

## ASSESSMENT PLAN: M.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 M.S. in Computer Science will be able to:

SLO 1	Apply advanced computer science theory to computational problems
ILO 1, 2, 6	
SLO 2	Demonstrate advanced understanding of the mechanisms, components and architecture of current computing systems
ILO 1, 6	
SLO 3	Apply emerging technologies and advanced algorithmic design
ILO 1, 6	
SLO 4	Critique, plan and produce complex software applications
ILO 1, 4, 6	

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SLO 5

Research and analyze current computer science literature

ILO 1, 2, 5, 6

### Year 1: 2013-2014

1. Which SLO(s) to assess	SLO 1
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	<ul style="list-style-type: none"> <li>• CS 6110 Theory and Design of Compilers</li> <li>• CS 6170 Automata and Formal Languages</li> <li>• CS 6260 Computation and Complexity</li> <li>• CS 6810 Artificial Intelligence</li> <li>• CS 6901 Graduate Capstone</li> </ul> <p>All graduate courses have a course capacity of 25.</p>
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	CS Graduate Coordinator (currently Dr. David Yang)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Computer Science Graduate Coordinator, and then delivered to the Computer Science Graduate 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 Graduate 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 2: 2014-2015

1. Which SLO(s) to assess	SLO 2
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	<ul style="list-style-type: none"> <li>• CS 6310 Advanced Software Engineering</li> <li>• CS 6522 Advanced WWW Software Development</li> <li>• CS 6560 Operating Systems Design</li> <li>• CS 6570 Distributed Computation</li> <li>• CS 6660 Database Systems</li> </ul> <p>All graduate courses have a course capacity of 25.</p>
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	CS Graduate Coordinator (currently Dr. David Yang)

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6. <i>Ways of reporting (how, to who)</i>	An assessment report will be generated by the Computer Science Graduate Coordinator, and then delivered to the Computer Science Graduate 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. <i>Ways of closing the loop</i>	The Computer Science Graduate 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. <i>Which SLO(s) to assess</i>	SLO 3
2. <i>Assessment indicators</i>	Multiple choice post-assessment exams, independent of coursework
3. <i>Sample (courses/# of students)</i>	<ul style="list-style-type: none"> <li>• CS 6140 Language Design</li> <li>• CS 6575 Parallel Programming</li> <li>• CS 6820 Machine Learning</li> <li>• CS 6825 Computer Vision</li> <li>• CS 6835 Statistical Pattern Recognition</li> </ul> All graduate courses have a course capacity of 25.
4. <i>Time (which quarter(s))</i>	Post-assessment exams will be administered during each academic quarter
5. <i>Responsible person(s)</i>	CS Graduate Coordinator (currently Dr. David Yang)
6. <i>Ways of reporting (how, to who)</i>	An assessment report will be generated by the Computer Science Graduate Coordinator, and then delivered to the Computer Science Graduate 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. <i>Ways of closing the loop</i>	The Computer Science Graduate 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 4: 2016-2017

1. Which SLO(s) to assess	SLO 4
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	<ul style="list-style-type: none"><li>• CS 6310 Advanced Software Engineering</li><li>• CS 6320 Software Engineering and Web-Based Systems</li><li>• CS 6522 Advanced WWW Software Development</li><li>• CS 6870 Computer Simulation</li></ul> All graduate courses have a course capacity of 25.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	CS Graduate Coordinator (currently Dr. David Yang)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Computer Science Graduate Coordinator, and then delivered to the Computer Science Graduate 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 Graduate 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	SLO 5
2. Assessment indicators	Multiple choice post-assessment exams, independent of coursework
3. Sample (courses/# of students)	<ul style="list-style-type: none"><li>• CS 6000 Research Methods</li><li>• CS 6526 Security in Wireless and Mobile Computing</li><li>• CS 6592 Network Management</li><li>• CS 6594 Broadband and Multimedia Networks</li></ul> All graduate courses have a course capacity of 25.
4. Time (which quarter(s))	Post-assessment exams will be administered during each academic quarter
5. Responsible person(s)	CS Graduate Coordinator (currently Dr. David Yang)
6. Ways of reporting (how, to who)	An assessment report will be generated by the Computer Science Graduate Coordinator, and then delivered to the Computer Science Graduate 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 Graduate Program Committee will meet in spring quarter to analyze and discuss the assessment report

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	<p>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.</p>
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