

The University of Hong Kong  
Department of Earth Sciences

Continuing Professional Development (CPD) Courses from the MSc in Applied Geosciences

JANUARY TO MAY 2024

**GEOS7012 Site investigation and engineering geological techniques** (approximately 36 hours) Fees \$13,700 **HKIE**

Taught by Prof Philip Chung, Ir Kevin Styles, Mr Mark Wallace & Ir Stuart Millis  
(Thursdays 18 January to 25 April 2024, 7:00pm - 9:45pm, + 3 Saturday/Sunday field classes)

A professional course on the concepts and skills used in geotechnical site investigation. Topics include the design of site investigations, desk study and walkover survey, aerial photographic interpretation, soil and rock description and classification, ground investigation technology and soil and rock laboratory testing.

**GEOS7033 Geology of Hong Kong** (approximately 36 hours) Fees \$13,700

Taught by Dr MC Cheung and Dr Diane Chung  
(Fridays 19 January to 26 April 2024, 7:00pm – 9:45pm, + 3 Saturdays fieldtrips)

To provide an understanding of the principal components of the geology of Hong Kong and its regional setting, including the distribution and interpretation of the main rock types, age relationships; and superficial deposits; and the locations and orientations of the main regional and local structures.

Pre-requisite: GEOS7010 Geology Principles and Practice and only non-geologists accepted.

**GEOS7036 Innovative Technology and Environmental Sustainability** (approximately 18 hours) Fees \$6900

Taught by Prof Louis Wong, Mr Anthony So, Dr PL Ng and Dr Vickie Kong  
(Wednesdays 13 March to 17 April 2024, 7:00pm – 9:45pm)

The course introduces the government policy on the adoption of digital technology and sustainability assessment in public works projects, and provides an understanding of the role of innovative technology and environmental sustainability in engineering practice through case histories and examples.

**GEOS8102 Rock engineering and applications** (approximately 36 hours) Fees \$13,700 **HKIE**

Taught by Prof Louis NY Wong, Ir Roy Hung and Mr Anthony So  
(Mondays 15 January to 22 April 2024, 7:00pm – 9:45pm)

This course starts with a brief introduction to the design methodology and the systems approach in rock engineering, and is mainly focused on the collection and analyses of engineering geological data for the design of rock structures. Uses of rock mechanics input and empirical classifications in analysis and design of rock slopes, tunnel excavation and support systems, and rock foundations are demonstrated through case histories.

Pre-requisite: Passed GEOS7015 Rock mechanics or equivalent

**GEOS8204 Basic Structural Mechanics and Behaviour** (approximately 18 hours) Fees \$6900 **HKIE**

Taught by Ir Philip CT Kwok  
(Wednesdays 17 January to 28 February 2024, 7:00pm – 9:45pm)

Behaviour of structural members subjected to tension, compression, bending, shear and torsion. Buckling of compression members. Statically determinate and indeterminate structures; including the concept of redundancy of structural members. Load transfer mechanisms of structural systems including foundations and shoring systems. General behaviour and basic concepts in design of reinforced concrete members. Structural design of foundations and retaining walls.

**GEOS8206 Mathematics II** (approximately 36 hours) Fees \$13,700 **HKIE**

Taught by Dr F L Tsang  
(Fridays 19 January to 26 April 2024, 7:00pm – 9:45pm)

This course is a continuation of GEOS8205 (Mathematics I). The first part of the course aims to teach students different solution methods to first order differential equations (separable, linear, Bernoulli, exact/non-exact types), second order linear differential equations with constant coefficients using characteristic equation, method of variation of parameters, method of educated guess. The second part introduces the concept of probability and statistics, topics include counting, probability (using the language of sets), random variables (including Binomial, Poisson, Exponential, Normal), probability density/distribution functions, cumulative distribution functions, joint distributions, independence, mean, variance, covariance, moment generating functions, sampling and confidence intervals (using Normal/t- distributions).

**HKIE** Courses approved by HKIE. These are some of the courses which a graduate in Earth Sciences or Geology would need to meet the entry requirements of the Hong Kong Institution of Engineers in the Geotechnical Discipline. A student must attend at least 80% of the meetings to receive a Certificate of Attendance. A Certificate of Completion is awarded to students who also successfully complete the coursework assessment and pass the examination. For queries please contact Prof. Andrew Malone [awmalone@hku.hk](mailto:awmalone@hku.hk) Tel: 2559 2555 or Miss Erica Lee [erica25@hku.hk](mailto:erica25@hku.hk) DES General Office Tel: 2857 8247

# Application Form for Enrolment in CPD Courses from the MSc in Applied Geosciences

JANUARY TO MAY 2024

Apply by 8 January 2024

<u>Courses</u>	<u>credits</u>	<u>Fees</u>
GEOS7012 Site investigation and engineering geological techniques	6 credits	HK\$13,700
GEOS7033 Geology of Hong Kong	6 credits	HK\$13,700
GEOS7036 Innovative Technology and Environmental Sustainability	3 credits	HK\$6900
GEOS8102 Rock engineering and applications	6 credits	HK\$13,700
GEOS8204 Basic Structural Mechanics and Behaviour	3 credits	HK\$6900
GEOS8206 Mathematics II	6 credits	HK\$13,700

Family Name: \_\_\_\_\_ Given names: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Phone numbers: Day \_\_\_\_\_ Home/Mobile \_\_\_\_\_ Fax: \_\_\_\_\_

Personal email: **ESSENTIAL** \_\_\_\_\_

Current position: \_\_\_\_\_ Company: \_\_\_\_\_

First Degree field of study: \_\_\_\_\_ Other Degrees \_\_\_\_\_

Course(s) applied for: \_\_\_\_\_

Total fees: HK\$ \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

How did you find out about these CPD courses? \_\_\_\_\_

Please return a completed application form and your cheque, payable to "The University of Hong Kong", to the following address:

**Director, MSc in Applied Geosciences**  
**Department of Earth Sciences**  
**The University of Hong Kong**  
**Pokfulam Road**  
**Hong Kong**

You will be notified by email regarding approval of application and meeting dates and venue.