

TECHNICAL REPORT OPTION TO CEng OR IEng REGISTRATION

Guidelines for Candidates and Assessors

1. Introduction

These guidance notes should be read in conjunction with EC's Standard for Professional Engineering Competence (UK-SPEC) available at www.engc.org.uk and the IED's threshold standards of competence, appended to this guideline.

The Technical Report Option provides a way to CEng and IEng for candidates who have not followed EC's exemplifying academic pathways. The career profile of such candidates must demonstrate that they have the engineering knowledge and understanding necessary to underpin EC's standard for registration to the same level as their peers who have followed the exemplifying academic pathways.

The report must cover an aspect of engineering design practice. The process of design requires the study of options and then assessment of those options through rigorous proving, invariably mathematically.

If a candidate satisfies the assessors that he/she has demonstrated the same underpinning knowledge and understanding as the exemplifying academic pathways for the grade applied for, the candidate will be invited to proceed to Professional Review.

2. Procedure

2.1 Candidates who wish to proceed by way of the Technical Report Option are required, in the first instance, to submit:

- Application form
- A CV and brief career history
- A synopsis of what is to be covered in the Technical Report, in the format prescribed below

2.2 Format of the Synopsis

- Introduction, to include the background and rational for selecting the subject
- Description of the key aims and objectives
- Major challenges faced
- Process and methods of investigation, including the engineering design principles employed
- Expected outcomes of the work
- Anticipated lessons learned
- No more than 500 words, typewritten (double spacing)

One copy of the synopsis should be submitted. The candidate should await approval of the synopsis before starting the Technical Report.

2.3 Assessment Process

The membership committee will:

- Determine whether, on the basis of the candidate's application, the candidate is likely to satisfy the standard requirements for professional review
- Evaluate the potential of the Technical Report to be a sufficiently rigorous academic test

2.4 Provided the outcome of the activities described in paragraph 2.3 is satisfactory the candidate will be invited to submit the Technical Report, within a fixed timeframe determined by the assessors, but not exceeding two years, in the format prescribed below.

3. The Technical Report Format and Content

Title Page: Name, address, membership number, project title, the purpose of the report, e.g. application for CEng or IEng registration and any other useful information.

Abstract: Summarise the main outcomes and achievements.

Contents Page:

Introduction: This should state concisely the form that the report will take and indicate the main topics, developments and points to be covered. As with the abstract, it is often better to finalise the introduction when the report is finished.

The introduction should include a focused statement of the key aims and objectives.

Main Body of the Report: This may be divided into relevant sub sections. Here the candidate has to show that they know what the subject is about and to give sufficient detail to demonstrate an understanding of the issues, with the application of engineering design principles underpinning the arguments.

At the outset the report should typically include a section on the project specification. This should include:

- Definition of the technical requirements (e.g. design specification)
- Overview of the process and methods of investigation
- Organisation and planning of the work

In writing the main body of the report the following important points should be considered:

- The theme should be developed in each section and ideas or information presented in a logical way backed up with acknowledged sources, technical data or literature referenced
- It may be useful to demonstrate links between ideas and to compare different sources of evidence
- Analytical comment should be demonstrated when appropriate
- Keep focused on the title and subject chosen and make sure that the information given is relevant
- Ensure the aims specified in the introduction have been achieved
- Illustrative diagrams, tables, drawings, calculations and statistics should be included only if they are necessary to support the text. They must be correctly applied, clearly presented and where necessary properly explained so that the underlying theory can be followed. Candidates must be able to demonstrate an understanding of any formulae and software used and any limits to their applicability
- Any lengthy, detailed calculations should be attached as an appendix

Discussion: This is where the threads of the developments and arguments in the report are drawn together. The main points will need to be summarised in a logical development of how the points led towards the report's subject. In essence the discussion must:

- Provide a critical appraisal of the work
- Identify lessons learned, with recommendations for further development or action

Conclusions: The Candidate should:

- Summarise the results of the work
- Outline recommendations for action

Appendices: These should only contain essential evidence, published papers, historical data, research, drawings or calculations that support or explain the background, principle or detailed development of the design work.

Length of the Report: This will be determined after the Membership Committee have fully assessed the application. Advice is given as relevant to each application.

3.1 The Candidate should ensure:

- The report is presented in a logical and focussed format
- Badly spelt and ungrammatical reports will be rejected
- The word limit is adhered to excluding acknowledgements, references, bibliography and appendices
- The report is typewritten (double spaced), and securely bound
- A declaration of authenticity is included. Authenticity should take the form of signatures by preferably Chartered or Incorporated Engineers who have worked with the candidate and can verify that the work is that of the candidate

4. Subsequent Procedure

When the report is completed it will be forwarded to two IED members for assessment and if it is satisfactory the candidate will be invited to attend a Technical Interview with the Assessors.

4.1 The Interview

The assessors will test the candidate's range and depth of knowledge and understanding of engineering principles as evidenced by the Technical Report. The interview will be conducted as informally as possible.

5. The Next Stage

5.1 If the interview is successful the candidate will be invited to a professional review interview.

6. Appeals

6.1 The procedure will be the same as that for Candidates who fail to satisfy the requirements for the Professional Review interview. The usual Institution appeals procedures will apply (see application pack).

FEES

£100 Initial fee with application

£150 Final fee with submission of the Technical Report