



School of Biological Sciences (SBS)

Major in Biological Sciences/
Major in Biological Sciences (Intensive)

Clive Lo
Coordinator



About us

School of Biological Sciences:

- >40 Academic staff from > a dozen of nations (*Scientists in a global village*)
- ~50 Technical and administrative staff
- ~400 Undergraduate students (all SBS majors)
- ~200 Postgraduate research students (PhD and MPhil) and postdoctoral scientists



Major in Biological Sciences

- 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 scientific analysis, organizational and communication skills.
- Suitable for students entering the **teaching profession** or pursuing **careers that require comprehensive knowledge in biological sciences**.

Curriculum for Major in Biological Sciences

Category	Courses	No. of credits	%
University Education	Common core English Chinese	36 12 6	22.5
Major	Biological Sciences	96	40
Electives	Free choices or courses leading to a 2 nd major or minor (s)	90	37.5
Total		240	100

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

Major in Biological Sciences

Requirement: 96 credits

- 1. Introductory Courses (48 credits)**
- 2. Advanced level courses (42 credits)**
- 3. Capstone requirement (6 credits)**

Major in Biological Sciences

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)**

Major in Biological Sciences

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)
BIOL3506	Evolutionary biology (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

- | | |
|-----------------|--|
| BIOL3314 | Plant structure and evolution (6) |
| BIOL4411 | Plant and food biotechnology (6) |
| ENVS3202 | Plant physiology and climate change (6) |

List III

- | | |
|-----------------|---|
| BIOL3109 | Environmental microbiology (6) |
| BIOL3203 | Food microbiology (6) |
| BIOL3405 | Molecular microbiology (6) |
| BIOL3508 | Microbial physiology and biotechnology (6) |

Major in Biological Sciences

3. Capstone requirement (6 credits)

One of the following courses:

BIOL3994 Directed studies in biological sciences (6 credits)

BIOL4964 Biological sciences internship (6 credits)

BIOL4994 Biological sciences project (12 credits)

BIOL4964 Biological sciences internship

- At least 160 hours valuable workplace training

Institutions, organizations and companies offering internship for Major in Biological Sciences in recent years:

HKU

- School of Biological Sciences, School of Biomedical Sciences, Faculty of Medicine, Department of Psychology

National University of Singapore

- Acoustic Research Lab

Al-Farabi Kazakh National University

HKSAR Government

- Agriculture, Fisheries and Conservation Department
- Leisure and Cultural Services Department

Prince of Wales Hospital

- Department of Obstetrics and Gynaecology

Ocean Park Hong Kong

World Wide Fund Hong Kong

Ecosystems Limited

Au Law Organic Farm

Geb Impact Technology Company Ltd

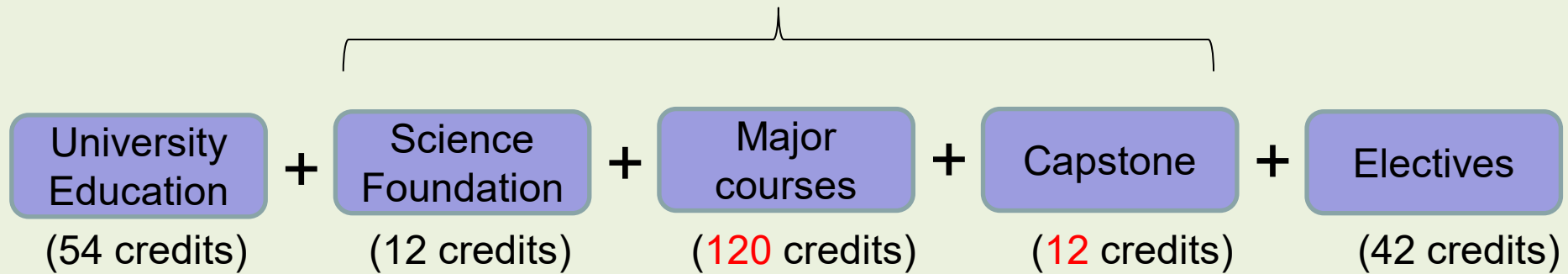
Tai Pan Bread and Cakes

Bright Future Pharmaceutical Laboratories

Avalon Biomedical (Management) Co. Ltd

Major in Biological Sciences (Intensive)

Intensive Major: 144 credits (96 in regular Biol Sci major)



Key features of the intensive major:

- Two introductory level courses: CHEM1042 and CHEM1043
- Five additional advanced level courses
- More electives available for selection:
 - BIOL4416 Stem cells and regenerative biology
 - BIOL4417 Omics and systems biology
 - BIOL3101 Animal behavior
 - BIOL3319 Tropical terrestrial ecology
 - BIOL4302 Environmental impact assessment
- Capstone: BIOL4994 Biological Sciences Project (12 credits)
- Accreditation by the Royal Society of Biology (UK)



Research Divisions



Ecology and Biodiversity



Molecular and Cell Biology



Facilities

Large Scale Aquarium



Plant Growth Chamber



Fresh Water Aquarium



Tissue Culture Room



Green House



Equipment

Analytical

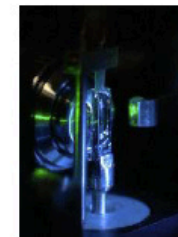


ICP-OES, PE Optima 8300



Real-Time PCR

Facilities



Flow cytometer



Atomic Absorption Spectrometer



LC/MS/MS



GC /MS



HPLC



Microcalorimeter,
GE Micro iTC 200



Confocal
microscope



Genetic Analyzer

Major in Biological Sciences graduates

Career prospects

- *civil servants*
- *secondary school teachers*
- *scientific officers*
- *technicians in pharmaceutical industry
healthcare industry, academic and
government laboratories*
- *environmental consultancy*
- *Postgraduates (MPhil, PhD)*

***In Hong Kong, Mainland, and across
the world***



Major in Biological Sciences/ Major in Biological Sciences (Intensive)

Coordinator:



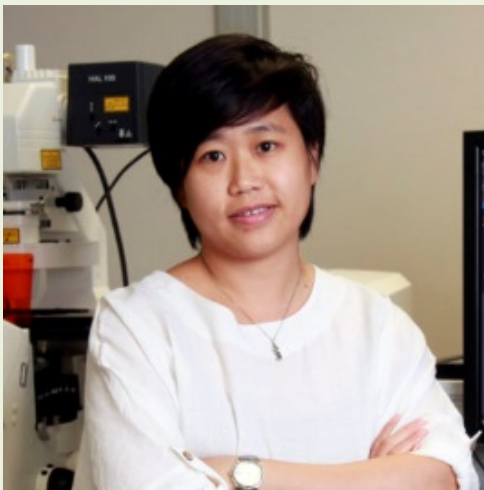
Dr. Clive Lo
clivelo@hku.hk

**Deputy Coordinator/
Capstone coordinator:**



Dr. Stefano Cannicci
(Capstone coordinator)
cannicci@hku.hk

Deputy Coordinator:



Dr. Karen Yuen
kwyuen@hku.hk

For latest information on curriculum:

<https://webapp.science.hku.hk/sr4/servlet/enquiry?frmid=MenuP>