

# + Class of 2016



## 環境科學課程

Environmental Science Programme  
(established 1994)

School of Life Sciences  
The Chinese University of Hong Kong

生命科學學院



香港中文大學  
The Chinese University of Hong Kong



The Programme is designed for students interested in environmental science and its applications in strategic **planning, policy development, pollution control and waste treatment, biodiversity, conservation, toxicology and environmental health.**

We prepare our graduates with a high level of competence in **scientific understanding of the environmental issues** and a proper handling of the appropriate techniques in addressing these issues.

The graduates are well prepared for employment in relevant **government departments, commercial and industrial enterprises, environmental consultancy, green groups, and further studies in environmental science disciplines.**

## Career Prospects:

Environmental Consultant

Green Groups (NGO)

Government Department  
Officers, e.g. AFCD, EPD,  
etc.

Accreditation, e.g. carbon  
audit, chemical analysis of  
food or ecological  
samples, etc.

Commercial sectors



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**Selected Job Profiles:**

**Mr. Chickee Chow**

*Consultant, Environmental Resources Management (ERM)*

**Ms. Anna Chung**

*Sustainability Development Manager, Mass Transit Railways Corporation*

**Miss Carol Kwok**

*Assistant Environmental Health and Safety Manager, Swire Resources*

**Dr. Eric Sze**

*Assistant Professor, Open University of Hong Kong*

**Mr. Alfred Tang**

*Senior Compliance Engineer, Avery Dennison*

**Ms. Felice Wong**

*Senior Environmental Engineer, Mass Transit Railways Corporation*

**Mr. F F Yeung**

*Country Parks Officer, AFCD, HKSAR Government*

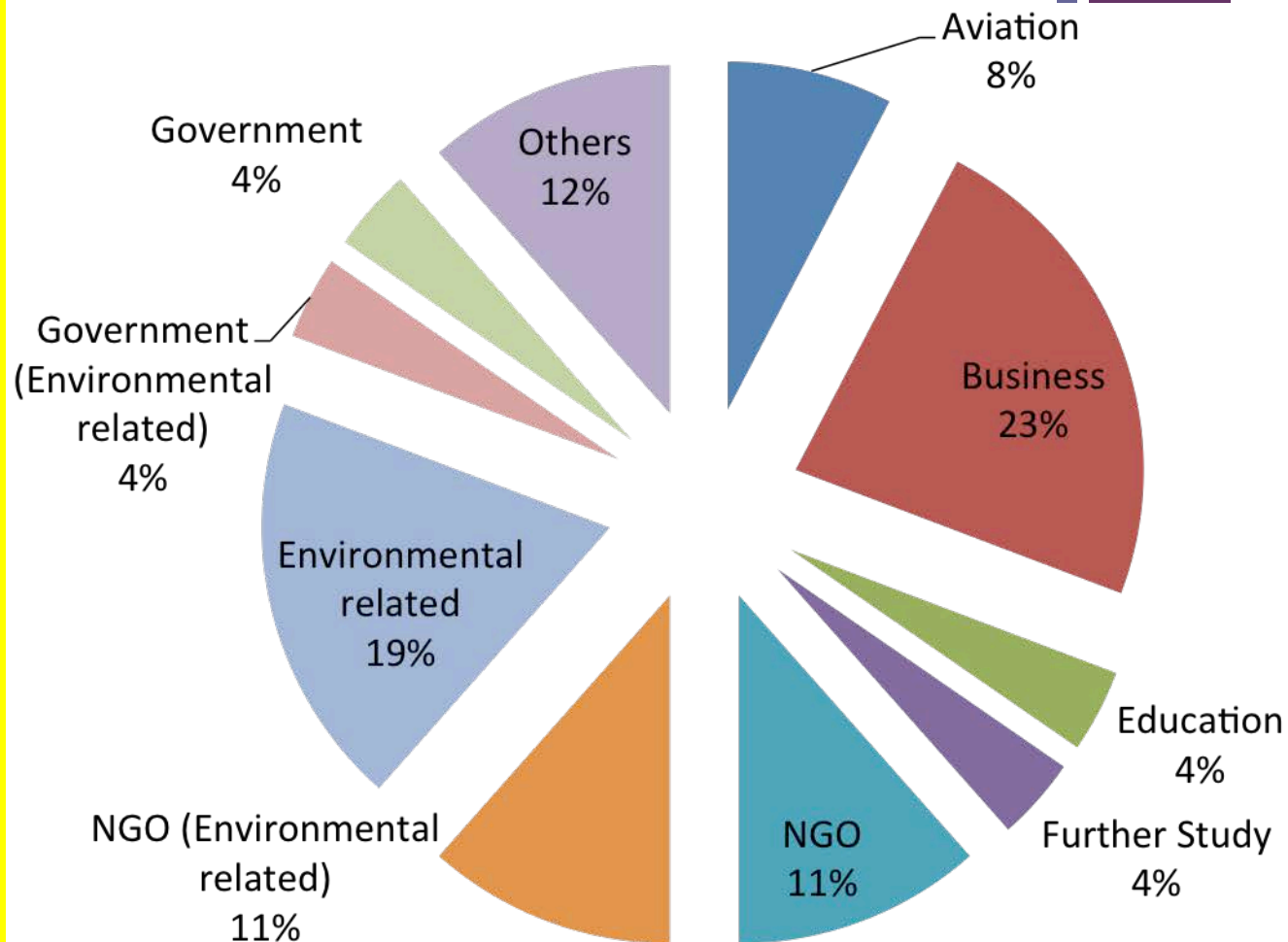
**Mr. Patrick C. W. Yeung**

*Project Manager, World Wide Fund-Hong Kong*

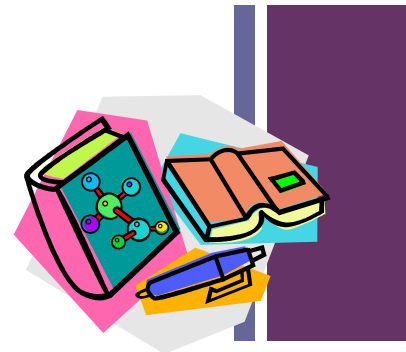
**Miss W Y Yiu**

*Environmental Protection Officer, EPD, HKSAR Government*

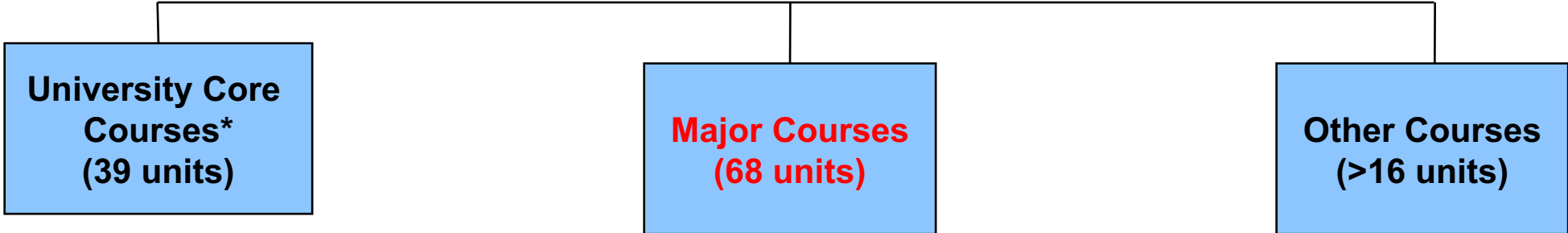
**Career Field of 2013 Full-Time First Degree in Environmental Science Programme**



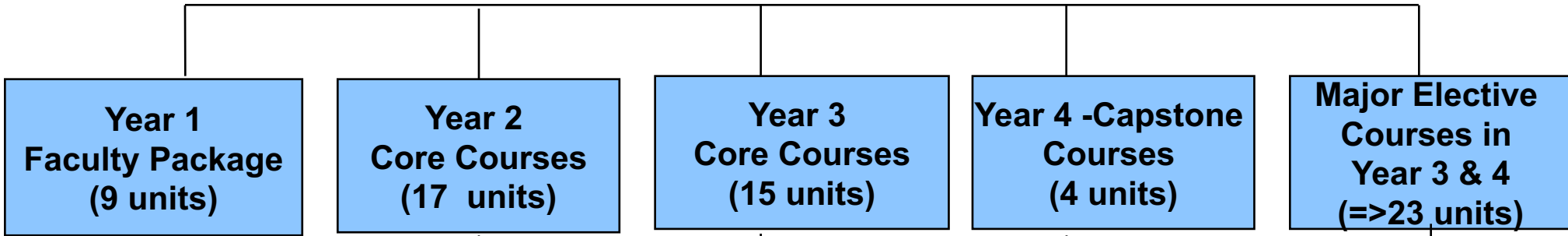
# Environmental Science Program Study Scheme and Requirements



**At least 123 units to graduate**



•Chinese & English Language, General Education, Information Technology & Physical Education



**LSCI1002**  
**CHEM 1280 or CHEM 1070 and**  
**Any faculty package**  
**courses from Math,**  
**Physics, Statistics**

BCHE2030 BIOL2210/2213  
BIOL2120 ENSC2270  
LSCI2002  
LSCI2003

ENSC2515/2517,  
ENSC3520/3820,  
3415/3417, plus  
elective courses

ENSC4906 or ENSC4907  
and  
LSCI4000  
Or  
ENSC4901/4902/4903

Course offered by ENS (Area A)  
And Biology,  
Chemistry, Geography &  
Resources Management,  
Envi Engineering, Public  
Health and  
Earth System Sciences (Area B)



## Environmental Science Curriculum Major Units: 66

Students are also encouraged to minor in Geography and Resource Management, Earth System Science, or Public Health.

### YEAR ONE (9 units):

- **LSCI 1002** Introduction to Biological Sciences
- **CHME 1280** Introduction to Organic Chemistry and Biomolecules
- Any one from MAT 1320, PHY 1001, PHY 1002, **STA 1012**
- + University GE, PE, and language courses



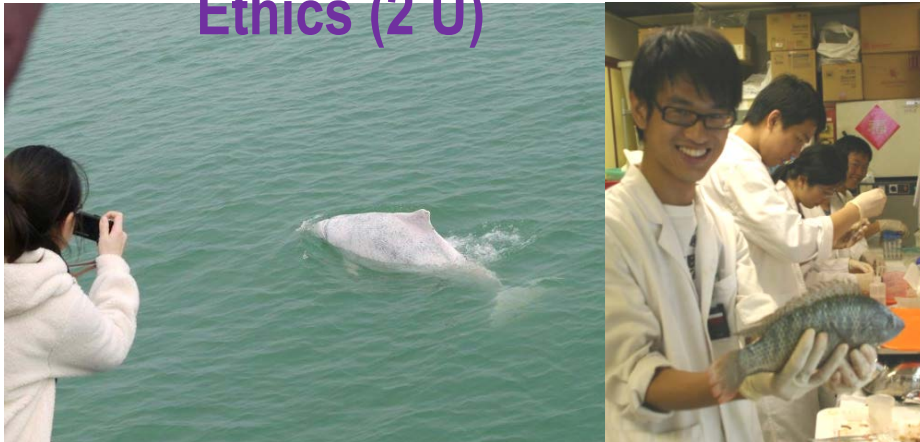
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# YEAR TWO

## (17 units)

- BCHE 2030 Fundamentals of Biochemistry (3 U)
- BIOL 2120 Cell Biology (3 U)
- LSCI 2002 Basic Laboratory Techniques in Life Sciences (2 U)
- LSCI 2003 Scientific Conduct and Ethics (2 U)

Term 1



- **ENSC 2270 Introduction to Environmental Science (3 U)**
  - **BIOL 2210 Ecology (3 U)**
  - **BIOL 2213 Ecology Lab (1 U)**
- (10 + 7 units)

Term 2

# + YEAR THREE (15 units)

- ENSC 2515 Environmental Chemistry (3 U)
- ENSC 2517 Environmental Chemistry Lab (2 U)
- ENSC 3520 Environmental & Biochemical Toxicology (3 U)
- ENSC 3820 Environmental & Biochemical Toxicology Lab (2 U)
- ENSC 3415 Chemical Instrumentation Techniques (3 U)
- ENSC 3417 Chemical Instrumentation Technique Lab (2 U)





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# YEAR FOUR

**Total major core: 45 units**

**+ 23 units electives = 68 units**

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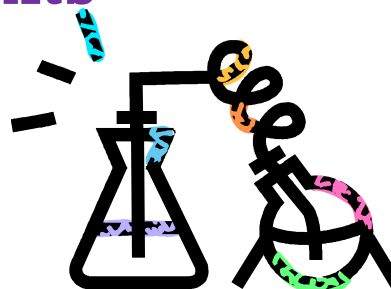
**CAPSTONE COURSES = 4 to 6 units**

■ **ENSC4901/4902/4903 Senior Experimental Projects (I/II/III; 2+2+2 U = 6 U) or**

■ **LSCI4000 Senior Literature Research (3 U)(Term 1 or Term 2)**

■ **ENSC4906 Internship (2U) or**

■ **ENSC4907 Field Study (2U)**



# Major Elective Courses (> 23 units)

**AT LEAST 12 units from Group A:**

<b>ENSC3230</b>	<b>Principles of Environmental Protection and Pollution Control (or GRMD3202)</b>	<b>3 units</b>
<b>ENSC4240/4242</b>	<b>Environmental Impact Assessment/Lab</b>	<b>3/2 units</b>
<b>ENSC4250</b>	<b>Environmental Health</b>	<b>3 units</b>
<b>ENSC4310/4510</b>	<b>Methods in Toxicological Research/Lab</b>	<b>3/2 units</b>
<b>ENSC4525</b>	<b>Advanced Environmental Chemistry</b>	<b>3 units</b>
<b>ENSC4535</b>	<b>Chemical Treatment Processes</b>	<b>3 units</b>



## **AT LEAST 10 UNITS FROM Group B:**

**BIOL**3012 Biodiversity Lab I (2U), 3022 Biodiversity Lab II (2U), 3410 General Microbiology (3U), 3560 Biology of Fungi and Non-Vascular Plants (2U), 3570 Biology of Vascular Plants (2U), 3610 Invertebrate Form and Function (2U), 3620 Vertebrate Life, (2U) 3630 Animal Physiology (3U), **3710 Marine Biology** (3U), **4012 Field and Environmental Biology** (2U), **4220 Environmental Biotechnology** (3U), **4260 Conservation Biology** (3U), **4510 Hong Kong Flora and Vegetation** (3U);

**CHEM**4280 Chemistry in Biofuel (2U), **4400 Advanced Analytical Chemistry** (2U), **4430 Practices in Testing Laboratory** (2U);

**ENER**3020 Energy Utilization and Human Behaviour (3U),

**ESSC**3200 Atmospheric Science (3U), **3300 Introduction to Physical Oceanography** (3U), **3600 Understanding Our Biosphere** (3U), **4400 Hydrology** (3U),

**GRMD**3203 Urban Environmental Problems (3U), **3209 Soil Science** (3U), **3323 Urban and Regional Planning** (3U) (or **3224 Tourism Planning and Management**, 3U), **4202 Hydrology and Water Resources** (3U), **4203 Ecosystem Restoration and Management** (3U), **4204 Environmental Planning and Assessment** (3U), **4401 Energy Resources** (3U);

**PHPC**3016 Environment and Health (3U);

**STAT**3210 Statistical Techniques in Life Sciences (3U)



# Revised Bloom's Taxonomy Table

The knowledge dimension	The cognitive process dimension					
	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual knowledge	Yellow	Yellow	Yellow	Green	Green	Green
Conceptual knowledge	Yellow	Yellow	Yellow	Green	Green	Green
Procedural knowledge	Yellow	Yellow	Yellow	Green	Green	Green
Meta-cognitive knowledge	Green	Green	Green	Green	Green	Green

**Assessments**  
(Affirmative and Summative with Criteria Referencing):

**Assignment,**  
Term Paper,  
Poster and Oral Presentations,  
Group Project,  
**Final Examination.**

<http://www.cuhk.edu.hk/sci/OBA/information/information01.html>

# Suggested Concentrations

## Concentration 1: Environmental Management



## Concentration 2: Environmental Chemistry

# Field Trips and Field Studies



Field Study to Sabah studying pitcher plants



iSeahorse – The new insight of environmental conservation



Mount Kinabalu (4095.2 M)



Danum Valley, Sabah



The Chinese University of Hong Kong  
ENSC4907 Field Study  
Tsoi Tak Chi (1155057936)

Field Study to Philippines for seahorse survey (ENSC 4907)



**△North-East  
New Territories  
(NENT)  
Landfill Gas  
Utilisation**



**Sha Lo Tung Field Study  
(EIA Lab)**

**Site visit at a metal finishing plant**



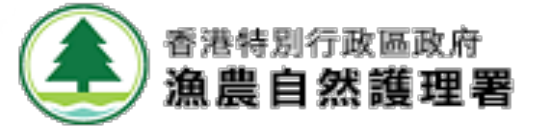
10/20/16

KMCHAN, ENS PROGRAM, CUHK

**Tai O Field Trip  
(ENSC2270)**

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# INTERNSHIP





# Scholarships



## Chevening Aberdeen Scott Scholarship

[http://www2.cuhk.edu.hk/gss/download/pdf/Scholarship/Scholarship\\_20141003\\_1.pdf](http://www2.cuhk.edu.hk/gss/download/pdf/Scholarship/Scholarship_20141003_1.pdf)



<http://www.iso.cuhk.edu.hk/english/publications/newsletter/article.aspx?articleid=61846>

# College Scholarships and Activity Funds

# Exchange Programs

Over 20 students joined exchange programs to the following universities in the last decade.

**Australia:** ANU, NSW

**Canada:** UBC, U of T, Waterloo

**Denmark:** Copenhagen

**Finland:** Helsinki

**Germany:** Hannover

**Japan:** Christian U, Kyoto Sangyo

**Mainland:** Peking

**Norway:** Bergen

**Sweden:** Royal Ins. Of Technology

**Switzerland:** Lausanne

**USA:** Penn State, Ohio State,  
Claremont McKenna



**Career  
Talks**  
*e.g. from  
CIWEM*





*Environmental Integrity & Excellence*

# HKIQEP

## 香港環專會

## Our Institutional Partners

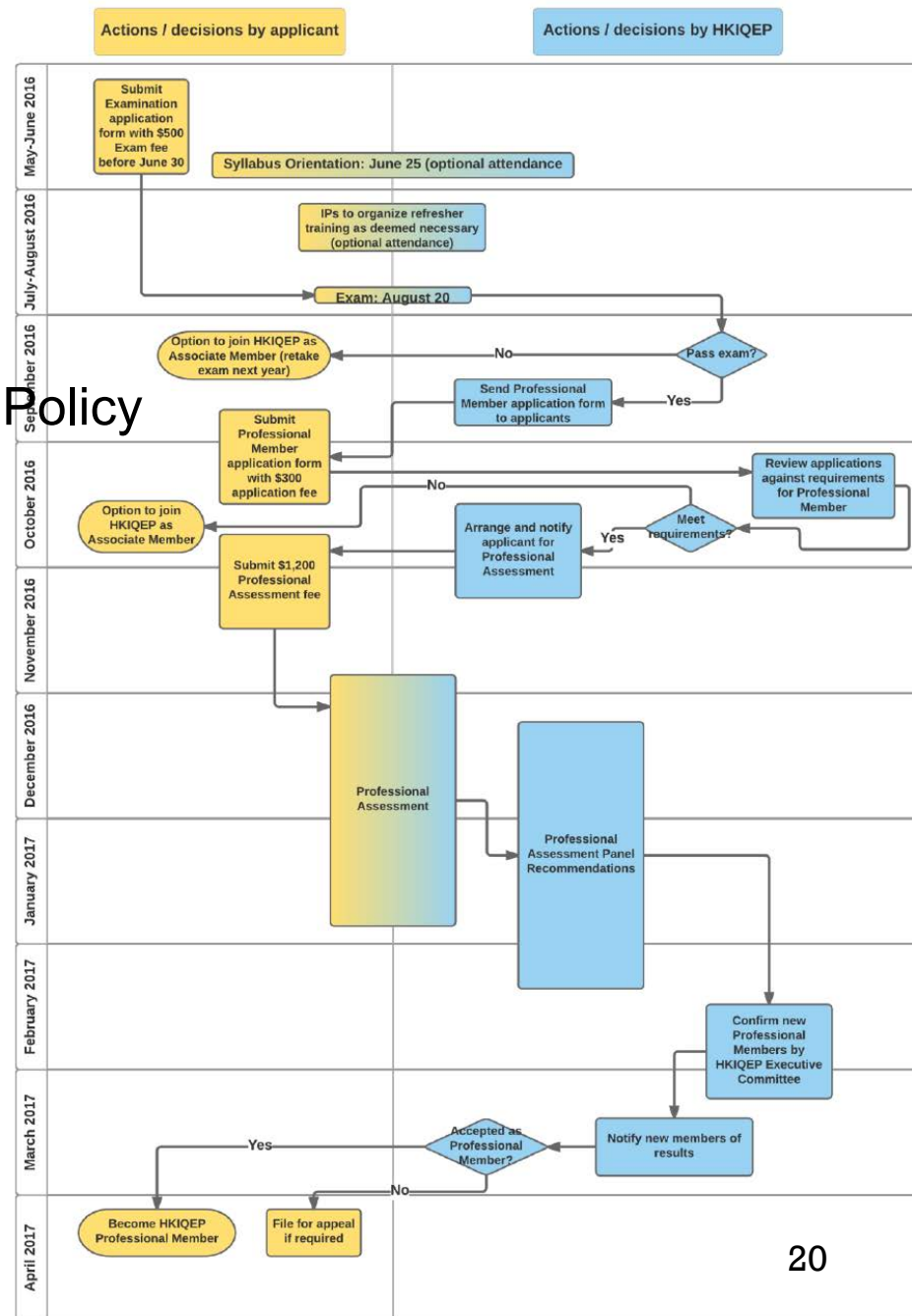
We collaborate with environmental professional institutions which share the same vision and goal of raising the standard of the environmental profession in Hong Kong. We work together with them to shape the qualification process for environmental professionals, as well as to mutually support each other in our missions. Our Institutional Partners include:

- Chartered Institution of Water and Environmental Management (CIWEM HK);
- Environmental Management Association of Hong Kong (EMAHK);
- Hong Kong Institute of Acoustics (HKIOA);
- Hong Kong Institute of Environmental Impact Assessment (HKIEIA); and
- Hong Kong Institute of Environmental Protection Officers (HKIEPO).

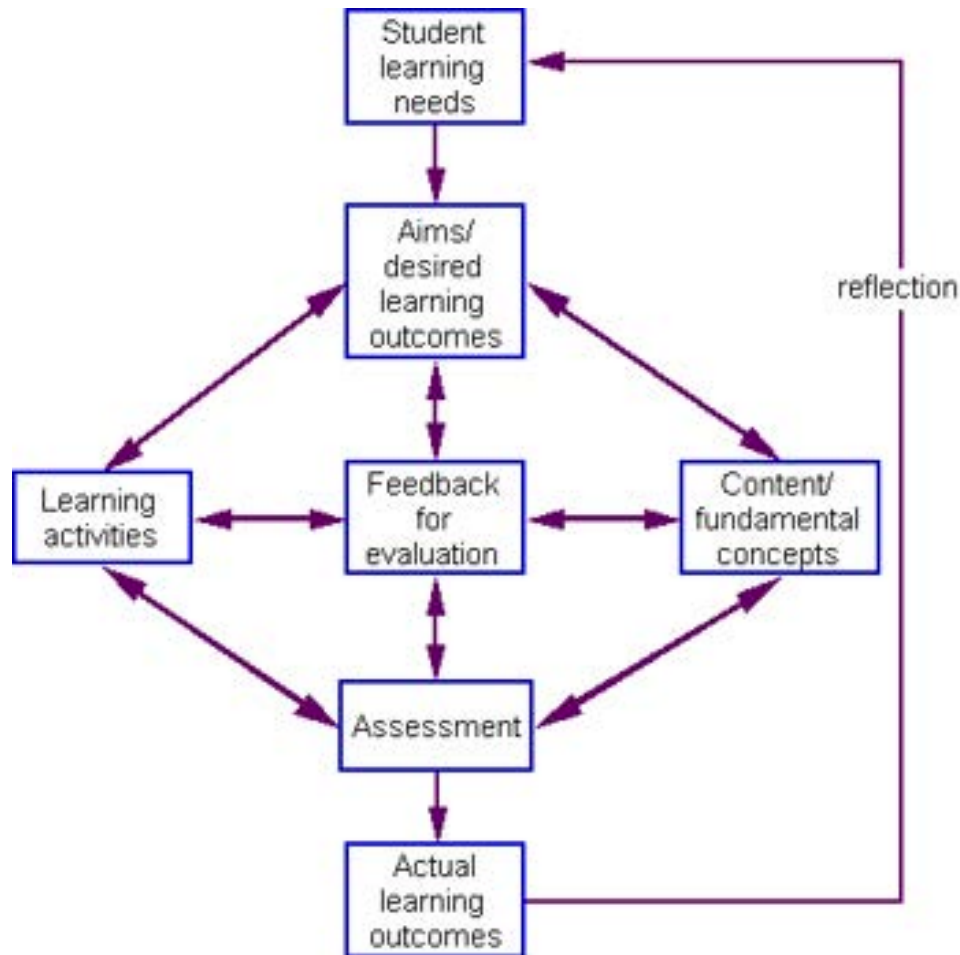
[http://hkiqep.org/membership/qualification-process-2016\\_17/](http://hkiqep.org/membership/qualification-process-2016_17/)

- 1.Environmental Science, Management & Policy
- 2.Air
- 3.Noise
- 4.Water
- 5.Waste
- 6.EIA (&HA)

<http://hkiqep.org/wp-content/uploads/2016/04/HKIQEP-Syllabus-Suggested-Materials-21March2016.pdf>



# OBA Practice in CUHK



**Feedbacks:**

**Curriculum Forum,**

**Course Teaching  
Evaluation.**

**Staff-Student  
Consultation Committee**

**Program Committee  
Meeting**

# Staff / Contacts

Name	Tel. No.	Room No.	Email
Prof. P O Ang	3943 6133	MSL	<a href="mailto:put-ang@cuhk.edu.hk">put-ang@cuhk.edu.hk</a>
Prof. K M Chan	3943 4420	SC 184	<a href="mailto:kingchan@cuhk.edu.hk">kingchan@cuhk.edu.hk</a>
Prof. L M Chu	3943 6378	SC E407	<a href="mailto:leemanchu@cuhk.edu.hk">leemanchu@cuhk.edu.hk</a>
Dr. Apple Chui	3943 8026	SC E412A	<a href="mailto:applepychui@cuhk.edu.hk">applepychui@cuhk.edu.hk</a>
Prof. S L Lam	3943 8126	SC G58	<a href="mailto:lams@cuhk.edu.hk">lams@cuhk.edu.hk</a>
Prof. H W Luo	3943 6121	MSL	<a href="mailto:haiweiluo@cuhk.edu.hk">haiweiluo@cuhk.edu.hk</a>
Prof. H K Lee	3943 6331	SC 261	<a href="mailto:hklee@cuhk.edu.hk">hklee@cuhk.edu.hk</a>
Prof. Susanna S T Lee	3943 6333	SC 181	<a href="mailto:lee2022@cuhk.edu.hk">lee2022@cuhk.edu.hk</a>
Prof. P K Wong	3943 6383	SC E411	<a href="mailto:pkwong@cuhk.edu.hk">pkwong@cuhk.edu.hk</a>
Prof. Jimmy C M Yu	3943 6268	SC 263	<a href="mailto:jimyu@cuhk.edu.hk">jimyu@cuhk.edu.hk</a>

## General Office: SC132, Science Centre, North Block

**Contact person** : Mr. Patrick Tang  
**Tel** : 3943 6294  
**Fax** : 2603 5646  
**Email** : [ens@cuhk.edu.hk](mailto:ens@cuhk.edu.hk)  
**Homepage** : <http://www.cuhk.edu.hk/ens/>



MSL: LFS Marine Lab  
SC: Science Center  
MMW: Mong Man Wai Bldg