

# Technical Report Route for Associate-Membership

If you do not hold a degree qualification, you may follow this route to demonstrate you have the right academic foundation for AMIStructE

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Your knowledge and understanding of structural engineering principles should be equivalent to a holder of an HND qualification or a bachelor's degree level 6 (that has been approved by the Joint Board of Moderators), in order to follow this route. Depending on the level of your highest engineering qualification, you will be assessed against the criteria listed on [page 3](#).

### Entry requirements

Candidates holding National, Higher National Certificates, National Diploma qualifications or perhaps no formal higher education qualifications, are welcomed to apply.

### How to apply

The submission process consists of four stages:

1. An initial academic assessment.
2. Submission and Assessment of a Synopsis.
3. Submission and Assessment of the Technical Report.
4. The Technical Report Interview.

### Stage 1 – The initial assessment

You'll need to submit

- ▶ [Form G](#)
- ▶ Your CV
- ▶ Transcripts and certificates of your qualifications
- ▶ Academic assessment fee of £165 (once your application has been processed)

Our Academic Qualifications Panel will determine whether this route is appropriate.

### Stage 2 – The synopsis

If the Panel approves your application, you will be asked to submit:

- ▶ **Form TR**, includes a 400 to 700 word synopsis of your proposed Report
- ▶ £70 Synopsis Fee

The Panel will then consider your Synopsis.

**Stage 3 – The technical report**

If your synopsis is satisfactory, you will be asked to submit:

- ▶ Technical Report
- ▶ Assessment fee of £320

Your technical report should:

- ▶ Cover one to two projects in which you have had major controlling interest.
- ▶ Have a structure consistent with good practice for technical papers (use of headings, figures, equations, references, acknowledgements, appendices etc)
- ▶ Be no longer than 5000 words long
- ▶ Include references to where the evidence required is demonstrated, using marginal notes.

It will be reviewed by two assessors and you will be informed whether you can proceed to the Technical Report **Interview**.

If you have not been permitted to proceed to the Technical Report Interview, you will be given reasons for the decision and written advice on how to address any deficiencies, with an invitation to resubmit your report.

**Stage 4 – The technical report interview**

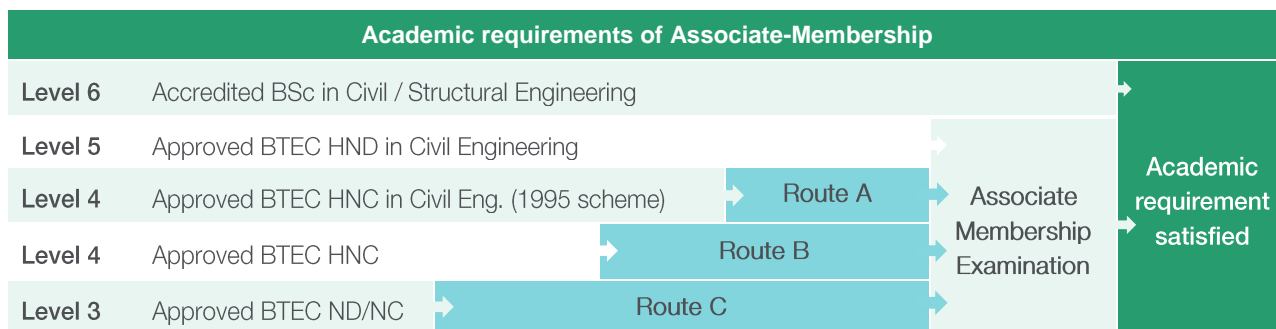
The Interview will last approximately one hour and will be conducted by two assessors.

If you are successful, you will have demonstrated sufficient knowledge to be at the HND level and therefore you will be able to progress to the **Associate-Membership Exam**.

If you are not successful at the interview stage, you will be given reasons for the decision and written advice on how to address any deficiencies.

**Assessment Routes A to C**

This table shows the three assessment routes to meeting the academic requirements for Associate-Membership. During stage 1, of your application the Panel will determine which route is right for you.



**Depending on the route followed, you should be able to demonstrate the elements listed below, within your technical report:**

	Route A	Route B	Route C
<b>1. Underpinning Science and Mathematics</b>	1.1 Demonstrate the accurate use of mathematics and scientific principles in a practical context	1.1 Demonstrate a knowledge of trigonometry 1.2 Demonstrate an understanding of calculus 1.3 Demonstrate an ability to transpose formulae 1.4 Demonstrate a knowledge of the science of materials and their behaviour	1.1 Show an understanding of trigonometrical functions and their application to construction problems 1.2 Apply calculus to the solution of problems of area, volume and deflection 1.3 Apply calculus to the solution of problems in maxima and minima 1.4 Show an ability to transpose formulae 1.5 Show an understanding of the science of materials used in construction 1.6 Show an understanding of the behaviour of soils and of soil mechanics
<b>2. Engineering Analysis</b>	2.1 Apply quantitative methods and computer software. 2.2 Apply hand computation and computer software to the solution of structural engineering problems. 2.3 State how aspects of a project/s could have been engineered differently to effect improvement.	2.1 Apply quantitative methods and computer software. 2.2 Apply hand computation and computer software to the solution of structural engineering problems of beams, columns, frames, sub structure. 2.3 State how aspects of a project/s could have been engineered differently to effect improvement.	2.1 Apply quantitative methods and computer software. 2.2 Apply hand computation and computer software to the solution of structural engineering problems of beams, columns, frames, substructure. 2.3 Apply hand computation and computer software to the solution of structural engineering problems in two major structural materials. 2.4 State how aspects of a super structure could have been engineered differently to effect improvements. 2.5 State how aspects of a substructure could have been engineered differently to effect improvements.

	Route A	Route B	Route C
<b>3. Design</b>	<p>3.1 Select a project/s and define the problem/s</p> <p>3.2 Select a project/s and identify the constraints</p> <p>3.3 Prepare alternative solutions to meet project/s brief set by client/employer</p> <p>3.4 Develop and complete solutions to meet project/s brief set by client/employer</p> <p>3.5 Prepare sufficient drawings and schedules to demonstrate the effectiveness of the solution</p>	<p>3.1 Select a project/s and define the problems</p> <p>3.2 Select a project/s and identify the constraints</p> <p>3.3 Prepare alternative solutions to meet project/s brief set by client/employer</p> <p>3.4 Develop and complete solutions to meet project/s brief set by client/employer</p> <p>3.5 Prepare sufficient drawings and schedules to demonstrate the effectiveness of the solution.</p>	<p>3.1 Select a project/s and define the problem/s</p> <p>3.2 Select a project/s and identify the constraints.</p> <p>3.3 Prepare alternative solutions to meet project/s brief for superstructure and foundation.</p> <p>3.4 Prepare and complete solutions to meet project brief for superstructure and foundations.</p> <p>3.5 Prepare sufficient drawings and schedules for superstructure and foundations.</p>
<b>4. Economic, social environmental context</b>	<p>4.1 Discuss commercial issues in respect of aspects of a project.</p> <p>4.2 Identify and discuss economic issues in respect of aspects of a project.</p> <p>4.3 Discuss environmental issues in respect of a project.</p> <p>4.4 Discuss sustainability issues in respect of a project.</p> <p>4.5 Write a risk assessment for a project</p> <p>4.6 Awareness of relevant legal requirements governing engineering activities,</p> <p>4.7 Knowledge of management techniques that may be used to achieve engineering objectives</p>	<p>4.1 Discuss commercial issues in respect of aspects of a project.</p> <p>4.2 Identify and discuss economic issues in respect of aspects of a project.</p> <p>4.3 Discuss environmental issues in respect of a project.</p> <p>4.4 Discuss sustainability issues in respect of a project.</p> <p>4.5 Write a risk assessment for a project</p> <p>4.6 Awareness of relevant legal requirements governing engineering activities,</p> <p>4.7 Knowledge of management techniques that may be used to achieve engineering objectives</p>	<p>4.1 Discuss commercial issues in respect of aspects of a project.</p> <p>4.2 Identify and discuss economic issues in respect of aspects of a project.</p> <p>4.3 Discuss environmental issues in respect of a project.</p> <p>4.4 Discuss sustainability in respect of a project.</p> <p>4.5 Identify and discuss health and safety issues related to the structural superstructure.</p> <p>4.6 Identify and discuss health and safety issues related to the substructure.</p> <p>4.7 Write a risk assessment for a project</p> <p>4.8 Awareness of relevant legal requirements governing engineering activities,</p> <p>4.9 Knowledge of management techniques that may be used to achieve engineering objectives</p>

	Route A	Route B	Route C
<b>5. Engineering Practice</b>	<p>5.1 Demonstrate the use and application of codes of practice and industry in a project/s</p> <p>5.2 Show a clear use of appropriate bibliography and the internet in considering alternatives and broadening engineering knowledge</p> <p>5.3 State how personal development will be achieved in technical and industrial experience.</p>	<p>5.1 Demonstrate the use and application of codes of practice and industry in a project/s</p> <p>5.2 Show a clear use of appropriate bibliography and the internet in considering alternatives and broadening engineering knowledge.</p> <p>5.3 State how personal development will be achieved in technical and industrial experience.</p>	<p>5.1 Show an understanding of codes of practice for two major structural materials.</p> <p>5.2 Demonstrate the use and application of codes of practice and industry in a project/s.</p> <p>5.3 Show a clear use of appropriate bibliography and the internet in considering alternative and broadening engineering knowledge.</p> <p>5.4 State how personal development will be achieved in technical and industrial experience</p>
<b>6. Additional General Skills</b>	<p>6.1 Exercise personal responsibility, which may be as a team member.</p> <p>6.2 Plan and carry out a personal programme of work</p> <p>6.3 Plan self-learning and improve performance, as the foundation for lifelong learning/CPD</p> <p>6.4 Apply skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities</p>	<p>6.1 Exercise personal responsibility, which may be as a team member.</p> <p>6.2 Plan and carry out a personal programme of work</p> <p>6.3 Plan self-learning and improve performance, as the foundation for lifelong learning/CPD</p> <p>6.4 Apply skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities</p>	<p>6.1 Exercise personal responsibility, which may be as a team member.</p> <p>6.2 Plan and carry out a personal programme of work</p> <p>6.3 Plan self-learning and improve performance, as the foundation for lifelong learning/CPD</p> <p>6.4 Apply skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities</p>