



School of Biological Sciences

Clive Lo
Biological Sciences Major
Coordinator



About us

School of Biological Sciences:

- ~40 Academic staff from > a dozen of nations (*Scientists in a global village*)
- ~12-15 Post-doctoral fellows
- ~200 Postgraduate research students (PhD and MPhil)
- ~50 Technical and administrative staff
- ~400 Undergraduate students



Biological Sciences Major

- Designed for students seeking a **broad-based training in the concepts and methodologies of Biological Sciences**
- Inquiry-driven learning environment to understand and appreciate life processes at different levels of biological organization.
- Emphasizes on both core concepts and applications.
- Experiential learning activities (Capstone experience).
- Emphasizes on problem-based learning, scientific analysis, organization and communication.
- Suitable for students entering the **teaching profession** or pursuing **careers that require comprehensive knowledge in biological sciences.**

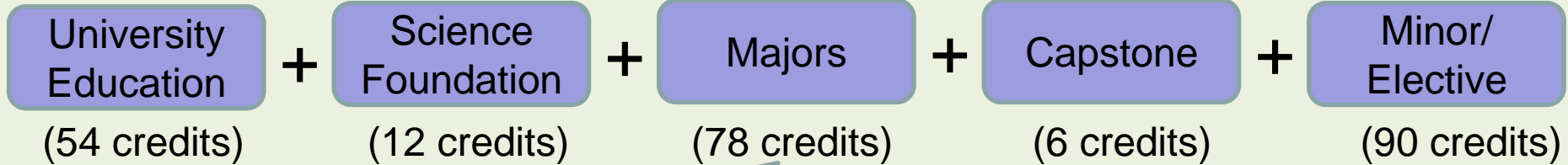
Criteria for major in Biological Sciences

Components	Courses	No. of credits	%	
Compulsory	Common core	36	22.5	(~ 9 courses)
	English	12		
	Chinese	6		
Specialization	Biological Sciences	96	40	(~ 16 courses)
Electives	Free choices or courses leading to a 2 nd major or minor (s)	90	37.5	(~ 15 courses)
Total		240	100	

- A student usually takes 10 courses (6 credits/course) each year

Biological Sciences Major curriculum

Biological Science Major requirement (96 credits)



- Introductory level courses (36 Credits)
- Advanced level courses
 - Genetics, Molecular & Cell Biology (12 Credits)
 - Ecology, Systematics, and Evolution (12 Credits)
 - Physiology and Organismic Biology I (6 Credits)
 - Physiology and Organismic Biology II (6 Credits)
 - Physiology and Organismic Biology III (6 Credits)

Biological Sciences Major Curriculum

1. Introductory Courses (48 credits)

Science Foundation Courses (12 credits)

- SCNC1111 Scientific method and reasoning
- SCNC1112 Fundamentals of modern science

Disciplinary Courses (36 credits)

- BIOL1110 From molecules to cells
- BIOL1309 Evolutionary diversity
- BIOL2306 Ecology and evolution
- BIOL2102 Biostatistics
- BIOL2103 Biological sciences laboratory course
- BIOL2220 Principles of Biochemistry (or BIOC2600)

Biological Sciences Major Curriculum

2. Advanced level courses (42 credits)

**Students will gain exposure and training in
three disciplinary areas:**

A. Genetics, Molecular & Cell Biology,

B. Ecology, Systematics, and Evolution

C. Physiology and Organismic Biology

A. Genetics, Molecular & Cell biology (at least 2 courses)

- BIOL3401 Molecular biology (6)**
- BIOL3404 Protein structure and function (6)**
- BIOL3402 Cell biology and cell technology (6)**
- BIOL3408 Genetics (6)**

B. Ecology, Systematics and Evolution (at least 2 courses)

- BIOL3301 Marine biology (6)**
- BIOL3419 Insect ecology (6)**
- BIOL3302 Systematics and phylogenetics (6)**
- BIOL3303 Conservation ecology(6)**
- BIOL3501 Evolution (6)**

C. Physiology and Organismic Biology

(at least one course from each list)

List I

- BIOL3105 Animal physiology (6)
- BIOL3205 Human physiology (6)
- BIOL3403 Immunology (6)
- BIOL3503 Endocrinology (6)
- BIOL3406 Reproduction and reproductive biotechnology (6)

List II

- BIOL3107 Plant physiology (6) **(not offered in 2019-2020)**
- BIOL3314 Plant structure and evolution (6)
- BIOL4411 Plant and food biotechnology (6)

List III

- BIOL3108 Microbial physiology (6)
- BIOL3109 Environmental microbiology (6)
- BIOL3405 Molecular microbiology (6)
- BIOL3203 Food microbiology (6)

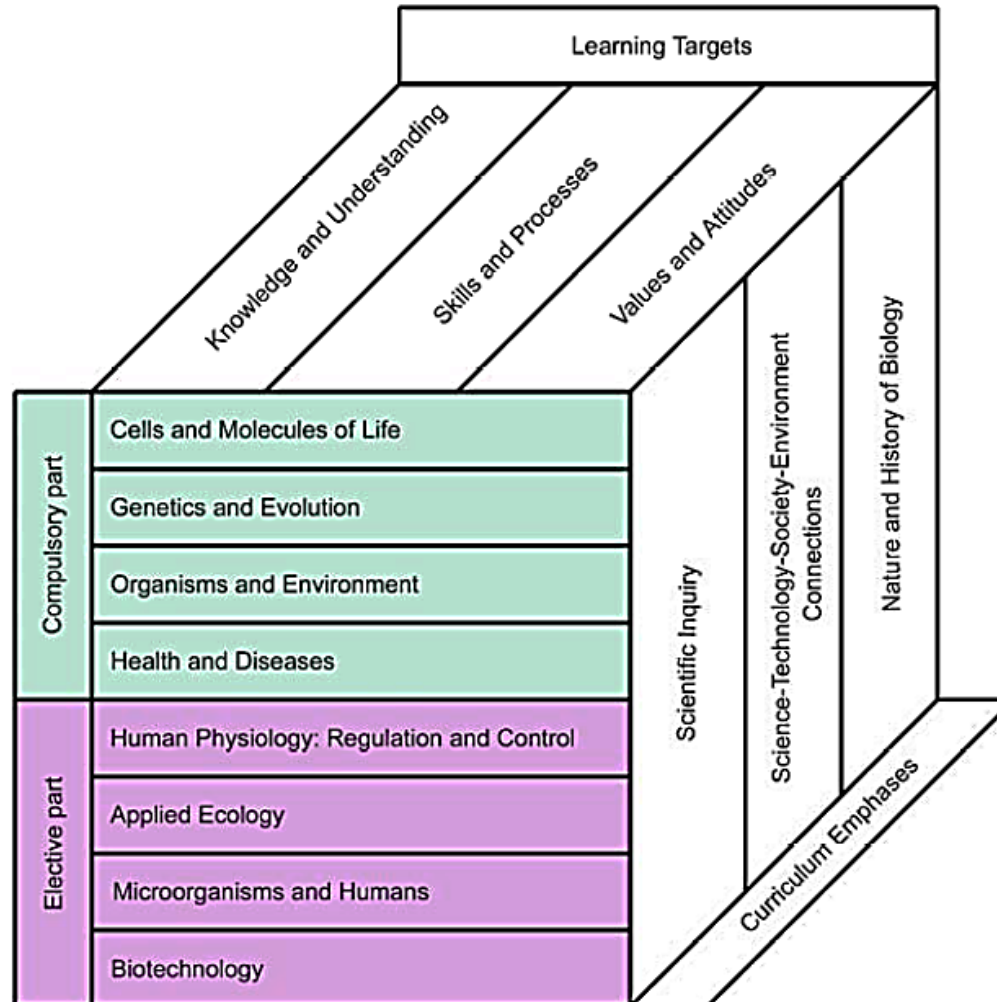
You are **strongly encouraged** to take a **second SBS Major** or a **SBS minor**:

- Major/minor in Ecology and Biodiversity
- Major/minor in Food and Nutritional Science
- Major/minor in Molecular Biology and Biotechnology
- Minor in Marine Biology
- Minor in Plant Science

Overlapping courses

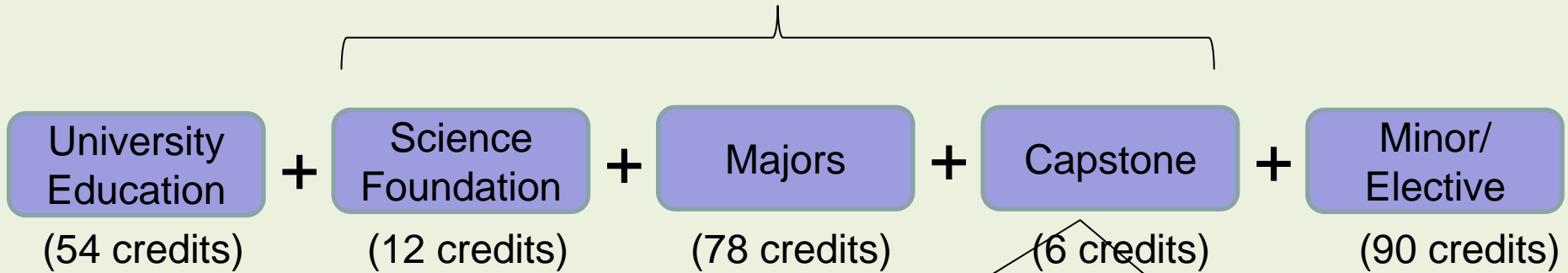
- no double counting
- replacement courses are needed
- Capstone requirement may be exempted

Biological Sciences Major & HKDSE Biology curriculum



Capstone experience

Biological Science Major requirement (96 credits)



At least ONE from below:

- **BIOL3113 Directed studies in biological sciences**
- **BIOL4113 Biological sciences project (12 credits)**
- **BIOL4114 Biological sciences internship**

Internship

- Students have a chance to experience work in commercial and government settings
- Where they gain at least 160 hours valuable workplace training

Jobs offered in previous years

- Faculty of Science and Faculty of Medicine, HKU
- Kunming Institute of Zoology, Chinese Academy of Sciences
- Environmental Protection Dept., HKSAR Government
- HK Adventist Hospital
- Kwong Wah Hospital
- Asia Ecological Consultants Ltd.
- HK Science & Technology Parks Corporation
- Castco Testing Centre Ltd.
- Cathay Pacific Catering Services (HK) Ltd.
- Gate Gourmet Hong Kong
- LSG Lufthansa Service HK Ltd.
- St James' Settlement
- Intertek Testing Services HK Ltd.

Undergraduate Life at SBS



BSc in Biological Sciences graduates

Our graduates took up careers as

- civil servants;*
- secondary school teachers,*
- scientific officers,*
- lab technicians, or in pharmaceutical industry, healthcare industry*
- environmental consultancy, etc.*

(Hong Kong, Mainland and overseas)



Research Divisions



Ecology and Biodiversity



Molecular and Cell Biology



Postgraduates

- SBS have ~200 postgraduates from local and international cities



Large Scale Aquarium



Plant Growth Chamber



Facilities

Fresh Water Aquarium



Tissue Culture Room



Green House



Equipment

Analytical



ICP-OES, PE Optima 8300



Real-Time PCR

Facilities



Flow cytometer



Atomic Absorption Spectrometer



LC/MS/MS



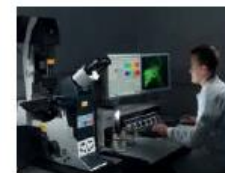
GC/MS



HPLC



Microcalorimeter, GE Micro iTC 200



Confocal microscope



Genetic Analyzer



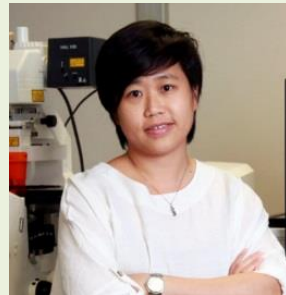
Biological Sciences Major Coordinators:



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Student Peer Advisers in 2019-20

- General roles
 - to **offer advice** in relation to academic studies to freshmen; and
 - to **facilitate** freshmen's **smooth transition** from secondary to university education
- Matching between **Student Peer Advisers (SPAs)** and freshmen starting from 2019-20
- You are highly encouraged to contact the following SPAs if you have any questions about your study (their contacts can be found at the Faculty's website)
 - Miss CHAN Ching Si (Jess) (BSc Year 2)
 - Miss CHAN Ying Wai (Candy) (BSc Year 2)
 - Miss CHU Hau Lam (Stephanie) (BSc Year 3)
 - Mr CHU Lok Hang (Vincent) (BSc Year 5)
 - Miss FOK Ching (Joice) (BSc Year 3)

