

MAJOR MODULES – Course Selection Guidelines

Biochemistry	IMS	Medical Biophysics
<p>To satisfy course pre-requisites the following <u>mandatory</u> courses must be completed in this order:</p> <p>Second-year: 0.5 course: Biochemistry 2280A 1.0 course from: Chemistry 2213A/2223B or 2273A/2283G 0.5 course: Biology 2581B</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Chemistry 2213A/2223B is generally recommended unless a Major in Chemistry is also being pursued or considered. A minimum mark of 65% in Biochemistry 2280A, Chemistry 2213A and Chemistry 2223B is required in order to take Biochemistry 3381A in third year. <p>Third-year: 1.5 courses: Biochemistry 3380G, 3381A and 3382A</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Biochemistry 3385A and 3386B could be completed in Year 3 <p>Fourth-year: 1.0 course: Biochemistry 4410A and 4420A.</p>	<p>This Major may only be completed in a BMSc degree.</p> <p>Second-year selection: 2.0 courses recommended. 0.5 course: If Chemistry 2223B is going to be taken, it should be taken in second year 1.0 course from: Biology 2581B, 2382B or 2290F/G 0.5 course: Biology 2244A/B or Statistical Sciences 2244A/B</p> <p>Third-year selection: 2.0 – 3.0 courses recommended. 2.0 – 3.0 courses from: Groups 1 and 2 as outlined in the Academic Calendar</p> <p>Points to consider:</p> <ul style="list-style-type: none"> At least 2.0 courses must be selected from Group 1 No more than 2.0 courses from one subject area can be taken at the 2000- or 3000-level Students should take the necessary pre-requisite courses for the 4000-level courses they wish to study in Year 4. 3000-level courses from the subject areas in Group 1 and 2 that do not appear in the lists in the Academic Calendar may be included in the Major with the permission of the IMS counselor. <p>Fourth-year selection: 2.0 course recommended 1.0 courses from: Groups 1 and 2 as outlined in the Academic Calendar, if not completed in Year 3 1.0 course: at the 4000-level from any of the basic medical science disciplines, including Medical Sciences</p>	<p>The following courses must be completed prior to registration in most of the 4000-level Medical Biophysics courses and should, therefore, be completed in either second or third year:</p> <p>0.5 course from: Computer Science 2035A/B 1.0 course: Physics 2101A/2102B or Physiology 2130 1.5 courses: Medical Biophysics 3501F, 3503G, 3970Z 1.0 course: Medical Biophysics 3505F and 3507G</p> <p>Year 4 course selection: 1.0 course from: Medical Biophysics 4445A/B, 4455A/B, 4467A/B, 4475A/B, 4535A/B.</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Students in Year 3 and 4 in September 2014/15 may follow the requirements of Major in Medical Biophysics as outlined in the 2012/13 Academic Calendar.

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Medical Cell Biology	Medical Sciences	Microbiology & Immunology
<p>To satisfy course pre-requisites the following <u>mandatory</u> courses must be completed in this order:</p> <p>Second-year: 0.5 course: Biology 2382B</p> <p>Third-year: 0.5 course: Biology 3316A 1.0 course: Anatomy and Cell Biology 3309</p> <p>Points to consider:</p> <ul style="list-style-type: none"> A minimum mark of 70% is required in Biology 3316A in order to take Anatomy & Cell Biology 4429A. A minimum mark of 70% in Biology 3316A or 75% in Anatomy & Cell Biology 3309 is required to take Anatomy & Cell Biology 4410A, 4411B <p>Fourth-year: 1.0 course from: Anatomy and Cell Biology 4410A, 4411B, 4429A, 4451F/G, 4461B</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Physiology 3120 or Anatomy and Cell Biology 3319 may be taken in either third or fourth year. Physiology 3120 is the prerequisite for Anatomy and Cell Biology 4451F/G Biology 3316A is the pre-requisite for Anatomy and Cell Biology 4410A, 4411B and 4429A Anatomy and Cell Biology 3309 (75%) is a pre-requisite for ACB 4410A and 4411B All other modular courses can be taken in second, third or fourth year. 	<p>Second-year selection: 2.5 courses recommended. 0.5 course: Biochemistry 2280A 0.5 course: Chemistry 2213A/B 0.5 course: Chemistry number 2100-3999 1.0 course from: Biology 2581B, 2382B or 2290F/G</p> <p>Third-year selection: 1.5 to 2.5 courses recommended. 0.5 course from: Biology 2244A/B or Statistics 2244A/B 1.0 – 2.0 courses from: Groups 1 and 2 as outlined in the Academic Calendar</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Students must take at least 1.0 course from Group 1 and no more than 2.0 courses from one subject area. Some courses are heavily constrained, e.g. Pathology 3240A. Students should review Access to Courses under Courses on the BMSc website. <p>Fourth-year selection: 1.0 – 2.0 courses recommended 1.0 – 2.0 courses from: Groups 1 and 2 as outlined in the Academic Calendar</p> <p>Points to consider:</p> <ul style="list-style-type: none"> A total of 3.0 courses from the Basic Medical Sciences at the 2000 or 3000-level must be completed by the end of Year 4. Permission may be granted to students in Honors degrees to include 1.0, 4000-level basic medical sciences courses in the Major 	<p>Second-year selection: 3.0 courses recommended 0.5 course from: Biochemistry 2280A 1.0 courses from: Chemistry 2213A, 2223B 1.0 courses from: Biology 2581B, 2382B 0.5 course: Microbiology and Immunology 2500A/B</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Microbiology and Immunology 2500B should be taken in Year 2 as it is the pre-requisite for all 3000-level Microbiology and Immunology courses <p>Third-year selection: 2.0 courses recommended 0.5 course: Biochemistry 3381A 1.0 courses: Microbiology & Immunology 3100A, 3300B (min mark of 70% in each) 0.5 courses from: Microbiology & Immunology 3610F, 3620G</p> <p>Points to consider:</p> <ul style="list-style-type: none"> A minimum mark of 65% in Biochemistry 2280A, Chemistry 2213A and Chemistry 2223B is required in order to take Biochemistry 3381A in third year. <p>Fourth year selection: 1.0 courses recommended 1.0 courses from: Microbiology & Immunology 4100A, 4200B, 4300A</p> <p>Points to consider:</p> <ul style="list-style-type: none"> All 4000-level Microbiology and Immunology courses require 70% in the pre-requisite courses.

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Pathology	Pharmacology	Physiology
<p>This Major may only be completed in a BSc Double Major.</p> <p>Second-year selection: 1.5 courses REQUIRED 0.5 course: Biochemistry 2280A 0.5 course: Biology 2382B 0.5 course: Chemistry 2213A/B, Biology 2244A/B or Statistical Sciences 2244A/B</p> <p>Third-year selection: 2.0 -3.0 courses recommended 1.0 course: Physiology 3120 1.0 course: Anatomy and Cell Biology 3319, 3309 1.0 course: Pathology 3240A, 3245B</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Anatomy and Cell Biology 3319 or 3309 may be delayed to Year 4 The 2000- or 3000-level courses in the “1.0 course from” list under Year 4 selection could be completed in Year 3. <p>Fourth-year selection: 1.5-2.5 courses recommended 0.5 course: Pathology 4400B 1.0 courses from: Medical Health Informatics 4100F, 4110G, Medical Sciences 4100F/G, Microbiology and Immunology 2500A/B, Pathology 4200A/B, 4500A/B, Physiology 3140A.</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Anatomy and Cell Biology 3319 or 3309 may be delayed to Year 4 Pathology 4400B requires a 70% in each of Pathology 3240A and 3245B Pathology 4500B is heavily constrained. Pathology 4500B requires a 75% in both Pathology 3240A and 3245B. The 2000- or 3000-level courses in the “1.0 course from” list could be completed in Year 3. 	<p>Second year selection: 2.0 courses recommended 0.5 course: Biochemistry 2280A 0.5 course: Chemistry 2213A/B 1.0 course: Biology 2382B, 2581B</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Students wishing to take both Pharmacology 2060A/B and 3620 must complete Pharmacology 2060A/B prior to Pharmacology 3620 Biology 2382B is the pre-requisite for Pharmacology 3620 <p>Third year selection: 3.0 courses recommended. 1.0 course: Physiology 3120 1.5 course: Pharmacology 3620 and 3580Y 0.5 course from: see the list in the Academic Calendar</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Registration in Pharmacology 3580Y requires a minimum average of 75% in the previous year Pathology 3240A could be taken in either third or fourth year but it is heavily constrained and space is limited. <p>Fourth year selection: 1.0-1.5 courses recommended 1.0 courses: in Pharmacology at the 4000-level 0.5 course: see the list in the Academic Calendar, if not completed in Year 3.</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Pharmacology 2060B can be included in the module if taken before September 2012. If used, only 0.5 4000-level Pharmacology courses are required. Students in Year 4 in 2014/15 may follow the modular outline in the 2012/13 Academic Calendar that does not include Biology 2581B 	<p>Second year selection: 2.0 courses recommended. 0.5 course: Biochemistry 2280A 0.5 course: Chemistry 2213A/B 1.0 course from: Biology 2581B, 2382B, 2290F/G</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Biology 2244A/B or Statistics 2244A/B could be taken in second, third or fourth year <p>Third year selection: 2.5 courses recommended 2.0 courses: Physiology 3120, 3130Y and 3140A 0.5 courses from: see list in the Academic Calendar</p> <p>Points to consider:</p> <ul style="list-style-type: none"> Physiology 3130Y is a half course that runs all year. Students will end up with one term that is heavier than the other – in one term, students will take 5 courses and Physiology 3130Y, and in the other term, they will take 4 courses and Physiology 3130Y. An average of at least 75% in the previous year is required for registration in Physiology 3130Y and in this module <p>Fourth year selection: 1.5 courses recommended: 1.0 courses: in Physiology at the 4000-level 0.5 course from: see list in the Academic Calendar, if not completed in Year 3.</p>