

Overview of the Year 1 Curriculum and beyond

KMCHAN
SCHOOL OF LIFE SCIENCES

From Broad-Based Admission to Declaring your
major in Life Sciences Programmes.

From your classroom to outside of the classroom
experiences.

1. Advantages of Broad-Based Admission and the SLS Curriculums

- To allow flexibility to students upon admission
- To explore your interests before selecting a major programme
- To gain a broader foundation in Life Sciences disciplines

Six Programs of SLS are individual programs, but they are also closely linked together !!

- Biochemistry
- Biology (incl. Human Biology)
- Cell & Molecular Biology
- Environmental Science
- Food & Nutritional Sciences
- Molecular Biotechnology

8/20/2012



Desired Learning Outcomes:

Our graduates will acquire a sense of *professionalism* and the capability of *working independently* with good communication, analytical, research and technical skills.

Can *adapt to the changing* social and research *environments* in order to stay *competitive* in further studies and in the job market.



Learning Experience under Broad-Based Admission

- To take a set of common fundamental courses in year 1/3 or faculty package in year 1/4.
- To declare a major program after 1 year of study.
- To acquire strong academic counseling from orientation to graduation (may even declare potential major at term start).
- To prepare career life in sciences, health and related fields, as well as in further postgraduate studies.
- No quota is set for each of the life science programmes

Overview:

*From Broad-based admission to Declaring your:
Selection of courses in year 1 of our 3 year curriculum or
year 2 of our 4 year curriculum*

Term 1

Build up fundamental knowledge

Take foundation courses in life science

BCHE2030 + BIOL2120+ LSCI2000 + LSCI2002

Foundation

Term 2

Confirm your interest

Select preferred courses from a list of 10 offered by all 6 programs

BCHE2000 BIOL2210 BIOL2213 BIOL2310 BIOL2313
CMBI2101 CMBI2200 ENSC2270 FNESC2003 MBTE2000

Declare preferred Major

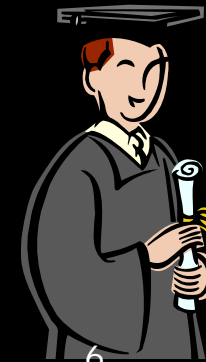
Exploration

Term 3
Term 4
Term 5
Term 6

Foster to be a
specialist

Engage in the advanced and specialized study
posed by your Major program

Specialization



Example of course selection:

Most likely **BCHE**, maybe **CMBI** or **FNSC**

Course code	Unit	BCHE	BIOL	CMBI	ENSC	FNSC	MBTE
BCHE2000	2	√					
BIOL2210	3		√		√		
BIOL2213	1		√ ^a		√		
BIOL2310	3	√	√	√			√
BIOL2313	1	√	√ ^a	√			√
CMBI2101	2			√			√
CMBI2200	2			√			
ENSC2270	3				√		
FNSC2003	2					√	
MBTE2000	2						√

Second Term

- [BCHE2000 Frontiers in Biochemistry \(2\)](#)
- [BIOL2210 Ecology \(3\)](#)
- [BIOL2213 Ecology Lab \(1\)](#)
- [BIOL2310 General and Molecular Genetics \(3\)](#)
- [BIOL2313 Genetics Lab \(1\)](#)
- [CMBI2200 Literature Survey in CMB & Scientific Communication \(2\)](#)
- [CMBI2101 Biology of Model Organisms for CMB Research \(2\)](#)
- [ENSC2270 Introduction to Environmental Science \(3\)](#)
- [FNSC2003 Food, Nutrition and Health \(2\)](#)
- [MBTE2000 Introduction to Molecular Biotechnology \(2\)](#)

6 Units + **4 Units** + **2 Units** = **12 Units**

Students are advised to take 9-12 units to opt for 2-3 majors

Student Learning Needs

- The school is also aware of the needs of graduates not working in the field of life sciences.
- *Generic skills* of communication, language abilities, creativity, leadership, life-long learning, etc, are also important “transferable skills” .



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Paul E. Gray (UC Berkeley):
“The most important outcome of education is to help students become independent of formal education”.

Curriculum Design



at least 99 units to graduate
(JA4757)

General Education
(15 units)

Major Course
(61-66 units)

Physical Education
(2 units)



Other Courses

(at least 19 - 21 units)
Minor Programmes, e.g. Education, Geography, Japanese, Public Health, Translation, Integrated BBA, etc.

Year 1 Core Courses
(11-17 units)

Year 2 Core Courses
(~15 -20 units)

Year 3 Core Courses
(~6-8 units)

Major Elective Courses
(≥23 units)

OUR 4 YEAR CURRICULUM (JS4601)

~62 - 68 major units out of 123 (4-year curriculum)

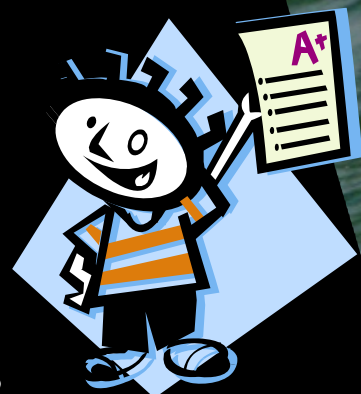
YEAR ONE (9 units) IN 4-YEAR CURRICULUM:

BIO 1002 Introduction to Biological Sciences

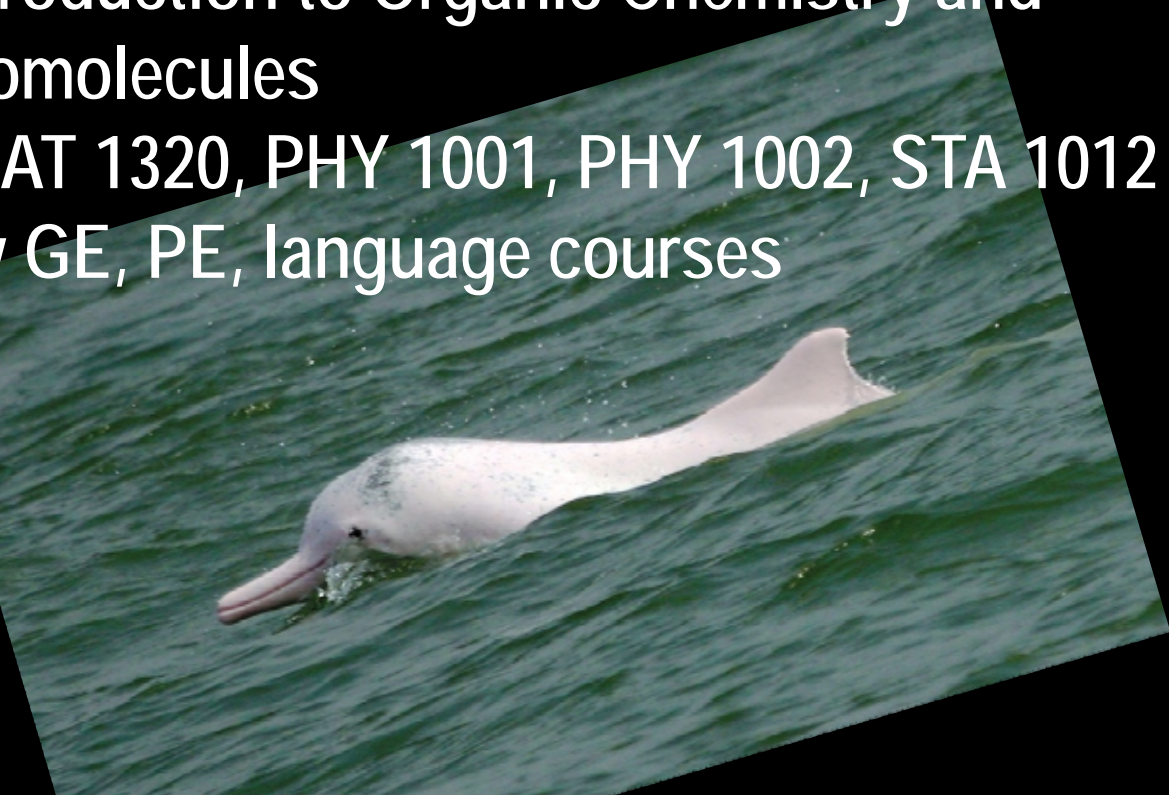
CHM 1280 Introduction to Organic Chemistry and
Biomolecules

Any one from MAT 1320, PHY 1001, PHY 1002, STA 1012

Other university GE, PE, language courses



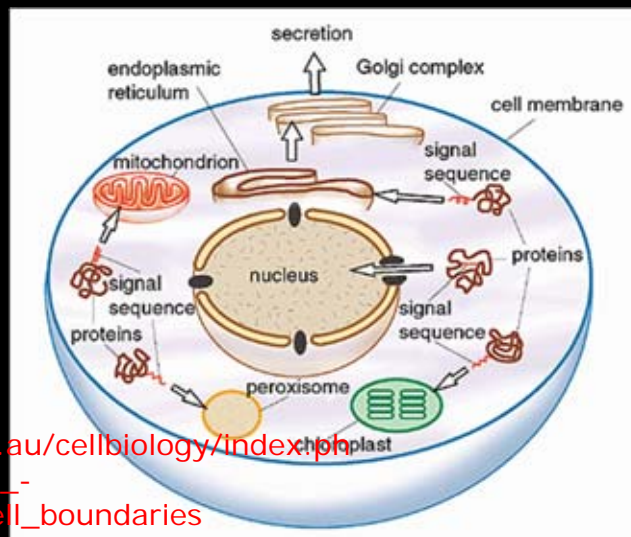
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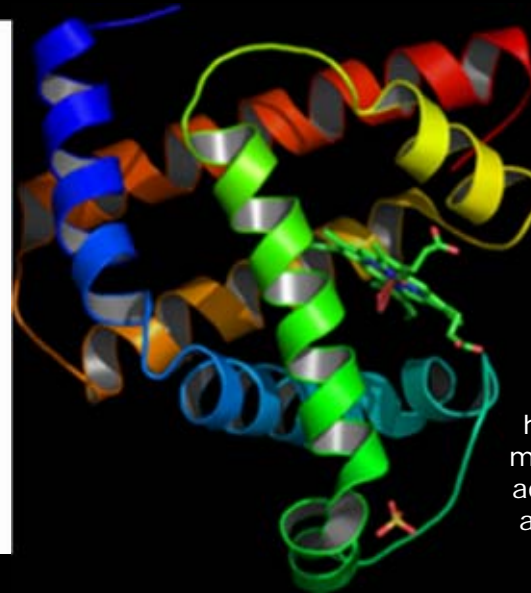
Year 1/3 or 2/4 - 1st term Curriculum: Same for all six programs of LSCI students

First Term

BCHE2030	Fundamentals of Biochemistry (3 units)
BIOL2120	Cell Biology (3 units)
LSCI2000	Research & Communication Skills in Life Sciences (1 unit)
LSCI2002	Basic Laboratory Techniques in Life Sciences (2 units)



http://php.med.unsw.edu.au/cellbiology/Index.php?title=2010_Foundations_-_Cells,_organelles_and_cell_boundaries



<http://www.google.com/imgres?imgurl=http://upload.wikimedia.org/wikipedia/commons/thumb/6/60/Myoglobin.png>

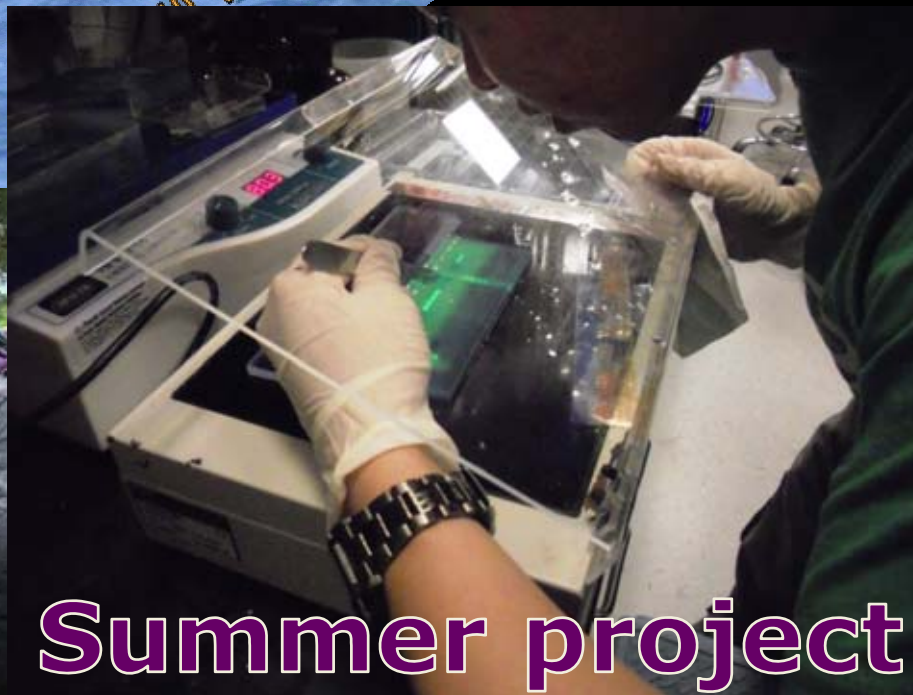
Year 1/3 or 2/4 - 2nd term Curriculum: Programme specific requirements

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 BIOL major requirement.

Field Trip

2. OUTSIDE OF CLASSROOM EXPERIENCES



Summer project

Picnic

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<https://moodle.cuhk.edu.hk/login/index.php>

2011-12 Term 1	2011-12 Term 2/3/4 2011-12 Summer	2012-13	2013-14	2014-15
Fall 2011	Spring 2012 Summer 2012			
WEBCT				
MOODLE				
CUFORUM (Teaching and Learning)				
BbPreview	BbPilot	CU @Learning System		

http://www.cuhk.edu.hk/eLearning/c_systems/elearn/implementation_s.html



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Lecture, tutorial, Lab & Field Trip

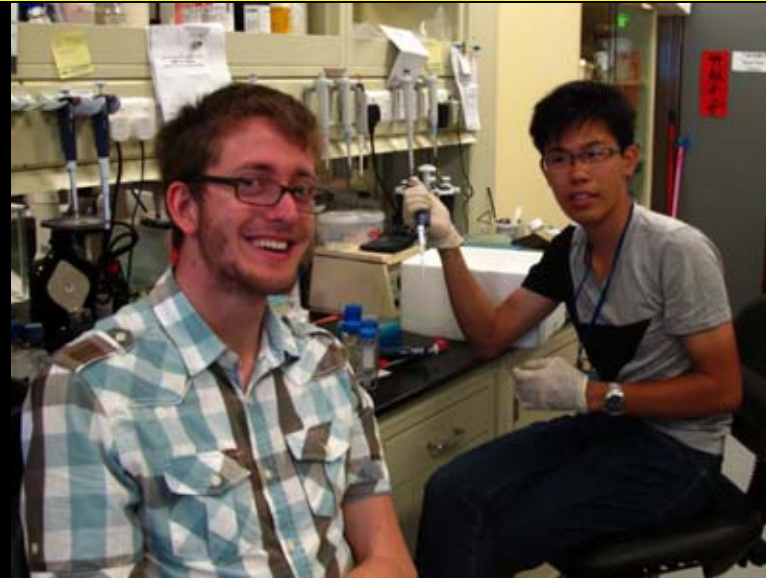


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Information \neq knowledge

Learning
how to
learn



Life sciences are
experimental sciences

Extracurricular Activities organized by the school and programmes

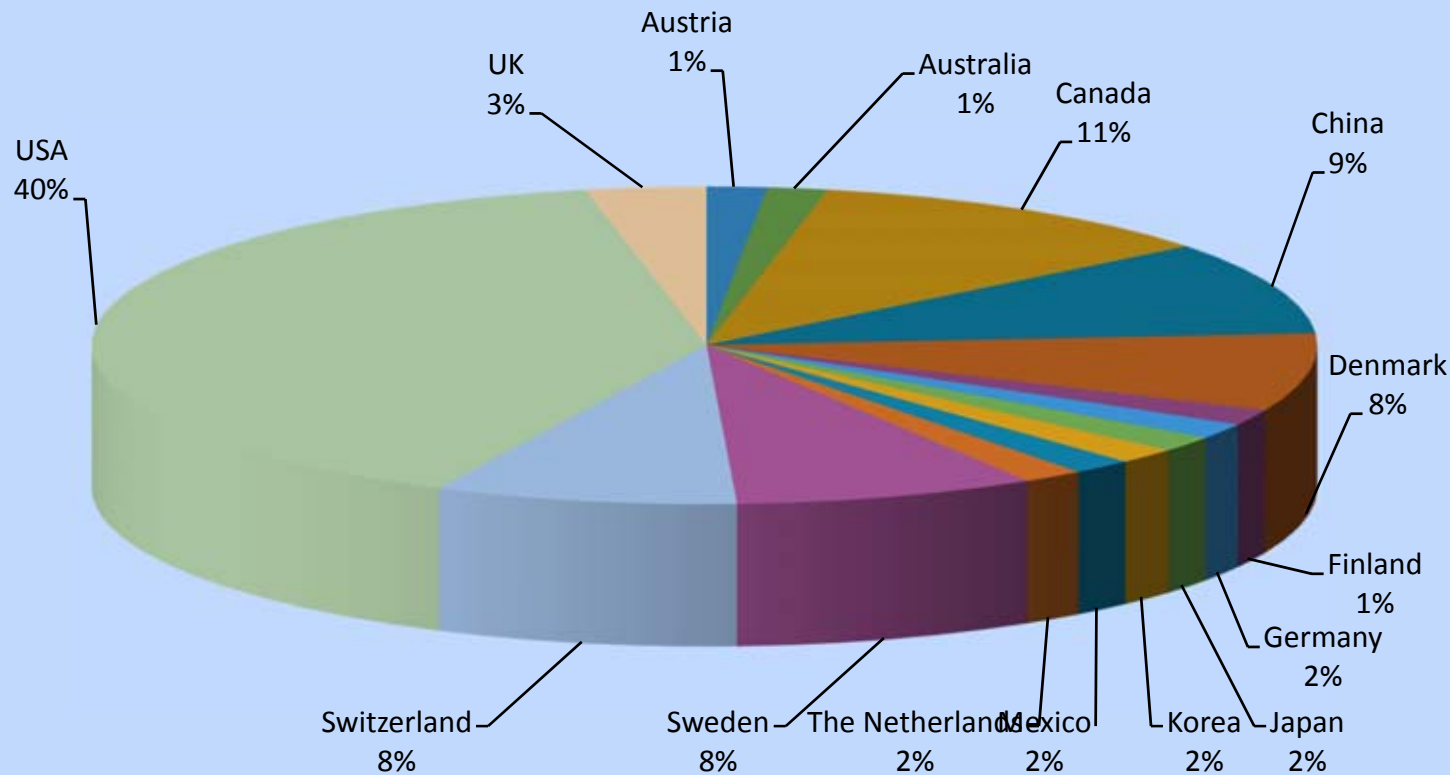
- The Young Scientist *Mentorship And Research Training* (**SMART Programme**) specifically offers a distinguished research experience to first year students. You may also receive up to \$5000 as rewards for working in the research laboratory
- **DREAM (Dedicated Research Exchange and Mentorship)**: participation in research work in foreign laboratories (e.g. Canada, UK, USA).
- **Summer Internship**: participation in summer jobs in R and D team of local biotechnology firms (e.g. HK DNA Chips, CK Life, etc). Ocean Park Foundation funds of summer experiences.
- **Summer research program**: participation in research work in any laboratories.
- **Career development workshops**: annual event allows alumni to talk about the trend of job market and their paths of success in career developments.
- **Exchange Programmes (organized by Faculty, College, or University)**

EXCHANGE PROGRAMS

<http://www.cuhk.edu.hk/sci/ssep/programme.html>

<http://www.cuhk.edu.hk/oal/>

2010 - 2011
Outgoing Science Exchange Students by Destination
理學院學生交換目的地



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Q & A₁₈

**MEETINGS,
SEMINARS,
CAREER TALKS,
FORUMS, etc.**

**BCH Curriculum
Committee Meeting**

ENS Career Talk 2009

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ACTIVITIES IN YOUR PROGRAMS



BCH Annual Picnic



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ENS Annual Picnic



COLLEGE ACTIVITIES

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Extracurricular activities organized by the student organizations



Foster better student- staff relationship

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Thank You



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