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ABSTRACT

This session will provide the participants with an overview of the ABET, Inc. accreditation process. This tutorial includes:
- An overview of the Information Systems Criteria,
- The process of information systems accreditation from ABET's Computing Accreditation Commission (CAC) perspective.
- A review of the process of planning and preparing for the accreditation team visit,
- The experience of gathering sample course materials from faculty, and
- A discussion of the accreditation process from the team's perspective is presented.

Keywords

Accreditation, Program Evaluation, Criteria, Standards, Information Systems Accreditation, ABET Accreditation

INTRODUCTION

This paper provides an overview of the ABET, Inc. accreditation process. First, the Information Systems Criteria are presented as it is paramount for the participants to understand it and its implications. The criteria are used as the basis for evaluation of information systems (IS) programs. In other words, the IS program must meet the Criteria for it to be accredited. Second, an overview of the process of information systems (IS) accreditation from ABET's Computing Accreditation Commission (CAC) perspective is discussed.   This discussion is followed by a review of the process of planning and preparing for the accreditation team visit and the importance of gathering and presenting sample course materials from faculty and students. Finally, a discussion of the process from the team's view is presented.

INFORMATION SYSTEMS CRITERIA

All undergraduate information systems programs are evaluated based on the published Criteria. For a program to be accredited, it must meet all the Criteria. Standards are provided as an example of one way the Criteria can be met. The ABET (2004) Accreditation Criteria and Standards for Undergraduate Information Systems are:

I. Objectives and Assessments

The program has documented educational objectives that are consistent with the mission of the institution. The program has in place processes to assess its progress regularly 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 review the program and the courses periodically.
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.

II. Students

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 of the program.

III. Faculty

Faculty members are current an 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.

IV. Curriculum

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.

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.

V. Technology Infrastructure

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.

VI. Institutional Support and Financial Resources

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.

VII. Program Delivery

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.

VIII. Institutional Facilities

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

VIII-1. The library that serves the information systems program must be adequately staffed with professional librarians and support personnel.

VIII-2. The library's technical collection must include up-to-date textbooks, reference works, and publications of professional and research organizations.

VIII-3. Systems for locating and obtaining electronic information must be available.

VIII-4. Classrooms must be adequately equipped for the courses taught in them.

VIII-5. Faculty offices must be adequate to enable faculty members to meet their responsibilities to students and for their professional needs.

OVERVIEW OF ABET'S ACCREDIATION PROCESS

The accreditation process can be described in six stages: investigation, initiation, pre-visit, visit, post-visit, and accreditation action. Each is briefly discussed below.

Investigation Stage

The investigation stage is usually the first step in accreditation.   A program may have an interest in being accredited and initiate an information gathering process. An inquiry is made at ABET for information and process requirements and Criteria are downloaded from the web site at www.abet.org for analysis. In this stage a program may send an observer to one of the two yearly training sessions for selected program evaluators, review accredited programs, contact faculty of accredited programs and/or hire an experienced accreditation consultant. An important question to answer is: Does the program meet the ABET Criteria? The program unit should carry out a thorough analysis of the program to determine if it meets the ABET Criteria.

Initiation Stage

If the program unit feels comfortable with the investigation stage, it moves to the next stage, initiation. A discussion with the administration of the institution is initiated to determine support for the process and required resources (time and cost). A one-course time release is usually needed by a faculty member. Current accreditation fees can be ascertained at www.abet.org. A self-study questionnaire document is requested from ABET or downloaded from the web site and the program unit enters the pre-visit stage.

Pre-visit Stage

The self-study analysis of the program is initiated and this should usually begin about one year prior to a scheduled accreditation on-campus visit. The self-study questionnaire is of paramount importance to the accreditation process and must be submitted to ABET by July 1 of the year of the visit. The self-study questionnaire is a detailed report documenting all attributes of the program under evaluation. The faculty must analyze all aspects of their program in the report. The report includes detailed documentation of program objectives, student outcomes, periodic assessments of the program, student advisement, student-faculty interaction, faculty interests, faculty qualifications, scholarly contributions, curriculum details, computing facilities, personnel support, faculty size, faculty oversight, adequacy of resources, administrative leadership, institutional support, library collection, library staffing, library budget, funding process, promotion and tenure procedures, admissions criteria, transfer procedures, and other details of all aspects of the program. It includes complete faculty vitae. All courses in the major must be documented. Detailed course syllabi with course content and learning objectives must be documented. Student advising and graduation records must be documented and accurate.

The institution needs to submit a "Request for Evaluation" form, found on the ABET web site, to ABET by January 31 of the year the program is to be visited. By July 1 of the same year, the institution must submit the Self-Study Report and pay the accreditation visit fee. All faculty, department chairs, dean, and administration including the president are made aware of the upcoming visit.

Some time in late spring or early summer the institution is sent a list of visiting team program evaluators and the name of the team chair.   The institution is requested to review the list and has the opportunity to challenge any team member, the team

chair, and/or program evaluator. Former faculty, graduates, consultants, and anyone who may have a conflict of interest may be excluded. The institution does not need to offer an explanation for a challenge. Once the team is set, the visiting team chair will contact the program unit's representative by August to set the visiting dates. The visiting team will usually visit on Sunday-Monday-Tuesday or Thursday-Friday-Saturday.

Once the team chair is in contact with the institution, the team chair will serve as the primary contact for the program unit until the following July accreditation action meeting takes place. The institution usually helps the team chair to make arrangements for lodging at a convenient hotel and nearby restaurants for meals. The institution does not pay for any of this unless they choose to host a luncheon on the first day of the visit. The team chair is in charge of the visiting schedule and usually contacts the program unit's representative to help prepare the visiting schedule prior to the visit.

Visit Stage

Generally, the team arrives by noon on Sunday and leaves by 4:00 pm on Tuesday. The team usually consists of three people. Course exhibits are usually reviewed on Sunday afternoon and the review continues through out the teams visit. They may also tour facilities in the afternoon. A private dinner and closed working session is conducted in the evening. Monday and Tuesday are used for interviewing. The team will want to see the president or equivalent, provost, dean, department chair, department faculty, computer center director, computer laboratory director, librarian, registrar, career center director, faculty in supporting departments, and students.

On the first full day of interviews the team meets early with top administration to explain the purpose of the visit and receives a briefing from the administration. Team members then meet individually with faculty, administrators and others who impact or interact with the program and students.

If the institution elects to host a group luncheon on day one of the visit they may do so. The institution is in charge but they must keep the affair modest. The host institution may invite whomever they choose to visit with the team during lunch. They usually invite alumni, advisory board members, administrations, faculty from related departments, and faculty from the program unit being visited. Some host the lunch in a private dinning room, faculty dinning room, faculty/staff cafeteria, or student cafeteria.

In the afternoon, the team may have questions and the team chair may ask for additional information. The team goes to dinner alone and meets alone in the evening to discuss their findings and prepare for the second day of interviews.

On the second day, the team chair usually meets with the department chair, asks for any additional information and may request changes in the interview schedule. Team members continue their interviews or tour and may continue to review course exhibits. The team has a private lunch and prepares for the exit interview. The team chair debriefs the department chair and discusses any misinterpretation of facts or observations. The team usually debriefs the dean and/or provost prior to meeting with the president. The team has the exit interview with top administration and their invitees. The visiting team does not disclose or discuss its tentative recommendations for accreditation with the institution. The team presents its factual findings orally and the opportunity is given to correct any factual errors at this time. Team leaves the campus immediately after the exit interview, usually by 4:00 pm, in order to catch a plane to be home that evening.

Post-visit Stage

After the exit interview, the institution has two weeks to send clarification information to the team chair. Listen closely to key words at the exit interview as the team will usually read from their draft preliminary statement. A program must meet all Criteria to be accredited. If there is a *deficiency*, the program is not accreditable. If there is a *weakness*, the program will have an intermediate visit or report due. If there is a *concern*, the program should consider addressing the issue.

The team will prepare a draft preliminary statement which includes the team's preliminary findings and recommendations to officers of the Computing Accreditation Commission. The draft preliminary report will undergo two detailed editing stages before it is transmitted to the institution visited for review. This process can take several months since it is all voluntary time. The institution will usually receive the preliminary statement by February and has 30 days to respond to it. The main purpose of the response is to correct factual errors or observations that were made at the time of the visit. Inadequacies may be corrected under certain circumstances. That is, if the corrections are made and are in full effect during the year of the visit. All corrections will need signed documented proof. The institution may provide additional information to the team chair up to the Computing Accreditation Commission (CAC) Annual Meeting in mid-July.

Accreditation Action Stage

The team chair usually presents the team findings at the Computing Accreditation Commission Annual Meeting. The commissioners ask questions and discuss the findings and recommendation of the team. The commissioners vote on

accreditation actions after each presentation.   At the end of all presentations, all decisions are reviewed for consistency and accuracy and a full vote of commissioners is taken again.

The accreditation actions voted on by the commissioners at the CAC Annual Meeting can be one of the following:

NGR – Next General Review – 6 years

IR – Interim Report – Report in 2 years

IV – Interim Visit – Visit in 2 years

RE – Report Extended

VE – Visit Extended

SC – Show Cause – Visit in the next cycle

NA – Not Accreditable (only appealable action)

A final statement is prepared by the team chair and officers of the Computing Accreditation Commission. The final statement is approved by the full membership of the commission and sent to the institution by September. This concludes the overview of the accreditation process.

What follows, is a review of the planning and preparation for an accreditation visit and a discussion of the team's perspectives of the visit.

PLANNING AND PREPARING FOR THE VISIT

In the pre-visit stage it is suggested that the program unit prepares two or three target visiting dates in September and October. Have the faculty, department chairs and administration (dean, provost, president, etc.) block-out some suggested time and dates in their calendar. It is difficult to get every one together for the visit. Be sure that the dean and president will be available. Be sure that the team can meet with all program faculties, faculty of supporting departments, students, librarian, computer center, laboratory directors, etc.

The person in-charge of the on-campus visit should be in contact with the team chair and help prepare the visiting schedule. Listen carefully to suggestions made by the team chair. Be sure faculty, administrators and students are available for scheduled meetings. A good cross section of students will provide the team with a broad view of the program.   Be sure to have a large number of seniors present for the meeting.

Be sure the team has good maps or provide a faculty member or student to escort the team members to and from appointments. A list of good restaurants and directions to them is very much appreciated.   Also include restaurants close by their hotel that might provide quick take-out food.

The team will need a private place to work during the 2 ½ day visit.   They will also want access to a room for 2 ½ days to review and analyze course materials. It is recommended that a lockable room, with key provided to each team member, be made available to them with sufficient space (tables and chairs) for them to work and for all the materials to be exhibited. Access to the Internet, telephone and a copy machine is always appreciated. The course exhibits should include all course syllabi, objectives, textbooks, materials, handouts, assignments, exams, quizzes, and graded student work needs to be on display. It is very important to have samples of graded student work for each course including samples of excellent, good and poor work.

As the self-study report is being prepared during the pre-visit stage, the program unit should collect course materials for the Fall-Spring semester prior to the visiting year. A faculty member is usually assigned the responsibility for the self-study questionnaire report and collection of faculty vita and course display materials. This person is usually the who needs release time. All program unit faculty need to be involved. Faculty vitae, course syllabi, textbooks, etc. and student work takes time and effort to collect and organize. A well-organized course exhibit will go a long way to leave a positive impression on the team. Missing course material will leave doubts. The course exhibits should be placed in a separate locked room several weeks in advance for the visiting team to review during the visit.

Prior to the visit the institution will provide the team with a random sample selection of the program graduates' transcript. The team will analyze the transcripts prior to the visit.

VISITING TEAMS VIEW OF THE VISIT

The team reads and analyzes the self-study report and other provided material prior to the visit. During their first evening team meeting, the visiting team usually compares notes to ascertain the program's strengths and weaknesses based on analysis of the self-study, college catalog, web site materials and other materials provided by the institution.   The main purpose of the on-site visit is to evaluate features that cannot be adequately addressed in the self-study report. For example, the team will evaluate such factors as faculty and student morale, intellectual atmosphere, stability and continuity of the faculty, caliber of the faculty, staff and students, and the learning outcomes of the education. They examine in detail such items as control and organizational structure, programs offered, degrees conferred, maturity and stability of the institution, number students enrolled in the program, college and institution, admission requirements, graduation requirements, teaching staff, teaching loads, publications, tenure policies, physical facilities, finances, curricular content and employment history of graduates.   Student support is evaluated, including registration, career and academic advising, library, computing and computing laboratory resources.

The initially focus on the program's stated objectives and learning outcomes and they attempt to verify that the institution regularly assessed the outcomes against its objectives, made improvements to the program, and modified the program's objectives based on the assessment feedback.   The team then focuses in on the faculty's qualifications to support the program.   Do they make regular scholarly contributions to the profession? Do they remain current in their field? Do they publish and attend professional conferences regularly? Do they hold terminal degrees?

CONCLUSION

Accreditation is a voluntary effort. Accreditation standards are proposed by professional societies to promote meeting minimum program standards in the profession. It is carried out by a large group of dedicated professional volunteers. If you want to become involved in accreditation activities the best place to begin is to complete an application to become a program evaluator and/or have your program unit start with the investigation stage above. This paper provides an overview of the ABET accreditation process. It presents the IS Criteria, as it is of overriding importance for participants to understand it and its implications. A brief review of the process of planning and preparing for the accreditation team visit and a discussion of the process from the team's view is presented as helpful aids and hinds for participants interested in accreditation activities.

REFERENCES

1. ABET, Accreditation Policy and Procedure Manual (2004) www.abet.org/policies.html
2. ABET, Criteria for Accrediting Computing Programs (2004) www.abet.org/criteria.html