

Biochemistry
Applicable to students admitted in 2024-25

Major Programme Requirement

Students are required to complete a minimum of 60[a] units of courses as follows:

	Units
1. Faculty Package: Group A: LSCI1002 Group B: CHEM1280 (preferred) or 1070 A course from the following Group C: MATH1520 (preferred) or 1010 or 1018 Group D: (PHYS1001 or 1002) (preferred) or 1111 Group E: STAT1012 (preferred) or 1011	9
2. Required Courses:	
(a) BCHE2000, 2030, 3030/3730, 3040, 3050, 3070, 3080, 3092, 3650	23
(b) BIOL2120#, 2313#, 2410#, LSCI2002#	8
3. Elective Courses:	
(a) Capstone Courses: One of the 5 options (at least 3 units, with a maximum of 6 units) (i) BCHE4901 and 4902 and 4903 (ii) BCHE4902 and 4903 (iii) LSCI4911# and 4912# and 4913# (iv) LSCI4912# and 4913# (v) LSCI4000#	3
(b) Of the 17 units of elective courses, at least 9 units, with one laboratory course should be taken from List A. <u>List A:</u> BCHE4030/4830^, 4040/4640^, 4060/4760^, 4070, 4080, 4090, 4130/4830^ <u>List B:</u> BIOL2420#, ENSC3520# (or LSCI3520#)/3820#, 4250#, 4310#/4510#, FNESC3010#, 4150#, LSCI3012#, 3030#, 3333#, MBTE3510#, 3518#, 3560#, 3568#, 4520# <u>List C:</u> BCHE2070, 3110, BIOL3410#, 3630#, 4310#, 4610#, BMEG3101, 4010, CMBI4001#, 4002#, 4003#, 4101#, 4102#, 4103#, 4201#, 4202#, 4203#, LSCI1012, 2003#, STAT3210	17

Total: 60[a]

In addition to fulfilling the above Major Programme Requirement, students meeting the criteria as specified by the Faculty can take the following stream offered by the Faculty:

Science, Technology And Research Stream

Students are required to complete a minimum of 12 units of courses as follows:

	Units
1. Required Courses:	
(a) One Faculty Package Course:	3

Choose from the two remaining groups of the Faculty Package that have not been used to fulfill the Faculty Package Requirement		
(b)	Research Courses: STAR2000, 3000, 4000[b]	6
(c)	Seminar Courses: STAR2050, 3050, 4050	3
2.	Experiential Learning: At least 4 consecutive weeks of outside Hong Kong exposure[c]	---
Total:		12
Explanatory Notes:		
1.	BCHE courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification.	
2.	Courses labeled as ^ are laboratory courses.	
[a]	Study Option: Berkeley Biosciences Study Abroad Programme Students who undergo one term of studies at the University of California, Berkeley, USA will take courses offered by the Berkeley Biosciences Study Abroad Programme. Units obtained from the Programme will be recognized as up to 12 units of Major Programme requirement. This option will be recorded on transcript.	
[b]	Students may select research-oriented course(s), as approved by the Major Programme, to substitute up to 4 units for fulfillment of Research Courses requirement.	
[c]	Students must complete any exchange/research/internship programme(s) offered by the University, Colleges, the Faculty of Science or Major Programme, as approved by the Major Programme, to fulfill the Experiential Learning requirement. Students are responsible for the extra costs incurred in the exchange/research/ internship programme(s).	

Biochemistry		
	Recommended Course Pattern	Units
First Year of Attendance	1 st term Faculty Package: one to two courses Major Required: Major Elective(s):	3-6
	2 nd term Faculty Package: one to two courses Major Required: Major Elective(s):	3-6
Second Year of Attendance	1 st term Major Required: BCHE2030, BIOL2120, LSCI2002 Major Elective(s):	8
	2 nd term Major Required: BCHE2000, 3050, 3070, 3650, BIOL2313, 2410 Major Elective(s):	10
Third Year of Attendance	1 st term Major Required: BCHE3030/3730, 3092 Major Elective(s): one to two courses	8 3-6
	2 nd term Major Required: BCHE3040, 3080	6

	Major Elective(s): one to two courses	3-6
Fourth Year of Attendance	1 st term Major Required: Major Elective(s) one to two courses	3-6
	2 nd term Major Required: Major Elective(s): two to three courses	5-8
	Total (including Faculty Package):	60

Biochemistry — Science, Technology And Research Stream (STARS)		
	Recommended Course Pattern	Units
First Year of Attendance	1 st term Faculty Package: two courses Major Required: Major Elective(s):	6
	2 nd term Faculty Package: two courses Major Required: Major Elective(s):	6
	Summer session STARS: STAR2050	1
Second Year of Attendance	1 st term Major Required: BCHE2030, BIOL2120, LSCI2002 Major Elective(s): STARS: STAR2000	8 1
	2 nd term Major Required: BCHE2000, 3050, 3070, 3650, BIOL2313, 2410 Major Elective(s): STARS: STAR3050	10 1
Third Year of Attendance	1 st term Major Required: BCHE3030/3730, 3092 Major Elective(s): one to two courses STARS: STAR3000	8 3-6 2
	2 nd term Major Required: BCHE3040, 3080 Major Elective(s): one to two courses STARS: STAR4050	6 3-6 1
Fourth Year of Attendance	1 st term Major Required: Major Elective(s): BCHE4902 [@] and one course	5-6
	2 nd term Major Required: Major Elective(s): BCHE4903 [@] and one to two courses	5-8
	Total (including Faculty Package):	69

[@] Students may take BCHE4902 and 4903 as a substitute for STAR4000.

Minor Programme Title Biochemistry
Minor Programme Requirement

Students are required to complete a minimum of 21 units of courses as follows:

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|----|---|-------------|
| 1. | Required Courses:
BCHE2030, 3030/3730, 3080 | Units
11 |
| 2. | Elective Courses:
BCHE3050/3070/3650^, 3110, 4030/4830^, 4040/4640^,
4060/4760^, 4070, 4080, 4090, 4130/4830^ | 10 |

Total: 21

Explanatory Note:

1. Courses labeled as ^ are laboratory courses.

Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit (s)</i>
BCHE2000	Frontiers in Biochemistry	2
BCHE2030	Fundamentals of Biochemistry	3
BCHE2070	Research Internship	2
BCHE3030	Methods in Biochemistry	3
BCHE3040	Proteins and Enzymes	3
BCHE3050	Molecular Biology	2
BCHE3070	Recombinant DNA Techniques	1
BCHE3080	Bioenergetics and Metabolism	3
BCHE3092	Self-study Modules in Biochemistry and Professional Development	3
BCHE3110	Chemical Biology	3
BCHE3650	Molecular Biology and Recombinant DNA Laboratory	2
BCHE3730	Analytical Biochemistry Laboratory	2
BCHE4030	Clinical Biochemistry	3
BCHE4040	Aspects of Neuroscience	3
BCHE4060	Basic and Applied Immunology	3
BCHE4070	Management and Accreditation of Biochemical Laboratory	3
BCHE4080	Biochemistry for Forensic Sciences	2
BCHE4090	Biochemistry for Sport and Exercise	2
BCHE4130	Molecular Endocrinology	3
BCHE4640	Aspects of Neuroscience Laboratory	2
BCHE4760	Immunology and Haematology Laboratory	2
BCHE4830	Medical Biochemistry Laboratory	2
BCHE4901	Senior Experimental Project I	2
BCHE4902	Senior Experimental Project II	2
BCHE4903	Senior Experimental Project III	2
STAR2000	Undergraduate Research in Science I	1
STAR2050	Seminar I	1
STAR3000	Undergraduate Research in Science II	2
STAR3050	Seminar II	1

STAR4000	Undergraduate Research in Science III	3
STAR4050	Seminar III	1