



College of Science (CSCI)  
 North Science 135  
 25800 Carlos Bee Boulevard, Hayward CA 94542

**2015-2016 CSCI EETF Assessment Year End Report, June, 2016**

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[NOTE: Items A, B, C, and D are identical to your Page 2 on your Annual Report for CAPR. Please simply cut and paste from there. Item E is unique to the CSCI EETF.]

**A. Program Student Learning Outcomes**

Students graduating with an M.S. in Computer Science from CSU East Bay will be able to:

1. apply advanced computer science theory to computational problems
2. demonstrate advanced understanding of the mechanisms, components and architecture of current computing systems
3. apply emerging technologies and advanced algorithmic design
4. critique, plan and produce complex software applications
5. research and analyze current computer science literature

**B. Program Student Learning Outcome(s) Assessed**

Following our assessment plan, we are closing the loop on PLO #3 this year. The department does collect assessment data for all targeted courses each year, however, so as to track trajectories for scores on all PLOs.

Post-assessment quizzes were administered for three courses (addressing PLO #3):

- CS 6260 (Computational Complexity – Core Requirement) Developing PLO 1 and PLO 3
- CS 6560 (Operating Systems Design – Core requirement) Developing PLO 2 and PLO 3
- CS 6901 (Graduate Capstone) Mastering PLO 1, PLO 2, and PLO 3

**C. Summary of Assessment Process**

The Department created SLOs and PLOs for the Master in Computer Science program in the academic year 2012-

assessment exams were developed for the required courses in the program, as well as a representative set of elective courses. The assessment instruments were then made available to the department faculty via a BlackBoard repository. Instructors teaching courses which were to be assessed in a given year deployed the tests and reported the results back to the Graduate Coordinator.

The Department has been using this assessment mechanism for three years now and can evaluate its advantages and disadvantages. Unfortunately, evaluating the results of the assessment exams as they stand is challenging, as each assessment contains questions addressing multiple PLOs. Due to a BlackBoard limitation, the results for individual PLOs cannot be automatically aggregated and compared across multiple courses, and instead must be tabulated by hand. To solve this problem, for the semester-based program, the Department agreed to develop assessment instruments that address only one PLO at a time. This will allow assessment to be automated, providing the opportunity to assess more courses, and assess those courses more frequently. The Department will be developing the new assessment instruments for the semester-based program beginning next year.

An additional challenge in the current system is assessing PLOs for both the Master's in Computer Science program and the Master's in Computer Network program. Since the programs share the great majority of the courses, but have different PLOs, it has been necessary to provide separate mappings of course SLOs to the PLOs of the two different programs, or to include additional questions on the assessment instruments to address the different PLOs. Fortunately, this difficulty will be eliminated under the semester-based program as the Master's in Computer Science and the Master's in Computer Networks have been combined into a single program with common PLOs.

In evaluating the assessment scores for PLO #3, we find very positive results in three of the four courses assessed. CS 6260, CS 6560, and CS 6901 are required courses for all students, except a small number of students who elect to complete a thesis rather than taking the comprehensive exams (CS 6901.) As a result, these assessment scores reflect the performance of the program as a whole in achieving PLO #3.

In regards to closing the loop and using the results of the assessment process to improve student



student performance on PLO #3.

**D. Summary of Assessment Results**