



Western
UNIVERSITY • CANADA

Prepare for Course Enrollment

Science & Basic Medical Sciences

Land Acknowledgement

We/I acknowledge that Western University is located on the traditional territories of the Anishinaabek, Haudenosaunee, Lūnaapéewak, and Chonnonton Nations, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum. This land continues to be home to diverse Indigenous Peoples (First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society.

Congratulations & Welcome to Western Science!

Academic Advising is here to support you with your academic journey at Western. We are dedicated to your academic success – through:

- Advising about the impact of course selection and academic performance on eligibility for modules and degrees
- Discussing your academic pathway – adding a module, changing directions, doing an exchange, letter of permission etc.

Degrees & Modules

A module is a collection of courses that defines an area of study. The number of courses included in the module is defined by the amount of specialization in the topic.

There are four possible modules of study which may be entered after first-year:

- Honours Specialization (9.0 or more specified courses)
- Specialization (9.0 or more specified courses)
- Major (6.0 – 7.0 specified courses)
- Minor (4.0 – 5.0 specified courses)

Modules can be combined in three different degree-types:

Degree Type	Module Combinations
Honours Bachelor Degree (4 Years/20 Courses)	<ul style="list-style-type: none">• Honours Specialization• Honours Specialization–Major• Honours Specialization–Minor• Major–Major
Bachelor Degree (4 Years/20 Courses)	<ul style="list-style-type: none">• Specialization• Specialization–Major• Specialization–Minor• Major–Major• Major• Major–Minor• Major–Minor–Minor
Bachelor Degree (3 years/15 Courses)	<ul style="list-style-type: none">• Major• Major–Minor• Minor–Minor

Module Options: Mathematics

- Honours Specialization In Applied Mathematics
- Honours Specialization In Mathematical & Statistical Sciences
- Honours Specialization In Mathematics
- Major In Applied Mathematics
- Major In Mathematics
- Specialization In Mathematics
- Minor In Mathematics

Module Options: Statistical & Actuarial Sciences

- Honours Specialization In Actuarial Sciences
- Honours Specialization In Data Science
- Honours Specialization In Financial Modelling
- Honours Specialization In Statistics
- Major In Actuarial Science
- Major In Applied Statistics
- Major In Data Science
- Major In Financial Modelling
- Minor In Applied Financial Modelling
- Minor In Applied Statistics
- Minor In Data Science
- Certificate In Data Science

Module Options: Integrated Science (WISc)

- Honours Specialization in Integrated Science With Astrophysics
- Honours Specialization in Integrated Science With Biology
- Honours Specialization in Integrated Science With Chemistry
- Honours Specialization in Integrated Science With Computer Science
- Honours Specialization in Integrated Science With Earth Sciences
- Honours Specialization in Integrated Science With Environmental Science
- Honours Specialization in Integrated Science With Genetics
- Honours Specialization in Integrated Science With Mathematical & Statistical Sciences
- Honours Specialization in Integrated Science With Physics
- Honours Specialization in Integrated Science With Synthetic Biology

Year One Course Selection

WHAT Should It Include?

- 5.0 courses numbered 1000-1999
- Courses must include at least four different subjects with no more than 2.0 courses in one subject
- At least 1.0 course must be chosen from each of the three categories (A, B, and C) shown below. Any outstanding breadth requirement not completed in first year must be completed prior to graduation.

WHY Do I Need To Take These Courses?

- Choosing courses that fulfill the prerequisites for senior courses (numbered 2000 - 4999)
- Meet graduation requirements

HOW Do I Know What Courses To Select?

- Review the module(s) for the program you are interested in pursuing in the Academic Calendar

WHERE Do I Find The Academic Calendar?

- <https://www.westerncalendar.uwo.ca/>

Enrollment Tips

- Pay Attention to the Course Prerequisites and Antirequisites listed in course descriptions.
- The order of when you take courses can impact your access to courses (i.e. prerequisites) and course credit (i.e. antirequisites). Compare antirequisite information of all your course selections. Keep track of antirequisites so you do not risk losing credit for a course
- Access to Courses: There may be extra enrollment conditions that restrict or delay your access to register in courses. These conditions are referred to as enrollment constraints. Refer to the Notes section in Draft My Schedule or when registering for a course to review the enrollment conditions for the course. Refer to the Enrollment Conditions/Enrollment Constraints section on the Register in Fall/Winter Courses section for more details.
- Essay v. Non-Essay courses: As part of your eventual graduation requirements, you will also be required to take 2.0 essay courses, of which one must be senior 2000 or higher. The good news, many of your modules include essay courses so you can complete your Module and essay requirements at the same time. See Graduation Requirements for Essay course requirements for the degree.

Enrollment Tips - Typical Errors to Avoid

- Taking more than the allowed limit of 1.0 course per year at an Affiliated College (Huron, King's)
- Taking senior courses (numbered 2000 or above) in first year
- Taking too many courses in one subject
- Taking too many first year/1000 level courses (the max is 7.0)
- Missing the Category A (e.g. Social Science) and B (e.g. Arts) requirements
- Missing the essay requirements
- Missing prerequisites for courses you are adding

Enrollment Tips - Typical Errors to Avoid

- Taking two courses that are antirequisites* (e.g. 2.0 statistics courses that can't both be counted in your program)
 - If both are taken, only the most recent course credit will be retained for credit.
 - The first course will be noted as RNC meaning repeated, no credit.
 - For example, if Math 1600A/B is completed successfully, and in the next term, a student then completes Math 1229A/B, they will lose credit for Math 1600A/B. Students are strongly advised to review pre- and anti-requisites VERY carefully!
- Overloading (max five 0.5 credit courses/term)
- Forgetting to drop second term courses if you did not complete the prerequisite

*Antirequisites are courses that contain the same or similar content

Course Suffixes

All suffixes are in upper case and indicate the following with regard to course weight and session

No suffix	1.0 course not designated as an essay course
A	0.5 course offered in first term
B	0.5 course offered in second term
A/B	0.5 course offered in first and/or second term
C	January courses in the Faculty of Law (4.0 credit weight)
D	February/March/April (FMA) courses in the Faculty of Law
E	1.0 essay course
F	0.5 essay course offered in first term
G	0.5 essay course offered in second term
F/G	0.5 essay course offered in first and/or second term
H	1.0 accelerated course (8 weeks) in the School of Nursing
J	1.0 accelerated course (6 weeks) in the School of Nursing
K	0.75 course (integrated curriculum of HBA1 program) at the Richard Ivey School of Business
L	Unassigned
M/N/P	Unassigned
Q	0.25 course offered in the first half of first term
R	0.25 course offered in the second half of first term
S	0.25 course offered in the first half of second term
T	0.25 course offered in the second half of second term
U	0.25 course offered in other than a regular session
V	0.375 course offered by the Faculty of Education
W	1.0 accelerated course offered in first term
X	1.0 accelerated course offered in second term
Y	0.5 course offered in other than a regular session
Z	0.5 essay course offered in other than a regular session

Honours Specialization in Mathematics – First Year Course Enrollment Example

Fall Term

- Calculus 1000A or Calculus 1500A-min grade of 60%
- Math 1600A/B-min grade of 60%
- 0.5 of Cat A or B-breadth (1.0)
- 0.5 Elective
- 0.5 Elective

Winter Term

- Calculus 1501A/B (recommended/60%) or Calculus 1301A/B with a mark of at least 85%
- Continuation of the 1.0 OR a new 0.5 course from Cat A or B*
- Math 1120B-min grade of 60%-not required
- 0.5 Elective
- 0.5 Elective

Basis of Admission is on 3.0 courses: 1.0 Calc.; 0.5 Math 1600A/B and 1.5 electivs: grades of 60% and an avg of 70% on these courses

*only Science allows students to split their Cat A/Cat B for their Yr. 1 requirements. We recommend/would prefer they do a 1.0 in either A or B

HONOURS SPECIALIZATION IN MATHEMATICS

FACULTY OF SCIENCE - MATHEMATICS



ADMISSION REQUIREMENTS

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including:

0.5 course: [Calculus 1000A/B](#) or [Calculus 1500A/B](#);

0.5 course: ([Calculus 1501A/B](#) (recommended) or ([Calculus 1301A/B](#) with a mark of at least 85%);

plus 2.0 additional courses, with no mark in these principal courses below 60%. [Mathematics 1600A/B](#) and [Mathematics 1120A/B](#), if taken in first year, will count toward the 3.0 principal courses. [Mathematics 1120A/B](#) and [Mathematics 1600A/B](#) are recommended.

Note: [Mathematics 1600A/B](#) must be completed prior to [Mathematics 2120A/B](#).

Honours Specialization in Mathematics

MODULE/PROGRAM INFORMATION

Module

9.0 courses:

4.5 courses: [Calculus 2502A/B](#), [Calculus 2503A/B](#), [Mathematics 2120A/B](#), [Mathematics 2122A/B](#), [Mathematics 2155F/G](#), [Mathematics 3020A/B](#), [Mathematics 3120A/B](#), [Mathematics 3122A/B](#), [Mathematics 3124A/B](#).

1.0 courses from: [Statistical Sciences 2857A/B](#), [Statistical Sciences 2858A/B](#), or any courses in Actuarial Science, Applied Mathematics, Data Science, Financial Modelling or Numerical and Mathematical Methods at the 2100 level or above.

2.5 additional courses from: [Mathematics 2124A/B](#), [Mathematics 2156A/B](#) or any courses in Mathematics at the 3000 level or above.

1.0 additional course in Mathematics at the 4000 level.

It is strongly recommended that [Mathematics 2122A/B](#) be completed in the year of entry into the module.

Note: Those students who plan to apply for graduate studies in Mathematics should take [Mathematics 4120A/B](#), [Mathematics 4121A/B](#), [Mathematics 4122A/B](#), [Mathematics 4123A/B](#), and at least one of [Mathematics 4151A/B](#), [Mathematics 4152A/B](#), [Mathematics 4153A/B](#) or [Mathematics 4156A/B](#).

Honours Specialization in Actuarial Science – First Year Course Enrollment Example

Fall Term

- Calculus 1000A or Calculus 1500A –grade of 60%
- Math 1600A-grade of 60%
- Economics 1021A-grade of 60%
- 1.0 electives: anything or....
 - Business Administration 1220E-recommended, not required
 - Philosophy 1230 A-recommended, not required

Winter Term

- Calculus 1501A/B (recommended/60%) or Calculus 1301A/B with a mark of at least 85%
- Economics 1022B-60%
- 1.5 Electives:
 - Actuarial Science 1021B-recommended
 - Math 1120B-recommended &/or
 - Continuation of Business Administration 1220E

*only Science allows students to split their Cat A/Cat B for their Yr. 1 requirements. We recommend/would prefer they do a 1.0 in either A or B

HONOURS SPECIALIZATION IN ACTUARIAL SCIENCE

FACULTY OF SCIENCE – STATISTICAL AND ACTUARIAL SCIENCES



ADMISSION REQUIREMENTS

Completion of first-year requirements with no failures. Students must have an average of at least 70% in 3.0 principal courses, including: ([Calculus 1000A/B](#) or [Calculus 1500A/B](#)) and ([Calculus 1501A/B](#) or ([Calculus 1301A/B](#) with a mark of at least 85%)), [Mathematics 1600A/B](#), [Economics 1021A/B](#) and [Economics 1022A/B](#), plus 0.5 additional principal course, with no mark less than 60% in any of the 3.0 principal courses.

Recommended (but not required) first year courses: [Actuarial Science 1021A/B](#), [Business Administration 1220E](#), [Philosophy 1200](#).

Note: [Economics 1021A/B](#) and [Economics 1022A/B](#), if not taken in first year, must be completed in one of the upper years in the program.

[Numerical and Mathematical Methods 1412A/B](#) and [Numerical and Mathematical Methods 1414A/B](#); or the former Applied Mathematics 1412A/B and the former Applied Mathematics 1414A/B or the former Applied Mathematics 1413 may be substituted for the 1.0 Calculus course requirement. [Numerical and Mathematical Methods 1411A/B](#) or the former Applied Mathematics 1411A/B may be substituted for [Mathematics 1600A/B](#). [Mathematics 1600A/B](#) (or [Numerical and Mathematical Methods 1411A/B](#)), if not taken in the first year, must be completed prior to the second term of Year 2.

Honours Specialization in Actuarial Science

MODULE/PROGRAM INFORMATION

Module

10.5 courses:

3.5 courses: Actuarial Science 2553A/B, Actuarial Science 2427A/B, Actuarial Science 3424A/B, Actuarial Science 3429A/B, Actuarial Science 3431A/B, Actuarial Science 4426F/G, Actuarial Science 4824A/B.

4.5 courses: Data Science 3000A/B (or the former Statistical Sciences 3850F/G), Statistical Sciences 2503A/B, Statistical Sciences 2857A/B, Statistical Sciences 2858A/B, Statistical Sciences 2864A/B, Statistical Sciences 3657A/B, Statistical Sciences 3858A/B, Statistical Sciences 3859A/B, Statistical Sciences 4861A/B.

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

0.5 courses: Calculus 2402A/B.

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

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

Honours Specialization in Integrated Science with Mathematical & Statistical Sciences – First Year Course Enrollment Example

Fall Term

- Integrated Science 1000Z-60%-full year course
- Calculus 1000A or 1500A-60%
- Chemistry 1301A-60%
- Physics 1201A or 1501A-60%
- Cat. A or B Elective-50%-full year course
- 0.5 Elective, OR see note-60%

Winter Term

- Continuation Integrated Science 1000Z (continued)-60%
- Integrated Science 1001X-60%-2.0-60%
- Continuation of your 1.0 Cat A or B elective -50%

Note:

*Yr 1 consists of 5.5 courses

**Physics 1201A meets ALL IS HSP Rqmnts, but if you want to pursue WISc HSP Physics, take Physics 1501A

***if you want IS HSP Bio; Enviro Sci; Genetics or Synthetic Bio, MUST take Bio 1001A

****if you want IS HSP Math, must take Math 1600A

HONOURS SPECIALIZATION IN INTEGRATED SCIENCE WITH MATHEMATICAL AND STATISTICAL SCIENCES

FACULTY OF SCIENCE – INTEGRATED SCIENCE PROGRAM – (WISC)



The Western Integrated Science (WISC) program is a first entry, four-year program administered by the Faculty of Science. It is designed to provide select students with the diverse science education necessary to address the interdisciplinarity of today's major scientific challenges (e.g., climate change, world hunger, alternative energy). WISC combines unique Integrated Science courses with traditional discipline-specific courses. In Year 2, WISC students will enroll in an Integrated Science Honours Specialization module administered jointly by the Faculty of Science and individual Science departments.

Students who complete WISC Program will graduate with an "Honours Bachelor of Science in Integrated Science with (specific discipline)."

ADMISSION REQUIREMENTS

Admission into WISC is competitive, limited and open only to students who apply to Western through the ES stream of the Ontario Universities' Application Centre. In addition to the Grade 12 requirements, a personal statement is required and will be used as part of the adjudication for admission. See the Western Faculty of Science website (https://www.uwo.ca/sci/undergraduate/future_students/index.html) for details about the admission selection process.

Completion of first year requirements with no failures. Students must complete the following courses with an average of at least 70%, with no individual course mark below 60%:

0.5 course: [Integrated Science 1000Z](#);

2.0 course: [Integrated Science 1001X](#);

0.5 course: [Calculus 1000A/B](#) or [Calculus 1500A/B](#);

0.5 course: [Chemistry 1301A/B](#);

0.5 course: [Physics 1201A/B](#) or [Physics 1501A/B](#) or the former [Physics 1301A/B](#);

0.5 course: [Mathematics 1600A/B](#).

Honours Specialization in Integrated Science With Mathematical & Statistical Sciences

MODULE/PROGRAM INFORMATION

Module

13.0 courses:

2.5 courses: Integrated Science 2001F/G*, Integrated Science 2002B*, Integrated Science 3001F/G**, Integrated Science 3002A/B**, Integrated Science 4001Y***.

0.5 course*: Philosophy 2320F/G.

0.5 course: Science 3377A/B**.

1.5 course: Integrated Science 4999E***.

0.5 course: Mathematics 2120A/B or Applied Mathematics 2811A/B.

5.0 courses: Applied Mathematics 2402A/B, Applied Mathematics 2814F/G, Applied Mathematics 3815A/B, Calculus 2502A/B, Calculus 2503A/B, Mathematics 2122A/B, Mathematics 2155F/G, Mathematics 3020A/B, Statistical Sciences 2857A/B, Statistical Sciences 2858A/B.

1.0 additional course in Actuarial Science, Financial Modeling or Statistical Sciences at the 2100 level or above.

1.5 courses at the 3000 level or above from Actuarial Sciences, Applied Mathematics, Financial Modelling, Mathematics, or Statistical Sciences.

Notes:

Year 1 consists of 5.5 courses.

* indicates courses taken in Second Year of Program

** indicates courses taken in Third Year of Program

*** indicates courses taken in Fourth Year of Program

PROGRESSION

PROGRESSION REQUIREMENTS

First year requirements must be completed with no mark less than 60% in any principal course and an overall average in principal courses of 70%. See particular Integrated Science module for what constitutes principal courses. For progression into 4th year of the program, students must maintain an overall average of 70% with no mark less than 60% in any course required in the module. Students who do not meet the progression requirements, or chose not to continue in the program, may be able to continue their studies in a traditional module. Students should consult an academic counsellor in the Department that administers their chosen module.

Multiple Modules – Is This Possible?

Two modules cannot be completed in a degree if more than half of the courses in one module are common with courses in the other module (e.g., a Minor having 2.5 or more courses that are common with either a Major or Honours Specialization module cannot be completed in addition to the Major or Honours Specialization module).

Common Courses

A common course is a course that is mandatory in both modules. Courses are not considered common between two modules until all choices from any picklists within the modules are exhausted, i.e., if the choice exists to take another course from a picklist, then another course must be taken (see Exception*).

Science/BMSc (including Neuroscience) students may double-count a maximum of 1.0 common course toward two modules.

When two modules contain more than 1.0 common course, the additional common course(s) must be distributed between the two modules as evenly as possible and substitute course(s) approved by the Department(s) offering the module(s) must be taken to maintain the number of courses required by each module. For example, if there are 2.5 common courses between two major modules, 1.0 can be counted toward both modules and 1.5 substitute courses must be taken (0.5 toward one module and 1.0 toward the other)

**If you are a Science or BMSc (or Neuroscience) student and you are completing a module in another Faculty (e.g., Economics or Psychology in the Faculty of Social Science), you must also consult the other Faculty for information on how they address common courses in shared modules.*

Questions?

Continue the Conversation....

Welcome Wednesdays

Connect with Science & Basic Medical Sciences Academic Advising office to discuss your academic related questions in advance of course registration & the start of the academic year.

June – August:

- Virtual Zoom Same-Day Appointments every Wednesday
- 10:00 a.m. – 12:00 p.m. (EDT)
- Log in using the Meeting ID: 944 8503 6022 with the password 745451

September – April:

- In Person at our office
- 10:00 a.m. – 12:00 p.m. (EDT)
- North Campus Building, 2nd Floor, Room 280

Thank You!

Academic Advising

Your one-stop-shop
for academic support!



<https://uwo.ca/sci/counselling/>



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