Department of Mathematics, CSCI

CALIFORNIA STATE UNIVERSITY EAST BAY

ASSESSMENT PLAN: B.S. in Computer Science

Updated Date: Winter 2015 by Matt Johnson

PROGRAM MISSION

CSUEB Missions, Commitments, and ILOs, 2012

CSUEB Computer Science Program Mission Statement

The mission of the Computer Science Department at California State University East Bay is to provide instruction and to model practices that encourage all students to become intelligent creators and users of computer software and applications, to think analytically and independently, and to stay current with technology by becoming life-long learners.

The mission of the University is to provide an academically rich, multicultural learning experience that prepares all its students to realize their goals, pursue meaningful lifework, and to be socially responsible contributors to their communities, both locally and globally.

The department supports these goals by providing essential knowledge in computer science to both majors and non-majors. It does this by providing (1) industry-specific skills taught by faculty who are current with emerging technology, (2) quantitative and analytical reasoning skills taught in all classes, and (2) rich offerings in a wide variety of areas in computer science. The department fosters academic growth for both its faculty and its students to maintain as high of a level of learning experience as is possible.

PROGRAM STUDENT LEARNING OUTCOMES (SLOs)

Students graduating with a B.S. in Computer Science will be able to:

SLO 1 *ILO 1, 6*	Apply knowledge of mathematics and computational theory to appropriate problems in computer science
SLO 2 *ILO 1, 2, 6*	Analyze a problem, and identify and define the resources and requirements needed for its solution
SLO 3 *ILO 1, 2, 6*	Design and implement a program to meet stated needs
SLO 4 *ILO 1, 6*	Develop and maintain computer-based systems, processes, and platforms

PROGRAM MISSION	
SLO 5 *ILO 1, 6*	Recognize and distinguish the mechanisms, components and architecture of computing systems
SLO 6 *ILO 1, 2, 5, 6*	Employ current techniques, skills, and tools necessary for computing practice
SLO 7 *ILO 3, 5, 6*	Identify professional, ethical, legal, and security issues and responsibilities and the impact of computing on individuals, organizations, and society
SLO 8 *ILO 2, 3, 4, 5, 6*	Perform successfully on teams to accomplish a common goal, and communicate effectively in written and oral form

Year 1: 2013-2014	
1. Which SLO(s) to assess	SLOs 1 and 2
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	• CS 2360 Introduction to Computer Science II • CS 3120 Programming Language Concepts • CS 3590 Data Communications and Networking • CS 4170 Theory of Automata • CS 4245 Analysis of Algorithms All undergraduate courses have a course capacity of 35.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	Undergraduate Coordinator (currently Dr. Matt Johnson)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Undergraduate Coordinator, and then delivered to the Computer Science Undergraduate Program Committee during the spring quarter. Each course aligned with these SLOs will be assigned a numeric score between 0 and 10, representing the average student score on the course's post-assessment examinations during the previous academic year.
7. Ways of closing the loop	The Computer Science Undergraduate Program Committee will meet in spring quarter to analyze and discuss the assessment report for this PLO. If the score for a given course is below the 7 threshold, the committee will recommend what actions needs be taken. Such actions include (but are not limited to): modification of the assessment examination if the questions seem inappropriate; revision of teaching practices to support student achievement; and refinement of the course learning outcomes that are aligned with the given programmatic SLOs. The Committee will then send an action report to the Department Chair for approval.

Year 2: 2014-2015	
1. Which SLO(s) to assess	SLO 3
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	• CS 1160 Introduction to Computer Science I • CS 3860 Computer Music Programming • CS 4110 Compiler Design • CS 4311 Software Engineering II • CS 4848 Computer Animation Programming All undergraduate courses have a course capacity of 35.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	Undergraduate Coordinator (currently Dr. Matt Johnson)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Undergraduate Coordinator, and then delivered to the Computer Science Undergraduate Program Committee during the spring quarter. Each course aligned with this SLO will be assigned a numeric score between 0 and 10, representing the average student score on the course's post-assessment examinations during the previous academic year.
7. Ways of closing the loop	The Computer Science Undergraduate Program Committee will meet in spring quarter to analyze and discuss the assessment report for this PLO. If the score for a given course is below the 7 threshold, the committee will recommend what actions needs be taken. Such actions include (but are not limited to): modification of the assessment examination if the questions seem inappropriate; revision of teaching practices to support student achievement; and refinement of the course learning outcomes that are aligned with the given programmatic SLO. The Committee will then send an action report to the Department Chair for approval.

Year 3: 2015-2016	
1. Which SLO(s) to assess	SLOs 4 and 5
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	• CS 2430 Computer Organization and Assembly Language • CS 3520 Web Site Development • CS 4560 Operating Systems • CS 4590 Computer Networks • CS 4660 Database Architecture All undergraduate courses have a course capacity of 35.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	Undergraduate Coordinator (currently Dr. Matt Johnson)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Undergraduate Coordinator, and then delivered to the Computer Science Undergraduate Program Committee during the spring quarter. Each course aligned with these SLOs will be assigned a numeric score between 0 and 10, representing the average student score on the course's post-assessment examinations during the previous academic year.

7. Ways of closing the loop	The Computer Science Undergraduate Program Committee will meet in spring quarter to analyze and discuss the assessment report for this PLO. If the score for a given course is below the 7 threshold, the committee will recommend what actions needs be taken. Such actions include (but are not limited to): modification of the assessment examination if the questions seem inappropriate; revision of teaching practices to support student achievement; and refinement of the course learning outcomes that are aligned with the given programmatic SLOs. The Committee will then send an action report to the Department Chair for approval.
Year 4: 2016-2017	
1. Which SLO(s) to assess	SLO 6
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	• CS 2370 Introduction to Computer Science III • CS 3240 Data Structures and Algorithms • CS 4320 Testing and Quality Assurance • CS 4596 Wireless and Mobile Networking • 4840 Computer Graphics All undergraduate courses have a course capacity of 35.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	Undergraduate Coordinator (currently Dr. Matt Johnson)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Undergraduate Coordinator, and then delivered to the Computer Science Undergraduate Program Committee during the spring quarter. Each course aligned with this SLO will be assigned a numeric score between 0 and 10, representing the average student score on the course's post-assessment examinations during the previous academic year.
7. Ways of closing the loop	The Computer Science Undergraduate Program Committee will meet in spring quarter to analyze and discuss the assessment report for this PLO. If the score for a given course is below the 7 threshold, the committee will recommend what actions needs be taken. Such actions include (but are not limited to): modification of the assessment examination if the questions seem inappropriate; revision of teaching practices to support student achievement; and refinement of the course learning outcomes that are aligned with the given programmatic SLO. The Committee will then send an action report to the Department Chair for approval.
Year 5: 2017-2018	
1. Which SLO(s) to assess	SLOs 7 and 8
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	• CS 3898 Cooperative Education • CS 4020 Computers and Social Responsibility • CS 4525 Principles of Network Security • CS 4810 Artificial Intelligence • CS 4835 Human-Computer Interaction

	All undergraduate courses have a course capacity of 35.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	Undergraduate Coordinator (currently Dr. Matt Johnson)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Undergraduate Coordinator, and then delivered to the Computer Science Undergraduate Program Committee during the spring quarter. Each course aligned with these SLOs will be assigned a numeric score between 0 and 10, representing the average student score on the course's post-assessment examinations during the previous academic year.
7. Ways of closing the loop	The Computer Science Undergraduate Program Committee will meet in spring quarter to analyze and discuss the assessment report for this PLO. If the score for a given course is below the 7 threshold, the committee will recommend what actions needs be taken. Such actions include (but are not limited to): modification of the assessment examination if the questions seem inappropriate; revision of teaching practices to support student achievement; and refinement of the course learning outcomes that are aligned with the given programmatic SLOs. The Committee will then send an action report to the Department Chair for approval.