

The University of Hong Kong
Department of Earth Sciences

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

JANUARY TO MAY 2025

GEOS7033 Geology of Hong Kong (approximately 36 hours) Fees \$15,000

Taught by Dr MC Cheung and Ms Trudy Kwong
(Fridays 24 January to 25 April 2025, 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.

GEOS7035 Intermediate geology (approximately 36 hours) Fees \$15,000

Taught by Ms Trudy Kwong, Dr Samuel Ng and Dr MC Cheung
(Mondays 20 January to 28 April 2025, 7:00pm – 9:45pm, + 2 Saturday fieldtrips)

The course is designed for students without geology background. It introduces mineralogy, petrology, structural geology, and further geological topics for non-geologists

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

GEOS7036 Innovative Technology and Environmental Sustainability (approximately 18 hours) Fees \$7500

Taught by Prof Louis Wong, Mr Anthony So, Dr PL Ng and Mr San Wong
(Wednesdays 19 March to 23 April 2025, 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 \$15,000 **HKIE**

Taught by Prof Louis NY Wong, Ir Roy Hung and Mr Anthony So
(Mondays 20 January to 28 April 2025, 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 \$7500 **HKIE**

Taught by Ir Philip CT Kwok
(Wednesdays 22 January to 5 March 2025, 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 \$15,000 **HKIE**

Taught by Dr F L Tsang
(Fridays 24 January to 2 May 2025, 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 Miss Trudy Kwong trudy8@hku.hk Tel: 2859 8002 or Miss Erica Lee 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 2025

Apply by 12 January 2025

<u>Courses</u>	<u>credits</u>	<u>Fees</u>
GEOS7033 Geology of Hong Kong	6 credits	HK\$15,000
GEOS7035 Intermediate geology	6 credits	HK\$15,000
GEOS7036 Innovative Technology and Environmental Sustainability	3 credits	HK\$7500
GEOS8102 Rock engineering and applications	6 credits	HK\$15,000
GEOS8204 Basic Structural Mechanics and Behaviour	3 credits	HK\$7500
GEOS8206 Mathematics II	6 credits	HK\$15,000

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.