Input and Participation of Engineering Libraries to the ABET Accreditation Process

Introduction

ABET is the organization that accredits undergraduate programs in applied science, computing, engineering, and technology according to the standards of the profession. ABET has four accreditation commissions: Applied Science (ASAC), Computing (CAC), Engineering (EAC), and Technology (TAC).

"ABET accredits postsecondary degree-granting programs housed within regionally accredited institutions. **ABET accredits programs only, not degrees, departments, colleges, or institutions. "** **(http://abet.org/the_basics.shtml).** Accredited programs must request an evaluation every six years in order to renew the accreditation.

When preparing for the accreditation process, engineering programs have two governing documents that need to be addressed: 1. Accreditation Criteria and 2. The Self-Study Questionnaire.
The current criteria and the self-study questionnaire for each Commission are posted on the ABET website at http://www.abet.org/forms.shtml.

In the current criteria for the Applied Sciences (ASAC), Engineering (EAC), and Technology (TAC), the library is not specifically identified but it is stated that "…information infrastructures must be in place to support the scholarly activities of the students and faculty and the educational objectives and outcomes of the program…" The current criteria for the Computer Science (CAC) does specify the library by name: "Institutional facilities including the library, other electronic information retrieval systems… are adequate to support the education objectives and outcomes of the program."

ABET has proposed the use of common language for defining the criteria across the four accreditation commissions. The proposed harmonization document for all four commissions: Applied Sciences, Engineering, Computer Science, and Technology, incorporates "The library services and the computing and information infrastructure must be adequate to support the scholarly and professional activities and the students and faculty" into Criterion 7. If approved, it will be in effect for the 2011-2012 cycle. For more information see http://www.abet.org/harmonization.shtml and the Proposed Criteria documents at http://abet.org/forms.shtml In this new definition of Criterion 7, educational units specifically are requested to supply documentation of library services that support the programs at their respective institutions.

When preparing the self-study documentation, the Self-Study Questionnaires for each Commission provide instructions, suggestions, and a template to the educational units. The current Self-Study Questionnaires for all four commissions mention the library by name. The ASAC asks for the "Summary and description of… Library Resources" and the EAC and TAC place the library under Non-Academic Supporting Units and ask the department to "Provide information about units that provide non-academic support to the programs being evaluated, e.g., library…" The Computer Science Accreditation Commission (CAC) self-study questionnaire includes more specific language and more direction regarding the criteria to be addressed than the other Commissions, which leave it open-ended for

librarians to provide information that demonstrates support for the programs being evaluated. The CAC Self Study Questionnaire asks the program to address these specific areas:

1. Library Staffing
   - Assess the staffing of the library (or libraries) that serves the program, including both size and qualifications.
2. Library Technical Collection
   - Assess the adequacy of the library's technical collection relative to the needs of the program and the faculty.
   - Describe and assess the adequacy of the process by which faculty may request the library to order books or subscriptions.
3. Library Electronic Access

Typically, library involvement is requested during the following phases of the accreditation process: preparing the library related information for the program self-study documentation, providing library specific supporting documents and participation in the site visit and discussions.

In order to assist engineering librarians in preparing for the ABET accreditation process we have surveyed our colleagues to find out what they have been asked to contribute for the departmental self-study documentation , as well as what library related topics were addressed during the site visit with the program evaluators. The following is a summary of the responses received. This document is not intended to be prescriptive, but rather is a compilation of the ELD members' experiences and contributions to the ABET accreditation process. The degree of library involvement in the process and the materials provided to the visitors varied from institution to institution. In addition, some librarians also noted that detailed statistical information is no longer required by ABET.

Although ABET doesn't request numerical data, the self-study questionnaires are open ended and librarians can choose to submit details related to their institution in addition to the description that ABET requests. It's important to remember that the following lists are composed of all items in all of the survey responses and it is not intended to imply that every item should be included in a given self-study or that every topic will be discussed during a given site visit.

Examples of library information included in the program self-study

1. General overview of the library

   Physical size and facilities
   Seating and study spaces
   Library hours
   Gate counts
   Size of collection
   Library expenditures (specific to Engineering materials)
   Acquisitions budgets
   Institutional memberships related to Engineering

2. Staffing levels

   Professional Staff
           Brief biographical statement
           Degrees if relevant
   Support staff (FTE)

3. Acquisitions

   Process used to acquire engineering-related materials (including how faculty can request
   materials for purchase)
   Approval plans

4. Collections

   Description of physical and virtual collections
   Consortial agreements (if applicable)
   Specialized full-text collections of professional organizations (IEEE, ACM, SPIE)
   Other resources available: maps, government documents, statistical sources, bibliographic
   management software
   Specialized resources: data, standards, patents and trademarks
   Materials purchased on demand
   Primary collection needs

5. Computing infrastructure

   Computing and printing facilities
   Specialized engineering software and applications (MATLAB, MathCad, etc.)
   Library web presence (web site, blog, wiki, podcasts etc.)
   Off campus access to electronic resources
   Wireless access

6. Services

   Reference services available to students and faculty
   Types of reference available: in-person, chat, email, SMS, individual research consultation etc.
   Course reserves and electronic course reserves
   Interlibrary loan and document delivery
   Retrieval services for off-site storage facilities
   Online resource guides and tutorials
   Instruction
           Generic classes on the use of library resources
           Class-specific bibliographic/information literacy sessions
           Other instruction
   Special events or programs for engineering students such as Engineering Week, resume writing,
   business opportunities for internships, visits to residential dorms etc.
   Outlook for services

7. Outreach

   Mechanisms of communication with faculty and students
   Special programs with Student Chapters of professional societies
   Activities involving the library and students

8. Additional materials

   Printouts of promotional materials, subject guides, specialized guides, information on special events or library programs for engineering students

Examples of library materials provided to visitors during site visits

Short narrative
    Library collections
    Reference
    Library instruction
    Searching the library resources
    Acquisitions of engineering – related materials

Handouts
    Copy of subject pages that list indexes and databases
    Collection development policy
    Latest collection assessment document
    Fact sheets about the library

Examples of topics of discussion and questions received by librarians during on-site visit

Resources and services of the library
Specific resources such as databases or a specific journal or book of interest
Hours
Off campus access
Is off campus access available 24/7?
How are the funding decisions made with regard to engineering materials?
Adequacy of the budget and access to resources
Is the library budget sufficient to meet the university's and program's needs, future plans, etc?
Working relationship librarians have with faculty
How is the faculty involved in collection decisions?
How are the faculty informed about library resources?
How do faculty members keep current with new information? Are there any training workshops that the library provides?
How do students use the library?
How many students use the library?
How does the engineering library connect with students?
How is information related to resources disseminated to the students?

How does the library support teaching students how to find and evaluate information?
Describe your instruction program
How has the library adapted to the electronic present and future?
Describe the library's strategic direction, plan, and optimism for the future.
How do librarians and staff stay current on resources? What training and/or professional development opportunities are they afforded?
Quality of library services not quantity of materials as measure of quality
Challenges or problems (such as budgetary issues, services issues, inadequate staff) with providing resources for users
What are the needs of the library?
What are the weaknesses of the library?
Trends in sci-tech librarianship

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