

1. Introduction to accreditation services

The Australian Computer Society (ACS), as the recognised accrediting body for information and communications technology (ICT) courses in Australia, conducts a process of accrediting tertiary courses for professional level membership of the Society. The ACS accreditation service is designed to assist educational institutions who are providing students the appropriate preparation for professional practice in ICT.

The accreditation process evaluates both the programs and the educational institution itself, ensuring that quality assurance processes are in place to cover physical resources, library resources, technical support, research activity and educational technology. Accreditation panels evaluate the adequacy of staff resources and the ability of the ICT industry and practitioners to have ongoing input to course design and delivery.

Accreditation is usually undertaken every five years by a panel of academics and practitioners, and a report is made available to the ACS Professional Standards Board with a recommendation.

2. Accreditation key ICT references: CBOK, SFIA and Seoul Accord Graduate Attributes

ACS accreditation utilises three main devices to benchmark program development. *In addition to these devices, the ACS supports the specific institution-based graduate attributes that may be in place, alongside other curriculum references such as: The Institute of Electrical and Electronics Engineer's (IEEE) Software Engineering Body of Knowledge (SWEBOK) and Engineers Australia competency standards for Software Engineering programs; the Association of Computer Machinery (ACM) and IEEE Computer Society Computer Science curriculum; and the ACM and Association for Information Systems (AIS) curriculum guidance for Information Systems programs. The requirements of the Australian Qualifications Framework (AQF) to ensure regulatory compliance, along with other educational devices such as Bloom's Taxonomy are also recognised as part of the overall process.*

i. The ICT Profession Core Body of Knowledge (CBOK)

The ACS does not present a detailed syllabus of study for educational institutions to follow. It is the expectation that the institution is preparing students for ICT professional practice where it is deemed appropriate that there is a requirement for professionalism and ethical behaviour to be taught.

A CBOK can be a syllabus or a list of things to study. However, the document from the ACS is presented as a framework on which to base both a breadth and depth of ICT study. The CBOK 'list' is the breadth of study expectation that should pertain to a program of study with the requirement that depth will be achieved in a particular specialist area of ICT with advanced units, including a Capstone Unit such as a project, in the latter part of the program.

ii. Skills Framework for the Information Age (SFIA)

The Skills Framework for the Information Age (SFIA) is a competency skills framework for aligning a workforce to deliver the needs of an organisation. It is the recognised international standard for ICT talent management. Using SFIA gives individuals and companies a common language to describe the capabilities required to deliver business outcomes – how to identify skills and knowledge to get the job done. SFIA can be applied to the context of the workforce from a small start-up to a multi-

national company. It is also the basis for the professional grades, accreditation and programs of the ACS.

iii. Seoul Accord Graduate Attributes

ACS bachelor degree accreditation is also subject to the Seoul Accord, an agreement between international accrediting bodies to recognise the processes and results of accreditation. Current signatories are the following organisations: ACS, BCS (United Kingdom), CIPS (Canada), JABEE (Japan), ABEEK (Korea), ABET (USA), Hong Kong (HKIE) and IEET (Taiwan). The ten graduate attributes to be referenced are:

- 1) Academic Education
- 2) Knowledge for Solving Computing Problems
- 3) Problem Analysis
- 4) Design/Development of Solutions
- 5) Modern Tool Usage
- 6) Individual and Team Work
- 7) Communication
- 8) Computing Professionalism and Society
- 9) Ethics
- 10) Life-Long Learning

Those programs recognised under the Seoul Accord support the substantive equivalent of education programs internationally, supporting a common approach to the ICT disciplines of study and mobility of graduates. It is also envisaged that additional levels of study will be recognised under the Seoul Accord.

In addition, in the Australian context, we also are able to utilise for reference, the ALTC Discipline Standards for Engineering & IT and are waiting for the Teaching and Learning Standards from TEQSA to be published.

3. Recent ACS accreditation key meetings

The ACS maintains an active schedule of educational institution visits throughout the year. In recent months, the following activities have taken place.

i. ABEEK/Korean delegation 1 June 2012, Sydney

ACS received a delegation of twelve from Korean organisations - universities and government agencies organised by the Accreditation Board for Engineering Education of Korea (ABEEK). The delegation were eager to learn from the ACS processes of accreditation of university bachelor degree programs and professional certification.

ii. Seoul Accord workshop and special meeting 14-16 June 2012, Sydney

The ACS hosted an international workshop of the Seoul Accord to progress issues of working groups within the signatory countries. Of particular discussion were issues of agreed terminology and jurisdictions from within which signatories conduct accreditation activities.

iii. ACS Accreditation Workshop 18-19 June 2012, Canberra

The ACS hosted a cross-university workshop in Canberra to support university academics that would be undertaking the accreditation process in the coming year. In particular, the use of SFIA skills as descriptions of learning outcomes for degree programs, to highlight the course focus as SFIA is used by government agencies, and increasing corporate organisations to describe job roles.

The ACS intends to coordinate more frequent events to support our academic colleagues and their curriculum development as a mechanism for the preparation of ICT industry professionals.

4. Current accreditation initiatives

i. Stakeholder communications

In addition to accreditation development events, the ACS will be providing more information to its constituent groups with regard to best practice initiatives and accreditation policy development.

ii. Expansion of ACS accreditation services

The majority of ACS accreditation of education occurs for higher education providers and their bachelor and masters degrees. The ACS is building appropriate processes and business models for the accreditation of Vocational Education and Training sector ICT programs and educational activities outside of the AQF such as vendor certifications and training courses.

iii. International engagement with the NZCS

The ACS is in discussions with the New Zealand Computer Society (NZCS) regarding the establishment of joint accreditation group to collaborate on accreditation approaches between Australia and New Zealand and to oversee the development and operation of accreditation and mutual recognition agreements with other countries.

iv. ACS Accreditation staffing

The ACS is actively recruiting new academic-related professionals to act as visit managers and as members of accreditation panels. These will be advertised through our network of education contacts and relevant industry/professional associations.

v. Review of the University Compact and Professional Partner Program (PPP)

Approximately 50% of universities had entered into Compact arrangements with the ACS in previous years; however, universities are increasingly transitioning to partner with ACS as a PPP to support the membership of their students, IT staff and faculty, separating the function of accreditation. Information to all universities reviewing their arrangements will be undertaken in September 2012 alongside consultation regarding future accreditation fees.

ACS Professional Certifications

Update July 2012

The ACS currently offers 2 levels of professional certification:

1. **Certified Technologist (CT)** – largely awarded to those with ACS accredited bachelor degrees. CT is aligned to Level 3 (Apply) of the Skills Framework for the Information Age (SFIA).

2. **Certified Professional (CP)** – awarded to those with extensive work experience and in most cases, completion of the ACS mentored Computer Professional Education Program.

CP is aligned to Level 5 (Ensure, advice) of SFIA.

ACS has also devised a **Certified Master Practitioner (CMP)** level (SFIA Levels 6 or 7 where appropriate) which will be made available to suitably qualified practitioners from designated specialty areas of ICT.

In 2012, ACS commenced work on professional certification specialisms. This involved the formation of advisory groups of industry and academic leaders to advise on the education, training and experience requirements for professional certification at the CP and CMP levels, as deemed appropriated by the group. The groups formed to date are from the fields of:

- Enterprise Architecture
- Information Security
- Software Development
- Business Analysis

In October 2012, the ACS Professional Standards Board will be asked to approve their recommendations to date with subsequent communications to education institutions and other stakeholders. Further areas of ICT expertise will be developed for professional certification grading in the coming year.

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