Major in Actuarial Science Module (20.0 courses)

This is a guide only. For complete information, see the <u>online Academic Calendar</u>

Last updated June 21, 2019

Year 1 (5.0 Courses)

Calculus 1000A/B or 1500A/B

Calculus 1501A/B **(recommended)** or Calculus 1301A/B with a mark of 85%+

Mathematics 1600A/B

Economics 1021A/B and Economics 1022A/B

0.5 other principal course

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 1100A/B or 1500A/B
  - Calculus 1501A/B or Calculus 1301A/B with a mark of at least 85%
  - Mathematics 1600A/B or the former Linear Algebra 1600A/B
  - Economics 1021A/B and Economics 1022A/B
  - 0.5 other principal course

Recommended (but not required) first year courses; AS1021A/B, Business 1220E, 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 (6.0 courses)

2.0 courses: Actuarial Science 2553A/B, 2427A/B, 3424A/B, 3429A/B.
1.0 courses: FM2555A/B, FM2557A/B
2.0 courses: Statistical Sciences 2503A/B, 2857A/B, 2858A/B,3657A/B.
0.5 course: Calculus 2402A/B ******.
0.5 additional Actuarial Sciences courses at the 3000 level or higher.
Statistical Sciences 4960F/G can be used to meet this requirement.

**Calculus 2402A/B may be replaced by (Calculus 2502A/B + Calculus 2503A/B. When such a replacement occurs, the module will include 6.5 courses.

 # 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

OPTIONS(9.0)Courses- 4 year general/honors degree only

These may also include any additional major or minor module in the Academic Calendar, *excluding Financial Modelling.*

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

- Satisfy the progression requirements for the University (Level 1 and Level II as described in the Academic Calendar) if completing a 4 year degree
- See graduation requirements for an honors degree(with double major)
- **Note :** most modular course pre-requisites stipulate min. grade of 60%.

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 overall average of 60% on the 20.0 courses
- 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 the academic calendar for any other residency requirements.

Note:
- **** honors degree(with double major) requires a 70% average within each of the 2 modules,** with no Ds in any required 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.

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

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 and Investments
SS2503B Advanced Mathematics for Statistical Applications
SS2858B Probability and Statistics II

Third Year

AS3429A Long Term Actuarial Mathematics II
SS3657A Intermediate Probability

AS3424B Short Term Actuarial Mathematics I (Loss Models)

0.5 additional Actuarial Science Courses at 3000+ level

Fourth Year

Any courses not yet completed (note that SS4960F/G can be taken in year 4 to meet the 0.5 additional Act Sci 3000+ level course reqt).