Welcome to the major of Environmental Science

6901 Bachelor of Science
What is Environmental Science?

An interdisciplinary approach to studying environmental problems relevant to everyday life:
How does ENVS differ from Earth Sciences, Chemistry, or Ecology & Diversity???
Why study ENVS in Hong Kong?
Coughing much? Hong Kong suffers bigger rise in poisonous ozone pollution than industrial Guangdong

But environmental campaigners say pollution cannot be solely blamed on mainland sources.

Rubbish effort: Hong Kong environment bureau slammed for slow work on food waste disposal

Audit Commission calls for more timely action as landfills face increased pressure.

Kong's potable water evaporate per year, green group says.

Country park living: Build homes on 'low eco value' Hong Kong parks, suggests Chief Executive CY Leung.

Chief executive's comments come a day after major think tank makes the same suggestion.

Despite more than 1,000 counted on sale, no imports of the fish took place last year according to official records, exposing extent of illegal trade.
What do Environmental Scientists do?

- Collect environmental data
- Analyze data
- Report scientific and technical information
- Environmental permits & licenses
- Review environmental policies
- Advise companies on environmental practice
Career Prospects
U.S. Bureau of Labor Statistics (BLS) - Environmental Science jobs will grow by 25% in the next decade!

- Environmental consultant
- Education/outreach
- Financial analyst
- Environmental chemist
- Environmental laboratories
- Conservation Organization
- Environmental professional
- Alternative technology
- Academic research
- Planning
Recently hired graduates:

- Government (EPD/AFCD)
- NGOs
- Private companies
- Academic Research
- Conservation & Sustainability
- Environmental Consultants
Environmental Science @ HKU

- A broad-based education
  - Emphasis on natural sciences
  - Practical field skills
  - Important analytical skills
  - Communication skills

- Ability to solve problems
  - Intellectual curiosity
  - Critical thinking
  - Multiple perspectives
ENVS Faculty – Biological Sciences

Dr Dingle
Major Coordinator

Dr Baker
Coral reef biology

Dr Bonebrake
Climate change; urbanization

Dr Yasuhara
Paleoclimate: marine ecosystems

Dr Gu
Environmental Toxicology + Microbiology

Dr Thiyagarajan
Environmental Life Science
ENVS Faculty – Earth Sciences, Chemistry, Physics & Social Science

Dr Not
Climate change, Plastic Pollution

Dr Thibodeau
Geochemistry, Pollution

Dr Liu
Climate change

Professor Zong
Climate change

Dr Chan (Chemistry)
Environmental chemistry

Professor Djurišić (Physics)
Sustainable Energy

Dr Mumby (SBS/Social Science)
Environmental Policy
Introductory level courses (48 credits)

**Science Foundation Courses** (12 credits)
- Scientific Methods and Reasoning
- Fundamentals of Modern Science

**ENVS Core Courses** (18 credits)
- Introduction to Environmental Science
- Environmental Field and Lab Course
- Environmental Data Analysis
- General Chemistry I

**ENVS Elective courses** (12 credits)
- Ecology (Environmental Life Science, Ecology and Evolution)
- Earth Science (Blue Planet, Introduction to Climate Change)
Advanced level courses (42 credits)

**ENVS3004 Environment, society and economics**

Plus at least 36 credits of other electives

Climate Change  
Urban Ecology  
Pollution

3 suggested pathways
Capstone Requirement – Final year (6 credits)

- Environmental Science Project
- Directed Studies in Environmental Science
- Environmental Science Internship
Experiential learning: Internships

Ocean Park: Environmental Education

Mott-MacDonald: Environmental Impact Assessment

United States Geological Survey: Property and Environment Research Center

WWF HK: Low-carbon Office Operation Program

EPD, AFCD, CLP, HK Observatory
Experiential learning: field courses

- Environmental Science in Practice (Japan)
- Environmental Field/Lab Methods (Local)
- Extra-curricular trips: (Shanghai)
Students collecting beach water sample.

To swim or not to swim? A disagreement between microbial indicators on beach water quality assessment in Hong Kong

Pui Kwan Cheung, Ka Lai Yuen, Ping Fai Li, Wai Hing Lau, Chung Man Chiu, Suet Wai Yuen, David M. Baker *

Faculty of Science, the University of Hong Kong, Hong Kong Special Administrative Region

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. Staying 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."
Summer Research Fellowship: Noise Annoys

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

Fengyi Guo\textsuperscript{a,b}, Timothy C. Bonebrake\textsuperscript{a,b}, Caroline Dingle\textsuperscript{b,*}

\textsuperscript{a} School of Biological Sciences, University of Hong Kong, Hong Kong
\textsuperscript{b} Department of Earth Sciences, University of Hong Kong, Hong Kong
ENVS Minor – 7 courses (42 credits)

- Introductory courses (3 courses)
  - ENVS1401 Introduction to Environmental Science
  - 2 electives

- Advanced courses (4 courses)
  - ENVS3004 Environment Society and Economics
  - 3 electives
Additional Support

- Skills training sessions
- Advice and mentoring
- “HKU Environmental Science Program”

ENVS Society

- envshku.wix.com/senvs
- “The Society of Environmental Science” (FB)
Student Peer Advisers in 2018-19

- General roles
  - to **offer advice** in relation to academic studies to freshmen; and
  - to **facilitate** freshmen’s **smooth transition** from secondary to university education

You are highly encouraged to contact the following **Student Peer Advisers (SPAs)** if you have any questions about your study (their contacts can be found at the Faculty’s website)

- Mr CHAN Yuk Chuen (BSc Year 4)
- Miss SIU Wing Man (BSc Year 3)
Environmental Science
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Any Questions?

Contact: Dr Caroline Dingle
cdingle@hku.hk