

Guidance Notes for Applicants applying for Membership in Structural Discipline by taking the HKIE Structural Examination

Please read the following notes carefully and comply with all requirements.

1. Introduction

The HKIE Structural Examination consists of TWO parts:

- (a) Written examination; and
- (b) Interview.

Applicants passing both parts and meeting the experience requirements under the relevant routes to membership will be eligible to become Corporate Member of the HKIE in the Structural Discipline (subject to meeting other requirements in the HKIE Constitution). Passing the written examination is not a pre-requisite for taking the interview or vice versa.

2. Requirements for taking the HKIE Structural Examination

To be eligible for taking the HKIE Structural Examination, an applicant must apply via one of the routes below and satisfy the following requirements:-

Formal Training Route

- (i) Applicants must possess an accredited/recognized engineering degree or equivalent relevant to the Structural Discipline.
- (ii) Applicants must have joined Scheme “A” Training in Civil/Structural or equivalent (e.g. a completion of IPD plus being invited to attend an interview from IStructE) with at least 2 years post-graduation relevant experience by **31 October 2017**.

General Experience Route

- (i) Applicants should possess an accredited/recognized engineering degree or equivalent relevant to the Structural Discipline.
- (ii) Applicants must have at least 4 years post-graduation relevant experience by **31 October 2017**.

Mature Route

- (i) Applicants without accredited/recognized engineering degree.
- (ii) Applicants over 35 years old.
- (iii) Applicants must have obtained relevant experience in posts of increasing responsibility of at least 13 years by **31 October 2017**.

Or

- (i) Applicants with accredited/recognized engineering degree.
- (ii) Applicants over 35 years old.
- (iii) Applicants must have at least 4 years post-graduation relevant experience by **31 October 2017**.

3. Application Procedure and Key Dates of the HKIE Structural Examination

- (i) Applicants should complete and return to the HKIE the relevant application form* with the fees (see Section 6) required on or before **31 August 2017**. Applicants who failed the written Examination previously can apply for a resit (Please refer to the result letter for the submission requirement).
- (ii) In **early October 2017**, applicants will be invited to attend a Preparatory Seminar that is scheduled to be held in **late October / early November 2017**.
- (iii) Eligible applicants will be informed of the detailed examination schedule 3 weeks before the date of the examination that is scheduled to be held in **5 December 2017**.
- (iv) Supplementary Interview will be held in **January 2018** for applicants who previously failed the interview only.
- (v) The Supplementary Interview Result will be released in **March 2018**.
- (vi) After the Written Examination, applicants will be required to submit their assessment documentation to the HKIE by **13 April 2018**. Applicants via Formal Training Route and General Experience Route should refer to the “Guidance Notes for Documentation” (attached) on submission requirements; applicants via the Mature Route should follow the submission requirements as laid out in Section 5 of “M3-Routes to Membership”. The Mature Candidates will be required to take the Written Examination and the Interview as stated in this guidance notes. All documentation must be verified by a HKIE Corporate Member.
- (vii) In **April 2018**, applicants will be notified of the Written Examination result.

- (viii) In **early June 2018**, applicants will be notified of the details of the Interview. The Interview will take place in **June & July 2018**.
- (ix) Applicants will be notified of the Interview result in **August 2018**.
- (x) Applicants who have passed both the Written Examination and Interview, but have not yet fulfilled the experience requirements as laid out in “[M3-Routes to Membership](#)”, will be required to submit a report on their experience in responsible position and CPD. They will be informed separately with the result letter in August. All applicants will be notified of the results on admission to Corporate Member of the HKIE in the Structural Discipline by mail accordingly.

| Key Dates | Application Procedure |
|------------------------------------|--|
| By 31 August 2017 | Application deadline 1. New Applicants 2. Applicants who resit the Written Examination |
| late October / early November 2017 | Preparatory Seminar |
| November 2017 | Notification to eligible applicants of details of the Written Examination |
| 5 December 2017 | Written Examination |
| January 2018 | Supplementary Interview for applicants who previously failed the Interview only |
| March 2018 | Release of the Supplementary Interview result |
| April 2018 | Release of the Written Examination result |
| 13 April 2018 | Deadline for submission of assessment documentation |
| Early June 2018 | Notification of the details of the Interview |
| June to July 2018 | Interview |
| August 2018 | Release of the Interview result |

* [Form 1/M](#) for applicants applying for the class of Member and [Form 1/D](#) for HKIE Corporate Members in other Disciplines.

4. Written Examination

The Written Examination will be held on 5 December 2017. The examination duration is seven hours. The eligible applicants will be informed of the detailed examination schedule 3 weeks before the date of the examination.

The Written Examination paper consists of two sections covering the following areas. The examination paper for Section 1 will be collected at the end of this Section before the commencement of Section 2.

Section 1: Multiple Choices (Answer ALL questions -- 20 marks)

(Duration -- 1 hr)

- Structural Engineering Concept
- Construction skills
- Building Control
- Contract and Construction Management
- Aspects on economy, health, safety and statutory regulations

Section 2: Design Questions (Answer ONE question -- 80 marks)

(Duration -- 6 hrs)

- Design concept
- Identification of alternative schemes
- Choice of materials
- Presentation of design scheme, calculations and details

Candidates are required to pass both sections in order to obtain an overall pass of the Written Examination.

In Section 2 Design Questions, candidates have to pass both Section A regarding preparation of design appraisal indicating two distinct and viable structural schemes and Section B regarding preparation of design calculations, framing plans, etc. in order to get a pass in this part. In answering the design questions, candidates must satisfy the examiner in essential requirements including provision of two distinct and viable structural schemes and structure stability. A **FAIL** will be given if:

- (a) only one scheme is proposed (even if this only one scheme is structurally feasible and acceptable), or
- (b) two schemes are proposed but they are not distinct or one of the schemes is not feasible, or
- (c) properly dimensioned framing/layout plans for the selected scheme are not provided in Section B.

In addition, a **FAIL** may be given if the client's requirements are not fulfilled.

Candidates are required to follow the Codes of Practice, Design Manuals and relevant design guidelines of the Hong Kong SAR Government in answering the design questions.

Equipment:

Candidates are required to provide their own pens, pencils, rulers and other writing and drawing equipment, reference books, notes and portable computers/programmable calculators as required.

5. Interview

Candidates are required to give a 15-minute presentation on the project(s) submitted prior to the Interview. The objective is to test the candidate's presentation skill as a professional engineer. The interview shall be conducted in English.

An interview will follow to test the candidate's experience, knowledge and ability on the following key elements:

- (i) Scope and quality of illustration
- (ii) Structural schemes & stability appraisal
- (iii) Alternative viable structural engineering solutions taking into account of client's requirements - function, time and cost
- (iv) Construction sequences and plants commonly used
- (v) Contract administration, construction supervision and record keeping
- (vi) Quality assurance and control
- (vii) Environmental implications, sustainability and safety
- (viii) Local professional practice, and appreciation of local law and statutory legislation
- (ix) Effective communication
- (x) Interpersonal skills
- (xi) Presentation skills
- (xii) Relevant Experience

6. Fees

Applicants shall submit the application with (a) the application fee (HK\$550), (b) examination fee (HK\$2,200), and (c) entrance/transfer fee and subscription fee (please refer to the fee table attached to the application form for the entrance/transfer and subscription fees). Applicants who apply for a resit of either or both parts of the HKIE Structural Examination will be charged at HK\$2,200.

For applicants applying for an additional discipline, the examination fee is HK\$1,500.

The application fee and examination fee are non-refundable and non-transferable.

Applicants who are absent from one or both parts of the HKIE Structural Examination will be treated as having attended the examination for the purpose of fee calculation.

If you have any queries, please contact the Membership Section by phone at 2890 2926 or by email at member@hkie.org.hk.

HKIE Structural Examination Guidance Notes for Documentation

(For Applicants via the Formal Training Route and the General Experience Route)

Applicants are required to submit their assessment documentation to the HKIE by **13 April 2018**. The requirements of the documentations are as follows:-

1. Report on Training and Experience

The object of the candidate's report is to inform the Assessors about the Candidate's training and experience. The report should be concise, between 1,600 and 2,000 words, in good English, typewritten on single sides of A4 paper and submitted in **duplicate**. At the head of the report the candidate must set out in chronological order, giving the inclusive dates of months and years for the particular periods of training and experience that he has acquired.

The report must not be a mere inventory of work prepared and executed. Instead the candidate must describe the tasks on which he has been employed. His account should be in chronological sequence and should explain clearly the precise position he has occupied in each case and the degree of responsibility assigned to and discharged by him. He should enlarge on any special problems he has met and on which he has obtained more extensive experience. An indication of the size and cost of the work should be given.

2. Project Report

The report should be prepared in A4 paper and supported with drawings of NOT greater than A1 size.

The report shall highlight the technical background of the projects, including general description on scope of works, structural design assumptions and concept, design calculation and analysis, support with related drawings such as foundation, excavation and lateral support plans, structural framing plan and site record photos.

Total no. of pages of the report shall be within 100 and total no. of drawings shall NOT be more than 15.

Pre-interview Project Presentation

Prior to the interview candidates will be allowed 15 minutes to make a presentation of their Project Report. Candidates should plan this presentation carefully to allow themselves to cover the scope of their Report in the time allocated.

The Assessors will not normally ask questions until the presentation has been completed. The Assessors will, however, help a candidate who is clearly having problems due to nervousness.

Candidates will be able to use the supporting documentation, submitted as part of the Project Report, and will be permitted to use photographs and drawings to illustrate the presentation. No visual aids such as slides, overhead projectors or flip charts will be allowed.

The purpose of this part of the assessment is to ensure that candidates are able to present themselves orally as well as in writing.

3. Continuing Professional Development (CPD) Record

A record of Continuing Professional Development up to **13 April 2018** should be provided. Any projection of CPD activities after **13 April 2018** will not be accepted. Nevertheless, candidates are expected to continue their CPD activities after that date.

For candidates under the Formal Training Route, a minimum average of 45 hours (or 7.5 days) per year calculated from the commencing date of Scheme “A”, up to the time of the Professional Assessment is required. For candidates under the General Experience Route, a minimum average of 45 hours per year up to the time of the Professional Assessment is required. The maximum period is 6 years.

It is desirable to have as much variety as possible and a balance between technical and contractual/professional subjects should be sought.

The Engineering Supervisor will be responsible for defining “days” and deciding which courses are “acceptable” as CPD days for Scheme “A” candidates within Scheme “A” period. After Scheme “A” period, the acceptability of CPD days will be decided by the Assessors.

For candidates under the General Experience Route, the acceptability of CPD days will be decided by the Assessors.

(For more details on CPD, please refer to the Membership Booklet M3 Section 3 II)

4. Training Logbook/Record (applies to candidates under Formal Training or equivalent, like IPD from IStructE)

All documentation MUST be verified by a HKIE Corporate Member.