

# REVISED BCS GUIDELINES ON COURSE ACCREDITATION

Roland Ibbett

## MOTIVATIONS FOR REVISION

- ▶ BCS now accredits for CITP Status
- ▶ Exemption is no longer appropriate
- ▶ The possibility of accrediting courses differently for CITP/CEng/CSci offers an opportunity to recognise degrees with different emphases
- ▶ Improved relationship with departments

## CITP/CEng/CSci COURSE ACCREDITATION

- ▶ Chartered IT Professional (CITP)
  - ▶ The exemplifying qualification for CITP is an accredited three-year (four-year in Scotland) Honours degree. Individuals presenting themselves for Registration will be required to demonstrate, *inter alia*, that they have acquired additional knowledge and skills to Masters level.
- ▶ Chartered Engineer (CEng) / Chartered Scientist (CSci)
  - ▶ The exemplifying qualification for both CEng and CSci is an accredited three-year (four-year in Scotland) Honours degree followed by an accredited Masters programme or appropriate further learning to Masters level, or an integrated, four-year (five-year in Scotland) Masters programme.

## COURSE REQUIREMENTS - CITP

- ▶ Degrees accredited by the BCS in fulfilment of the exemplifying educational requirements for CITP will normally be honours BEng, BSc or BA degrees in the field of computing or information systems engineering.
- ▶ The central theme of these degree programmes will be computing systems. Such systems might include software systems, IT-based information systems, IT-based business systems, embedded systems, health informatics systems, e-learning systems, or, more generally, systems involving people and IT working in harmony to achieve some defined purpose.

## COURSE REQUIREMENTS - CEng

- ▶ Degrees accredited by the BCS in full or partial fulfillment of the exemplifying educational requirements for CEng will normally be honours BEng, BSc, MComp or MEng degrees in the computing field (typically Computer Systems Engineering or Software Engineering) and specialist MSc degrees in similar fields.
- ▶ These degrees will have as a central theme an engineering approach to the design, development, maintenance and operation of computer software and systems (as set out in UK SPEC - The Accreditation of Higher Education Programmes).

## COURSE REQUIREMENTS - CSci

- ▶ Degrees accredited by the BCS in full or partial fulfilment of the exemplifying educational requirements for CSci will normally be honours BSc or integrated Masters degrees either in the computing field itself or in a field of computational science or specialist Masters degrees or MRes programmes in these fields.
- ▶ These degrees will have as a central theme a scientific approach to the modelling, design and development of computer software and systems, sometimes as systems in their own right, and sometimes as systems contributing to research in another scientific discipline.

Computer based systems  
Potential and limitations of  
computer based systems  
Major individual  
problem-solving project  
Team working  
Transferable skills  
Legal, social, ethical, professional,  
economic and commercial issues

## CITP

Development, deployment  
& evaluation of computer  
based systems using:  
*BSc:* relevant concepts & principles  
*BA:* appropriate theory  
risk & safety assessment

## CEng

Use of engineering principles  
*BEng:* Relevant mathematics  
*BSc:* Commercial/economic context  
Management techniques

*MEng:* Advanced designs/Design methods  
Originality in applying knowledge

## CSci

Use of scientific principles  
Relevant mathematics  
*BSc:* Computational modelling  
Contextual knowledge of  
e.g. Psychology, Biology,  
Neuroscience, e-science

*MSci:* Awareness of current issues  
Originality in applying knowledge

## PROGRAMME CRITERIA

- ▶ All programmes accredited for CITP, CEng or CSci must be guided by the relevant QAA/CPHC benchmark statement
- ▶ The course should be up to date and convey a sense of excitement about the subject
- ▶ Not more than one-third of the material in an accredited programme may normally lie outwith the benchmark
- ▶ Programmes that do include more than one third of their material from other disciplines may be creditable if
  - ▶ this material is integrated into the programme in support of the computing outcomes
  - ▶ this is shown in the mapping of the PLOs to the BCS criteria



## INDIVIDUAL PROJECTS

- ▶ Projects should reflect the aims and learning outcomes that characterise the programme to which they contribute
- ▶ For CITP accreditation, the project may involve producing a tangible deliverable or might be an in-depth investigation of a "state-of-the-art" IT system leading to reasoned conclusions for innovation and change.
- ▶ For CEng accreditation, the project will normally be expected to involve the design and development of a tangible deliverable.
- ▶ For CSci accreditation, the individual project may involve producing a tangible deliverable or may be a research based computing project (e.g. in theoretical computer science) or may be related to another scientific discipline.

## THE ACCREDITATION PROCESS

- ▶ Accreditation continues to involve a visit but there are now two alternative types of visit/documentation
- ▶ **Type 1**
  - ▶ As previously but with some revisions to the documentation
- ▶ **Type 2**
  - ▶ Following a previous visit which resulted in a full 5-year accreditation, an HEI may be offered the option of submitting reduced documentation based on a Reflective Evaluation Document (RED)
  - ▶ The RED should explain how the HEI is continuing to satisfy the accreditation requirements
  - ▶ The RED will be accompanied by internal review documents

## ACCREDITATION CRITERIA

- ▶ Criteria for CITP
- ▶ Additional criteria for partial CEng/CSci (breadth)
- ▶ Additional criteria for full CEng/CSci (depth)
- ▶ Additional criteria for CITP Further Learning
- ▶ Criteria for IEng
- ▶ Criteria for Specialist Masters

## REVIEW GROUP MEMBERSHIP

Gordon Bull  
Elizabeth Friend

BCS AAC  
BCS (*alt*: Samantha Chaffey/  
Karen Tuck)

Graham Gough  
Roland Ibbett  
Andrew McGettrick  
Roger Boyle & Paul McGrath  
Graham Brookes/Les Neal  
Anne de Roeck

University of Manchester  
BCS QSB (Convenor)  
Chairman, BCS QSB  
Chair AAC & former Chair AAC  
Chair/former Chair Mem Comm  
CPHC representative

### **In attendance**

Kristy MacDonald  
Andrew Ramsey  
Mike Rodd

Science Council  
ECUK (*alt*: Richard Shearman)  
BCS