

Succinct Summary of Selected Proposed Computing Criteria Changes

This is a summary of the most significant changes in both the General and Program Criteria. There are five sets of changes shown below, three in the General Criteria, and two in the Program.

1. **General Criteria C5 (Curriculum)** – All additions are noted in gold or blue, and deletions are noted by ~~striketrough~~; with the exception of C5.5 below, the changes apply to all associates, bachelors, and masters level criteria. The addition of C5.5 applies only to bachelor level programs. Both parts (gold and blue) are **first reading proposals**.

Criterion 5: Curriculum

The program's requirements must be consistent with its program educational objectives and designed in such a way that each of the student outcomes can be attained. The curriculum must combine technical, professional, and general education components **and must include diversity, equity, inclusion and accessibility topics consistent with the institution's mission. The curriculum must** ~~to~~ prepare students for a career, further study, and lifelong professional development in the computing discipline associated with the program.

The curriculum requirements specify topics, but do not prescribe specific courses. The program must include mathematics, statistics, and science appropriate to the discipline and at least 30 semester credit hours (or equivalent) of up-to-date coverage of fundamental and advanced computing topics that provide both breadth and depth. The computing topics must include:

1. Techniques, skills, and tools necessary for computing practice.
2. Principles and practices of security and privacy in computing.
3. Local and global impacts of computing solutions on individuals, organizations, and society.
4. **Developing inclusive and accessible computing solutions that avoid biases that negatively impact direct and indirect users.**
5. **A comprehensive project or experience appropriate to the discipline which: 1) builds on technical knowledge and skills acquired in prior advanced course work, and 2) enables the application of appropriate professional dispositions.**

New Definitions:

Direct users: Direct users are the target population for whom computing solutions are designed.

Indirect users: Indirect users may not use computing solutions directly but could be affected by their functionality.

Professional dispositions are defined as behaviors desired in the workplace.

2. General Criteria C8 (Institutional Support) – All additions are noted in gold and deletions are noted by strikethrough; the changes apply to all associates, bachelors, and masters level criteria. This is a second reading proposal.

Criterion 8: Institutional Support

Institutional support, resources, and leadership must be adequate sufficient to: a) ensure the quality and continuity of the program; Resources including institutional services, financial support, and staff (both administrative and technical) provided to the program must be adequate to meet program needs. The resources available to the program must be sufficient to b) attract, retain, and provide for the continued professional development of a qualified faculty; The resources available to the program must be sufficient to c) acquire, maintain, and operate infrastructures, facilities and equipment appropriate for the program; and to provide an d) create and foster a respectful environment in which among the program's students, faculty, staff, and administrators such that the student outcomes can be attained. Resources include institutional services and policies, financial support, and administrative and technical staff.

Respectful Environment

A respectful environment is inclusive and supports, values, and treats all members fairly and with dignity.

3. **General Criteria C6 (Faculty)** – All additions are noted in gold and deletions are noted by strikethrough. This is a second reading proposal.

Criterion 6: Faculty

Each faculty member teaching in the program must have ~~expertise and educational background~~ **competency and currency within the program's discipline** consistent with the contributions to the program expected from the faculty member. The ~~competence~~ **competency** of faculty members must be demonstrated by such factors as education, professional credentials and certifications, professional experience, ongoing professional development, contributions to the discipline, teaching effectiveness, and communication skills. Collectively, the faculty must have the breadth and depth to cover all curricular areas of the program.

The faculty serving in the program must be of sufficient number to maintain continuity, stability, oversight, student interaction, and advising. The faculty must have sufficient responsibility and authority to improve the program through definition and revision of program educational objectives and student outcomes as well as through the implementation of a program of study that fosters the attainment of student outcomes.

4. **Computer Science Program Criteria C5.a (Curriculum)** – All additions are noted in gold and deletions are noted by ~~strikethrough~~. This is a first reading proposal.

Criterion 5: Curriculum

The curriculum requirements are in addition to the General Criteria curriculum requirements and specify topics, but do not prescribe specific courses.

These requirements are:

- a. Computer science: At least 40 semester credit hours (or equivalent) that must include:
 1. Substantial coverage of: algorithms and complexity; computer science theory; concepts of programming languages; ~~and~~ software development ~~and~~ fundamentals; software engineering; and artificial intelligence.
 2. Substantial coverage of at least one general-purpose programming language.
 3. Exposure to: computer architecture and organization, information data management; networking and communication; operating systems; ~~and~~ parallel and distributed computing; specialized platforms; graphics and interactive techniques; human computer interaction; and sustainable computing.
 4. The study of computing-based systems at varying levels of abstraction.
 5. A major project that requires integration and application of knowledge and skills acquired in earlier course work.

- b. Mathematics and Statistics: At least 15 semester credit hours (or equivalent) that must include discrete mathematics, probability, and statistics and must have mathematical rigor at least equivalent to introductory calculus.

- c. Science: Coursework that develops and applies the scientific method in a non-computing area.

5. Information Systems Program Criteria C5 (Curriculum) – All additions are noted in gold and deletions are noted by strikethrough. This is a **second reading proposal**.

5. Curriculum

The curriculum requirements are in addition to the General Criteria curriculum requirements and specify topics, but do not prescribe specific courses.

These requirements are:

- a. Information systems: At least 30 semester credit hours (or equivalent) that include coverage of fundamentals and applied practice in application development; **programming**; data and information management; information technology infrastructure; systems analysis, design and acquisition; project management; and the role of information systems in organizations;
- b. Information systems environment: At least 15 additional semester credit hours (or equivalent) of a cohesive set of topics that provide an understanding of an information systems environment;
- c. **A major project that requires integration and application of knowledge and skills acquired in earlier course work; and**
- d. ~~Quantitative analysis or methods that must include statistics.~~ **Appropriate mathematical and statistical models and techniques to solve a broad range of problems in Information Systems.**