

ABET
Computing Accreditation Commission

PROGRAM EVALUATOR WORKSHEET

Institution	Upper State University		
Program Name	Computing	Team Chair	Leonard Michael
Visit Dates	12-13 April 2016	Program Evaluator	Charles North

Use “C” for concern, “W” for weakness, and “D” for deficiency in the appropriate line.
The result for each criterion will be the union of any C, W, or D within that criterion’s elements.

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
Criterion 1. STUDENTS						
Student performance must be evaluated.						
Student progress must be monitored to foster success in attaining student outcomes, thereby enabling graduates to obtain program objectives.						
Students must be advised regarding curriculum and career matters.		D				Self-study doesn't say whether every student is advised on career matters. Career advising seems to be available when students request it. Secondly, pre-requisites not being enforced and graduation requirements not being met in the transcript analysis indicate that some students are not advised academically after the freshman year.
The program must have and enforce policies for accepting both new and transfer students, awarding appropriate academic credit for courses taken at other institutions, and awarding appropriate academic credit for work in lieu of courses taken at the institution.		W				Self-study doesn't discuss policies for accepting transfer students except at junior standing. Course substitutions need more detailed documentation than provided.
The program must have and enforce procedures to ensure and document that students who graduate meet all graduation requirements.		D				There is a process described in self-study for graduation checklisting. However, one transcript shows that a student does not meet graduation requirement of MTH 2045 and yet the student graduated.
Criterion 2. PROGRAM EDUCATIONAL OBJECTIVES						

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
The program must have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and these criteria.		W				PEOs are consistent with the institutional mission but appear to be inconsistent with that of the college. College's mission states the graduates are to work in an interdisciplinary framework and the PEO's don't address that. I realize the wording in this worksheet expects alignment with institutional mission and not that of the college's mission. I seek clarification from CAC whether it is ok to for PEO's to be not aligned with the College's mission in which the program is housed while aligning with institutional mission.
There must be a documented, systematically utilized, and effective process, involving program constituencies, for the periodic review of these program educational objectives that ensures they remain consistent with the institutional mission, the program's constituents' needs, and these criteria.						

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
Criterion 3. STUDENT OUTCOMES						
The program must have documented student outcomes that prepare graduates to attain the program educational objectives.		W				The self-study lists the outcomes differently from CAC's criterion 3 listing. An appropriate mapping needs to be provided. I am using my own mapping for my evaluation below.
There must be a documented and effective process for the periodic review and revision of these student outcomes.						
The program must enable students to attain, by the time of graduation:						
(a) An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline		W				Self-study outcome does not tie application of the knowledge to program's student outcomes and 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		W				Self-study says "multi-disciplinary teams" which is confusing when it really is meant to say "cross-functional" teams. It is not clear how the CPT courses that address this outcome, would cover multi-disciplinarity.
(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		W				Self study uses the term "life-long learning", instead of continuing professional development. I guess one could make a case that you could be engaged in life-long learning, without continuing to develop professionally.
(i) An ability to use current techniques, skills, and tools necessary for computing practice						
Criterion 4. CONTINUOUS IMPROVEMENT						

The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained.		W				Without course syllabi, it is hard to be convinced that the student outcomes mapping to CPT courses makes sense.
The results of these evaluations must be systematically utilized as input for the continuous improvement of the program.						
Other available information may also be used to assist in the continuous improvement of the program.						

SAMPLE

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
Criterion 5. CURRICULUM						
The program's requirements must be consistent with its program educational objectives and designed in such a way that each of the student outcomes can be attained.		W				Without course syllabi, it is hard to evaluate this part.
The curriculum must combine 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 must include at least one year of up-to-date coverage of fundamental and advanced topics in the computing discipline associated with the program.						General criterion 5 requires one year of computing coursework that is satisfied by USU. However, there is a deficiency if you apply program specific criterion that requires 40 credits in computing courses.
In addition, the program must include mathematics appropriate to the discipline beyond the pre-calculus level.						USU's computing program satisfies the general criterion 5 for curriculum. However, there is a deficiency if you apply program specific criterion for computing that requires 30 semester credits of math/sci.
For each course in the major required of all students, its content, expected performance criteria, and place in the overall program of study must be published.		??				Course content, syllabi are not provided
Criterion 6. FACULTY						
Each faculty member teaching in the program must have expertise and educational background consistent with the contributions to the program expected from the faculty member.		??				No faculty resumes were provided. PhDs are listed without the name of the discipline doctoral work was performed in. General criteria says that there must some faculty with PhD in computer science but no relevant information is provided.
The competence of faculty members must be demonstrated by such factors as education, professional credentials and certifications, professional experience, ongoing professional development, contributions to the discipline, teaching effectiveness, and communication skills.		??				No faculty credentials, teaching evaluations were provided.
Collectively, the faculty must have the breadth and depth to cover all curricular areas of the program.		??				No pertinent information provided.
The faculty serving in the program must be of sufficient number to maintain continuity, stability, oversight, student interaction, and advising.						

The faculty must have sufficient responsibility and authority to improve the program through definition and revision of program educational objectives and student outcomes as well as through the implementation of a program of study that fosters the attainment of student outcomes.

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SAMPLE

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
Criterion 7. FACILITIES						
Classrooms, offices, laboratories, and associated equipment must be adequate to support attainment of the student outcomes and to provide an atmosphere conducive to learning.						
Modern tools, equipment, computing resources, and laboratories appropriate to the program must be available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support program needs.		W				Computer Upgrade plan not found in Appendix C. Sun workstation lab is dated. It is unclear how modern the rest of the labs are in terms of hardware and software because no details are provided.
Students must be provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories available to the program.						
The library services and the computing and information infrastructure must be adequate to support the scholarly and professional activities of the students and faculty.						
Criterion 8. INSTITUTIONAL SUPPORT						
Institutional support and leadership must be adequate to ensure the quality and continuity of the program.						
Resources including institutional services, financial support, and staff (both administrative and technical) provided to the program must be adequate to meet program needs.						
The resources available to the program must be sufficient to attract, retain, and provide for the continued professional development of a qualified faculty.						
The resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities and equipment appropriate for the program, and to provide an environment in which student outcomes can be attained.						
ABET POLICIES AND PROCEDURES						

Program Criterion: Each program must satisfy applicable Program Criteria (if any). Program Criteria provide the specificity needed for interpretation of the General Criteria as applicable to a given discipline. If a program, by virtue of its title, becomes subject to two or more sets of Program Criteria, then that program must satisfy each set of Program Criteria; however, overlapping requirements need to be satisfied only once.

For a program that is evaluated under specific program criteria, complete the applicable pages and delete the others.

Program Criteria for Computer Science and Similarly Named Computing Programs

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
PROGRAM CRITERIA (Computer Science)						
3. Student Outcomes						
The program must enable students to attain, by the time of graduation:						
(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. [CS]						
(k) An ability to apply design and development principles in the construction of software systems of varying complexity. [CS]						
5. Curriculum						
Students must have the following amounts of course work or equivalent educational experience:						
a. Computer Science: One and one-third year that must include						
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 or engineering majors that provide some exposure to laboratory work. [CS]						
6. Faculty						
Some full time faculty members have a Ph.D. in computer science.						

Program Criteria for Information Systems and Similarly Named Computing Programs

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
PROGRAM CRITERIA (Information Systems)						
3. Program Outcomes						
The program must enable students to attain, by the time of graduation:						
(j) An understanding of and an ability to support the use, delivery, and management of information systems within an Information Systems environment. [IS]						
5. Curriculum						
Students must have course work or an equivalent educational experience that includes:						
a. Information Systems: One year that must include:						
1. Coverage of the fundamentals of application development, data management, networking and data communications, security of information systems, systems analysis and design and the role of Information Systems in organizations. [IS]						
2. Advanced course work that builds on the fundamental coursework to provide depth. [IS]						
b. Information Systems Environment: One-half year of course work that must include a cohesive set of topics that provide an understanding of an environment in which the information systems will be applied professionally. [IS]						
c. Quantitative analysis or methods including statistics. [IS]						
6. Faculty						
Some full-time faculty members, including those responsible for the IS curriculum development, must hold a terminal degree with a program of study in information systems. [IS]						

Program Criteria for Information Technology and Similarly Named Computing Programs

	Last Visit	Pre-Visit	Day 0	Day 1	Exit Stmt	For each Deficiency (D), Weakness (W), and/or Concern (C), identify the basis for your conclusion
PROGRAM CRITERIA (Information Technology)						
3. Program Outcomes						
The program must enable students to attain, by the time of graduation:						
(j) An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, and web systems and technologies. [IT]						
(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. [IT]						
(l) An ability to effectively integrate IT-based solutions into the user environment. [IT]						
(m) An understanding of best practices and standards and their application. [IT]						
(n) An ability to assist in the creation of an effective project plan. [IT]						
5. Curriculum						
Students must 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. [IT]						