

# ACTS

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## Notes for trainees

*These notes describe how participating in an IChemE Accredited Company Training Scheme can assist you with your early professional development and help move you swiftly and efficiently towards achieving Chartered status.*

### Advantages

Being registered on an ACT Scheme means that your company has committed to providing the necessary training and opportunities for you to gain the experience and competencies required to become a Chartered Chemical Engineer as efficiently as possible. You will be supported by the company in your application to become a Chartered Member of the Institution of Chemical Engineers, the organisation of choice for chemical engineers.

**Chartered Chemical Engineer** status is awarded by IChemE to demonstrate professional competence and commitment within chemical, biochemical and process engineering. It is a requirement for progression in some industrial sectors and is recognised in others as a critical professional career milestone.

As a Chartered Chemical Engineer, you gain the widely recognised postnominals CEng MIChemE and can apply for other registrations as appropriate, including European Engineer (Eur Ing) and Chartered Scientist (CSci).

### Standards

The eventual aim of the scheme is to enable you to reach the standards expected of a Chartered Chemical Engineer. The following definition of a Chartered Engineer is provided by Engineering Council UK, the regulatory body for the engineering profession on which the Institution's Chartered membership requirements are based:

*“Chartered Engineers develop solutions to engineering problems using new or existing technologies, through innovation, creativity and change and/or they may have technical accountability for complex systems with significant levels of risk.”*

IChemE also requires that a prospective Chartered Chemical Engineer is expected to hold a position in which they are responsible, in a professional sense, for the consequences of their technical judgements and decisions.

Your company ACT Scheme will give you exposure to a sufficient range of training and experience that will enable you to satisfy IChemE's requirements and lead to Chartered status.

### Portfolio

You should use the scheme to build a strong portfolio of initial training and experience. This portfolio should include the following:

Evidence that you have the ability to provide chemical engineering knowledge to practical situations:

- Identifying or defining problem, opportunity or project
- Combining ideas and contributions from different people and disciplines
- Creativity and innovation (developing your own ideas to produce new solutions, new designs and technological approaches)
- Scientific or technical evaluation and optimisation (of product, process, equipment, method, project against the requirements you identified, or the brief given)
- Planning and execution of projects (organising or performing technical work to implement or validate solutions, designs etc).

Evidence that you are able to handle the wider implications of your work as a chemical engineer:

- Ability to handle health, hazard and safety aspects: to apply appropriate principles, good practice, meet legislative requirements
- Ability to handle sustainability aspects: these could include environmental, public concern and other societal issues, recognition of risks
- Ability to handle commercial and economic aspects.

Evidence of your interpersonal, leadership and communication skills in relation to:

- Managing interpersonal relationships
- Demonstrating leadership in a professional role
- Communicating ideas and plans by report writing and oral presentation.

Evidence to show that you are committed to high standards of professional and ethical practice.

Evidence of your commitment to [continuing professional development \(CPD\)](#), including the methods and tools used to record your CPD activities.

Given the diversity of chemical engineering roles today a wide range of work areas can and will provide the necessary experience. This includes, but is most definitely not limited to:

- |  |                                   |
|--|-----------------------------------|
| ▪ Health, safety, risk aspects           | ▪ Plant & process design          |
| ▪ Plant operation                        | ▪ Teaching, managing, training    |
| ▪ R&D                                    | ▪ Project and contract management |
| ▪ Instrumentation & control              | ▪ Product & process development   |
| ▪ Technical evaluation                   | ▪ Simulations                     |
| ▪ Materials                              | ▪ Quality & assurance             |
| ▪ Sustainability & environmental aspects | ▪ Economic evaluation             |
| ▪ Legislation, regulation                |                                   |

By the time of your application for Chartered Member, you should be able to provide examples of work in 4-6 different areas. Your company will also have very specific tailored formal training that you will be expected to attend and qualify.

## Support

Your Scheme Manager is responsible for organising the programme of training and experience for your company or site. There may be several graduates on the scheme at various stages of their training, so each person is allocated a personal mentor. Your mentor will ideally be an experienced chemical engineer and a Chartered Member or Fellow of IChemE.

Your mentor's role is to support you through your time on the scheme and to check on your progress. Preferably, you will keep the same mentor from the time you join the company until your application for Chartered membership is approved. Every effort is made to ensure a good match between yourself and your mentor, but occasionally problems can occur. If you feel this applies in your case, discuss the situation with your mentor and if the partnership cannot be retrieved, ask your scheme manager to assign you an alternative mentor.

When you first meet your mentor, confirm the best way of contacting them. You may also spend some time discussing how the partnership will work (in some companies the mentor and trainee draw up a simple written statement to remind them what they have agreed). You will probably meet with your mentor about once a quarter or at least every 6 months, depending on your company's approach.

## Getting started

Trainees are expected to be in membership of IChemE in order to be registered on the scheme.

Your Scheme Manager or Administrator will need to complete a trainee registration form, including details of your membership number and mentor. Submission of this form to IChemE will allow us to register you on your company scheme, assess your academic qualifications and advise you of your pathway for Chartered membership; confirmation of this will be sent to you and your Scheme Manager.

If you are not a member of IChemE, you will need to go online [here](#) complete the online application form, upload copies of all relevant degree certificates and pay an application fee.

If you are a Student/Affiliate member of IChemE and eligible for [Associate Membership](#), you should go online and upgrade your membership to Associate member.

If you are a current Associate Member, we recommend you visit [www.icheme.org](http://www.icheme.org) and login to 'My IChemE' to check your contact details and ensure that your work email is included on your record. It is important to keep your details up to date in order that we can stay in contact with you.

## Keeping track

You will be expected to record what you do on the scheme, things you learn and skills or knowledge you need to acquire. A framework linking your training needs to IChemE outcomes should be developed with your mentor. Successful review, assessment and update of your training progress against the IChemE competence and commitment guidance is key to your success.

Schemes vary from one company to another, due to the different sectors and circumstances in which they operate. Some schemes are very structured and have a clearly defined programme of training and opportunities to gain experience. Others have a range of options available so that you, with the help of your mentor, can decide the appropriate time to tackle them.

We suggest recording evidence of acquired competency in a format consistent with the IChemE Competence and Commitment [report](#).

## Monitoring progress

A key role of your mentor is to review your progress, assessing the level of achievement obtained and recommending how to reach the required level of competency across the breadth of functional training areas identified as being offered within the scheme, including the 5 integrating IChemE competency areas.

Companies may use their own metrics and processes for assessment, though a successful process to assess competence in each of the relevant areas using a 4 point scale is shown below:

### Stage 1

This area has only been touched on by the trainee.

### Stage 2

There has been some training undertaken or experience gained in this area, but more is required.

### Stage 3

Evidence of competence demonstrates good coverage, but the candidate needs either a little more experience or training, or the opportunity to operate at the required level. (The required experience, training or opportunities should be described on the form.)

### Stage 4

Evidence of competence demonstrates adequate coverage and meets the standard required for a Chartered Chemical Engineer.

For the regular meetings with your mentor, prepare a report that details your development over the review period. Write this in a way that captures the evidence that you are developing the skills of a practising, competent and committed chemical engineer. IChemE recommend using the Competence and Commitment (C&C) report template for this process; this will enable you to easily see any gaps in your knowledge and experience, which you can then plan how to fill with your mentor. A C&C template, guidance and report examples can be found on the [C&C report and guidance](#) page of our website.

Each graduate develops at a varying pace, so it is vital to keep up to date records of experience and mentor meetings. Experience in some areas of the C&C report may be completed quickly, however, examples can be replaced later if more relevant experience is gained. It is important to discover any gaps in your knowledge on a regular basis in order to plan how those gaps can be filled. It is the trainee's responsibility to take control of their own training and development and to prepare fully for every mentor meeting.

## Becoming Chartered

To obtain Chartered membership through IChemE you will have to satisfy the following criteria:

- Fulfil IChemE's academic educational requirement
- Have sufficient relevant training and experience (typically at least 4 years)
- Work, or have worked in a responsible position in chemical engineering
- Nominate suitable referees to support your application

Upon the completion of your training and following the signing-off of your Competence and Commitment report by your verifier/s (which may be your mentor and scheme manager), complete and submit an online application to IChemE for Chartered membership with the required accompanying documentation.

You will receive confirmation that your application has been received and if it is immediately apparent that any further information or evidence is missing, you will be contacted with specific instruction.

Your application will then start to go through the peer review process and you will be kept informed electronically once each stage has occurred.

Your Competence and Commitment report will be reviewed against the standard for Chartered Member. Should the assessor not feel able to make a judgement based on the information, feedback will be provided to enable you to amplify and/or amend and resubmit.

Your Professional Review interview will be held in confidence with two Chartered Chemical Engineers. The purpose of the interview is to:

- establish that you hold a position of appropriate responsibility
- verify that you can demonstrate an ability to operate as a competent chemical engineer
- assess that you are appropriately committed to the chemical engineering profession

Based upon a successful Professional Review interview, an election recommendation will be made to the next IChemE Professional Formation Forum meeting.

For more information contact the ACTS administrator: [acts@icheme.org](mailto:acts@icheme.org)