

**Cell and Molecular Biology**  
**Applicable to students admitted in 2021-22**

**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: BCHE2030#, 3050#, 3070#, BIOL2120#, 2313#, 2410#, CMBI2200, 3010, 3020, 3030, 3040, 3100, 3101, 3200, 4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, 4301, 4302, 4303, LSCI2002#	43
3. Elective Courses: 8 units of courses from the following: BCHE3030#, 3040#, 4030#, 4040#, 4060#, 4130#, BIOL3410#, 3420#, 3530#, 3630#, 4010#, 4120#, BMEG2001#, 2011#, 3102#, CMBI2500, 4901, 4902, 4903, LSCI1012, 2003#, 4910#, 4911#, 4912#, MBTE4320#, 4510#, 4520#, 4530#, STAT3210#	8
<b>Total:</b>	<b>60[a]</b>

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:

1. Required Courses:	
(a) One Faculty Package Course: Choose from the two remaining groups of the Faculty Package that have not been used to fulfill the Faculty Package Requirement	3
(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]	---
<b>Total:</b>	<b>12</b>

Explanatory Notes:

1.	CMBI courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification.
[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).

Cell and Molecular Biology		
	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	1 <sup>st</sup> term Faculty Package: CHEM1280 and LSCI1002 Major Required: Major Elective(s):	6
	2 <sup>nd</sup> term Faculty Package: 1 course from Faculty Package Major Required: Major Elective(s):	3
<b>Second Year of Attendance</b>	1 <sup>st</sup> term Major Required: BCHE2030, BIOL2120, LSCI2002 Major Elective(s):	8
	2 <sup>nd</sup> term Major Required: BCHE3050, 3070, BIOL2313, 2410, CMBI2200 Major Elective(s):	8
<b>Third Year of Attendance</b>	1 <sup>st</sup> term Major Required: CMBI3010, 3030, 3100 Major Elective(s):	6
	2 <sup>nd</sup> term Major Required: CMBI3020, 3040, 3101, 3200 Major Elective(s):	9
	Summer session Major Elective(s): CMBI4901	2
<b>Fourth Year of Attendance</b>	1 <sup>st</sup> term Major Required: CMBI4001, 4002, 4003, 4201, 4202, 4203 Major Elective(s): 1 course	6 2-3
	2 <sup>nd</sup> term Major Required: CMBI4101, 4102, 4103, 4301, 4302, 4303 Major Elective(s): 2 courses	6 4-5
<b>Total (including Faculty Package):</b>		<b>60</b>

Cell and Molecular Biology — Science, Technology And Research Stream (STARS)		
	<b>Recommended Course Pattern</b>	<b>Units</b>
<b>First Year of Attendance</b>	1 <sup>st</sup> term Faculty Package: two courses Major Required: Major Elective(s):	6
	2 <sup>nd</sup> term Faculty Package: two courses Major Required: Major Elective(s): STARS: STAR2050	6  0-1
	Summer session STARS: STAR2050 (if not taken)	0-1
<b>Second Year of Attendance</b>	1 <sup>st</sup> term Major Required: BCHE2030, BIOL2120, LSCI2002 Major Elective(s): STARS: STAR2000 or 3050	8  1
	2 <sup>nd</sup> term Major Required: BCHE3050, 3070, BIOL2313, 2410, CMBI2200 Major Elective(s): STARS: STAR2000 (if not taken) or 3050 (if not taken)	8  1
	1 <sup>st</sup> term Major Required: CMBI3010, 3030, 3100 Major Elective(s): STARS: STAR3000 or 4050	6  1-2
<b>Third Year of Attendance</b>	2 <sup>nd</sup> term Major Required: CMBI3020, 3040, 3101, 3200 Major Elective(s): STARS: STAR3000 (if not taken) or 4050 (if not taken)	9  1-2
	Summer session Major Elective(s): CMBI4901	2
	1 <sup>st</sup> term Major Required: CMBI4001, 4002, 4003, 4201, 4202, 4203 Major Elective(s): 1 course or CMBI4902 <sup>@</sup>	6 2-3
<b>Fourth Year of Attendance</b>	2 <sup>nd</sup> term Major Required: CMBI4101, 4102, 4103, 4301, 4302, 4303 Major Elective(s): 2 courses or CMBI4903 <sup>@</sup> and 1 course	6 4-5
	<b>Total (including Faculty Package):</b>	<b>69</b>

<sup>@</sup> Students may take CMBI4902 and 4903 as a substitute for STAR4000.

<b>Minor Programme Title</b>	
Cell and Molecular Biology	
<b>Minor Programme Requirement</b>	
Students are required to complete a minimum of 22 units of courses as follows:	
	<b>Units</b>
1. Required Courses: BCHE3050, BIOL2120, 2410, CMBI3101, 4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, 4301, 4302, 4303	22
<b>Total:</b>	<b>22</b>

### Course List

<i>Course Code</i>	<i>Course</i>	<i>Unit(s)</i>
CMBI2200	Literature survey in CMB and Scientific Communication	2
CMBI2500	Research Internship	2
CMBI3010	CMB Laboratory I	3
CMBI3020	CMB Laboratory II	3
CMBI3030	CMB Laboratory III	1
CMBI3040	CMB Laboratory IV	1
CMBI3100	Methodology of Critical Thinking in CMB	2
CMBI3101	Biology of Model Organisms for CMB Research	3
CMBI3200	Proposal Formulation and Creative Scientific Writing in CMB	2
CMBI4001	Protein Trafficking	1
CMBI4002	Protein Folding	1
CMBI4003	Signal Transduction	1
CMBI4101	Cancer Cell Biology	1
CMBI4102	Stem Cell Biology	1
CMBI4103	Neuronal Cell Biology	1
CMBI4201	Genomics and Transcriptomics	1
CMBI4202	Proteomics	1
CMBI4203	Metabolomics	1
CMBI4301	Current Topics in Cell Biology	1
CMBI4302	Current Topics in Molecular Biology	1
CMBI4303	Current Topics in Biotechniques	1
CMBI4901	Senior Experimental Project I	2
CMBI4902	Senior Experimental Project II	2
CMBI4903	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