

## **Curricula for Research Postgraduate Programs**

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### **Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) Programs in Atmospheric Environmental Science**

#### *Curriculum for Master of Philosophy (MPhil) Program in Atmospheric Environmental Science*

The Master of Philosophy (MPhil) program aims to train postgraduate students to conduct independent research in Atmospheric Environmental Science. Students must fulfill the following program requirements:

- a) Completion of at least 9 credits of coursework, including:
  - i) 3 credits of core course MATH 5360 Weather, Climate and Pollution;
  - ii) 3 credits of elective course chosen from the elective course list;
  - iii) 3 credits of approved postgraduate course endorsed by the Program Director;
- b) Completion of and passing ENVS 6770 Professional Development in Science (Environmental Science Programs). Students are expected to complete the course in their first year of study. The maximum time allowed for course completion is two years for full-time students, or three years for part-time students. The 2 credits earned from ENVS 6770 cannot be counted toward the credit requirements;
- c) Completion of and passing LANG 5010 Postgraduate English for Science Studies which should be taken in the first year of study. The 1 credit earned from LANG 5010 cannot be counted toward the credit requirements;
- d) Taking and passing ENVS 6011 Postgraduate Seminar whenever it is offered; maximum number of credits to be earned from this course is 2;
- e) Registration in ENVS 6990 MPhil Thesis Research; and
- f) Presentation and oral defense of the MPhil thesis.

#### *Curriculum for Doctor of Philosophy (PhD) Program in Atmospheric Environmental Science*

The Doctor of Philosophy (PhD) program aims to train students in original research in Atmospheric Environmental Science, and to cultivate independent and innovative thinking that is essential for a successful research career in environmental science. Students must fulfill the following program requirements:

- a) Completion of at least 12 credits of coursework, including:
  - i) 3 credits of core course MATH 5360 Weather, Climate and Pollution;
  - ii) 6 credits of elective courses chosen from the elective course list;

- iii) 3 credits of approved postgraduate course endorsed by the Program Director;
- b) Completion of and passing ENVS 6770 Professional Development in Science (Environmental Science Programs). Students are expected to complete the course in their first year of study. The maximum time allowed for course completion is two years for full-time students, or three years for part-time students. The 2 credits earned from ENVS 6770 cannot be counted toward the credit requirements. HKUST MPhil (AES) graduates who have taken and passed this course before may be exempted from this requirement, subject to prior approval from the Program Director and PG Coordinator;
- c) Completion of and passing LANG 5010 Postgraduate English for Science Studies, which should be taken in the first year of study. The 1 credit earned from LANG 5010 cannot be counted toward the credit requirements. HKUST MPhil graduates may be considered for exemption from this requirement, subject to prior approval from the Program Director and PG Coordinator;
- d) Taking and passing ENVS 6011 Postgraduate Seminar whenever it is offered; maximum number of credits to be earned from the course is 4 for PhD students. Students who have taken the HKUST MPhil (AES) program will be granted credit transfer from ENVS 6011 to the PhD program up to 1 credit;
- e) Submission of a thesis proposal to the Qualifying Examination Committee who will examine the student's general background knowledge and knowledge related to the topic of the research proposal. The student must pass the qualifying examination;
- f) Registration in ENVS 7990 Doctoral Thesis Research; and
- g) Presentation and oral defense of the PhD thesis.

Elective Course List

CHEM	5410	Atmospheric Chemistry
ENVS	6012	Special Topics in Environmental Science
EVSM	6070	Environmental Impact Assessment
MATH	5311	Advanced Numerical Methods I
MATH	5350	Computational Fluid Dynamics for Inviscid Flows
MATH	5351	Mathematical Methods in Science and Engineering I
MATH	5460*	Time Series Analysis
MECH	5210	Fluid Dynamics
PHYS	5110	Mathematical Methods in Physics

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\* This course may be replaced by ISOM 5530 Multivariate Data Analysis.