

## Biochemistry

Institute of Biochemistry  
Faculty of Science

This section presents the requirements for the B.Sc. programs in:

- **Biochemistry – B.Sc. Honours**
- **Computational Biochemistry – B.Sc. Honours**
- **Biochemistry – B.Sc. General**

Requirements for the program Biochemistry and Biotechnology are presented in the Biotechnology program section of this Calendar.

Co-operative Education Option is available.

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### Graduation Requirements

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In addition to the requirements listed below, students must satisfy:

- i) the University regulations (see *The Academic Regulations of the University*, and *the Academic Requirements and Regulations for the Bachelor of Arts Degree*),
- ii) the Faculty regulations applying to all B.Sc. students including those relating to Science Continuation and Breadth requirements (see *The Academic Regulations for the Bachelor of Science*).

Students should consult with the Institute when planning their program and selecting courses.

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### Course Categories for Biochemistry

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The program descriptions below make use of the following course categories that are defined in the Faculty of Science Regulations section of this Calendar.

- \* **Approved Arts or Social Science**
- \* **Free Elective**

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### Program Requirements

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#### Biochemistry B.Sc. Honours (20.0 credits)

##### A. Credits Included in the Major CGPA (13.0 credits):

1. 1.5 credits in BIOL 1003, BIOL 2104, BIOL 3104;
2. 0.5 credit in either BIOL 2001 or BIOL 2002;
3. 0.5 credit in either BIOL 3205 or BIOL 3305;
4. 1.0 credit from:  
BIOL 2301, BIOL 3201, BIOL 3205, BIOL 3303, BIOL 3305, BIOL 3501, BIOL 3505, BIOL 4008, BIOL 4009, BIOL 4103, BIOL 4104, BIOL 4106, BIOL 4109, BIOL 4201, BIOL 4206, BIOL 4209, BIOL 4300, BIOL 4301, BIOL 4302, BIOL 4303, BIOL 4305, BIOL 4505;
5. 5.0 credits in: CHEM 1000 [1.0], CHEM 2101, CHEM 2203, CHEM 2204, CHEM 2303, CHEM 3201, CHEM 3202, CHEM 3205, CHEM 3506;
6. 2.5 credits in: BIOC 2200, BIOC 3005, BIOC 3100[1.0], BIOC 4001;
7. 1.0 credit from: BIOC 4002, BIOC 4004, BIOC 4005, BIOC 4006, BIOC 4007, BIOC 4202, BIOC 4302, BIOC 4400, BIOC 4708;
8. 1.0 credit in either BIOC 4907 [1.0] or BIOC 4908 [1.0];

##### B. Credits Not Included in the Major CGPA (7.0 credits):

9. 1.0 credit in either (PHYS 1007 and PHYS 1008) or (PHYS 1003 and PHYS 1004);
10. 1.5 credits in MATH 1007, MATH 1107, and STAT 2507;
11. 0.5 credits in NSCI 1000 or Approved Arts or Social Sciences;
12. 1.5 credits in Approved Arts or Social Sciences;
13. 1.5 credits from the following: Biochemistry courses listed in but not used to fulfil Item 7 above, BIOC 4901; Biology courses listed in but not used to fulfil Item 4 above; CHEM 2102, CHEM 3101, CHEM 3102, CHEM 3506, CHEM 3504, CHEM 3700, CHEM 3800, CHEM 4202, CHEM 4203; PHYS 2305, PHYS 2306; MATH 2007, MATH 2008, MATH 2107; COMP 1002;
14. 1.0 credit in free electives.

#### Computational Biochemistry B.Sc. Honours (20.0 credits)

##### A. Credits Included in the Major (14.0 credits):

1. 1.5 credits in BIOL 1003, BIOL 2104, BIOL 3104;
2. 1.0 credit in Biology at the 1000-level or higher;
3. 3.0 credits in CHEM 1000 [1.0], CHEM 2203, CHEM 2101, CHEM 2303, CHEM 3506;
4. 0.5 credit in CHEM 2204 or CHEM 2206;
5. 2.5 credits in Biochemistry: BIOC 2200, BIOC 3005, BIOC 3100 [1.0], BIOC 4006;
6. 0.5 credit in Biochemistry at the 4000-level or CHEM 4406;
7. 0.5 credit in Biochemistry at the 4000-level;
8. 1.5 credits in COMP 1005, COMP 1006, COMP 2002;
9. 0.5 credits in Computer Science at the 2000-level or above;
10. 2.5 credits in CMPS 2800, CMPS 3604, CMPS 3800, CMPS 4909 [1.0];

##### B. Credits Not Included in the Major (6.0 credits):

11. 1.0 credit in PHYS 1007 and PHYS 1008; or PHYS 1003 and PHYS 1004;
12. 1.5 credits in MATH 1007, MATH 1107, and STAT 2507;
13. 2.0 credits in Approved Arts or Social Sciences;
14. 1.5 credits in free electives.

#### Biochemistry B.Sc. General (20.0 credits)

##### A. Credits Included in the Major CGPA (11.5 credits):

1. 1.5 credits in BIOL 1003, BIOL 2104, BIOL 3104;
2. 0.5 credit in either BIOL 2001 or BIOL 2002;
3. 0.5 credit in either BIOL 3205 or BIOL 3305;
4. 1.0 credit from: BIOL 2301, BIOL 3201, BIOL 3205, BIOL 3303, BIOL 3305, BIOL 3501, BIOL 3505, BIOL 4008, BIOL 4009, BIOL 4103, BIOL 4104, BIOL 4106, BIOL 4109, BIOL 4201, BIOL 4206, BIOL 4209, BIOL 4300, BIOL 4301, BIOL 4302, BIOL 4303, BIOL 4305, BIOL 4505;
5. 2.5 credits in: BIOC 2200, BIOC 3005, BIOC 3100 [1.0], BIOC 4001;

6. 1.0 credit from: BIOC 4002, BIOC 4004, BIOC 4005, BIOC 4006, BIOC 4007, BIOC 4202, BIOC 4302, BIOC 4708;
7. 4.0 credits from: CHEM 1000 [1.0], CHEM 2101, CHEM 2203, CHEM 2204, CHEM 2303, CHEM 3201, CHEM 3506;
8. 0.5 credit in CHEM 3202 or CHEM 3205;

**B. Credits Not Included in the Major CGPA (8.5 credits):**

9. 1.0 credit in either (PHYS 1007 and PHYS 1008) or (PHYS 1003 and PHYS 1004);
10. 1.5 credits in MATH 1007, MATH 1107, and STAT 2507;
11. 0.5 credits in NSCI 1000 or an Approved Arts or Social Sciences;
12. 1.5 credits in Approved Arts or Social Sciences;
13. 3.0 credits chosen from the following: biochemistry courses listed in but not used to fulfil Item 6 above, BIOC 4901, biology courses listed in but not used to fulfil Item 4 above, CHEM 2102, CHEM 3101, CHEM 3102, CHEM 3202, CHEM 3205, CHEM 3504, CHEM 3506, CHEM 3700, CHEM 3800, CHEM 4202, CHEM 4203, PHYS 2305, PHYS 2306, MATH 2007, MATH 2008, MATH 2107, STAT 2507, COMP 1007;
14. 1.0 credit in free electives.