

**THE HONG KONG INSTITUTION OF ENGINEERS
ENGINEERING GRADUATE TRAINING SCHEME “A”**

MODEL TRAINING GUIDE

**GEOTECHNICAL ENGINEERING AND
GEOTECHNICAL ENGINEERING (ENGINEERING GEOLOGY)**

Model Training Guide (MTG)

The Model Training Guide is a guide to Companies on the practical experiences considered relevant in the formal training of potential Professional Engineers.

Training Programme (TP)

The Training Programme is the plan prepared by a Company which is designed to meet the experiences listed in the MTG and to meet the objectives set out in the Record of Objectives. This ‘plan’ is presented for approval on Form TD1 Part 2 as a part of the Assessment/Reassessment procedures.

Training Period - Nominally 3 years

The length of the training is based on meeting the objectives and not determined by time. The times shown below are indicators only of the time that a trainee would normally take to meet the relevant objectives.

All trainees should normally complete a 12-month period on site during the training period, of which at least six months should be in continuous full-time services resident on site. Not more than four months should be on supervision of ground investigation.

A period of consolidation (see Stage 4 below) should be provided at the end of the training period. The duration of this will vary according to the actual training programme of a trainee and the degree of responsibility to which he/she has been exposed during training but normally should be not less than 12 months.

Training Aim

It is important to note that the Scheme “A” Graduate Training is designed to be a fast track by which a graduate can obtain full professional status. The training therefore covers both Technical and Professional matters.

Continuing Professional Development (CPD)

An implicit part of the Scheme “A” training is related to CPD which should be an integral and relevant part of the development of the graduate trainee.

Training Stages

Structured training is important. One suggested structure is as follows:

Stage 1	The first stage is common to graduate trainees in all the HKIE Disciplines. It introduces the trainee to the Organization in which he/she is working and to Professional and General matters relating to the profession.
Stage 2	This stage is mainly office based (with field and site visits required as part of the trainee's office duties) and introduces trainees to the practice of the Geotechnical Discipline.
Stage 3	This stage is site based and provides trainees with the experience of implementing engineering works. It can be undertaken at any time appropriate to the TP.
Stage 4	The final stage consolidates the training obtained in Stages 1, 2 and 3 and exposes the trainee to greater technical responsibility (under supervision) within work teams.

The Engineering Supervisor may structure the TP using a different combination of stages as long as it meets the objectives set out in the Record of Objectives.

Training Programme Content

The Common Core Objectives set out by the HKIE for Scheme "A" trainees are intended to make graduates aware of the HKIE, their own organization, their professional responsibilities and general matters relating to the engineering profession such as communication skills and engineer in society.

The Core Objectives set out in the Record of Objectives, supported by the Specific Objectives drawn up by the Organization in the TP, indicate the range of skills intended to be attained by trainees. Broadly speaking, there are five areas to be covered:

1. Procedural matters that are relevant to the professional practice.
2. Investigation and Design experience through which the graduate acquires the skills to identify problems, to collect and collate information, and to exercise engineering principles and judgement in arriving at appropriate solutions.
3. Construction and Site Supervision experience through which the graduate acquires the field skills of the profession, as well as skills to implement solutions to geotechnical problems and to manage the works.
4. Financial matters that are related to project implementation.
5. Contractual matters and relationships that are relevant to the professional practice.

It is recognized that towards the end of the training period there is a need for trainees to begin to undertake the responsibilities of professionals while still under supervision.

N.B.

1. For registration as a trainee, a graduate should possess an engineering degree with sufficient Geotechnical or Civil engineering content. Alternatively he should possess a degree in Geology or Earth Sciences, augmented as necessary by academic units or part-units in Mathematics, Soil Mechanics, Rock Mechanics, Basic Structural Mechanics and Behaviour, Hydrogeology, and Management, and a research type project. Knowledge of Design is also required, but this may be undertaken as part of supervised on-the-job training if not covered in an academic course. Degrees not yet recognized by the HKIE will be assessed on a case-by-case basis by the HKIE and will advise on any necessary topping-up requirements.
2. The minimum training period must not be less than 36 months.
3. The programme set out is for guidance only but substantial departure should not be made. Employers should endeavour to provide training to their trainees in as many areas as possible as is appropriate to the sector of employment.
4. This guide should be read in conjunction with Section 3 of the Membership Admission Requirements booklet.
5. During their training, each trainee is required to maintain a Graduate Training Log Book, CPD Logbook and Record of Objectives.