

# **SELF-STUDY QUESTIONNAIRE**

**To determine evaluation eligibility under the traditional or new CAC Criteria, please reference the “Proposed Changes to the Criteria” section at the back of the 2007-08 CAC Criteria document (version 8/3/07 edition).**

## **Computing Accreditation Commission**

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# General Instructions

## A. Introduction

The ABET *Criteria for Accrediting Computing Programs* is based in part on what students are supposed to learn in their course of study in a given program, as distinct from what they are presented in the curriculum. Consequently, institutions are required to have program educational objectives that describe the career and professional accomplishments that the program is preparing graduates to achieve, and have program outcomes that describe what students are expected to know and be able to do by the time of graduation. In addition, institutions are expected to have an assessment plan and process for determining the extent to which program educational objectives and program outcomes are being attained. This assessment is to be an ongoing process for improving student learning through enhancements to the program.

## B. Accreditation Process

This Self-Study Questionnaire is the basis for preparing a Self-Study Report of the program. This report provides essential information used by an evaluation team to determine whether the program is in compliance with the appropriate *Criteria*. The completion of this report is one of the most important steps in the accreditation process used by the Computing Accreditation Commission (CAC) of ABET, Inc. This process consists of the following steps:

1. The institution submits a Request for Evaluation of its computing program(s).
2. The institution submits a Self-Study Report of the program.
3. CAC conducts an on-site evaluation visit of the program.
4. The evaluation team submits to the institution a Program Audit Form, summarizing the team's evaluation, at the conclusion of the on-site visit.
5. Within 7 days after the visit, the institution may submit a response to the Program Audit noting errors of fact or observation.
6. ABET sends the institution a Draft Statement for Review and Comment, which describes the evaluation of the program.
7. The institution submits, within 30 days of receipt of the Draft Statement, a Due Process Response describing and documenting changes that have been made to address shortcomings noted in the Draft Statement. This response is sent to the Team Chair, with a copy to ABET.
8. Based on the institution's Due Process Response, the Team Chair prepares a Draft Final Statement, prior to the summer meeting of the CAC.
9. Formal consideration of the program by the CAC at its summer meeting results in a Final Statement to the institution, along with the accreditation action for the program.

### C. Requirements of the Self-Study Report

As indicated above, ABET requires a Self-Study Report and an on-site evaluation of the program by a visiting evaluation team as part of the accreditation process. The Self-Study Report is expected to be a qualitative and quantitative assessment of the strengths and limitations of the program, and should include an assessment of the extent to which program educational objectives and program outcomes are being achieved. The Self-Study Report and accompanying assessment should involve appropriate constituent groups in its preparation. While the Self-Study Questionnaire specifies the items to be addressed in the report, the institution determines how it will conduct its Self-Study of the program.

It is important that the information in the Self Study show clearly the details of the process of formulating the program educational objectives and the program outcomes, as well as the details and results of the process of assessing the extent to which the objectives and outcomes are achieved. In general, input from constituencies such as advisory boards, alumni, and employers of graduates should be included in establishing program educational objectives, and data collected from these constituencies would normally be included in the process to assess the extent to which the objectives are achieved. On the other hand, the establishment of program outcomes, which are designed to enable graduates to achieve the program objectives, is largely an internal process, conducted primarily by the faculty although input from external sources also is expected. Data that is used to assess the extent to which program outcomes are achieved will primarily be obtained during the normal educational activities of students, and the CAC expects that direct measurement of the extent to which outcomes are achieved will be included.

### D. Content

The information provided in the Self-Study Report is used by the CAC to conduct both a qualitative and quantitative assessment of the program. At a minimum, this qualitative and quantitative information can be supplied by responding to the items in this questionnaire, using the indicated format. However, if the institution wishes to use an alternate format, it should be sure to provide all of the requested information.

The Self-Study Report should have two sections. The first section addresses compliance to all of the criteria for accrediting the program, and the second provides a collection of appendices containing program data and institutional profile information.

While the Self-Study Report is organized around the program accreditation criteria, it should be noted that in addition to the criteria, the program is required to satisfy the requirements of the ABET Policies and Procedures Manual (APPM). The APPM requires adherence to ABET standard policies, including policies on program naming and program differentiation in publicly-available materials such as catalogs and web sites. The Self-Study Report does not contain an explicit APPM section, but some of the questions may assist teams in determining whether or not the APPM requirements are met.

### E. Supplemental Materials

The following materials are also to be submitted: (Where appropriate a reference to a website is sufficient.)

1. A copy of the general catalog of the institution, covering course details, program requirements, and other institutional information applicable at the time of the visit.
2. Copies of all promotional brochures or literature describing the computing programs of the institution, and the institution's website address.
3. Copies of 10 transcripts of recent graduates of the program. Each transcript must be accompanied by the program requirements under which the student graduated from the program. It is particularly helpful to the CAC team if you will also provide any advising worksheets that show how each student fulfilled program requirements.
4. If a course is taught wholly on-line by a non-resident faculty member, data about that faculty member must be included in the Self-Study Report or provided in separate documents for credentialing purposes. In addition, for wholly on-line courses or complete degree program, the results of a survey to that group of students regarding their experiences in the program (comparable to the usual interview with students during an evaluation visit) should be made available to the visiting team.

### F. Preparation

It is important that the program title appear on the cover of each Self-Study Report and that this title be given exactly as it is listed in your college catalog, on transcripts, and on your institution's Request for Evaluation. This title is listed in the ABET Accreditation Yearbook and on the ABET website. Individuals applying for governmental positions, or for any position requiring graduation from an ABET accredited program, can find themselves in difficulty if the ABET listing of accredited programs is not consistent with the program title (or degree) as identified by the institution. DO NOT reproduce these instruction pages in the completed report.

Throughout the Self-Study Questionnaire you will find directions relative to specific programs, e.g. computer science, information systems, or information technology. These directions are in italics with braces and indicate the portion of the questionnaire that is applicable to each program. ONLY use those sections that are pertinent to your specific program.

### G. Submission and Distribution

If you are having more than one program evaluated under different computing criteria (i.e., computer science, information systems or information technology) you must have a separate Self-Study Report for each program. If there is more than one program the additional Self-Study Reports may be created by copying and pasting where appropriate.

If you are having more than one program evaluated under the same specific program criteria the responses may vary from one program to another. These include programs on separate campuses, different tracks or different degree specifications such as BA and BS. If this is the case, please use separate copies of the specific section as appropriate for each program, and clearly delineate which program is being described.

One copy of the Self-Study Report for each program should be sent to the following address by July 1 prior to the visit:

Computing Accreditation Commission  
ABET, Inc.  
111 Market Place, Suite 1050  
Baltimore, MD 21202-4012

The institution also submits one copy of the Self-Study Report for each program and one set of the supplemental material to the Team Chair.

Following instructions from the Team Chair, the institution also submits one copy of the appropriate Self-Study Report and one set of supplemental material to each Program Evaluator and Observer.

When new or updated material becomes available between the time the Self-Study Report is submitted and the date of the visit, it should be provided to the team members in advance or on arrival at the campus, with a copy to ABET Headquarters in accordance with instructions from the Team Chair.

The 7-day response following the visit should be sent to the Team Chair, and a copy forwarded to ABET Headquarters.

The 30-day response following receipt of the Draft Statement should be sent to the Team Chair and a copy forwarded to ABET Headquarters and to the first editor.

#### H. Display Materials

The following are the requirements for display materials:

1. For each required or elective computing course in the program (this includes courses counted in the IS Environment for Information Systems programs), there must a display of course materials available for study at all times during the evaluation visit. If some of this documentation is on-line (e.g., in an instructor's web site), please include the URLs in the display, and have a computer available at or near the course displays so that the team can view it. The material expected for each course includes:
  - a. Course name and number, instructors' name(s), course coordinator's name, number of credits, meeting times.
  - b. Textbook and other required material (e.g. manuals, reference booklets, standards and documents).
  - c. Syllabus/schedule (*provide hardcopy and URL if only available on-line*), including the course's outcomes and assessment plan.
  - d. Course policies.
  - e. Relationship between the course's outcomes and the program outcomes. This can be in the form of a table, such as:

Program Outcomes – Mapped to Course Outcomes				
Course Title				
Course outcomes	Program outcome-1	Program outcome-2	Program outcome-3	...
Course-outcome-1				
Course outcome-2	Entries in the table above indicate which course outcomes relate to which program outcomes, and the strength of that relationship.			
Course outcome-3				
...	...	...	...	...

- f. The manner in which data from this course is used to assess program outcomes. This also can be in the form of a table, such as the following. Alternatively, this information can be captured in a separate assessment notebook.

Program Outcomes – Mapped to Course Data Items				
Course Title				
Course data item	Program outcome-1	Program outcome-2	Program outcome-3	...
Course data-item-1				
Course data item-2	Information in these cells should indicate that the data item is used to assess the extent to which the program outcome is met. Include any evaluative instruments such as rubrics.			
Course data item-3				
...	...	...	...	...

- g. Assignments and projects, tests, exams and important handouts.
  - h. Student work (examples of graded high/medium/low quality work for labs, projects, tests/exams etc.).
  - i. Any feedback mechanisms/examples to students that might be on-line and the associated URL.
  - j. Any substantive electronically posted communication, threaded discussion, or teamwork, etc.
2. An assessment display must be created that contains a description of the assessment process you use to gather data, and documents the gathering and evaluation of the data and the improvement activities that resulted from the evaluation. Where possible, organize the material by program educational objective and program outcome. This display will document the material discussed in the Self-Study under Criteria 2, 3 and 4.

It would be most helpful to the team if all assessment and course display materials are available in the same location during the visit. The team also will need access to a printer, which should be in the same location as the displays. A properly networked computer from which printing can be done also should be available here.

### I. Confidentiality

The information supplied in this report is for the confidential use of ABET and its authorized agents, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.



# **Self-Study Report**

## **for (name of program, name of Institution)**

### **<Date of Report>**

This section presents a complete outline of the material to be provided in each Self-Study Report. Each report should be formatted similarly to this section, preferably with the same heading titles. **DO NOT DUPLICATE THE DETAILED INSTRUCTIONS.**

#### Background Information

Please provide the following background information.

##### **1. Degree Title**

Give title(s) of all degrees awarded for the program under review, including options, etc., as specified in transcripts and/or diplomas, and describe as necessary.

##### **2. Program Modes**

Indicate the modes, e.g., day, co-op, off-campus, on line, distance education, in which this program is offered and describe any differences in the information given for the computing unit as a whole in the Appendix.

##### **3. Actions to Correct Previous Deficiencies, Weaknesses and/or Concerns**

If specific program deficiencies, weaknesses and/or concerns were identified by the CAC during the most recent evaluation (visit or report), please refer to them and indicate the actions taken. Deficiencies, weaknesses and/or concerns that were addressed in the previous evaluation as being common to all computing programs should be addressed in each Self-Study Report.

##### **4. Contact Information**

Identify the primary pre-visit contact person, e.g., the program chair or his/her designee if applicable. Provide name, address, telephone number, and e-mail address. Explicitly note any differences with the information on your Request for Evaluation (RFE).

#### Accreditation Summary

This section is the focus of the Self-Study Report. A complete description of how the program satisfies all of the requirements for each criterion must be presented. It is suggested that the information presented for each criterion be as complete as possible such that the Program Evaluator(s) can determine if all of the requirements are being met without cross-referencing material provided under other criteria. This may require some duplication of material but it should aid the Program Evaluator(s). Reference to the material provided in the Appendix (found

at the end of this document), and to other information provided by the institution, should be made as needed.

If you are having a program evaluated that exists on separate campuses, the answers to these questions may vary from one campus to another. If this is the case, please use separate copies of this section for each campus, and clearly delineate which campus is being described.

## 1. Students

### Criterion

Students can complete the program in a reasonable amount of time. They have ample opportunity to interact with their instructors. Students are offered timely advising, by qualified individuals, about the program's requirements and their career alternatives. Students who graduate from the program meet all program requirements.

### A. Frequency of Course Offerings

1. List below the course numbers, titles, semester hours and frequency of offerings for all courses required for the major that are offered less frequently than once per year.

Dept Course #	Title of Course	Semester Hours	Frequency

2. Explain how it is determined when each required course will be offered, e.g., rotation, odd-numbered years, etc

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3. List below the course numbers, titles, and semester hours of courses allowed for the major but not required (i.e., electives within the major), and explain how it is determined when they will be offered.

Dept Course #	Title of Course	Semester Hours

**B. Interaction with Faculty**

1. Describe how you achieve effective interaction between students and faculty.

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**C. Student Advising**

1. Describe your system of advisement for students on how to complete the program. Indicate how you ensure that such advisement is available to all students.

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2. When students need to make career choices, what is their procedure for obtaining advising? How do they have adequate access to qualified professionals when necessary?

3. Advising must be done by qualified individuals. Discuss the system by which advisors become qualified.

#### **D. Meeting the Requirements**

1. Describe your standards and procedures for ensuring that graduates meet all of the requirements of the program.

### **2. Program Educational Objectives**

#### **Criterion**

*The program has documented, measurable program educational objectives that are based on the needs of the program's constituencies.*

1. Provide the institution's mission statement. Include any other mission statements that are relevant.

2. List the program's educational objectives. Explain how and where they are documented outside of this Self-Study.

3. Describe how your program's educational objectives align with your institution's mission.

4. Explain how the program's educational objectives align with the needs of its constituencies, and include a list of the stakeholders. Also describe the role the constituencies played in formulating the educational objectives.

5. For each program educational objective, indicate the mechanism(s) used to measure it.

### 3. Program Outcomes

#### Criterion

The program has documented measurable outcomes that are based on the needs of the program's constituencies.

The program enables students to achieve, by the time of graduation:

- (a) An ability to apply knowledge of computing and mathematics appropriate to the discipline;
- (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
- (c) An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;
- (d) An ability to function effectively on teams to accomplish a common goal;
- (e) An understanding of professional, ethical, legal, security, and social issues and responsibilities;
- (f) An ability to communicate effectively with a range of audiences;
- (g) An ability to analyze the local and global impact of computing on individuals, organizations and society;
- (h) Recognition of the need for, and an ability to engage in, continuing professional development;
- (i) An ability to use current techniques, skills, and tools necessary for computing practices.

For computer science programs:

- (j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
- (k) An ability to apply design and development principles in the construction of software systems of varying complexity.

For information systems programs:

The program outcomes are consistent with those accepted by the information systems community.

The program enables students to achieve the following attributes by the time of graduation:

An understanding of processes that support the delivery and management of information systems within a specific application environment.

For information technology programs:

- (j) An ability to use and apply current technical concepts and practices in the core information technologies;
- (k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems;

- (l) An ability to effectively integrate IT-based solutions into the user environment;*
- (m) An understanding of best practices and standards and their application;*
- (n) An ability to assist in the creation of an effective project plan.*

1. List the program's outcomes. Discuss how and where they are documented outside of this Self-Study.

2. For each program outcome, indicate the mechanism(s) used to measure it.

3. Explain the relationship between the outcomes and the needs of the program's constituencies. Also explain the role played by the various constituencies in formulating the program outcomes.

4. Indicate how your program outcomes map to your program educational objectives.

5. Explain how completion of your program enables (a)-(i) of the general criteria, as well as enables the corresponding additions from the relevant program criteria.

#### 4. Continuous Improvement

##### Criterion

The program uses a documented process incorporating relevant data to regularly assess its program educational objectives and program outcomes, and to evaluate the extent to which they are being met. The results of the evaluations are documented and used to effect continuous improvement of the program through a documented plan.

1. Describe your procedure for periodically assessing the extent to which each of the program educational objectives is being met by your program. Include:
  - Frequency and timing of assessments.
  - What data are collected (should include information on initial student placement and subsequent professional development).
  - How data are collected.
  - From whom data are collected (should include students and computing professionals).
  - How assessment results are used and by whom.

2. Describe your procedure for periodically assessing the extent to which each of the program outcomes is being met by your program. Include:
  - Frequency and timing of assessments.
  - What data are collected (should include information on initial student placement and subsequent professional development).
  - How data are collected.
  - From whom data are collected (should include students and computing professionals).
  - How assessment results are used and by whom.



3. If you have an assessment plan or similar document that provides the information in (1) and (2) above, include it as an appendix and reference the appendix here.

4. Attach as an appendix copies of the actual documentation that was used by your data collection and assessment process since the last accreditation visit or for the past three years if this is the first visit. Include survey instruments, data summaries, analysis results, etc. Indicate the appendix reference here.

5. Describe your use of the results of the program’s assessments to identify program improvements and modifications to program educational objectives and program outcomes. Include:

- Any program changes within the last six years based on assessments.
- Any significant future program improvement plans based upon recent assessments, including timelines.
- Any changes in program educational objectives or program outcomes within the last six years.
- How this information has been documented.

## 5. Curriculum

Note: One year of study refers to the amount of course work that a student would complete in an average year of fulltime enrollment. For a traditional four-year program using standard semester units, one year refers to 30 semester credits. For programs using standard quarter units, one year refers to 45 quarter credits. One year is measured similarly in programs using other units to measure course work.

### Criterion

The program's requirements are consistent with its educational objectives and are designed in such a way that each of the program outcomes can be achieved. The curriculum combines technical and professional requirements with general education requirements and electives to prepare students for a professional career and further study in the computing discipline associated with the program, and for functioning in modern society. The technical and professional requirements include at least one year of up-to-date coverage of basic and advanced topics in the computing discipline associated with the program. In addition, the program includes mathematics appropriate to the discipline beyond the pre-calculus level. For each course in the major required of all students, its content, expected performance criteria, and place in the overall program of study are published.

For Computer Science Programs:

Students have the following amounts of course work or equivalent educational experience.

- a. Computer science: One and one-third years that includes:
  1. coverage of the fundamentals of algorithms, data structures, software design, concepts of programming languages and computer organization and architecture. [CS]
  2. an exposure to a variety of programming languages and systems. [CS]
  3. proficiency in at least one higher-level language. [CS]
  4. advanced course work that builds on the fundamental course work to provide depth. [CS]
- b. One year of science and mathematics:
  1. Mathematics: At least one half year that must include discrete mathematics. The additional mathematics might consist of courses in areas such as calculus, linear algebra, numerical methods, probability, statistics, number theory, geometry or symbolic logic. [CS]
  2. Science: A science component that develops an understanding of the scientific method and provides students with an opportunity to experience this mode of inquiry in courses for science and engineering majors that provide some exposure to laboratory work. [CS]

For Information Systems Programs:

Students have course work or an equivalent educational experience that includes:

- a. Information Systems: One year that includes:
  - 1. coverage of the fundamentals of a modern programming language, data management, networking and data communications, systems analysis and design and the role of Information Systems in organizations. [IS]
  - 2. advanced coursework that builds on the fundamental coursework to provide depth. [IS]
- b. Information Systems Environment: One-half year of coursework that includes varied topics that provide background in an environment in which the information systems will be applied professionally. [IS]
- c. Quantitative analysis or methods including statistics. [IS]

For Information Technology Programs:

Students have course work or an equivalent educational experience that includes:

- a. Coverage of the fundamentals of
  - 1. The core information technologies of human computer interaction, information management, programming, networking, web systems and technologies. [IT]
  - 2. Information assurance and security [IT]
  - 3. System administration and maintenance [IT]
  - 4. System integration and architecture [IT]
- b. Advanced course work that builds on the fundamental course work to provide depth.

**Credit Hour Definition**

One semester or quarter hour normally means one hour of lecture or three hours of laboratory per week. One academic year normally represents from twenty-eight to thirty weeks of classes, exclusive of final examinations. Please describe below if your definitions differ from these.

**A. Prerequisite Flow Chart**

Attach a flow chart showing the prerequisite structure of the program's courses required or allowed towards the major.

## **B. Course Requirements of Curriculum (term by term and year by year)**

1. Required and elective courses. In the tables on the following pages, list the courses in the order in which they are normally taken in the curriculum, classified in the appropriate categories. The data should clearly indicate how the program meets the Curriculum Category of the *Criteria for Accrediting Computing Programs*. These tables are designed for a semester calendar; they may be easily altered for a quarter calendar.
2. Individual courses may be split between or among curriculum areas if the course content justifies the split. For example, a discrete mathematics course may have some of its semester hours under mathematics and some under computer science. In such cases, assign semester hours to categories in multiples of one-half semester hour.
3. Required courses. List courses by department/subject abbreviation (Math, Chem, IS, etc.), number, and title. Apportion the semester hours for each course by category.
4. Elective courses. Designate these courses “elective.” If an elective is restricted to a particular category, then tabulate the semester hours in that category and indicate the category in the listing, e.g. “elective—science.” In addition, be sure that you have supplied information elsewhere in this document indicating how you ensure that students take the course in the specified category (e.g., advisement, graduation check sheets, etc.). For free electives (i.e., those not restricted to a particular category), list the semester hours under the heading “Other.” Use footnotes for any listings that require further elaboration.

*For computer science programs:*

		Category (semester hours)					
Year Semester	Course (Dept., Number, Title)	Program Core	Program Advanced.	Mathematics	Science	General Education	Other
First Semester Freshman Year							
Second Semester Freshman Year							
First Semester Sophomore Year							
Second Semester Sophomore Year							

<b>SUBTOTALS</b>							

Year Semester	Course (Dept., Number, Title)	Category (semester hours)					
		Program Core	Program Advanced	Mathematics	Science	General Education	Other
First Semester Junior Year							
Second Semester Junior Year							
First Semester Senior Year							
Second Semester Senior							

Year							
SUBTOTALS							
TOTALS							

For information systems programs:

		Category (semester hours)					
Year Semester	Course (Dept., Number, Title)	Information Systems Core	Information Systems Advanced	Quantitative Analysis	IS Environment	General Education	Other
First Semester Freshman Year							
Second Semester Freshman Year							
First Semester Sophomore Year							

Second Semester Sophomore Year							
<b>SUBTOTALS</b>							

Year Semester	Course (Dept., Number, Title)	Category (semester hours)						
		Systems Core	Information Systems Advanced	Quantitative Analysis	IS Environment	General Education Edu	Other	
First Semester Junior Year								
Second Semester Junior Year								
First Semester Senior								



Year							
Second Semester Senior Year							
SUBTOTALS							
TOTALS							

*For information technology programs*

		Category (semester hours)				
Year Semester	Course (Dept., Number, Title)	Program Core	Program Advanced.	Mathematics	General Education	Other
First Semester Freshman Year						
Second Semester Freshman Year						

First Semester Sophomore Year						
Second Semester Sophomore Year						
SUBTOTALS						

		Category (semester hours)				
Year Semester	Course (Dept., Number, Title)	Program Core	Program Advanced.	Mathematics	General Education	Other
First Semester Junior Year						
Second Semester Junior Year						

First Semester Senior Year						
Second Semester Senior Year						
SUBTOTALS						
TOTALS						

Explain how the curriculum addresses the program outcomes. Include a table showing how each course contributes to the program outcomes.

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For computer science programs

The following areas must be stressed within the program’s curriculum. Indicate the course numbers and titles of courses embodying a significant portion of these areas:

Area	Courses (Dept., Number, and Title)
Algorithms	
Data structures	
Software design	

Programming language concepts	
Computer organization and architecture	
Exposure to variety of languages and systems	
Proficiency in at least one higher level language	
Advanced course work that builds on the fundamental course work to provide depth	
Discrete mathematics	
Science component	

For information systems programs

The following areas must be stressed within the program's curriculum. Indicate the course numbers and titles of courses embodying a significant portion of these areas:

Area	Courses (Dept., Number, and Title)
Modern Programming Language	
Data Management	
Networking and Data Communications	
Systems Analysis and design	
IS in Organizations	

For information technology programs

The following areas must be stressed within the program's curriculum. Indicate the course numbers and titles of courses embodying a significant portion of these areas:

Area	Courses (Dept., Number, and Title)

Human computer interaction	
Information management	
Programming	
Networking	
Web systems and technologies	
Advanced course work that builds on the fundamental course work to provide depth	

### C. Course Descriptions

For each required or elective course in the program that can be counted in the curriculum being reviewed for accreditation, include a two-page or three-page course outline, as indicated below, at this point in the Self-Study Report. If your documentation does not exactly follow this format, be sure that all of the requested information (if applicable) is present, and please in any case adhere to a common format for all course descriptions. If some of this documentation is on-line (e. g., in an instructor's web site), please give here the URLs for accessing any such materials. These URLs should be made accessible to the visiting team as soon as the Self-Study is sent to them.

As described in Section H of the General Instructions for the Self-Study, the course outline for each required or elective computing course in the program (including those that satisfy the IS Environment component of an Information Systems program) must also be included in a display of course materials that is available for study at all times during the evaluation visit.

#### COURSE DESCRIPTION

Dept., Number		Course Title	
Semester hours		Course Coordinator	

Current Catalog Description

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Textbook

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References

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Course Outcomes

--

Relationship between Course Outcomes and Program Outcomes

--

Prerequisites by Topic

--

Major Topics Covered in the Course

--

Assessment Plan for the Course

--

How Data in the Course is Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

--

*For a computer science program*

Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms			Software design		
Data structures			Concepts of programming languages		

*For an information systems program*

Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Hardware and Software			Networking and Telecommunications		
Modern Programming Language			Analysis and Design		
Data Management			Role of IS in an Organization		
Quantitative Analysis			Information Systems Environment		

*For an information technology program*

Estimate Curriculum Category Content (Semester hours)



Area	Core	Advanced	Area	Core	Advanced
Human computer interaction			Programming		
Information management			Networking		
Web systems and technologies			Information assurance and security		
System administration and maintenance			System integration and architecture		

## 6. Faculty

### Criterion Part A: Faculty Qualifications - Criterion

Faculty members teaching in the program are current and active in the associated computing discipline. They each have the educational background or expertise consistent with their expected contributions to the program. Each has a level of competence that normally would be obtained through graduate work in the discipline, relevant experience, or relevant scholarship. Collectively, they have the technical breadth and depth necessary to support the program

For Computer Science Programs:

Some full time faculty members have a Ph.D. in computer science.

For Information Systems Programs:

Some full-time faculty, including those responsible for the IS curriculum development, hold a terminal degree in information systems.

### Criterion Part B: Faculty Size and Workload - Criterion

There are enough full time faculty members to provide continuity, oversight and stability, to cover the curriculum reasonably, and to allow an appropriate mix of teaching, professional development, scholarly activities and service for each faculty member. The faculty assigned to

the program has appropriate authority for the creation, delivery, evaluation and modification of the program, and the responsibility for the consistency and quality of its courses.

**A. Faculty Profile**

1. Please complete the following table for each faculty member who regularly teaches courses in the program.

Faculty Name	Rank	FT/PT	Highest Deg./Field	Research Areas	# Advisees

FT/PT = Full-time/Part-time

**B. Information Regarding Faculty Members**

On separate pages, please furnish the following information for all faculty members who teach courses allowed for the major, including those who have administrative positions in the department (chair, associate chair, etc.). Use the form given below as guidance. This form need not be followed exactly, but all requested information should be supplied. Use a common format for all faculty members. Limit information to no more than three pages per person, providing only the most recent information if needed to limit space. Place the form(s) for administrators first, followed by the others in alphabetical order.

If you are having more than one program evaluated, particularly if the programs are on separate campuses, indicate clearly the program(s) and/or campus(es) to which an individual is assigned, and the percentage of time to each, if more than one.

1. Name, current academic rank, and tenure status:

Name:	
Rank:	
Tenure Status:	

2. Date of original appointment to this faculty, followed by dates and ranks of advancement:

Title	Dates Held

3. Degrees with fields, institutions, and dates

<u>Degree</u>	<u>Field</u>	<u>Institution</u>	<u>Date</u>

4. If you do not have an advanced degree in the program area, describe any course work you may have taken, or other ways in which you have achieved competence in the program area; there is no necessity to repeat information here that is contained in later sections of this document.

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5. Conferences, workshops, and professional development programs in which you have participated in the last 5 years to improve teaching and professional competence in the program area:


6. Other related computing experience including teaching, industrial, governmental, etc. (where, when, description and scope of duties):

Dates	Where	Duties

7. Consulting—list agencies and dates, and briefly describe each project:

Dates	Agency	Project

8. For the academic year in which the Self Study was written list your assigned duties other than for teaching, (committee membership, advising, etc.) with average hours per week. Indicate which, if any, carry extra compensation. If you are course coordinator for courses taught by other than full-time or part time faculty, please indicate here which courses.



9. For the four years preceding the Self Study, list all department, college, and/or university committees of which you are/were a member including year(s) served:


10. Principal publications during the last five years. Give in standard bibliographic format.


11. Other scholarly activity during the last 5 years: grants, sabbaticals, software development, etc.:




### **C. Faculty Size**

The purpose of this section is to determine whether you have a sufficient number of faculty members to provide overall continuity and stability for the program. The Faculty Profile table in 6.A relates to this concept.

1. Section 1 (Students) of the Self Study contains the course numbers of courses required for the major that are offered less frequently than once per year and those allowed for the major but not required, and explains how it is determined when they will be offered. Explain (if applicable) any difficulties you have offering required or optional courses frequently enough, particularly as they might be affected by faculty size.

### **D. Faculty Workload**

1. Describe the means for ensuring that all full-time faculty members have sufficient time for professional development and scholarly activities. For those faculty members having significant extra duties (e.g., large number of advisees, manage or maintain computing resources, director of undergraduate or graduate programs, etc.), explain how these components of the faculty workload are recognized.

### **E. Program Development and Delivery**

1. Describe the roles of the program's faculty and other offices on the campus in creating, evaluating and modifying the program.

## F. Course Oversight

1. Full-time faculty members have the responsibility for the consistency and quality of major courses. That means they must either teach all sections of a course or be responsible for coordinating the instruction of sections not taught by full-time faculty members. Describe how this oversight and coordination is performed.

## 7. Facilities

### Criterion

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

Computing resources are available, accessible, systematically maintained and upgraded, and otherwise adequately supported to enable students to achieve the program's outcomes and to support faculty teaching needs and scholarly activities. Students and faculty receive appropriate guidance regarding the computing resources and laboratories available to the program.

### A. Library Staffing

1. Assess the staffing of the library (or libraries) that serves the program, including both size and qualifications.



**B. Library Technical Collection**

1. 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.

**C. Library Electronic Access**

1. Assess the library's systems for locating and obtaining electronic information.

**D. Classroom Equipment**

1. Describe the equipment typically available in classrooms where you teach your courses. Assess its adequacy for the purpose.

**E. Faculty Offices**

1. Discuss and assess the adequacy of faculty offices.

## F. Computing Facilities

1. Describe the computing hardware, software and networks used for instruction. Specify any limitations that impact the quality of the educational experience.

Institutional and college computing facilities:

Departmental computing facilities:

Other computing facilities:

2. Describe the laboratory equipment planning, acquisition, and maintenance processes and their adequacy. Include discussion of these topics for university-wide computing resources available to all students (if used by your majors), your own laboratories and equipment (if applicable), and computing resources controlled by other departments and/or schools (if used by your majors). Discuss the adequacy and effectiveness of these processes and how they are assessed. Please attach documentation (e.g., inventories, equipment replacement plans, etc.) to this report.

3. What support personnel are available to install, maintain, and manage departmental/college hardware, software, and networks used for instruction in the program? Describe the adequacy and limitations of the level of support. Include discussions at the university, college and departmental levels as appropriate.

**G. Student Access**

1. State the hours the various facilities are open. State whether students have access from dormitories or off campus by direct access, modem, etc., and describe this access quantitatively.

**H. Faculty Access**

1. Describe the computing facilities available to faculty for class preparation and for scholarly activities and research. Include specifics regarding resources in faculty offices.

## 8. Support

### Criterion

The institution's support for the program and the financial resources available to the program are sufficient to attract and retain qualified faculty, administer the program effectively, acquire and maintain computing resources and laboratories, and otherwise provide an environment in which the program can achieve its educational objectives and outcomes. Support and resources are sufficient to provide assurance that the program will retain its strength throughout the period of accreditation.

### A. Faculty Stability

1. Evidence of the long-term continuity and stability of a program is provided by its ability to both attract and retain high quality faculty. Describe how your program attracts and retains high quality faculty. Some topics the description might address are sabbatical and other leave programs, salaries, benefits, teaching loads, support for and recognition of scholarly activity (including financial support for attendance at professional meetings), departmental and institutional ambiance, etc.

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2. Give counts of the total number of full-time faculty and the number of resignations, retirements, and new hires for each of the last five years. Indicate whether there are significant problems attracting and retaining faculty, and if so, the causes.

Year	Total Faculty	Resignations	Non-renewals	Retirements	New Hires
2003-2004					
2004-2005					
2005-2006					
2006-2007					
2007-2008					

**B. Faculty Professional Activities**

1. Summarize the support mechanisms for professional activities of your faculty, such as attendance at meetings, research, etc. Highlight important faculty accomplishments that have resulted from this support.

**C. Administration Effectiveness**

1. Describe the effectiveness of the administration of the program.

**D. Adequacy of Resources**

1. Describe the adequacy of the resources available to the program, including those to acquire and maintain laboratory facilities, relative to the ability of the program to achieve its educational objectives and outcomes. Include information on how the institution determines the adequacy of these resources.

**E. Continuity of Institutional Support**

1. Discuss and show evidence of continuity of institutional support for the program in the past, and problems that have existed or are anticipated in this area, if any.



## APPENDIX – INSTITUTIONAL SUMMARY

*The institution may employ any means it chooses to represent itself to ABET and the visiting team. Consequently, the references to specific tables in the following are for guidance only. The information may be presented in any manner the institution chooses.*

### The Institution

<<Name and Address of the Institution>>

<<Name and Title of the Chief Executive Officer of the Institution>>

### Type of Control

<<Description of the type of managerial control of the institution, e.g., private-non-profit, private-other, denominational, state, federal, public-other, etc.>>

### History of Institution

<<Provide a brief history of the Institution, its origin, and its development>>

### Student Body

<<Briefly describe the student body and where the students come from.

### Regional or Institutional Accreditation

<<Name the organizations by which the institution is currently accredited, and the dates of initial and most recent accreditation evaluations>>

### Personnel and Policies

<<Summarize the following elements>>

- The promotion and tenure system
- The process used to determine faculty salaries
- Faculty benefits

### Education Unit

<<Describe the education unit (see General Instructions). Describe the administrative chain of responsibility from the individual responsible for the program to the chief executive officer of the institution. Include names and titles. An organization chart may be included>>

### Credit Unit

<<It is assumed that one semester or quarter credit normally represents one class hour or three laboratory hours per week. One academic year normally represents at least 28 weeks of classes, exclusive of final examinations. If other standards are used for this program, the differences should be indicated.>>

### Instructional Modes

<<If modes other than traditional on-campus instruction are employed in any programs, the additional modes of instruction should be listed and described in relation to the applicable programs. The institutional and/or unit policies under which the alternate modes are offered should be summarized.>>

### Grade-Point Average

<<Indicate the grade-point average required for graduation. If there are differences in requirements among the regular and alternative instructional modes, please explain.>>

### Academic Supporting Units

<<Provide information about units that teach courses required by the programs being evaluated, e.g., mathematics, physics, etc. Include names and titles of the individuals responsible for these units>>

### Non-Academic Supporting Units

<<Provide information about units that provide non-academic support to the programs being evaluated, e.g., library, computing facilities, placement, tutoring, etc. Include names and titles of the individuals responsible for these units>>

### Faculty Workload

<<Describe the faculty workload policy. Define what constitutes a full-time load>>



## Tables

{{The tables that follow are simply a guide and are not required in the Self-Study Report. All are optional. The institution is encouraged to employ any means it chooses to represent itself to ABET and the visiting evaluation team.}}

**Table 1. Programs Offered by the Educational Unit**

Program Title <sup>1</sup>	Modes Offered <sup>2</sup>					Nominal Years Complete	Administrative Head	Administrative Unit or Units (e.g. Dept.) Exercising Budgetary Control	Submitted for Evaluation <sup>3</sup>		Offered, Not Submitted for Evaluation <sup>4</sup>	
	Day	Co-op	Off Campus	Alternative Mode					Now Accredited.	Not Now Accredited	Now Accredited	Not Now Accredited

List of the titles of all degrees offered by the education unit responsible for the programs being evaluated, undergraduate and graduate, granted by the institution. If there are differences in the degrees awarded for completion of co-op programs, these should be clearly indicated.

<sup>1</sup> Give program title as shown on a graduate's transcript

<sup>2</sup> Indicate all modes in which the program is offered. If separate accreditation is requested for an alternative mode, list on a separate line. Describe "Other" by footnote.

<sup>3</sup> Only those programs being submitted at this time for reaccreditation (now accredited) or initial accreditation (not now accredited) should be checked in this column.

<sup>4</sup> Programs not submitted for evaluation at this time should be checked in this column.

**Table 2. Degrees Awarded and Transcript Designations by Educational Unit**

Program Title <sup>1</sup>	Modes Offered <sup>2</sup>			Alternative Mode	Name of Degree Awarded <sup>3</sup>	Designation on Transcript <sup>4</sup>
	Day	Co-op	Off Campus			

Complete the table for all programs, as follows:

<sup>1</sup> Give the program title as officially published in catalog.

<sup>2</sup> List the mode for each program offered. <sup>3</sup> List degree awarded for each mode offered. If different degrees are awarded, list on separate lines.

<sup>4</sup> Indicate how the program is listed on transcript for each mode offered. If different designations are used, list on separate lines.

**Table 3. Support Expenditures**

{{This table should be completed for the Instructional Unit and for each program being evaluated}}

<<Name of Instructional Unit or Program>>

Fiscal Year	(previous year) <sup>1</sup>	(current year) <sup>2</sup>	(year of visit) <sup>3</sup>
Expenditure Category			
Operations (not including staff) <sup>4</sup>			
Travel <sup>5</sup>			
Equipment <sup>6</sup>			
(a) Institutional Funds			
(b) Grants and Gifts <sup>7</sup>			
Graduate Teaching Assistants			
Part-time Assistance <sup>8</sup> (other than teaching)			
Faculty Salaries			

Report Department Level and Program Level data for each program being evaluated. Updated tables are to be provided at the time of the visit.

- <sup>1</sup> Provide the statistics from the audited account for the fiscal year completed year prior to the current fiscal year.
- <sup>2</sup> This is your current fiscal year (when you will be preparing these statistics). Provide your preliminary estimate of annual expenditures, since your current fiscal year presumably is not over at this point.
- <sup>3</sup> Provide the budgeted amounts for your next fiscal year to cover the fall term when the ABET team will arrive on campus.
- <sup>4</sup> Categories of general operating expenses to be included here.
- <sup>5</sup> Institutionally sponsored, excluding special program grants.
- <sup>6</sup> Major equipment, excluding equipment primarily used for research. Note that the expenditures (a) and (b) under "Equipment" should total the expenditures for Equipment. If they don't, please explain.
- <sup>7</sup> Including special (not part of institution's annual appropriation) non-recurring equipment purchase programs.
- <sup>8</sup> Do not include graduate teaching and research assistant or permanent part-time personnel.

**Table 4. Personnel and Students**

{{This table should be completed for the Instructional Unit and for each program being evaluated}}

<<Name of Instructional Unit or Program>>

Year<sup>1</sup>: \_\_\_\_\_

	HEAD COUNT		FTE <sup>2</sup>	RATIO TO FACULTY <sup>3</sup>
	FT	PT		
Administrative <sup>4</sup>				
Faculty (tenure-track)				
Other Faculty (excluding student Assistants)				
Student Teaching Assistants				
Student Research Assistants				
Technicians/Specialists				
Office/Clerical Employees				
Others <sup>5</sup>				
Undergraduate Student enrollment <sup>6</sup>				
Graduate Student enrollment				

Report data for the program unit(s) and for each program being evaluated.

- <sup>1</sup> Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.
- <sup>2</sup> For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc. For faculty members, 1 FTE equals what your institution defines as a full-time load.
- <sup>3</sup> Divide FTE in each category by total FTE Faculty. Do not include administrative FTE.
- <sup>4</sup> Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.
- <sup>5</sup> Specify any other category considered appropriate, or leave blank.
- <sup>6</sup> Specify whether this includes freshman and/or sophomores.

**Table 5. Program Enrollment and Degree Data**

{{This table should be completed for the Instructional Unit and for each program being evaluated}}

<<Name of Instructional Unit or Program>>

	Academic Year		Enrollment Year					Total Undergrad	Total Grad	Degrees Conferred			
			1st	2nd	3 <sup>rd</sup>	4th	5th			Bachelor	Master	Doctor	Other
CURRENT	FT												
	PT												
1	FT												
	PT												
2	FT												
	PT												
3	FT												
	PT												
4	FT												
	PT												
5	FT												
	PT												

Give official fall term enrollment figures (head count) for the current and preceding five academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the fall visit.

FT--full time

PT--part time

**Table 6. Faculty Salary Data<sup>1</sup>**

{{This table should be completed for the Instructional Unit and for each program being evaluated}}

<<Name of Instructional Unit or Program>>

Academic Year \_\_\_\_\_

	Professor	Associate Professor	Assistant Professor	Instructor
Number				
High				
Mean				
Low				

<sup>1</sup> If the program considers that this information to be confidential, it can be provided only to the Team Chair.