

HONOURS SPECIALIZATION IN MEDICAL BIOPHYSICS (MEDICAL SCIENCE CONCENTRATION)

This module leads to an Honours Bachelor of Medical Sciences (BMSc) degree. See BACHELOR OF MEDICAL SCIENCES (BMSc) PROGRAM for more information.

Admission Requirements

Admission to this Honours Specialization module occurs in Year 3 and requires admission to Year 3 of the Bachelor of Medical Sciences (BMSc) Program. Students will usually complete MEDICAL SCIENCES FIRST ENTRY (Medical Sciences 1 and 2) prior to admission to the Honours Specialization module. Enrolment in this Honours Specialization module is limited and meeting the minimum requirements does not guarantee admission.

The 1000-level half courses listed below must each be completed with a mark of at least 60%:

- 1.0 course: Biology 1001A and Biology 1002B
- 1.0 course: Chemistry 1301A/B and Chemistry 1302A/B.
- 0.5 course from: Calculus 1000A/B, Calculus 1500A/B.
- 0.5 course from: Applied Mathematics 1201A/B, Calculus 1301A/B, Calculus 1501A/B, Mathematics 1600A/B.
- 0.5 course from: Physics 1201A/B, Physics 1501A/B, the former Physics 1028A/B, the former Physics 1301A/B.
- 0.5 course from: Computer Science 1026A/B, Physics 1202A/B, Physics 1502A/B, the former Physics 1029A/B, the former Physics 1302A/B.

The 2000-level courses below must be completed with a minimum mark of 60% in each prior to admission to the Honours Specialization module in Year 3. These 2000-level courses will also be used towards the Module requirements. See ADMISSION TO THE BACHELOR OF MEDICAL SCIENCES (BMSc) PROGRAM for additional average, course load requirements, etc.

- 0.5 course: Biochemistry 2280A.
- 0.5 course: Chemistry 2213A/B.
- 0.5 course from: Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2100A.
- 0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

Notes:

1. It is recommended that 1.0 of the following modular courses be completed prior to Year 3: (Physics 2101A/B and Physics 2102A/B) or Physiology 2130 or Physiology and Pharmacology 2000.
2. Students are encouraged to take Medical Biophysics 2500A/B in second year if they want an introduction to the discipline of Medical Biophysics or are interested in learning how biophysics concepts are applied in translational health research.

MODULE

11.5 courses:

0.5 course: Biochemistry 2280A.

0.5 course: Chemistry 2213A/B.

0.5 course from: Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2100A.

0.5 course from: Biology 2244A/B or Statistical Sciences 2244A/B.

1.0 course from: Physics 2101A/B and Physics 2102A/B, or Physiology 2130 or Physiology and Pharmacology 2000 (see notes).

3.0 courses: Medical Biophysics 3330F, Medical Biophysics 3467B, Medical Biophysics 3501A, Medical Biophysics 3518B, Medical Biophysics 3720A, Medical Biophysics 3820B.

1.0 course: Medical Biophysics 3980E.

0.5 course: Medical Biophysics 4700B.

1.5 courses from: (Medical Biophysics 3503G or Medical Biophysics 4445A/B), Medical Biophysics 4330A, Medical Biophysics 4501A, Medical Biophysics 4730A/B.

1.0 course from: Medical Biophysics 4467B, Medical Biophysics 4518B, Medical Biophysics 4720B.

1.5 courses: Medical Biophysics 4970E (Research Project = 1.5 courses) or Medical Biophysics 4971E

Notes:

1. Physics 2101A/B and Physics 2102A/B include the following courses in their prerequisites, with marks of at least 60%: one of Physics 1202A/B, Physics 1402A/B or Physics 1502A/B, and one of Calculus 1301A/B or Calculus 1501A/B.
2. Physiology 3120 may be substituted for Physiology 2130.
3. Students registered in the module prior to September 2024, will follow the modular requirements of the 2023-24 Academic Calendar.

PROGRESSION REQUIREMENTS – for students registered in Year 3 of this module in 2025/26 and onward.

NOTE: Students registered in Years 3 and 4 of this module in 2024/25 or earlier must consult the 2024/25 Academic Calendar (or an earlier Academic Calendar, if appropriate).

In addition to the usual [Progression Requirements for HONOURS SPECIALIZATION MODULES](#), students must complete the following 7.0 modular courses by the end of Year 3 (note: some courses require individual marks greater than 60%):

- Biochemistry 2280A;
- Chemistry 2213A/B;
- One of Biology 2382A/B, Biology 2581A/B, Chemistry 2214A/B, Computer Science 2035A/B, Data Science 2000A/B, Data Science 2001A;
- Biology 2244A/B or Statistical Sciences 2244A/B;
- 1.0 course from (Physics 2101A/B and 2102A/B), Physiology 2130 or Physiology and Pharmacology 2000;
- Medical Biophysics 3330F, Medical Biophysics 3467B, Medical Biophysics 3501A, Medical Biophysics 3518B, Medical Biophysics 3720A and Medical Biophysics 3820B; and
- Medical Biophysics 3980E

Students registered in Year 3 of the Honours Specialization in Medical Biophysics (Medical Science Concentration) in 2025/26 and onward who satisfy the Progression Requirements are assured progression to Year 4 of the Honours Specialization in Medical Biophysics (Medical Science Concentration).

BMSc Students who are not registered in Year 3 of the Honours Specialization in Medical Biophysics (Medical Science Concentration) in 2025/26 and onward may be considered for admission to Year 4 of the Honours Specialization if (i) the minimum Admission and Progression Requirements are satisfied, (ii) spaces are available, and (iii) permission is granted.