial Science, Financial Modelling or Statistical Sciences course at the 4000 level</p> <p>**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.</p> <p># Module shown is as per current calendar year. You may complete module using current calendar year <u>or</u> using calendar in effect in year of module entry.</p>	<p><b>Third Year</b></p> <p>AS3429A Long Term Actuarial Mathematics II  FM3520A Financial Modeling I  SS3657A Intermediate Probability  SS3859A Regression</p> <p>AS3424B Short Term Actuarial Mathematics I(Loss Models )  AS3431B Long Term Actuarial Mathematics III  DS3000B Introduction to Machine Learning  SS3858B Mathematical Statistics</p>
<p><b>OPTIONS (4.5 Courses)</b></p> <p>This module may not be combined with any other module offered by the Department of Statistical and Actuarial Sciences.</p> <p><b>If taking another module that includes an intro stats course (anti-req to S2858), please consult with other department regarding course substitution.</b></p> <p>Also, you must complete any additional module with a minimum 60% average.</p> <p><b>Notes:</b>  Courses common to more than one module taken require substitution. However, if both modules are from faculty of science, up to 1.0 courses <i>explicitly required for each module</i> can be counted towards both modules.  <b>2<sup>nd</sup> Degree students should meet with</b> a faculty counsellor to review other degree requirements (e.g. other than modular courses needed).</p>	<p><b>Fourth Year</b></p> <p>AS4426F Actuarial Practice I  AS4824A Short Term Actuarial Mathematics II  SS4861B Time Series</p> <p><b>0.5 course: Any additional Actuarial Science, Financial Modeling or Statistical Sciences Course at the 4000 level</b></p>
<p><b>Progression Requirements</b></p> <ul style="list-style-type: none"> <li>Minimum cumulative modular average of 70%</li> <li>Minimum mark of 60% in each course of module</li> <li>Passing grade in each course</li> </ul>	