

ACPHIS Discussion: Overview of ACS Accreditation of IS Programs

Agenda: Review the ACS approach to accreditation
and see how it applies to IS programs
Consider typical issues that arise in IS Accreditation
and provide feedback to the ACS

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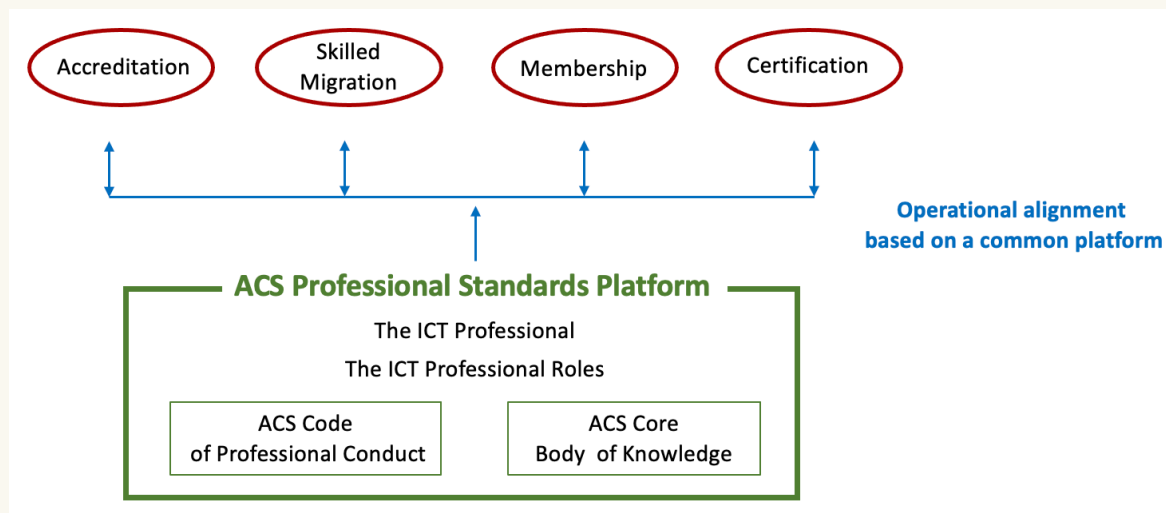
Disclaimer: I'm not speaking on behalf of the ACS.

This presentation is based on current published material and my last 7 years
working with the ACS on accreditation and professional standards.
My role with the Professional Standards Board finished last December.

The Context of ACS Accreditation

Professional Standards : The ACS is professional society for ICT in Australia (member of Professions Australia, Seoul Accord, IFIP-IP3, etc.)

ACS standards setting and assessment activities are governed by its **Professional Standards Board** with committees and integrated into a **Professional Standards Platform**.



*See ACS Core Body of Knowledge for a discussion of professionalism

ACS Accreditation Principles

Purpose of Accreditation : To improve the professionalism of the ICT industry by working with Higher Education Institutions to develop Programs which produce professional ICT graduates.

Accreditation Design Principles :

Approach: Developmental rather than compliance

Respect for the autonomy of education providers - no prescribed curriculum

Criteria: Transparent, equitable & explicit, so minimising bias
Grounded in the HESF & AQF (does not duplicate TEQSA's criteria)
Seoul Accord & International comparators

Authentic: Evaluation is based on primary sources rather than PR

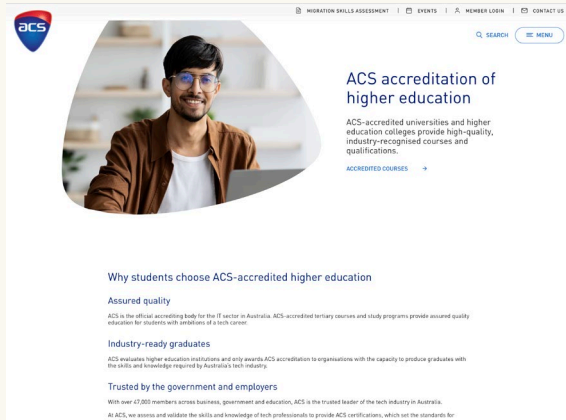
Application: Parsimonious (submission may be <5 pages for a program)
Provides online access to materials (CMS, LMS, ...)

Case Manager support

ACS Accreditation Website

just google [acs accreditation](https://www.acs.org.au)

Useful Background Documents:



Accreditation Guide
Register of Accredited ICT Programs
(Accreditation Annual Report 2022)

Professional Standards Platform:

Core Body of Knowledge
Code of Professional Conduct

Accreditation Manual:

Volume 1: Accreditation Process
Volume 2: Accreditation Criteria
Volume 3: Application Template

Accreditation Criteria

1. the Institution

using ICT discipline-specific criteria within the **HESF**

2. the Program

using ICT discipline-specific criteria within the **AQF**

2.1 Program Design Criteria

2.2 Skills for a specified ICT professional role (EU c-CF, SFIA)

2.3 Knowledge Criteria:

Professional knowledge and skills (CBoK)

Breadth of ICT knowledge (CBoK)

Depth of knowledge in a particular field of ICT

(ACM, Disciplinary Bodies of Knowledge)

2.4 Application of knowledge and skills

Let's have a look at the criteria in practice, using the application form ([Vol 3](#))

Accreditation Application Form:

1. Institutional Criteria

Institutional commitment to ICT education

Place of the school in the university

ICT academic leadership - professorial level

staffing - expect 6+ EFT, 3 in the area of program focus

staff qualifications - both ICT and educational

currency (cpd) & engagement, relevant research

Technological resources for ICT education

Industry-grade software

Monitoring, Review & Improvement

ICT Industry Advisory Board

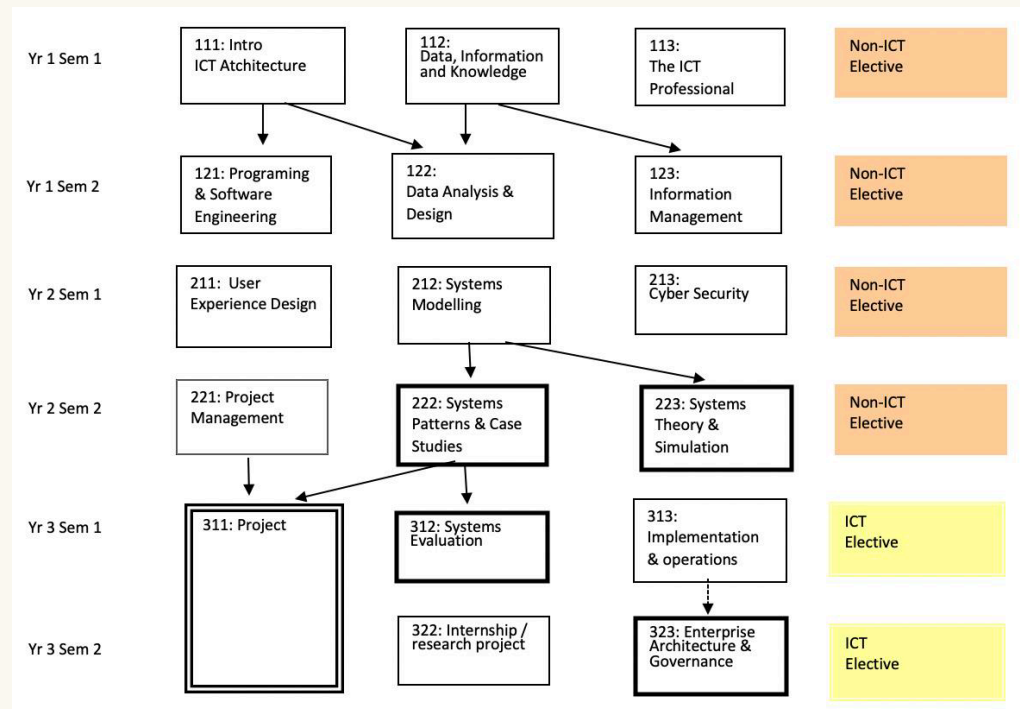
Accreditation Application Form :

2.1 Program Design Criteria

Program Title - Testamur identifies program as a part of the ICT field

Program Objectives - Relevant to the ICT field

Program Structure & justification



- 1.5 EFTSL of ICT

- ICT knowledge built through program to an advanced level

Accreditation Application Form :

2.2 Skills for a specified ICT Professional Role

Identify a role that a graduate can perform professionally
Demonstrate an understanding of the role (skills required, etc)
Show how the program develops the necessary skills

[SFIA](#) (May 2023 update)

Generic Business Analysis job descriptions

Generic job/role descriptions (referencing BABOK v3 and SFIA v8) for the following:

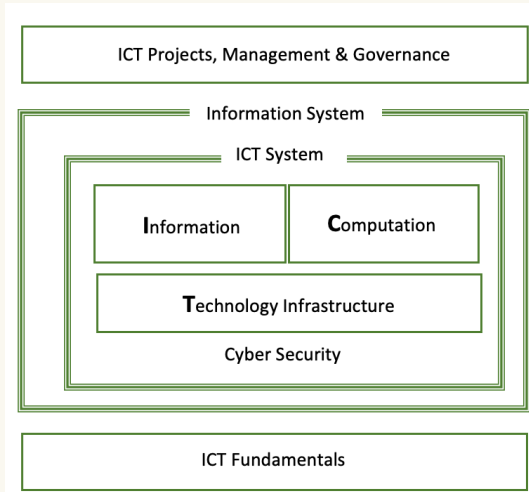
- Business Analysis Practice Lead
- Senior Business Analyst
- Business Analyst
- Trainee/Apprentice Business Analyst

The template describes...

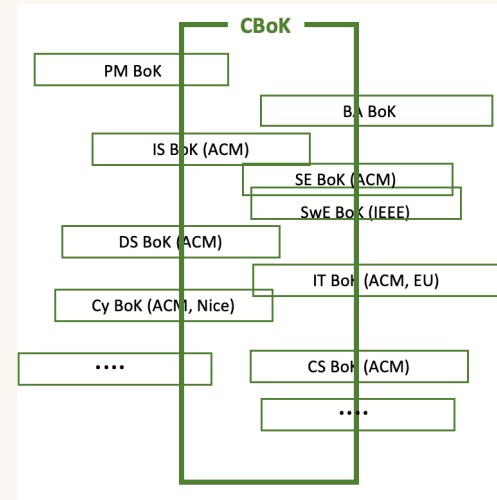
- Job purpose
- Job responsibilities
- Minimum requirements for the role
- Education and qualifications
- Mapping to BABOK knowledge areas, SFIA skills and levels
- Illustrative mapping to organisational behaviours/values

The Basis of Accreditation Knowledge Criteria : CBoK

Specifies (a) the concept of the ICT Profession and an ICT Professional



(b) Areas of Core ICT Knowledge



(c) Relationship with disciplinary BoKs

Information Systems

- Analysis of human activity systems, ontological modelling, specifying organisational and external context of computing systems, impact and user experience analysis
- Integration of systems components into coherent socio-technical systems
- Types of application: organisational operations (transaction processing, executive information systems), simulation and decision support, information management (digital document (text, video, sound, image) creation, storage, communication and information retrieval), knowledge management, digital platforms and markets
- User experience: interface design, physical and cognitive ergonomics
- Application context where specifically linked to ICT: Domain attributes (e-health, e-business, transport and logistics, agriculture, e-government, etc), language and cultural factors, users work practices and organisational contexts

Accreditation Application Form :

2.3 Knowledge Criteria

ICT Knowledge: BIT (Information Systems)

Show where CBoK knowledge is **explicitly taught and assessed** in mandatory subjects. Use the following levels of assessment:

1. Introductory - teaches and assesses conceptual level knowledge, student able to discuss the topic, recognise cases and examples
(*'know-that'* - Bloom levels 1 & 2)

2. Intermediate - assesses application of concepts, students able to use knowledge to perform a task and explain it
(*'know how'* - Bloom level 3)

3. Advanced - assesses reflection, students able to analyse and evaluate
(*'know-why'* - Bloom levels 4 & 5)

Mandatory Subjects v	ICT Knowledge Types >	Knowledge Areas										In-depth					
		Professional					Core										
		ICT Ethics	Impacts of ICT	Working Individually & Teamwork	Professional Communication	The Professional Practitioner	ICT Fundamentals	ICT Infrastructure	Information & Data Science & Engineering	Computational Science & Engineering	Application Systems	Cyber Security	ICT Projects	ICT management & governance			
111: Intro to ICT Architecture							1	1	1	1	1	1		1			
112: Data Information and Knowledge							1		2					1			
113: The Digital Professional		1	1	2	2	2						2					
121: Intro to Programming & Software Engineering									2								
122: Database Design								3						1			
123: Information Management Systems													1	1			
211: Systems Modelling			2							2				2			
212: CyberSecurity											2						
213: Human-Computer Interaction														2			
221: Systems Theory and Simulation						2				3				2			
222: Systems Design Patterns and Case Studies								2						2			
223: ICT Project Management		2										3					
311: Business Analysis Project (double unit)		3			3	3						3		3			
312: Systems Evaluation			3											3			
313: Implementation and Operations													3				
322: Internship or Research Project				3	3									3			
323: Enterprise Architecture & Systems Governance													3	3			
							Professional					Core					In-depth

levels of knowledge

knowledge areas

IS subjects

Types of knowledge

See Vol 2 for details, esp. re In-depth & the Seoul Accord

Show use of reference sources (eg. ACM curric)

Accreditation Application Form :

2.4 Application of knowledge and skills

Integration of the programs components to produce coherent knowledge

Development of knowledge through the program to an advanced level

Application of the knowledge to the professional role (capstone / internship)

General preparation for Professional Practice.

Summary: Accreditation Criteria

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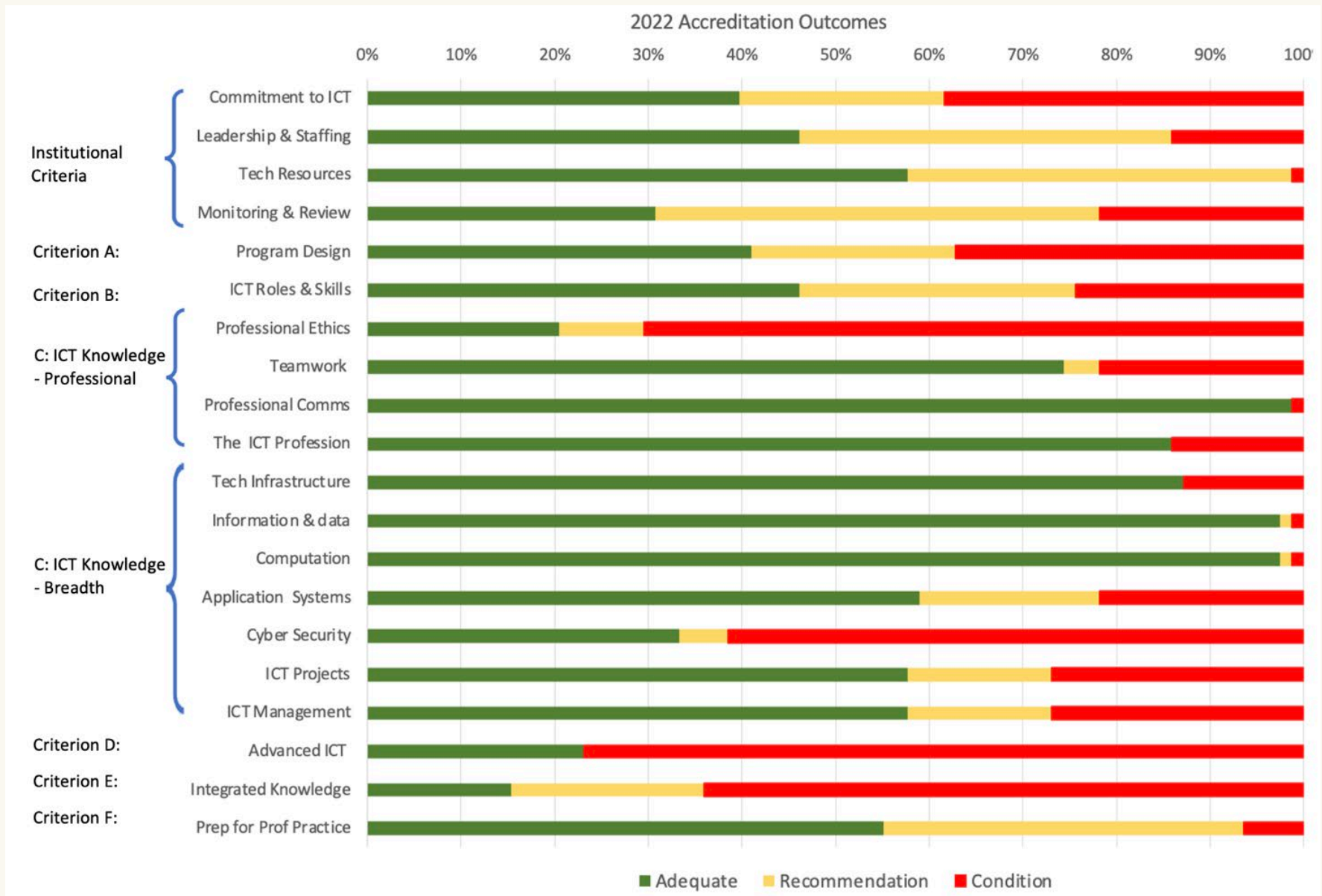
2.4 Application of knowledge and skills



Let's conclude with a look at Issues that arise in accreditation

General Accreditation Issues 2022

(a covid year)



Specific Accreditation Issues with I.S. Programs

1. the Institution

Lack of profile for the IS discipline within the university

Low staff numbers

2. the Program

Volume of ICT - 12 ICT subjects are needed for a program to be an ICT program

Breadth - patchy coverage of the ICT field (CBoK), cybersecurity often missing

In-depth - advanced level of knowledge needs a prereq with a prereq

Explaining the target professional role

ACPHIS Discussion:

ACS Accreditation of IS Programs

Suggestions for Follow up:

1. Check out the [ACS Accreditation Website](#)
2. Contact your ACS Case Manager for a chat
(email: accreditation@acs.org.au)
3. Craig is happy to talk with you
(email: craig.mcdonald@canberra.edu.au)
4. ACPHIS will prepare a report of this discussion and post it on the website
(<https://www.acphis.org>)