Welcome to the major of

Environmental Science

What is Environmental Science?

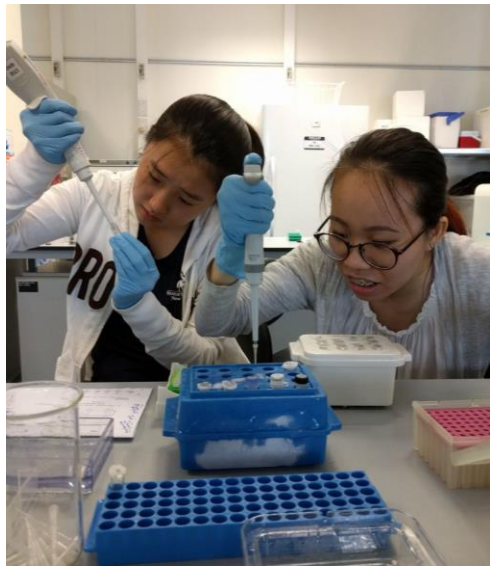
An interdisciplinary approach to studying and finding solutions for environmental problems relevant to everyday life.

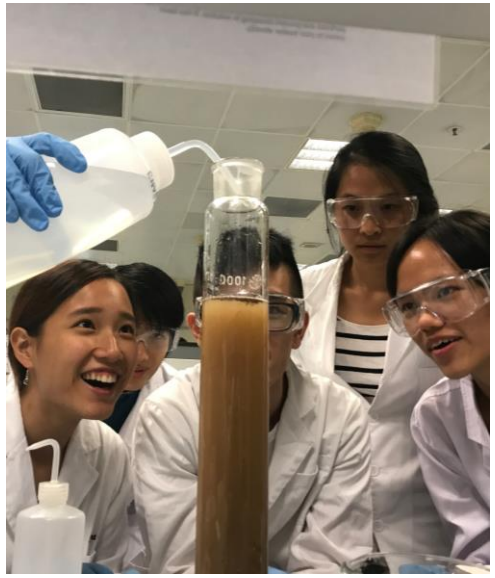
Integrates physical, biological and information sciences to better understand the relationship between humans and the environment.




Environmental Science @ HKU

- A broad-based education
  - Emphasis on natural sciences
  - Practical field and analytical skills
  - Communication
- Critical thinking skills
- Multiple perspectives
- Ability to solve novel problems
- Develop leadership skills





Experiential learning = learning by doing!

University Aims

- UEA1: Pursuit of academic/professional excellence, critical intellectual inquiry, and life-long learning
- UEA2: Tackling novel situations and ill-defined problems
- UEA3: Critical self-reflection, greater understanding of others, and upholding personal and professional ethics
- UEA4: Intercultural communication and global citizenship
- UEA5: Communication and collaboration
- UEA6: Leadership and advocacy for the improvement of the human condition

Curriculum: Introductory level courses (48 credits)

Strong background in basic sciences – to understand the basic processes that sustain life in the earths systems.

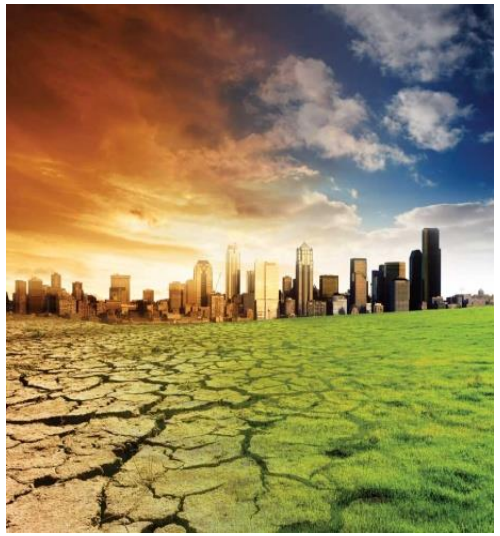
- Mandatory
  - ENVS1401 Introduction to environmental science
  - CHEM1042 General chemistry I **OR** CHEM1041 Foundations of chemistry
  - ENVS2001 Methods in environmental science
  - ENVS2002 Environmental data analysis

- Electives
  - EASC1020 Introduction to climate science **OR** EASC1401 Blue planet
  - ENVS1301 Environmental life science **OR** BIOL2306 Ecology and evolution
  - CHEM2241 Analytical chemistry I
  - GEOG2120 Introduction spatial analysis

Curriculum: advanced level courses (42 credits)

Core Course: ENVS3004 Environment, Society, and Economics

Plus at least 36 credits of other electives:



Climate Change

Urban ecology

Pollution

Flexibility to choose the courses that match your interests

Curriculum: advanced level courses (42 credits)

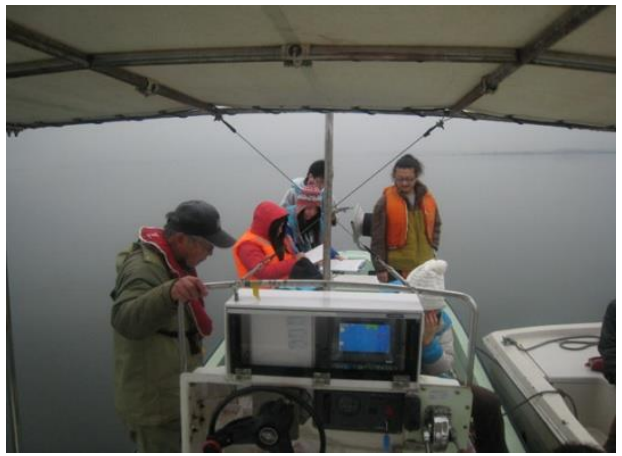
Core Course: ENVS3004 Environment, society, and economics

Plus at least 36 credits of other electives:

- BIOL3109 Environmental and molecular ecology
- BIOL3216 Food waste management
- BIOL3217 Food, environment and health
- BIOL3303 Conservation ecology
- BIOL4302 Environmental impact assessment
- CHEM3141 Environmental chemistry
- CHEM3241 Analytical chemistry II: chemical instrumentation
- EASC3020 Global change: anthropogenic impact
- EASC3405 Environmental remote sensing
- ENVS3007 Natural Hazard and mitigation
- ENVS3010 Sustainable energy
- ENVS3019 Urban ecology
- ENVS3020 Global change ecology
- ENVS3042 Pollution
- ENVS3202 Plant ecophysiology and climate change
- ENVS3313 Environmental oceanography
- ENVS3402 Qualitative data, social science methods and decision making in environmental science
- ENVS3403 Spatial analysis in environmental biology
- GEOG3202 GIS in environmental studies
- GEOG2127 Environmental management

Opportunities for local and overseas fieltrips

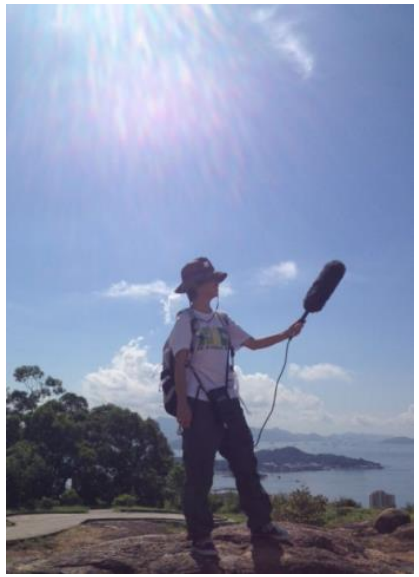
- Overseas Field Courses
  - ENVS3022 Environmental science field course (Japan)
  - ENVS3028 Coastal sustainability (USA, Malaysia)
  - ENVS3401 Understanding tropical ecosystems in a changing world (Borneo)
  - EASC3419 Earth system science field studies (USA)



Capstone Requirement – Final Year

Choice between:

- Environmental Science Project
- Directed Studies in Environmental Science
- Environmental Science Internship



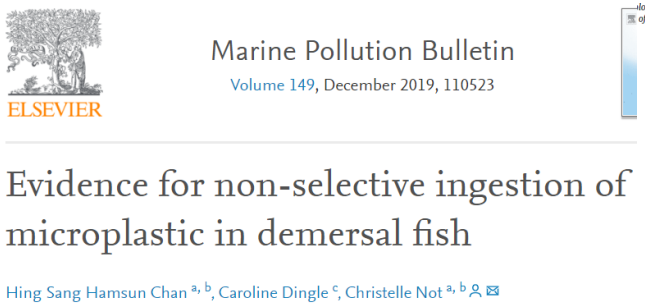
Opportunities for Research

- The environmental science major provides many opportunities to gain hands on research experience in environmental science, from Year 1.
- Our teachers have experience across a wide range of related disciplines.
- Many of our student projects have been published in scientific journals and have had impacts on the local environment


LETTER

Impact of cutting meat intake on hidden greenhouse gas emissions in an import-reliant city

Y Y Yau[1], B Thibodeau[1,2] and C Not[1,2,3]


ELSEVIER

Marine Pollution Bulletin

Volume 149, December 2019, 110523

Evidence for non-selective ingestion of microplastic in demersal fish

Hing Sang Hamsun Chan [a, b], Caroline Dingle [c], Christelle Not [a, b]


ELSEVIER

Contents lists available at ScienceDirect

Behavioural Processes

journal homepage: www.elsevier.com/locate/behavproc

Low frequency dove coos vary across noise gradients in an urbanized environment

Fengyi Guo[a,b], Timothy C. Bonebrake[a,b], Caroline Dingle[b,*]


Students' Corner

Undergraduate Environmental Science Research Published in Peer-reviewed Journal

Hear from our Students

Kylie Ka Lai YUEN

2015 BSc graduate (major in Environmental Science)

"Living in an urban city, we tend to forget that we are very much connected to nature and relying on its resources. Hopefully, the new findings can raise public awareness that human health goes hand in hand with environmental protection. From sample collection to experimental design to data analysis, our journey to publishing this article was not smooth though. We encountered unforeseen obstacles and setbacks along the way, but making continuous improvements by trial and error is what makes this a truly fruitful learning experience."

The Paper

Pui Kwan CHEUNG

2014 BSc graduate (double major in Environmental Science and Geography)

2014 Exchange study at the University of Edinburgh, UK

2013 Founding member, the Society of Environment Science, Faculty of Science, HKU

2011 – 2012 Academic Secretary, Greenwoods, HKUSU

"Publishing the results of an undergraduate research project in a scientific journal was an achievement that I've never thought of! It was indeed a long and difficult journey which would never be completed without the concerted effort by our group members and the support from our supervisor Dr Baker. I believe all the passion that I have in Environmental Science stems from my desire to protect the natural environment. Studying Environmental Science at HKU was the best decision I've ever made in my life. Few things in life are happier than devoting yourself in a subject and a career that you love. Environmental Science didn't make me a fortune, but it made every day of my university life a happy day, and most importantly it made me realise the importance of having the courage to choose a subject that you love, instead of a subject that the society loves."

Students collecting beach water sample.

Accredited Major – Benefit to Students

- Reduced time to professional accreditation
- Student membership
- Mentorship opportunities
- Networking with environmental professionals
- Conferences, workshops and other events to develop skills and knowledge

HK
Environmental Integrity & Excellence

HKIQEP
香港環專會

Our major is accredited by the Hong Kong Institute of Qualified Environmental Professionals

Accredited pathway: required courses*

Course	Course Title
ENVS1401	Introduction to environmental science
ENVS2001	Methods in environmental science
ENVS2002	Environmental data analysis
ENVS3004	Environment, society and economics
ENVS3010	Sustainable energy and environment
ENVS3019	Urban ecology
ENVS3042	Pollution
ENVS3402	Qualitative data, social science methods and decision-making in environmental science
EASC3405	Environmental remote sensing
BIOL4302	Environmental impact assessment
GEOG2127	Environmental management

*Students must take all of these courses in order to receive all the benefits of accreditation.

Major Coordinators

Dr Christelle Not
Dept of Earth Sciences

Prof Jin Wu
School of Biological Sciences

ENVS Teachers come from multiple departments, providing interdisciplinary expertise and diverse experience

Prof Ashton
Biology

Prof Baker
Biology

Prof Bonebrake
Biology

Prof Chu
Chemistry

Prof Djurisic
Physics

Prof Khan
Earth Sciences

Prof Liu
Earth Sciences

Dr Luo
Earth Sciences

Prof Michalski
Earth Sciences

Prof Mumby
Biology/
Social Sciences

Prof Seymour
Biology

Prof Vengatesen
Biology

Prof Yasuhara
Biology

Jobs held by recent graduates

- Government (EPD/AFCD)
- Environmental Consultants
- Private companies (ESG, Sustainability)
- NGOs
- Academic Research
- Conservation & Sustainability

BUSINESS ENVIRONMENT COUNCIL 商界環保協會

THE PENINSULA HOTELS

Environmental Protection Department
The Government of the Hong Kong Special Administrative Region

Ocean Park Hong Kong 香港海洋公園

WWF®

ERM

THE HONGKONG AND SHANGHAI HOTELS, LIMITED 香港上海大酒店有限公司

ARUP

MOTT MACDONALD

AECOM

Additional Support

- Skills training sessions
- Advice and mentoring
- Open door policy
- **Student Peer Advisers**

THE SOCIETY OF ENVIRONMENTAL SCIENCE, FACULTY OF SCIENCE, HKU

- Society of Environmental Science
  - envshku.wix.com/senvs
  - “The Society of Environmental Science” (FB)
  - HKUSES

We look forward to you joining us!