



COURSE PLANNING FOR MAJORS IN SCHOOL OF LIFE SCIENCES

PROGRAMMES:

BIOCHEMISTRY

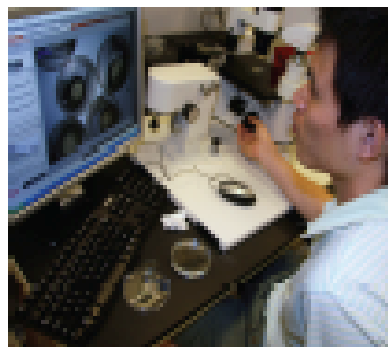
BIOLOGY

CELL & MOLECULAR BIOLOGY

ENVIRONMENTAL SCIENCE

FOOD AND NUTRITIONAL SCIENCES

MOLECULAR BIOTECHNOLOGY



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1. DIRECTOR'S MESSAGE

August 16, 2012

Dear Students:

A very warm welcome to all of you joining our big family of the School of Life Sciences. You have made a wise choice to study Life Sciences at the Chinese University.

Our curriculum provides a wide range of study schemes covering many different basic, applied and advanced life science disciplines. Our courses also aim at providing both generic skills and professional training. This booklet is prepared by our staff to help you design your study plan. Should you have any queries or need any assistance, please don't hesitate to contact our staff or your academic adviser. We are very happy to serve and help you.

I wish you all a most rewarding and enjoyable learning experience at our School and the University.

Yours sincerely,

Ka- Hou Chu, Ph.D.



2. COURSE PLANNING FOR YEAR ONE IN A THREE-YEAR SYSTEM

There are six majors in the School of Life Sciences:

- Biochemistry
- Biology
- Cell and Molecular Biology
- Environmental Science
- Food and Nutritional Sciences
- Molecular Biotechnology

All Life Sciences majors must complete four compulsory foundation courses of 9 units and required introductory course(s) for each programme in their first year curriculum in 3 year system or second year curriculum in 4 year system.

Admit to Life Sciences



Declare potential majors in first term of study



Enroll 4 compulsory courses in first term

BCHE2030 Fundamentals of Biochemistry (3 units)

BIOL2120 Cell Biology (3 units)

LSCI2000 Research and Communication Skills in Life Sciences (1 unit)

LSCI2002 Basic Laboratory Techniques in Life Sciences (2 units)



Select programme's introductory courses in second term

BCHE2000 Frontiers in Biochemistry (2 units)

BIOL2210 Ecology (3 units)

BIOL2213 Ecology Laboratory (1 unit)

BIOL2310 General and Molecular Genetics (3 units)

BIOL2313 Genetics Laboratory (1 unit)

CMBI2101 Biology of Model Organisms for CMB Research (2 units)

CMBI2200 Literature Survey in CMB and Scientific Communication (2 units)

ENSC2270 Introduction to Environmental Science (3 units)

FNSC2003 Food, Nutrition and Health (2 units)

MBTE2000 Introduction to Molecular Biotechnology (2 units)

Course code	Unit(s)	BCHE	BIOL	CMBI	ENSC	FNSC	MBTE
BCHE2000	2	√					
BIOL2210	3		√		√		
BIOL2213	1		√ [#]		√		
BIOL2310	3	√	√	√			√
BIOL2313	1	√	√ [#]	√			√
CMBI2101	2			√			√
CMBI2200	2			√			
ENSC2270	3				√		
FNSC2003	2					√	
MBTE2000	2						√

[#] Choose only ONE laboratory course from BIOL2213, BIOL2313 or BIOL3413 (offered in the second year) for the major requirement of BIOL.

3. List of Major Courses of the First Year of Study

2012-13, First Term

Course Code	Course Title	Unit(s)	Course Component	Period	Room
BCHE2030 Tut. Gp. 1 Tut. Gp. 2 Tut. Gp. 3 Tut. Gp. 4	Fundamentals of Biochemistry	3	LEC	F1-3	TYW LT
			TUT	W7-8	SC L2
			TUT	W9-10	SC L4
			TUT	H7-8	SC L4
			TUT	H9-10	SC L4
BIOL2120	Cell Biology	3	LEC	M1-3	LSK LT6
LSCI2000	Research and Communication Skills in Life Sciences	1	LEC	W2	TYW LT
LSCI2002A	Basic Laboratory Techniques in Life Sciences	2	LAB	W7 W8-10	SC L1 TBA
LSCI2002B	Basic Laboratory Techniques in Life Sciences	2	LAB	H7 H8-10	SC L2 TBA

2012-13, Second Term

Course Code	Course Title	Unit(s)	Course Component	Period	Room
BCHE2000	Frontiers in Biochemistry	2	LEC	W3-4	TYW LT
BIOL2210	Ecology	3	LEC	T7-9	BMS G18
BIOL2213	Ecology Laboratory	1	LAB	M7-10	SC 295
BIOL2310	General and Molecular Genetics	3	LEC	M1-3	LSK LT7
BIOL2313A/C	Genetics Laboratory	1	LAB	T7-10	SC 295
BIOL2313B/D				W7-10	SC 295
CMBI2101	Biology of Model Organisms for CMB Research	2	LEC	T3-4	SC L1
CMBI2200	Literature Survey in CMB and Scientific Communication	2	WKS	M4-5	LHC 106
ENSC2270	Introduction to Environmental Science	3	LEC	F1-3	LSK LT4
FNSC2003	Food, Nutrition and Health	2	LEC	T5-6	SC L1
MBTE2000	Introduction to Molecular Biotechnology	2	LEC	H5-6	MMW 707

Biochemistry Applicable to students admitted in 2012-13

1. Major Programme

S7 students

Students are required to complete 59-61 units of courses as follows:

- | | | |
|------|---|-------------|
| (i) | Required Courses (Note):
BCHE2000, 2030, 3030/3630, 3040, 3080/3680, 3090, 4010, 4020,
4300, 4400 (or 4410), 4610, BIOL2120#, 2310#, 2313#, LSCI2000#,
2002# | 39-41 units |
| (ii) | Elective Courses:
Students are required to take at least 8 units with one course
accompanied by laboratory from Group A:
<u>Group A</u>
BCHE4030/4830, 4040/4640, 4060/4660, 4130/4830, MBTE4530#
<u>Group B</u>
ENSC3320#/3920#, 4250#/4252#, 4310#/4510#, FNCS3010#/
3011#, 4150#/4151#, 4160#/4161#, MBTE4520#
<u>Group C</u>
BCHE2070, BIOL3410#, 3630#, 4310#, 4330#, CMBI3010#, 3020#,
4001#, 4002#, 4003#, 4101#, 4102#, 4103#, 4201#, 4202#, 4203#,
STAT3210 | 20 units |

Total: 59-61 units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance 1st term : BCHE2030, BIOL2120, LSCI2000, 2002 2nd term : BCHE2000, BIOL2310, 2313	15 units
Second Year of Attendance 1st term : BCHE3040, 3080/3680, 3090 2nd term : BCHE3030/3630, 4010, 4020, 4610	20 units
Third Year of Attendance 1st term : BCHE4300 2nd term : BCHE4400 (or 4410) Elective Courses Students are required to take at least 8 units with one course accompanied by laboratory from Group A: <u>Group A</u> BCHE4030/4830, 4040/4640, 4060/4660, 4130/4830, MBTE4530 <u>Group B</u> ENSC3320/3920, 4250/4252, 4310/4510, FNCS3010/3011, 4150/4151, 4160/4161, MBTE4520 <u>Group C</u> BCHE2070, BIOL3410, 3630, 4310, 4330, CMBI3010, 3020, 4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, STAT3210	4-6 units 20 units
Total: 59-61 units	

Note: Only Major courses at 3000 and above level will be included in the calculation of the Major GPA for honours classification.

Students with associate degrees or higher diplomas

Students are required to complete 51-53 units of courses as follows:

- | | | |
|------|---|-------------|
| (i) | Required Courses (Note):
BCHE2000, 2030, 3030/3630, 3040, 3090, 4010, 4020, 4300, 4400 (or
4410), 4610, BIOL2120#, LSCI2000#, 2002# | 30-32 units |
| (ii) | Elective Courses: | 21 units |

Students are required to take at least 8 units with one course accompanied by laboratory from Group A:

Group A

BCHE3080/3680, 4030/4830, 4040/4640, 4060/4660, 4130/4830, MBTE4530#

Group B

ENSC3320#/3920#, 4250#/4252#, 4310#/4510#, FNCS3010#/3011#, 4150#/4151#, 4160#/4161#, MBTE4520#

Group C

BCHE2070, BIOL3410#, 3630#, 4310#, 4330#, CMBI3010#, 3020#, 4001#, 4002#, 4003#, 4101#, 4102#, 4103#, 4201#, 4202#, 4203#, STAT3210

Total: 51-53 units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance 1st term: BCHE2030, 3090, BIOL2120, LSCI2000, 2002 2nd term: BCHE2000, 3030/3630	18 units
Second Year of Attendance 1st term: BCHE3040, 4300 2nd term: BCHE4010, 4020, 4400 (or 4410), 4610 term: Elective Courses Students are required to take at least 8 units with one course accompanied by laboratory from Group A: <u>Group A</u> BCHE3080/3680, 4030/4830, 4040/4640, 4060/4660, 4130/4830, MBTE4530 <u>Group B</u> ENSC3320/3920, 4250/4252, 4310/4510, FNCS3010/3011, 4150/4151, 4160/4161, MBTE4520 <u>Group C</u> BCHE2070, BIOL3410, 3630, 4310, 4330, CMBI3010, 3020, 4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, STAT3210	12-14 units 21 units
Total: 51-53 units	

Note: Only Major courses at 3000 and above level will be included in the calculation of the Major GPA for honours classification.

2. Minor Programme

Students are required to complete a minimum of 20 units as follows:

BCHE2030, 3030/3630, 3080/3680, 3090 and 5 units from courses in biochemistry at 4000 and above level with accompanied laboratory. Among the 20 units, no more than 5 should overlap with the requirement of the student's Major Programme.

Course List

Course Code	Course Title	Unit
BCHE1700	Biochemical Basis of Life and Disease Laboratory	2
BCHE2000	Frontiers in Biochemistry	2
BCHE2030	Fundamentals of Biochemistry	3
BCHE2070	Research Internship	2
BCHE3030	Methods in Biochemistry	3
BCHE3630	Methods in Biochemistry Laboratory	2
BCHE3040	Proteins and Enzymes	3
BCHE3080	Bioenergetics and Metabolism	3
BCHE3680	Bioenergetics and Metabolism Laboratory	2
BCHE3090	Self-Study Modules in Biochemistry	2

BCHE4010	Molecular Biology	2
BCHE4020	Recombinant DNA Techniques	1
BCHE4610	Molecular Biology Laboratory	2
BCHE4030	Clinical Biochemistry	3
BCHE4040	Aspects of Neuroscience	3
BCHE4640	Aspects of Neuroscience Laboratory	2
BCHE4060	Basic and Applied Immunology	3
BCHE4660	Basic and Applied Immunology Laboratory	2
BCHE4130	Molecular Endocrinology	3
BCHE4830	Medical Biochemistry Laboratory	2
BCHE4300	Selected Topic in Biochemistry	2
BCHE4400	Guided Study in Biochemistry	2
BCHE4410	Supervised Research in Biochemistry	4

Biology
Applicable to students admitted in 2012-13

1. Major Programme
S7 students
Biology Stream

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

- | | | |
|------|--|----------|
| (i) | Required Courses (Notes):
BCHE2030#, BIOL2120, 2210, 2310, 3012, 3022, 3410, 3550, 3610,
3620, LSCI2000#, 2002# | 30 units |
| (ii) | Elective Courses: | |
| (a) | One laboratory course from BIOL2213, 2313, 3413 and another
laboratory course from BIOL4012, 4032, MBTE4033# | 3 units |
| (b) | A combination of courses from the following (including at least 18
units from BIOL-coded elective courses):
BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL3000, 3310, 3530,
3630, 3710, 4010, 4120, 4210, 4220, 4310, 4430/4440 (or
4431/4451), 4510, 4710, CMBI4201#, 4202#, 4203#, ENSC4260#,
FNSC4180#, 4181#, MBTE4320#, 4510#, 4530#, STAT3210# | 27 units |

Total: 60
units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance 1st term: BCHE2030, BIOL2120, LSCI2000, 2002 2nd term: BIOL2210, 2310, and at least one laboratory course from BIOL2213, 2313, 3413* * offered in 1st term of 2nd year of study	16 units
Second Year of Attendance (a) BIOL3410, 3550, 3610, 3620 (b) Two courses from BIOL3012, 3022: 4 units (c) Elective courses from (ii) above: 9 units	24 units
Third Year of Attendance Elective courses from (ii) above: 20 units	20 units
	Total: 60 units

Notes: Applicable to students of *Biology Stream*

1. Students are not allowed to take BIOL3532, 3632, 3712, 4212, 4222, 4322, 4512 and 4712.
2. In general, students should complete courses at 2000 level before proceeding to courses at 3000 level, and so on. When selecting courses at 3000 and above level, students should pay attention to the prerequisite requirement.
3. Some elective courses in (ii)/(iii) above are offered in alternate years.

Human Biology Stream

Students are required to complete a minimum of 59 units of courses as follows:

- | | | |
|------|---|----------|
| (i) | Required Courses (Notes):
BCHE2030#, BIOL2120, 2210, 2310, 3310, 3410, 4310,
BMJC4411#/4421#, MEDN3050#/3051#, 3060#/3061#,
3070#/3071#, 3080#/3081#, 4550#, 4560#, LSCI2000#, 2002# and
at least one laboratory course from BIOL2213, 2313, 3413 | 53 units |
| (ii) | Elective Courses:
A combination of courses from the following:
BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL4120, 4210,
ENSC4250#, MBTE4033#, 4320#, STAT3210# | 6 units |

Total: 59
units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance	16 units

BCHE2030, BIOL2120, 2210, 2310, LSCI2000, 2002 and at least one laboratory course from BIOL2213, 2313, 3413* * offered in 1st term of 2nd year of study	
Second Year of Attendance BIOL3310, MEDN3050/3051, 3060/3061, 3070/3071, 3080/3081	19 units
Third Year of Attendance BIOL3410, 4310, BMJC4411/4421, MEDN4550, 4560 and two elective courses	24 units
	Total: 59 units

Notes: Applicable to students of *Human Biology Stream*

- Students are not allowed to take BIOL3532, 3632, 3712, 4212, 4222, 4322, 4512 and 4712.
- In general, students should complete courses at 2000 level before proceeding to courses at 3000 level, and so on. When selecting courses at 3000 and above level, students should pay attention to the prerequisite requirement.
- Some elective courses in (ii) above are offered in alternate years.

Biology Stream

Students with associate degrees

Students are required to complete a minimum of 55 units of courses as follows:

- | | |
|---|----------|
| (i) Required Courses: | 26 units |
| (a) Three courses from: BCHE2030#, BIOL2120, 2210, 2310 (9 units) | |
| (b) One laboratory course from: BIOL2213, 2313, 3413 (1 unit) | |
| (c) Five courses: BIOL3410, 3550, 3610, 3620, LSCI2000# (12 units) | |
| (d) Two laboratory courses: BIOL3012, 3022 (4 units) | |
| (ii) Elective Courses: | 29 units |
| A combination of courses with a minimum of one laboratory course from the following (including at least 20 units from BIOL-coded elective courses): | |
| BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL3000, 3310, 3530, 3630, 3710, 4010, 4012, 4120, 4210, 4220, 4310, 4320, 4430/4440 (or 4431/4451), 4510, 4710, CMBI4201#, 4202#, 4203#, ENSC4260#, FNESC4180#, 4181#, MBTE4033#, 4320#, 4510#, 4530#, STAT3210# | |

Total 55 units

To be included in the Major GPA as well.

Students with higher diplomas

Students are required to complete a minimum of 51 units of courses as follows:

- | | |
|---|----------|
| (i) Required Courses: | 22 units |
| (a) Two courses from: BCHE2030#, BIOL2120, 2210, 2310 (6 units) | |
| (b) Five courses: BIOL3410, 3550, 3610, 3620, LSCI2000# (12 units) | |
| (c) Two laboratory courses from: BIOL3012, 3022 (4 units) | |
| (ii) Elective Courses: | 29 units |
| A combination of courses with a minimum of one laboratory course from the following (including at least 20 units from BIOL-coded elective courses): | |
| BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL3000, 3310, 3530, 3630, 3710, 4010, 4012, 4032, 4120, 4210, 4220, 4310, 4430/4440 (or 4431/4451), 4510, 4710, CMBI4201#, 4202#, 4203#, ENSC4260#, FNESC4180#, 4181#, MBTE4033#, 4320#, 4510#, 4530#, STAT3210# | |

Total 51 units

To be included in the Major GPA as well.

Human Biology Stream

Students with associate degrees

Students are required to complete a minimum of 57 units of courses as follows:

- | | |
|-----------------------|----------|
| (i) Required Courses: | 48 units |
|-----------------------|----------|

(a)	Three courses from: BCHE2030#, BIOL2120, 2210, 2310 (9 units)	
(b)	One laboratory course from: BIOL2213, 2313, 3413 (1 unit)	
(c)	Sixteen courses: BIOL3310, 3410, 4310, BMJC4411#/4421#, MEDN3050#/3051#, 3060#/3061#, 3070#/3071#, 3080#/3081#, 4550#, 4560#, LSCI2000# (38 units)	
(ii)	Elective Courses: A combination of courses from the following: BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL4120, 4210, ENSC4250#, MBTE4033#, 4320#. STAT3210#	9 units
		Total 57 units
#	To be included in the Major GPA as well.	

Students with higher diplomas

Students are required to complete a minimum of 53 units of courses as follows:

(i)	Required Courses:	44 units
(a)	Two courses from: BCHE2030#, BIOL2120, 2210, 2310 (6 units)	
(b)	Sixteen courses: BIOL3310, 3410, 4310, BMJC4411#/4421#, MEDN3050#/3051#, 3060#/3061#, 3070#/3071#, 3080#/3081#, 4550#, 4560#, LSCI2000# (38 units)	
(ii)	Elective Courses: A combination of courses from the following: BCHE3080#, 4010#, 4040#, 4060#, 4130#, BIOL4120, 4210, ENSC4250#, MBTE4033#, 4320#, STAT3210#	9 units
		Total 53 units
#	To be included in the Major GPA as well.	

2. Minor Programme

Students are required to complete a minimum of 18 units of Biology courses which should include at least one course (3 units) from the following fundamental courses: BIOL2120, 2210, 2310.

Note: Courses which Biochemistry, Cell and Molecular Biology, Environmental Science, Food and Nutritional Sciences, and Molecular Biotechnology Majors take to fulfil their Major requirement cannot be used to fulfil the Minor Programme requirement.

Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit</i>
Biology Stream		
BIOL1005	Introduction to Biological Sciences	3
BIOL2120	Cell Biology	3
BIOL2210	Ecology	3
BIOL2213	Ecology Laboratory	1
BIOL2310	General and Molecular Genetics	3
BIOL2313	Genetics Laboratory	1
BIOL3000	Internship	2
BIOL3012	Biodiversity Laboratory I	2
BIOL3022	Biodiversity Laboratory II	2
BIOL3052	Tech in Microbiology and Genetics	2
BIOL3310	Human Biology	3
BIOL3410	General Microbiology	3
BIOL3413	Microbiology Laboratory	1
BIOL3530	Plant Physiology	3
BIOL3550	Plant Biology	4
BIOL3610	Invertebrate Structure and Function	2

BIOL3620	Vertebrate Life	2
BIOL3630	Animal Physiology	3
BIOL3710	Marine Biology	3
BIOL4010	Evolutionary Biology	3
BIOL4012	Field and Environmental Biology	2
BIOL4032	Physiological Investigations	2
BIOL4120	Developmental Biology	3
BIOL4210	Environmental Pollution and Toxicology	3
BIOL4220	Environmental Biotechnology	3
BIOL4310	Human Genetics	3
BIOL4430	Literature Senior Seminar I	1
BIOL4431	Experimental Senior Seminar I	3
BIOL4440	Literature Senior Seminar II	2
BIOL4451	Experimental Senior Seminar II	3
BIOL4510	Hong Kong Flora and Vegetation	3
BIOL4710	Fish Biology and Mariculture	3

Human Biology Stream

The Human Biology Stream is offered in cooperation with the School of Biomedical Sciences. Basically, the course requirement in the first half of this stream is identical with that of the regular Biology Stream. In the latter half, students will specialize in other courses described therein.

BIOL2120	Cell Biology	3
BIOL2210	Ecology	3
BIOL2213	Ecology Laboratory	1
BIOL2310	General and Molecular Genetics	3
BIOL2313	Genetics Laboratory	1
BIOL3310	Human Biology	3
BIOL3410	General Microbiology	3
BIOL3413	Microbiology Laboratory	1
BIOL4120	Developmental Biology	3
BIOL4210	Environmental Pollution and Toxicology	3
BIOL4310	Human Genetics	3
MEDN3050	Anatomy I	3
MEDN3060	Anatomy II	3
MEDN3051	Anatomy Laboratory I	1
MEDN3061	Anatomy Laboratory II	1
MEDN3070	Basic Principles of Physiology	3
MEDN3071	Basic Principles of Physiology Laboratory	1
MEDN3080	Physiology of Major Organ Systems in Man	3
MEDN3081	Physiology of Major Organ Systems in Man	1
MEDN4550	Specialized Topics in Anatomy	3
MEDN4560	Specialized Topics in Physiology	3
BMJC4411	Research Project I	3
BMJC4421	Research Project II	3

Cell and Molecular Biology Applicable to students admitted in 2012-13

Major Programme

S6/S7 students

Students are required to complete a minimum of 63 units of courses as follows (Note):

- | | | |
|------|---|----------|
| (i) | Required Courses:
BCHE2030#, 4010#, 4020#, BIOL2120#, 2310#, 2313#, CMBI2101, 2200, 3010, 3020, 3100, 3200, 4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, 4301, 4302, 4303, LSCI2000#, 2002# | 42 units |
| (ii) | Elective Courses:
At least seven courses of the following:
BCHE3030#, 3040#, 4030#, 4040#, 4060#, 4130#, BIOL3410#, 3530#, 3630#, 4010#, 4120#, BMEG1130, CMBI4100, 4200, MBTE4320#, 4510#, 4520#, 4530#, PHAR1000#, 2130#, STAT3210# | 21 units |

Total: 63 units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance BCHE2030, BIOL2120, 2310, 2313, CMBI2101, 2200, LSCI2000, 2002	17 units
Second Year of Attendance BCHE4010, 4020, CMBI3010, 3020, 3100, 3200 and 9 or 12 units from elective courses in (ii) above	22 or 25 units
Third Year of Attendance CMBI4001, 4002, 4003, 4101, 4102, 4103, 4201, 4202, 4203, 4301, 4302, 4303 and 12 or 9 units from elective courses in (ii) above	24 or 21 units
Total: 63 units	

Note: Major courses at 2000 and above level will be included in the calculation of the Major GPA for honours classification.

Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit</i>
CMBI2101	Biology of Model Organisms for CMB Research	2
CMBI2200	Literature Survey in CMB and Scientific Communication	2
CMBI3010	Cell and Molecular Biology Laboratory I	3
CMBI3020	Cell and Molecular Biology Laboratory II	3
CMBI3100	Methodology of Critical Thinking in CMB	2
CMBI3200	Proposal Formulation and Creative Scientific Writing in CMB	2
CMBI4001	Protein Trafficking	1
CMBI4002	Protein Folding	1
CMBI4003	Signal Transduction	1
CMBI4100	Supervised Research in CMB I	3
CMBI4101	Cancer Cell Biology	1
CMBI4102	Stem Cell Biology	1
CMBI4103	Neuronal Cell Biology	1
CMBI4200	Supervised Research in CMB II	3
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

Environmental Science Applicable to students admitted in 2012-13

1. Major Programme

S7 students

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

- | | | |
|------|--|----------|
| (i) | Required Courses: | 37 units |
| (a) | BCHE2030#, BIOL2120#, 2210#/2213#, ENSC2270, 2515/2517, 3320/3920, 3415/3417, LSCI2000#, 2002# | |
| (b) | At least 6 units from ENSC3000, 3001, 4000/4001(or 4020/4221) | |
| (ii) | Elective Courses (at least 23 units from the following): | 23 units |
| | ENSC3230*, 4240, 4242, 4250, 4260, 4310, 4510, 4525, 4535;
BIOL3012#, 3022#, 3410#, 3550#, 3610#, 3620#, 3710#; 4012#, 4510#, and
BIOL4210#, 4220#, GRMD3202#*, 3203#, 3206 4203#, 3211#, 3221
4202# (or ESG55006#), 3223#, PHPC1014, 1015(or STAT3210#), 2009# | |

Total: 60 units

To be included in the Major GPA as well.

* Students can either take ENSC3230 or GRMD3202, but not both courses.

Recommended course pattern		
First Year of Attendance		16 units
1st term :	BCHE2030, BIOL2120, LSCI2000, 2002	
2nd term:	ENSC2270, BIOL2210/2213	
Second Year of Attendance		24 units
1st term :	ENSC2515/2517 plus two elective courses from (ii) above	
2nd term:	ENSC3320/3920, 3415/3417 plus one extra elective course from (ii) above	
Third Year of Attendance		20 units
1st term :	ENSC3000 or 3001 and 4000, or 4020, plus one to two elective courses from (ii) above	
2nd term:	ENSC4001 or 4221 plus one to two elective courses from (ii) above	
		60 units

2. Minor Programme

- (i) Students are required to complete a minimum of 18 units of courses from:
BIOL2210, ENSC2270, 2515, 3230, 3320, 3415 (or CHEM3410), ENSC4240, 4250, 4260, 4310, 4525, 4535

Total: 18 units

- (ii) Prerequisite conditions for certain courses may be waived; intending Minor students should consult the Environmental Science Programme Office.

Course List

Course Code	Course Title	Unit
ENSC2270	Introduction to Environmental Science	3
ENSC2515	Environmental Chemistry	3
ENSC2517	Environmental Chemistry Laboratory	2
ENSC3000	Environmental Science Internship	2
ENSC3001	Field Study	2
ENSC3230	Principles of Environmental Protection and Pollution Control	3
ENSC3320	Biochemical Toxicology	3
ENSC3415	Environmental Instrumentation Techniques	3
ENSC3417	Environmental Instrumentation Techniques Laboratory	2
ENSC3920	Biochemical Toxicology Laboratory	2

ENSC4000	Literature Research in Environmental Science I	2
ENSC4001	Literature Research in Environmental Science II	2
ENSC4020	Directed Research in Environmental Science I	2
ENSC4221	Directed Research in Environmental Science II	4
ENSC4240	Environmental Impact Assessment	3
ENSC4242	Environmental Impact Assessment Laboratory	2
ENSC4250	Environmental Health	3
ENSC4260	Conservation Biology	3
ENSC4310	Methods in Toxicological Research	3
ENSC4510	Methods in Toxicological Research Laboratory	2
ENSC4525	Advanced Environmental Chemistry	3
ENSC4535	Chemical Treatment Processes	3

Food and Nutritional Sciences
Applicable to students admitted in 2012-13

Major Programme
/S7 students

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

- | | | |
|------|--|----------|
| (i) | Required Courses:
BCHE2030#, BIOL2120#, 3410#/3413#, FNSC2003, 3010/3011, 3030/3031,
3110/3111, LSCI2000#, 2002# | 27 units |
| (ii) | Elective Courses:
BCHE4060#, 4660#, 4130#, BIOL2310#, 2313#, MBTE4320#, ENSC3320#,
3920#, FNSC4110, 4111, 4120, 4121, 4150, 4151, 4160, 4161, 4170, 4171,
4180, 4181, 4411 and 4421, 5130#, 5320#, 5430#, STAT3210# | 33 units |

Total: 60 units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance	14 units
1st term : BCHE2030, BIOL2120, LSCI2000, 2002	
2nd term: FNSC2003 plus one elective course	
Second Year of Attendance	20 units
1st term : BIOL3410/3413, FNSC3030/3031, 3110/3111	
2nd term: FNSC3010/3011 plus one elective course with laboratory	
Third Year of Attendance	26 units
The rest of elective courses not yet taken from (ii)	
	Total: 60 units

Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit</i>
FNSC2003	Food, Nutrition and Health	2
FNSC3010	Nutrition and Human Development	3
FNSC3011	Nutrition and Human Development Laboratory	1
FNSC3030	Nutritional Biochemistry	3
FNSC3031	Nutritional Biochemistry Laboratory	1
FNSC3110	Food Chemistry and Analysis	3
FNSC3111	Food Chemistry and Analysis Laboratory	1
FNSC4110	Food Technology	3
FNSC4111	Food Technology Laboratory	1
FNSC4120	Community Nutrition	3
FNSC4121	Community Nutrition Laboratory	1
FNSC4150	Introduction to Medical Nutrition Therapy	3
FNSC4151	Introduction to Medical Nutrition Therapy Laboratory	1
FNSC4160	Nutrition Planning and Food Policy	3
FNSC4161	Nutrition Planning and Food Policy Laboratory	1
FNSC4170	Food Product Development and Quality Control	3
FNSC4171	Food Product Development and Quality Control Laboratory	2
FNSC4180	Food Microbiology	3
FNSC4181	Food Microbiology Laboratory	1
FNSC4411	Directed Research in Food and Nutritional Sciences I	2
FNSC4421	Directed Research in Food and Nutritional Sciences II	2
FNSC5130	Human Physiology	3
FNSC5320	Nutritional Physiology	3
FNSC5430	Food Toxicology and Safety	3

Molecular Biotechnology Applicable to students admitted in 2012-13

Major Programme S6/S7 students

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

- | | | |
|------|--|----------------|
| (i) | Required Courses:
BCHE2030#, 3030#, 4010#, BIOL2120#, 2310#/2313#, 3410#, 4320#,
CMBI2101#, LSCI2000#, 2002#, MBTE2000, 3000, 4320, 4033, 4034,
4510, 4520, 4530, and 4 or 6 units from
MBTE4800/4830/4840/4850/4860 | 48 or 50 units |
| (ii) | Elective Courses:
BCHE3040#, 3080#, 3680#, 4030#, 4060#, BIOL3530#, 3630#, 4032#,
4120#, 4330#, BMEG2130#, CMBI4001#/4002#/4003#,
4101#/4102#/4103#, 4201#/4202#/4203#, 4301#/4302#/4303#,
STAT3210# | 10 or 12 units |

Total: 60 units

To be included in the Major GPA as well.

Recommended course pattern	
First Year of Attendance BCHE2030, BIOL2120, 2310/2313, CMBI2101, LSCI2000, 2002, MBTE2000	17 units
Second Year of Attendance BCHE3030, 4010, BIOL3410, MBTE4033, 4034, 4320, 4800 (optional) and 9 units from MBTE4510/4520/4530 or (ii) elective courses	21 or 23 units
Third Year of Attendance MBTE3000, 2 or 4 units from MBTE4830/4840/4850/4860 and 15 units from MBTE4510/4520/4530 or (ii) elective courses	17 or 19 units
Total: 60 units	

Course List

<i>Course Code</i>	<i>Course Title</i>	<i>Unit</i>
MBTE2000	Introduction to Molecular Biotechnology	2
MBTE3000	Business and Social Aspects of Biotechnology	3
MBTE4033	Methods in Molecular Biotechnology Laboratory I	2
MBTE4034	Methods in Molecular Biotechnology Laboratory II	2
MBTE4320	Genetic Engineering	3
MBTE4510	Plant Biotechnology	3
MBTE4520	Animal Biotechnology	3
MBTE4530	Microbial Biotechnology	3
MBTE4800	Research in Molecular Biotechnology	2
MBTE4830	Literature Senior Seminar I	2
MBTE4840	Literature Senior Seminar II	2
MBTE4850	Senior Experimental Project I	2
MBTE4860	Senior Experimental Project II	2

10. Contacts

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