

Draft Criteria

for Accrediting Programs in Information Systems

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Criteria for Program Evaluation

In order to be considered for accreditation an information systems program should be designed to give graduates a broad general education at the baccalaureate level and to enable them to function effectively in the information systems profession. Programs designed to prepare graduates for supporting roles in information systems, e.g. technician, are not eligible, nor are programs that fail to provide an adequate base for the application of concepts fundamental to the discipline of information systems. Although special circumstances such as evening or cooperative baccalaureate programs and distance education are not specifically addressed, these programs are eligible for consideration.

The criteria that follow were adapted from "Criteria for Accrediting Programs in Computer Science in the United States" published by the Computing Sciences Accreditation Board (CSAB). The criteria are intended to assure an adequate foundation in business, general education, mathematics, social sciences, and information systems fundamentals, and to assure appropriate preparation in advanced information systems areas. They are designed to be flexible enough to permit the expression of an institution's individual qualities and ideals, and are intended to encourage and stimulate creative and imaginative programs. They are to be applied with judgment. Nothing in the criteria should be interpreted as constraining an institution in the development of its educational programs.

The criteria are divided into seven major categories. Each category begins with a statement of Intent. The Intent is followed by a list of Standards. The Standards are followed by Guidance to help with interpretation of the criteria. To help institutions apply the criteria, guidance is provided for each category. **This guidance is not intended to be prescriptive but to help clarify interpretation of the Standards.**

An *Intent* provides the underlying principles associated with a category. For a program to be accreditable it must meet the Intent statement of every category.

Standards provide a detailed description of how an information systems program can minimally meet the statement of Intent. The word "must" is used within each standard to convey the expectation that the condition of the standard will be satisfied in all cases. Alternative approaches to achieving the Intent of a category are acceptable, but the institution must demonstrate that its approach provides an educational experience of equivalent value.

The *Guidance* Section provides institutions and program evaluators with guidance for assessing compliance with the Standards. It should not be regarded as prescriptive, but is intended to clarify the Standards.

Guidance statements generally express norms for meeting the standards. When an institution's approach does not coincide with a norm, it is their responsibility to demonstrate that its approach enables it to meet the Standard. The words "should" and "may" are used in guidance statements to convey that flexibility.

The section numbers and headings correspond to the section numbers and headings used in the Criteria. Each guidance item is either tagged [Global] or tagged with a number indicating the standard or standards that it supports, e.g. [IV-7]. "Global" guidance pertains to the entire category.

I. Objectives and Assessments

Intent

The program has documented educational objectives that are consistent with the mission of the institution. The program has in place processes to regularly assess its progress against its objectives and uses the results of the assessments to identify program improvements and to modify the program's objectives.

Standards

- I-1. The program must have documented educational objectives.
- I-2. The program's objectives must include expected outcomes for graduating students.
- I-3. Mechanisms must be in place to periodically review the program and the courses.
- I-4. The results of the program's assessment must be used to help identify and implement program improvement.
- I-5. The results of the program's review and the actions taken must be documented.

Guidance

1. Accreditation visits alone do not satisfy the intent of this category. [I-1 through I-5].
2. The program's educational objectives should be consistent with the mission of the institution. [I-1]
3. Assessment can produce quantitative and qualitative indicators of the program's progress in meeting its objectives. [I-3, I-5]

4. The program assessment should use information on initial student placement and subsequent professional development. [I-4]
5. The program assessment should include soliciting inputs from students and advice from computing professionals in industry and government. [I-4]
6. At a minimum, programs should conduct assessments on an annual basis. [I-4, I-5]
7. The scope of the assessments should be chosen to balance costs and benefits. Major comprehensive assessments might occur less frequently if supplemented by more frequent assessments of limited scope. [I-4, I-5]
8. Institutions should be able to demonstrate that they use the results of the assessment. [I-5]

II. Students

Intent

Students can complete the program in a reasonable amount of time. Students have ample opportunity to interact with their instructors and are offered timely guidance and advice about the program's requirements and their career alternatives. Students who graduate the program meet all program requirements.

Standards

- II-1. Courses must be offered with sufficient frequency for students to complete the program in a timely manner.
- II-2. Information systems programs must be structured to ensure effective interaction between teaching faculty and students.
- II-3. Advising on program completion, course selection and career opportunities must be available to all students.
- II-4. There must be established standards and procedures to ensure that graduates meet the requirements the program.

Guidance

1. For large classes, additional measures should be taken to assure effective interaction between faculty/teaching assistants and students. [II-2]
2. If Students with special needs are admitted to the program these needs should be addressed. Some ways to address this are tutors, special sections, or challenging individual projects. [II-3]

3. Materials describing the program requirements should be complete and consistent. [II-3]
4. There should be consistency across the advising processes. [II-3, II-4]
5. The advisory function should be given administrative support such as automated record keeping, articulation agreements, and automated pre-requisite verification. [II-4]

III. Faculty

Intent

Faculty members are current and active in the discipline and have the necessary technical breadth and depth to support a modern information systems program.

Standards

- III-1 The interests, qualifications, and scholarly contributions of the faculty members must be sufficient to teach the courses, plan and modify the courses and curriculum, and to remain abreast of current developments in information systems.
- III-2 All faculty members must have a level of competence that would normally be obtained through graduate work in information systems.
- III-3 A majority of the faculty members should hold terminal degrees. Some full-time faculty members must have a Ph.D. in information systems or a closely related area.
- III-4 All faculty members must remain current in the discipline.

Guidance

1. Some faculty members should regularly contribute to the discipline. [III-1, III-2, III-4]
2. In addition to other qualifications, for a faculty member to be considered competent in current information systems, s/he should be able to teach a broad range of fundamental information systems courses and to make a scholarly contribution to the information systems discipline. [III-1, III-2, III-3, III-4]
3. The equivalent of graduate work in information systems can be demonstrated by relevant research, thesis supervision, a history of attendance at relevant technical conferences, auditing of graduate courses, or relevant work experience. [III-2]

4. A majority of the faculty members should hold terminal degrees in a computer-related field. [III-3]

IV. Curriculum

Intent

The curriculum combines professional requirements with general education requirements and electives to prepare students for a professional career in the information systems field, for further study in information systems, and for functioning in modern society. The professional requirements include coverage of basic and advanced topics in information systems as well as an emphasis on an IS environment. Curricula are consistent with widely recognized models and standards.

Standards

Curriculum standards are specified in terms of semester-hours of study. Thirty semester-hours generally constitutes one year of full-time study and is equivalent to 45 quarter-hours. A course or a specific part of a course can only be applied toward one standard.

General

- IV-1. The curriculum must include at least 30 semester-hours of study in information systems topics.
- IV-2. The curriculum must contain at least 15 semester-hours of study in an information systems environment, such as business.
- IV-3. The curriculum must include at least 9 semester-hours of study in quantitative analysis as specified below under quantitative analysis.
- IV-4. The curriculum must include at least 30 semester-hours of study in general education to broaden the background of the student

Information systems

- IV-5. All students must take a broad-based core of fundamental information systems material consisting of at least 12 semester hours.
- IV-6. The core materials must provide basic coverage of the hardware and software, a modern programming language, data management, networking and telecommunications, analysis and design, and role of IS in organizations.
- IV-7. Theoretical foundations, analysis, and design must be stressed throughout the program.

IV-8. Students must be exposed to a variety of information and computing systems and must become proficient in one modern programming language.

IV-9. All students must take at least 12 semester hours of advanced course work in information systems that provides breadth and builds on the IS core to provide depth.

Information Systems Environment

IV-10. The 15 semester hours must be a cohesive body of knowledge to prepare the student to function effectively as an IS professional in the IS environment.

Quantitative Analysis

IV-11 The curriculum must include at least 9 semester-hours of quantitative analysis beyond pre-calculus

IV-12 Statistics must be included.

IV-13 Calculus or discrete mathematics must be included.

Additional Areas of Study

IV-14. The oral and written communications skills of the student must be developed and applied in the program.

IV-15. There must be sufficient coverage of global, economic, social and ethical implications of computing to give students an understanding of a broad range of issues in these areas.

IV-16 Collaborative skills must be developed and applied in the program.

Guidance

1. Quantitative analysis material may be covered in courses other than mathematics courses. [IV-3 IV-12]
2. The courses taken for broadening the student's background are frequently specified by institutional requirements. [IV-4]

3. Some of the topics in the information systems segment could be covered in courses offered outside the academic unit that administers the information systems program. [IV-1, IV-4 through IV-9]
4. Programming and systems analysis and design should include laboratory work, including the use of modern software tools. [IV-1, IV-5 through IV-9]
5. The advanced courses should be the equivalent of a course in each of the following areas: systems analysis and design, computer networks, database, and project management. [IV-8]
6. Oral and written skills should be applied in information systems courses. [IV-14]
7. There should be the equivalent of at least one semester-hour of coverage of social and ethical implications of computing. [IV-15]
8. Information Systems Environment. The courses taken for the I.S Environment are to broaden the student's background in the area in which the information systems knowledge is to be applied. For example, in the business environment, the student would take courses in the following areas: management, accounting, organizational behavior, marketing, finance, microeconomics, and macroeconomics. If the program is located in a business school, these course are frequently specified by institutional requirements.

V. Technology Infrastructure

Intent

Computer resources are available, accessible, and adequately supported to enable students to complete their course work and to support faculty teaching needs and scholarly activity.

Standards

- V-1. Each student must have adequate and reasonable access to the systems needed for each course.
- V-2. Documentation for hardware and software must be readily accessible to faculty and students.
- V-3. All faculty members must have access to adequate computing resources for class preparation and for scholarly activities.
- V-4. There must be adequate support personnel to install and maintain computing resources.
- V-5. Instructional assistance must be provided for the computing resources.

Guidance

1. Systems that are representative of modern, state-of-the-practice computing facilities must be available. [V-1]
2. The assessment of access to facilities includes consideration of the adequacy of the facilities in "closed" laboratories. Generally, students in closed laboratories should have individual workstations or mobile computing resources. If students do not own systems and the university does not provide them, then adequate space and facilities must be provided. [V-1]
3. Appropriate software tools should be available to support the needs of a modern curriculum. [V-1]
4. Adequate computer network connectivity should be available to faculty and students. [V-1, V-3]
5. Faculty should have access to adequate computing facilities from their offices. [V-3]
6. Depending on the nature of the scholarly activities pursued by the faculty, additional or separate facilities may be needed from those used to support student course work and course preparation. [V-3]
7. Instructional assistance will be available via appropriate means, e.g. help desks, dedicated phone lines, staff support, and/or student assistants.

VI. Institutional Support and Financial Resources

Intent

The institution's support for the program and the financial resources available to the program are sufficient to provide an environment in which the program can achieve its objectives. Support and resources are sufficient to provide assurance that an accredited program will retain its strength throughout the period of accreditation.

Standards

- VI-1. Support for faculty must be sufficient to enable the program to attract and retain high-quality faculty capable of supporting the program's objectives.
- VI-2. There must be sufficient support and financial resources to allow faculty members to attend national technical meetings with sufficient frequency to maintain competence as teachers and scholars.
- VI-3. There must be support and recognition of scholarly activities.
- VI-4. There must be office support consistent with the type of program, level of scholarly activity, and

needs of the faculty members.

- VI-5 Adequate time must be assigned for the administration of the program.
- VI-6 Upper levels of administration must provide the program with the resources and atmosphere to function effectively with the rest of the institution.
- VI-7 Resources must be provided to acquire and maintain laboratory facilities that meet the needs of the program.
- VI-8 Resources must be provided to support library and related information retrieval facilities that meet the needs of the program.
- VI-9 There must be evidence of continuity of institutional support and financial resources.

Guidance

1. Examples of evidence of continuity are a record of continuity or credible long-range plans. [Global]
2. Sabbatical and other leave programs, reasonable teaching loads, and competitive salaries are important factors in attracting and retaining faculty of high quality. [VI-1]
3. Examples of office support are secretarial services, copy machines, and fax machines. [VI-4]
4. Positive, constructive leadership at the college/school level and in the unit that administers the program are especially important in maintaining the program's quality. [VI-1, VI-6]
5. All levels of administration are relevant to the program. [VI-6]

Support for laboratories includes physical space, computing equipment, and associated support personnel. [VI-7]

VII. Program Delivery

Intent

There are enough faculty members to cover the curriculum reasonably and to allow an appropriate mix of teaching and scholarly activity.

Standards

- VII-1. There must be enough full-time faculty members with primary commitment to the program to provide continuity and stability.
- VII-2. Full-time faculty members must oversee all course work.

- VII-3 Full-time faculty members must cover most of the total classroom instruction.
- VII-4 Faculty members must remain current in the discipline.
- VII-5 All full-time faculty members must have sufficient time for scholarly activities and professional development.
- VII-6 Advising duties must be a recognized part of faculty members' workloads.

Guidance

1. The number of faculty members needed by a program is influenced by factors such as the number of students in the program, the number of courses required by the program, the demand for information systems courses by non-information systems majors, the existence of other programs in which faculty members are involved, and teaching loads. [II-1, VII-1, VII-4]
2. In general, a faculty member has primary commitment to the program if the majority of her/his activities are in direct support of the program. [VII-1]
3. Qualified instructors other than full-time faculty members, if utilized, should serve a supplemental role. [VII-2, VII-3]
4. Full-time faculty members should cover at least 70% of the total classroom instruction. [VII-3]
5. At least 25% of the total faculty effort (FTEs) should be devoted to scholarly activities. [III-8]
6. Teaching loads should not exceed the equivalent of 12 semester-hour credits per semester. If they do become that high, the load should not exceed four courses and two preparations per semester. [III-8]
7. The need to remain current in the discipline and the need for professional growth of faculty members, particularly those with high teaching loads, should be addressed. [III-8]
8. The number of undergraduate advisees assigned to a faculty member should be reasonable or sufficient released time should be provided. [III-9]

VIII. Institutional Facilities

Intent

Institutional facilities including the library, other electronic information retrieval systems, computer networks, classrooms, and offices are adequate to support the objectives of the program.

Standards

- VII-1. The library that serves the information systems program must be adequately staffed with professional librarians and support personnel.
- VII-2. The library's technical collection must include up-to-date textbooks, reference works, and publications of professional and research organizations.
- VII-3. Systems for locating and obtaining electronic information must be available.
- VII-4. Classrooms must be adequately equipped for the courses taught in them.
- VII-5. Faculty offices must be adequate to enable faculty members to meet their responsibilities to students and for their professional needs.

Guidance

1. The technical collection should also include a representative number of trade journals. [VII-2]
2. Facilities for printing electronically retrieved information should be available. [VII-3]
3. Some classrooms should have network access. [VII-4]
4. Faculty offices should have adequate space for meeting with students. [VII-5]