

# Errata to BCS Guidelines on Course Accreditation Published January 2007

## PUBLICATION DATA:

*BCS web address:* [www.bcs.org](http://www.bcs.org)

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*Please note a reordering and renumbering of section 2 as follows:*

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## 1 OVERVIEW OF ACCREDITATION:

**Section 1.1 Introduction:** Page 1, Paragraph 7 line 3: [www.engc.org.uk](http://www.engc.org.uk)

**Section 1.4 Programme Structures:** Page 3, Paragraph 4: In Scotland, where entry to tertiary education can be after only five years of secondary education, undergraduate degree programmes typically require an additional 120 credit points over and above the credit point requirements for elsewhere in the UK. In addition, the SCQF credit levels differ from those used in England, Wales and Northern Ireland. Levels 7 and 8 in Scotland correspond to levels 1 and 2 in the rest of the UK. The junior honours are at level 9 or 10 and final year honours courses are at level 10. Masters degrees are at level 11. Thus, normally, an honours degree in Scotland requires 480 points (with a minimum of 120 at level 10 and a further 120 at level 9 or 10) and an integrated masters 600 credit points (with a minimum of 120 at level 11), whilst an ordinary/pass degree requires 360 points (with a minimum of 60 at level 9).

NB: In the near future, QAA levels 1, 2, 3 and 4 are expected to become levels 4, 5, 6 and 7.

**Section 1.5 Accreditation:** Page 4, Paragraph 3: The exemplifying academic qualification for CITP is an accredited honours degree in the computing field, which is expected to include a suitable honours level project, together with further learning beyond graduation.

**Section 1.5 Accreditation:** Page 4, Paragraph 9: In addition to meeting the criteria outlined in section 2.2, not more than one-third of the material in an accredited programme may normally lie outside the scope of the QAA Computing Benchmark as summarised in table 1.5. Programmes that do include more than one third of their material from other disciplines may nevertheless be accreditable, provided that this material is demonstrably integrated into the programme in support of the computing outcomes and that this is demonstrated by the mapping of the Intended Programme learning Outcomes to the BCS criteria.

The Society does not accredit Generalist Masters Degrees, however candidates holding such degrees will be considered under the individual route to Membership as detailed in section 5.

**Section 1.5 Accreditation: Page 4, Table:**

Table 1.5

Programme Type	Minimum Computing Credit Points	Notes	Accreditation
Joint Honours Degree	160 of which a minimum of 80 are at level 2*†	The programme should provide breadth in computing	Accredited as partially meeting the requirements for CITP
Ordinary Degree	200 of which a minimum of 40 are at level 3	The programme should provide breadth in computing	Accredited as meeting the requirements for IEng
Honours Degree	240 of which a minimum of 80 are at level 3*	The programme should provide breadth and depth in the area of computing and should be influenced by relevant research and industry trends, with adequate theoretical underpinning	Accredited as meeting the requirements for CITP and partially meeting the requirements for CEng and/or CSci
Specialist Masters Degree	120 at level 4*	The programme should provide in-depth study of at least one specialist area of computing and build on the equivalent of an honours degree	Accredited as partially meeting the requirements for CEng and/or CSci and/or satisfying the further learning requirements for CITP
Integrated Masters Degree	320 of which a minimum of 60 are at level 4*	The programme should provide breadth and depth in the area of computing and should be influenced by relevant research and industry trends, with adequate theoretical underpinning. In addition it should provide in-depth study of at least one specialist area of computing	Accredited as meeting the requirements for CITP and CEng and/or CSci and satisfying the further learning requirements for CITP

**NOTES:**

† Accreditation as partially meeting the requirements for CITP must include a suitable honours level project together with the teaching and assessment of Legal, Social, Ethical and Professional Issues

\* The differences in the minimum computing points between the England, Wales and Northern Ireland requirements and the Scottish requirements are detailed in Section 1.4 on page 3

A course will not be considered for an alternative level of accreditation than that outlined in the table.

## 2 CRITERIA FOR ACCREDITATION

**Section 2.1 Departmental Criteria: Page 6, Paragraphs 3 & 4:** The Society requires evidence of a clear quality assurance framework at departmental and institutional level, and where appropriate, at inter-institutional level. Evidence is also required that this framework is in active use and that it involves the participation of students; such evidence could take the form of output from externally conducted institutional reviews and internal reviews of the department.

The Society requires evidence that the students on the programme are adequately supported by appropriate learning resources which include academic, administrative and technical staff, computing and communication facilities which include appropriate software tools, and specific and general learning facilities including access to appropriate digital and print-based information and effective academic advice and guidance.

**Section 2.2.2 Supplementary Requirements for CEng: Page 10, Computing-related practical abilities:**

- Use appropriate processes to specify, design, implement, verify and maintain computer-based systems, including working with technical uncertainty
- Investigate and define a problem, identify constraints, understand customer and user needs, identify and manage cost drivers, ensure fitness for purpose and manage the design process and evaluate outcomes
- Apply the principles of appropriate supporting disciplines

### **At masters level**

- Develop and apply new technologies
- Show originality and innovation
- Make general evaluation of commercial risk through some understanding of the basis of such risks

### **Integrated masters level group project**

Within an integrated masters programme students undertake a group project, giving them the opportunity to demonstrate:

- Their ability in applying practical and analytical skills present in the programme as a whole
- Innovation and/or creativity
- Synthesis of information, ideas and practices to provide a quality solution together with an evaluation of that solution
- That the project meets a real need in a wider context and has an identifiable customer (at least potentially) other than the student
- The ability to work as a team to deliver a significant piece of work
- Critical self evaluation of the process

The learning outcomes required for accreditation for CEng can be found at [http://www.engc.org.uk/documents/Regulations\\_for\\_Registration.pdf](http://www.engc.org.uk/documents/Regulations_for_Registration.pdf)

**Section 2.2.3 Supplementary Requirements for CSci: Page 10-11, Computing-related cognitive abilities**

**Second bullet of section:**

- Knowledge and understanding of mathematical principles necessary to underpin their programme of study and to enable them to apply mathematical methods, tools and notations proficiently in the

analysis and solution to problems

Final two lines of section:

The requirements for accreditation for CSci can be found by following the links at [www.sciencecouncil.org](http://www.sciencecouncil.org)

#### **Section 2.2.4 Integrated Masters Programmes – CITP Further Learning new section**

Integrated Masters programmes accredited for CITP may additionally be accredited as satisfying the requirements for CITP Further Learning.

Graduates should have been assessed on the following abilities:

##### ***Computing-related cognitive abilities***

- A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their field of study
- A comprehensive understanding of techniques applicable to their own research or advanced scholarship

##### ***Computing-related practical abilities***

- Show critical awareness of current problems and/or insights
- Show originality and innovation

#### **Section 2.2.7 Individual Projects pages 12 & 13**

Project Reports, Second bullet:

- an in-depth investigation of the context and literature, and where appropriate, other similar products (this section is likely to be emphasised less for an IEng project)

Project Reports, Sixth bullet:

- where appropriate, a critical appraisal of the project, indicating the rationale for any design/implementation decisions, lessons learnt during the course of the project, and evaluation (with hindsight) of the project outcome and the process of its production (including a review of the plan and any deviations from it)

Undergraduate Projects, page 13

It is expected that within an undergraduate programme, students will undertake a major computing project, normally in their final year and normally as an individual activity, giving them the opportunity to demonstrate: .....

Postgraduate Projects (including integrated masters' programmes)

Postgraduate projects must give students the opportunity to demonstrate: .....

#### **Section 3.8 Confidentiality page 17:**

The Society treats the work of the Academic Accreditation Committee as confidential. No reports or minutes of meetings will be shown to anyone with the exception of members of the Committee or of the Accreditation Panel, a representative of the Society's secretariat, the Engineering Council, the Science Council or designated members of the Society in the case of an appeal. However, the Society has a Memorandum of

Understanding with the QAA which encourages HEIs to share their BCS accreditation reports and outcomes with all stakeholders and as such, no restrictions are placed on the use of the report by the HEI to which it is sent. The MoU can be viewed at [www.bcs.org/accreditation](http://www.bcs.org/accreditation)

## 4 OUTCOMES

### **Section 4.2 Programmes From Which No Students Have Yet Graduated Page 18**

New programmes are normally accredited only when at least one cohort of students has graduated, since it is the final standard achieved which determines whether the programme is appropriate for accreditation. Initial accreditation may be granted for new programmes which seem likely to meet the appropriate criteria but which have not yet produced graduates. It is not a guarantee of future accreditation but is given where the Society is confident that the programme is likely to meet its objectives and to merit future consideration. In such cases, accreditation will only be granted for one period to cover a specific output of graduates. However, should a programme, other than those of one year duration, be in its first year the Society will not normally review it.

## APPENDIX I: LEGAL, SOCIAL, ETHICAL AND PROFESSIONAL ISSUES

*Page 21, Line 1:* Programmes seeking accreditation must cover and assess the legal, social, ethical and professional issues relating to computing....

## APPENDIX III: HEI APPLICATION FOR BCS ACCREDITATION

*Page 28, Paragraph 4, lines 2- 4:* Full details of programme specifications can be found by following the Academic Infrastructure links on the QAA website at [www.qaa.ac.uk](http://www.qaa.ac.uk)

*Page 29, Submission Document, third bullet:*

- a **Section B** for each programme submitted (in HC format, except Sections B.3.1, B.5.1, B.7.6 and B.7.7 which should be on CD)

*Pages 30-32, Section A1 & A2:* Quality Assurance & Learning Resources – Refer to BCS Guidelines Section 2.1

## APPENDIX IV: BCS ACCREDITATION CRITERIA

Please note a reordering and re-numbering of the sections as follows:

- Section 1: Quality Assurance and Enhancement
- Section 2: Requirements for Undergraduate Programmes
- Section 3: Supplementary Requirements for CEng
- Section 4: Supplementary Requirements for CSci
- Section 5: Integrated Masters – Requirements for CITP Further Learning
- Section 6: Supplementary requirements for IEng
- Section 7: Requirements for Postgraduate Programmes
- Section 8: Project Requirements

Page 37: Title change from Department Overview to Quality Assurance and Enhancement

*Section 1 Quality Assurance and Enhancement:* **Note: Individual programmes not meeting an aspect will be identified explicitly, with that aspect being rated “at threshold”. Should the number of programmes so identified be significant then that aspect will be rated at “below threshold” overall.**

- 1.1 **Programmes are influenced** by research, industry and market requirements
- 1.2 **Programmes are appropriately titled and specified** using intended learning outcomes which are accessible to all stakeholders.
- 1.3 **Programme intended learning outcomes are mapped** to the BCS criteria for the specific accreditation sought
- 1.4 **Programme intended learning outcomes are mapped** to the modules where they are delivered and assessed.
- 1.5 **Programmes are delivered and students supported**, employing appropriate resources in terms of staff, learning materials, equipment and accommodation.
- 1.6 **Support of student engagement and development** takes cognisance of individual ability and evidenced prior achievement.
- 1.7 **HEI regulations governing awards**, as gauged through student achievement, properly underpin the fulfilment of the requirements of the accreditation sought.
- 1.8 **Programme assessment**, in terms of subject content and level, is appropriate and is overseen through relevant QAA processes which engage with external examiners.
- 1.9 **Quality assurance and enhancement** processes are effective in supporting the delivery and evolution of programmes.
- 1.10 **Any off-site learning and assessment activities of a programme** are handled appropriately including
  - study and work placements
  - franchised study
  - validated awards studied at another location

Page 38, Section 2, Requirements for undergraduate programmes:

Additional points:

- 2.0 **The programme contains sufficient computing content**, as set out in table 1.5 of the guidelines.  
Graduates have been assessed on the following abilities:.....
- 2.2.5 **Operate computing equipment effectively**, taking into account its logical and physical properties.

Page 39, Section 3 re-titled to Section 7, Requirements for postgraduate programmes:

Additional point:

- 7.0 **The programme contains sufficient computing content**, as set out in table 1.5 of the guidelines.  
Graduates have been assessed on the following abilities:.....

Additional point:

**At Integrated masters level**

**3.2.7 Students undertake a group project, giving them the opportunity to demonstrate:**

- **Their ability in applying practical and analytical skills** present in the programme as a whole
- **Innovation and/or creativity**
- **Synthesis of information, ideas and practices** to provide a quality solution together with an evaluation of that solution
- **That the project meets a real** need in a wider context and has an identifiable customer (at least potentially) other than the student
- **The ability to work as a team** to deliver a significant piece of work
- **Critical self evaluation of the process**

New Section 5: Integrated Masters - requirements for CITP Further Learning

Integrated Masters programmes accredited for CITP may additionally be accredited as satisfying the requirements for CITP Further Learning provided they have been assessed on the following abilities:

*Computing-related cognitive abilities*

- 5.1.1 A systematic understanding** of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their field of study
- 5.1.2 A comprehensive understanding** of techniques applicable to their own research or advanced scholarship

*Computing-related practical abilities*

- 5.2.1 Show critical awareness of current problems and/or insights**
- 5.2.2 Show originality and innovation**

Page 46, Panel recommendations list

Partial CITP	CITP	CITP & Partial CEng
CITP & CEng	CITP& CSci	CITP & Partial CSci
CITP & CEng & CSci	CITP & Partial CEng & Partial CSci	Partial CITP & IEng
CITP Further Learning & Partial CEng &/or Partial CSci		
CITP & CITP Further Learning & Partial CEng &/or Partial CSci		