The ICE Training Process to CEng MICE

Presented by ICE South West
Content

1. Routes to membership
2. Initial Professional Development (IPD)
3. Roles and responsibilities
4. Organising personal development
5. Continuing Professional Development (CPD)
6. The Quarterly Review
7. Progression to Professional Review
Routes to membership
Routes to membership

Educational Base

100% Development Objectives
- Early guidance
- Decrease supervision
- Gain responsibility

100% Attributes

Company Approved Training Scheme
- Supervised IPD
- Training Review
- Completion Certificate ICE 3144

Consolidation And Preparation

Independent Experience Route
- Self Managed IPD
- Career appraisal
- CA Advice letter

Professional Review
Educational base for CEng MICE

- Accredited MEng
- Accredited BEng (Hons) + any accredited MSc
- Accredited BSc (Hons) + any accredited Technical MSc

Accredited courses found at www.jbm.org.uk

Other combinations require “Academic Assessment”
ICE 3000A Series

Routes to Membership (MICE)

Development Objectives
for Eng Tech TMICE/ AMICE / MICE and IEng MICE / CEng MICE

Continuing Professional Development (CPD)
Membership Guidance Note
MGN 0 – List of Membership Guidance Notes

Please consult the Membership Downloads section of the ICE website (www.ice.org.uk/membership) to obtain a copy of all the listed Documentation.

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Vers</th>
<th>Rev</th>
<th>Date</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>List of MGNs</td>
<td>37</td>
<td>7</td>
<td>15/12/2011</td>
<td>Lists all the Membership Guidance Notes (MGN)</td>
</tr>
<tr>
<td>1</td>
<td>ICE 3000 series</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Please see <a href="#">www.ice.org.uk/ice3000-index</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for further details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>List of Membership Forms</td>
<td>19</td>
<td>0</td>
<td>21/12/2010</td>
<td>List of all membership forms</td>
</tr>
<tr>
<td>3</td>
<td>Attributes for Membership</td>
<td>1</td>
<td>2</td>
<td>27/05/2011</td>
<td>Attributes for the different grades of Membership</td>
</tr>
<tr>
<td>4</td>
<td>Academic Assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Please see <a href="#">www.ice.org.uk/academicassessment</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for further details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Student membership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Please see <a href="#">www.ice.org.uk/students</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for further details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Graduate membership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Please see <a href="#">www.ice.org.uk/graduates</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for further details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Approved NVQs</td>
<td>2</td>
<td>5</td>
<td>02/12/2011</td>
<td>List of NVQs approved as contributing to IPD only and also those</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>acceptable in lieu of both IPD and the educational base</td>
</tr>
<tr>
<td>8</td>
<td>Setting up an ICE Approved Training Scheme</td>
<td>2</td>
<td>3</td>
<td>02/12/2011</td>
<td>Notes for employers on the process of setting up a TS, what it entails,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>what commitment is required, ICE auditing process, who to contact</td>
</tr>
</tbody>
</table>
Initial Professional Development (IPD)
Overall objective

- Efficient and effective learning
- A successful Professional Review at the earliest possible time
Initial Professional Development

- Company Training Scheme
- Development Objectives ICE 3005A
- Continuing Professional Development ICE 3006A
- Documenting learning
- Mentor support
Roles and responsibilities
Key Players

- Supervising Civil Engineer (SCE)
- Delegated Engineer (DE)
- Trainee
- Regional Support Team (RST)
Responsibilities

Supervising Civil Engineer (SCE)

- Is responsible to ICE for the effectiveness of the trainee’s development

- Directs the trainee’s experience as the need is identified

- Ensures sufficient resources

- Knows how the Development Objectives are likely to be achieved

And.....
Responsibilities

Supervising Civil Engineer (SCE)

- Accredits the validity of Continuing Professional Development (CPD)
- Is familiar with the Professional Review criteria
- Undertakes a formal annual review (ICE 3144)
- Holds the training completion review (ICE 3144)
- Creates a learning culture
Responsibilities

**Delegated Engineer (DE)**

*Responsible to SCE*

- Supports the trainee’s development
- Makes the most of resources
- Enables the necessary breadth of experience
- Undertakes regular reviews
- Reviews achievement
Responsibilities

Delegated Engineer (DE)

- Knows when Development Objectives have been achieved
- Accredits the validity of Continuing Professional Development (CPD)
- Supports the Trainee’s planning
- Creates a learning culture
- Is an accessible mentor
Responsibilities

Trainee

- Takes opportunities to learn
- Records experience and accumulates evidence
- Makes regular progress reports
- Asks for support and guidance
- Helps foster the learning culture
- Ensures progress is reviewed by DE/SCE
Responsibilities

Regional Support Team (RST)

- Approves training schemes
- Approves SCEs (but not DEs)
- Makes routine visits
- Gives advice and guidance
- Countersigns 3144 on training completion
- Does NOT review Professional Review documents
Roles and responsibilities

- **Supervising Civil Engineer**
  - Director of ceremonies
  - Overseer

- **Delegated Engineer**
  - Day-to-day support
  - Easy to access

- **Trainee**
  - Doing the learning
  - Recording it

- **Regional Support Team**
  - Advice and guidance
ICE 3144 – Annual Appraisal and Training Completion Review Certificate

- SCE’s annual appraisal and assessment of performance

- Certificate of completion of training – to progress to Professional Review
Organising personal development
Organising personal development

- It’s your life

- The tools are here for you:
  - to use
  - to modify
  - to use repeatedly

- You have to pick up the tools and use them
## Development Objectives

**Provide technical and commercial management**

<table>
<thead>
<tr>
<th>C1</th>
<th>Plan, organise and supervise resources to complete tasks</th>
</tr>
</thead>
</table>

**Eng Tech TMICE For Example**
- Programmes, Plans, Method statements, Progress monitoring, Records.

<table>
<thead>
<tr>
<th>C1</th>
<th>Plan for effective project implementation</th>
</tr>
</thead>
</table>

**AMICE MICE IEng MICE For Example**
- Planning and resourcing, Programming, Method statements, Contractual obligations, Information and administration systems, Instructions, Records. A “project” can be whatever you are responsible for – e.g. a design, zone research work, feasibility study, a site-based project, etc.

**CEng MICE For Example**
- Planning and resourcing, Programming, Method statements, Contractual obligations, Information and administration systems, Instructions, Records, Project risk and opportunities. A “project” can be whatever you are responsible for – e.g. a design, zone research work, feasibility study, a site-based project, etc.

Each DO is given an achievement rating against the following scale:

<table>
<thead>
<tr>
<th>A</th>
<th>Appreciation</th>
<th>You must appreciate why the DO is important and why it is done.</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Knowledge</td>
<td>You must have a basic understanding and knowledge of the DO and how it is achieved.</td>
</tr>
<tr>
<td>E</td>
<td>Experience</td>
<td>You must have achieved the DO, or part of it, working under supervision.</td>
</tr>
<tr>
<td>B</td>
<td>Ability</td>
<td>You must have achieved the DO several times in different situations, having the competence to assist others and to work without supervision.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Achievement Rating</th>
<th>Eng Tech TMICE</th>
<th>AMICE</th>
<th>MICE</th>
<th>IEng MICE</th>
<th>CEng MICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>A</td>
<td>K</td>
<td>E</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Date Achieved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You and your mentors should use this scale primarily as a learning programme and should record your progression towards the achievement of each DO to identify the next stage of your development.
## Achievement rating

<table>
<thead>
<tr>
<th></th>
<th>Appreciation</th>
<th>You must appreciate why the DO is important and why it is done</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Knowledge</td>
<td>You must have a basic understanding and knowledge of the DO and how it is achieved</td>
</tr>
<tr>
<td>E</td>
<td>Experience</td>
<td>You must have achieved the DO, or part of it, working under supervision</td>
</tr>
<tr>
<td>B</td>
<td>Ability</td>
<td>You must have achieved the DO several times in different situations, having competence to assist others and to work without supervision</td>
</tr>
</tbody>
</table>
Development Objectives

A. Engineering knowledge and understanding

B. Engineering problems and solutions

C. Effective project implementation

D. Communication with others

E. compliance with codes of conduct
The development cycle

1. Review: Analysis/appraisal
   - Evidence of competence gained

2. Planning
   - Development Action Plan

3. Development activities

4. Assessing/evaluating achievement
   - Personal development record

You
Organising personal development

The development cycle

- Development Activities
- Development Report
- Personal Development Record
- Development Action Plan
- Development Objectives
- Development Review
aka “Quarterly Reports”

- Gather information on a daily basis
- Collate information in a usable way
- Write reports
Development Reports

aka “Quarterly Reports”

- Summarise the information gathered
- 1000 – 1500 words
- Experience gained
- Learning achieved
  - Experience
  - Study
- Understanding
- Competence
Development Reports

Report includes

- Outline description of project/s worked on
  *(include graphic material, photos, sketches etc.)*
- Details of personal involvement and tasks
- What has been learned from experience
- Summary of training (CPD) activities
- Proposed Development Action Plan

*plus evidence of achievements*
Appendices

Evidence of experience

- Project reports
- Calculations and drawings
- Personal Development Record (CPD)
- Reading Record
- Technical Meeting notes/reports

and.....
Appendices

Evidence of experience (cont’d)
- Technical Articles
- Further Learning Record
- Written Exercises
- Index to Personal Civil Engineering Library
- Institution activity
- Current affairs
FAQs and problems

- Where is there a template for the report?
- I don’t know where to start
- I don’t have time
- Who do I ask for help?
- Does the ICE require them to be quarterly?
- How do I catch up if I get behind?
Continuing Professional Development (CPD)
Rule 5 of ICE Rules of Professional Conduct: -

All members shall develop their professional knowledge, skills and competence on a continuing basis, and shall give all reasonable assistance to further the education, training and CPD of others.
Continuing Professional Development

Definition

The systematic maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of professional and technical duties throughout your working life.
Continuing Professional Development

Subjects and Topics

- Self development and learning
- Communication skills
- Strategic Management
- Technical
- Legislation
- Health and Safety
- Sustainability and Environment

and.....
Continuing Professional Development

Subjects and Topics

- Associated Professional Areas
- Working With Others
- Commercial Practice
- Information Technology
- Technical software
- Contract Management
- Special Interest Areas
What counts?

- On-the-job learning (incl. work shadowing)
- Presentations (in-house, industry, schools)
- Attending industry seminars and trade exhibitions
- Structured reading, training videos, technical research
- Participation in careers events

and.....
What counts?

- Involvement in ICE activities
- Knowledge sharing, coaching, teaching
- Mentoring and helping to develop others
- Structured learning (courses, qualifications, workshops)

and more ~ refer to ICE 3006A
What counts?

- When you have learnt something
- When you evaluate the learning
## Development Action Plan (DAP)

### Template from ICE 3190

**CPD Development Action Plan**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Membership No.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Review of learning needs</th>
<th>Development Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Ref</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CPD PERSONAL DEVELOPMENT RECORD

<table>
<thead>
<tr>
<th>Name:</th>
<th>Membership No.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Development Activity</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Details of CPD activity</td>
<td>Dates</td>
</tr>
<tr>
<td></td>
<td>Effective learning time</td>
</tr>
<tr>
<td></td>
<td>Dev. Plan ref.</td>
</tr>
<tr>
<td></td>
<td>Key Learning Points</td>
</tr>
<tr>
<td></td>
<td>Key Benefits/Value added</td>
</tr>
<tr>
<td></td>
<td>Further comments: was the plan successful? How can I improve it in future?</td>
</tr>
</tbody>
</table>

Template from ICE 3190
The Quarterly Review

- Quarterly
- With Delegated Engineer or Supervising Civil Engineer
- Development Report presented in advance
- Fixed diary time (2h slot)
- Aim is to agree Development Objectives achieved, review the Development Action Plan and set new Development Goals
The Quarterly Review

Explores

- What has the trainee really learned?
- Development Objectives achieved
- Should the trainee be moving different work?
- DAP/CPD priorities in the next period
The Quarterly Review

The SCE/DE should

- Read, critique and return the Quarterly Report to the trainee before the Review

- Ask probing questions about the trainee’s experience

- Sign off the Development Objectives achieved

- Agree and sign off the CPD record

- Consider whether the trainee needs to move to different work

- Agree the Development Action Plan for the next period
The Quarterly Review

The trainee should

- Be prepared to give a short verbal summary of their Quarterly Report
- Be prepared to produce evidence of experience claimed
- Be able to produce evidence of CPD claimed
- Suggest what Development Objectives might have been achieved
- Have a view of what needs to happen next
The Quarterly Review

The Outcome for the SCE/DE.....

- Satisfied that the trainee is making progress in terms of training and experience
- Satisfied that the trainee has a viable work plan towards ICE Membership
- Any necessary career move is identified for action

......feeling positive
The Outcome for the trainee.....

- Assurance that progress is being made in terms of required professional knowledge and experience
- Confirmation that Development Objectives are being progressively achieved
- CPD record is signed off and accepted
- Development Action Plan is agreed, and any necessary career moves have been identified

......feeling good
Application Package

- Training Agreement ICE 3144 signed off as complete by SCE and countersigned by Regional Support Team
- 2000 word Experience Report
- 4000 word Project Report
- Development Action Plan record
- Personal Development Record
Sponsors

One Lead Sponsor
  CEng MICE or FICE
  Familiar with ICE requirements
  Personally familiar with the candidate’s work

Two Supporting Sponsors
  CEng Members of Engineering Council Institution
  Personally familiar with the candidate
- Report presentation by candidate (15 minutes)
- Interview by two experienced engineer Reviewers (45 minutes)
- Written exercise / essay (120 minutes)

.....to demonstrate the Attributes of CEng MICE

THE END