

## Program Fee

The program fee for each student, for two years of study, is HK\$84,000. The program fee is subject to revision by HKUST. The student is required to pay half of the program fee upon the start of the program, and the remaining half at the start of the 2nd year. A student will be required to pay an additional registration fee, on a monthly pro-rata basis, if he/she fails to complete the program within 24 months.

Subject to the availability of research funding and satisfactory performance, students may receive a stipend or other financial supports while stationed in Nansha.

## Faculty List

Prof. Furong Gao (Program Director)  
PhD, McGill University

Prof. Guohua Chen  
PhD, McGill University

Prof. Ping Gao  
PhD, University of Cambridge

Prof. Jang-Kyo Kim  
PhD, University of Sydney

Dr. Stephen Lee  
PhD, University of Southampton

Prof. Christopher Leung  
PhD, Massachusetts Institute of Technology

Prof. Zongjin Li  
PhD, Northwestern University

Prof. Yongli Mi  
PhD, Syracuse University

Prof. Jingshen Wu  
PhD, University of Sydney

Prof. Tongxi Yu  
PhD, University of Cambridge

Prof. Mathew Yuen  
PhD, University of Bristol

Prof. Tongyi Zhang  
PhD, Beijing University of Science & Technology

## HKUST Fok Ying Tung Graduate School

The MPhil-AME program is offered by the HKUST Fok Ying Tung Graduate School. The School was established in 2006 as the fifth school of the University. The mission of the Graduate School is to become a prominent research and education base for the Pearl River Delta region, pushing economic growth and technological advancements, expanding outreach to industry and fostering knowledge exchange between Hong Kong and the Mainland. The School and its research centers will have a Mainland base in the Nansha district of Guangzhou City - a new campus with facilities that will set new standards both academically and architecturally to meet contemporary international based researcher requirements. The School will be an integral part of the University's strategy for fulfilling its social and economic development responsibilities, and for realizing its vision.

## Application Details

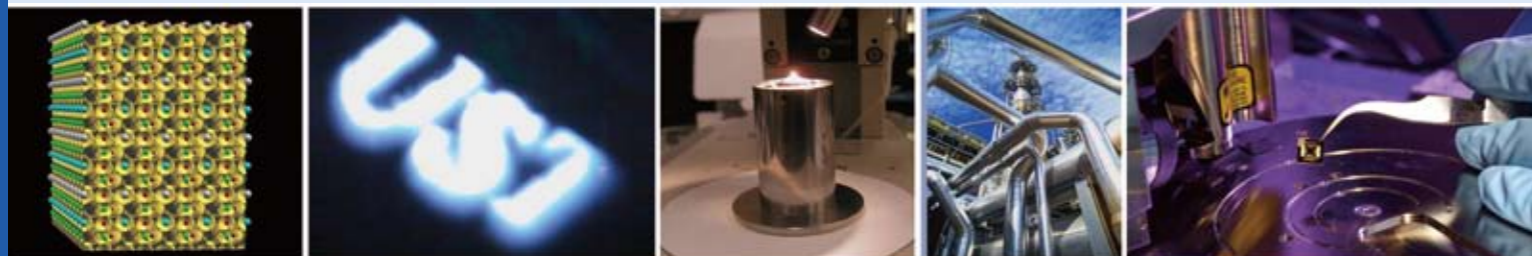
For application deadline and details, please refer to the program web page at:  
<http://fyt.hkust.edu.cn/Academic-Programs>

For inquiry, please contact:  
Tel: (852) 2358 6939  
Fax: (852) 2358 5085  
Email: [mphil.ame@ust.hk](mailto:mphil.ame@ust.hk)

HKUST Fok Ying Tung Graduate School  
Room 5613, 5/F, Lift 31-32  
The Hong Kong University of Science and Technology  
Clear Water Bay, Kowloon, Hong Kong

# MPhil in Advanced Materials Engineering 哲学硕士（先进材料工程）





## Program Objectives

Advanced materials represent a major technological development area in the Pearl River Delta region. Offered under the HKUST Fok Ying Tung Graduate School, and joining together programs in the Mechanical, Chemical and Civil Engineering departments of the University, the **Master of Philosophy in Advanced Materials Engineering (MPhil-AME; 哲学硕士(先进材料工程))** program leverages on resources available in Hong Kong and in Nansha to provide a unique opportunity for highly qualified students to be engaged in an interdepartmental research-based MPhil program covering a broad spectrum of materials-related disciplines. Students will benefit from the world-class teaching offered by a wide selection of postgraduate courses available at HKUST's Clear Water Bay campus, and from the opportunity to participate in relevant research in a strategic Mainland location within close proximity to related industries. Students will take part in and experience first-hand HKUST's broad-based effort to support the scientific, technological and economic developments in the PRD region. While in Nansha, students will benefit from multi-disciplinary idea exchanges in a closely-knitted campus. Students will be equipped with broadened perspectives which are of particular relevance to the development of the PRD. Successful students may continue their postgraduate studies at HKUST and overseas, or undertake employments in PRD to drive technological and economic development in the region.

## Program Schedule and Structure

Commencing in February and September every year, the MPhil-AME program is expected to

require 2 years of study under the full-time mode. After their enrollment in the program, students will first be stationed at HKUST's Clearwater Bay campus for one to two semesters to complete their disciplinary coursework requirements. Afterwards, students will be stationed in HKUST's Nansha campus to conduct research work, and to complete the HKUST Fok Ying Tung Graduate School extra-disciplinary common course requirement and the research seminar requirement. Students will complete the program by conducting their thesis defenses in the Clearwater Bay campus in Hong Kong.

While stationed in Nansha, students may conduct research works under cooperative programs with local industries.

## Medium of Instruction

All in-class lectures and materials will be in English.

## Admission Requirement

Applicants should have a bachelor's degree in engineering, science, or a related field with satisfactory performance. Applications should include the transcript from the applicant's undergraduate institution and letters of recommendation from at least two former instructors. Scores in the Graduate Records Examination (GRE) should be submitted if available. Students should demonstrate sufficient command of English and include the test report of TOEFL or other equivalent tests if available.

To be admitted into the program, a student must be recommended by at least one HKUST faculty member committed to the supervision of the student's research work.

## Curriculum and Requirements

### - Disciplinary Coursework

Students are required to complete 12 credits (four courses) in postgraduate coursework in disciplines related to his/her field of research. Three out of the four disciplinary courses must be selected from the core curriculum listed below:

MECH 501	Foundation of Solid Mechanics [3-0-0:3]
MECH 504	Nanoscale Thin Films and Nano-Structure Materials [3-0-0:3]
MECH 505	Fracture of Polymers [3-0-0:3]
MECH 541	Advanced Mechanical Behaviour of Materials [3-0-0:3]
MECH 543	Thermodynamics and Kinetics of Materials [3-0-0:3]
MECH 548	Nanocomposite Science and Technology [3-0-0:3]
MECH 593	Finite Element Methods [3-0-0:3]
CENG 540	Advanced Transport Phenomena [3-0-0:3]
CENG 551	Processing of Polymers and Polymer Composites [3-0-0:3] (or offered as CENG600N or CENG351)
CENG 584	Nanomaterials for Chemical Engineering Applications [3-0-0:3]
CIVL 524	Advanced Concrete Technology [3-0-0:3]
CIVL 525	Renovation Engineering [3-0-0:3]
CIVL 533	Advanced Mechanics of Materials [3-0-0:3]
IELM 526	Design and Analysis of Engineering Experiments [3-0-0:3]
IELM 531	Six Sigma Management Techniques [3-0-0:3]

A graduation grade average (GGA) of B or above is required for graduation. If a student fails to meet the graduation grade average requirement, he/she is required to repeat or substitute the course(s) at a per credit fee.

### - Extra-disciplinary Common Course

Students are also required to complete 3 credits of coursework in extra-disciplinary common course(s) to be offered by the HKUST Fok Ying Tung Graduate School in the Nansha campus. These common courses are intended to equip the students with perspectives beyond their scientific and technical fields of study, and to enhance their effectiveness as contributors in PRD and in the global workplace. Example common courses include:

- Introduction to Hong Kong Society
- History of South China
- Globalization
- Sustainable Development
- Technology Management
- Management of Technological Innovations
- National Innovation Systems
- Career Mapping in the Hi-Tech Era
- Technical Management
- The Business of R&D
- Management Science
- Management of Organizations
- Corporate Finance and Accounting

### - Thesis

Students are required to conduct research, to submit a thesis, and to defend it in front of an MPhil thesis examination committee at a public oral defense. The defense will take place at HKUST's Clearwater Bay campus. An MPhil thesis committee, to be appointed by the Dean of the HKUST Fok Ying Tung Graduate School in consultation with the head of the department that the principle thesis supervisor belongs to, shall consist of at least three (3) faculty members with at least two who are not the student's thesis supervisors.

### - Research Seminar and English Proficiency

When stationed in Clearwater Bay, students are required to attend a research seminar course (non-credit) in any of the departments in the School of Engineering for one semester. When stationed in Nansha, students are required to register an attendance rate of at least 50% in one Nansha Campus Seminar Series. Each student will be required to make presentation at least once in a seminar in the Nansha Campus Seminar Series. All students in FYTGS's MPhil programs are required to pass LANG 501 - Postgraduate English for Academic Purposes (1 credit). Students are expected to attend and pass LANG 501 while they are stationed in the Clearwater Bay campus.