California State University, Los Angeles

Annual Assessment Report

Program: COMPUTER SCIENCE MASTER OF SCIENCE Report Semester/Year: \_ SPRING 2019\_\_ \_\_\_\_\_\_

College/School: \_\_\_ECST\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Assessment Coordinator: \_\_\_\_\_ Dr. Sun \_\_\_\_\_\_\_\_

Specialized Accreditation: 🗹 No ❒ Yes please specify Agency/organization and Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Department Mission:

To graduate well educated computer scientists who are prepared to meet the challenges of a rapidly changing, increasingly complex world. This will be accomplished through:

* A well-qualified faculty who care about students and their success.
* A dynamic, up-to-date curriculum that has an optimal balance between theory and practice.
* Laboratories, computer facilities, and instructional classrooms on par with any computer science program in the nation.
* Unique co-curricular opportunities for students such as participation in student design competitions, professional student organizations, and pre-professional employment.
* Opportunities for undergraduate and graduate students to participate in research and industry-funded design clinic projects.
* Mutually beneficial partnerships with area industry that take advantage of our location in one of the most concentrated high-tech centers in the nation.
* Strong cooperative relationships with local high schools, community colleges, and with other four-year institutions.

Please list all Program Learning Outcomes (PLOs):

1. Students will have the ability to write software (i.e., programming in the small) at an advanced level by applying state-of-the-art programming language concepts and algorithm design strategies.
2. Students will have the ability to design software systems (i.e., programming in the large) at an advanced level by applying state-of-the-art software system design and development techniques.
3. Students will have acquired advanced knowledge and skills in one or more areas of computer science.
4. Students will be able to communicate effectively both orally and in writing.
5. Students will embrace lifelong learning and will have the skills to adapt to new environments and technologies.

**Alignment of Institutional Learning Outcomes (ILOs) and Program Student Learning Outcomes (see Appendix A for a complete description of each ILO) - Please indicate which of your PLOs best match the following ILOs.**

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| Cal State LA Institutional Learning Outcomes | PLO(s) which match this ILO |
| 1. Knowledge: Mastery of content and processes of inquiry | 1, 2, 3 |
| 1. Proficiency: Intellectual skills | 2, 4, 5 |
| 1. Place and Community: Urban and global mission | 2, 5 |
| 1. Transformation: Integrative learning | 3, 4, 5 |

Assessment Results - Describe any assessment activities conducted within the past academic years for each outcome. See Appendix for examples of assessment measures and use of results. *Please attach any additional information as needed.*

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| Program Learning Outcome  (List activities for each PLO. Enter “general” for activities that pertain to multiple PLOs) | 1. How and when was this PLO assessed? (For example, which assessments were used, which courses were examined, what were the dates of data collection?) See Appendix B for other examples | 2. What were the results? (For example, how many students reached each level of proficiency on the SLOs assessed?) See Appendix C for other examples | 3. Based on the results, what instructional, programmatic, or curricular improvements were made? |
| General (all PLOs) | 2018-2019: All the PLO’s were evaluated for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. | Students, Alumni, Faculty, Employer and IAB surveys have all been satisfactory | None |
| PLO 1 | Rubric evaluated in evaluated in CS5035, CS5780, CS5990, CS5996 in Spring semester, 2019 | Satisfactory. (Detailed Assessment Report to be completed in Fall 2019) | None |
| PLO 2 | Rubric evaluated in evaluated in CS 5035, CS5220, CS5990 in Spring/Fall semester, 2019 | Satisfactory. (Detailed Assessment Report to be completed in Fall 2019) | None |
| PLO 4 | Rubric evaluated in evaluated in CS5220, CS5990 in Spring/Fall semester, 2019 | Satisfactory. (Detailed Assessment Report to be completed in Fall 2019) | None |
| PLO 3 | Annual survey of all constituents. | Satisfactory. (Detailed Assessment Report to be completed in Fall 2019) | Machine Learning and Data Science have become increasingly important sub-disciplines of computer science. Employers in our Industry Advisory Board have expressed a strong interest in having students who are knowledgeable in these areas  We strengthened our offerings in this area. In addition to the existing CS4660 (Artificial Intelligence), CS4661 (Introduction to Data Science), we have developed two new courses [CS 4662 (Advanced Machine Learning) and CS 4663 (Deep Learning]) |
| PLO 5 | Annual survey of all constituents. | Satisfactory. (Detailed Assessment Report to be completed in Fall 2019) |  |

**Assessment Plan - In this section, provide a description of assessment plan that specifies assessment activities conducted (and to be conducted) from 2017-2021.**

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| Program Learning Outcome | Academic year/semester when PLO is assessed | What is your tentative plan for assessing this PLO? (For example, which assessments will be used, which courses will examined?) |
| PLO 1 | Annual – Either in Fall or Spring semesters. | * This outcome will be assessed using a common rubric with performance indicators and asking program faculty to score based on several artifacts (projects, assignments, exams). This rubric is evaluated each time CS5035, CS5112, CS5780, CS5990, and CS5996 are offered. * Conduct a survey to evaluate this outcome for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. These constituent surveys are conducted on CSNS. * Discuss assessment of this PLO at department retreats in Spring semester. |
| PLO 2 |  | * This outcome will be assessed using a common rubric with performance indicators and asking program faculty to score based on several artifacts (projects, assignments, exams). This rubric is evaluated each time CS5220, CS5337 and CS5780 are offered. * Conduct a survey to evaluate this outcome for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. These constituent surveys are conducted on CSNS.   Discuss assessment of this PLO at department retreats in Spring semester. |
| PLO 3 |  | * Conduct a survey to evaluate this outcome for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. These constituent surveys are conducted on CSNS. * Discuss assessment of this PLO at department retreats in Spring semester. |
| PLO 4 |  | * This outcome will be assessed using a common rubric with performance indicators and asking program faculty to score based on several artifacts (projects, assignments, exams). This rubric is evaluated each time CS5035, CS5220, CS5780 and CS5990 are offered. * Conduct a survey to evaluate this outcome for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. These constituent surveys are conducted on CSNS.   Discuss assessment of this PLO at department retreats in Spring semester. |
| PLO 5 |  | * Conduct a survey to evaluate this outcome for its “satisfaction” using various constituent (Alumni, Faculty, IAB, Student) surveys. These constituent surveys are conducted on CSNS. * Discuss assessment of this PLO at department retreats in Spring semester. |

Note: PLO #5 is not an “Outcome” according to ABET (our accreditation agency). We agree that life-long learning is a long term goal and not necessarily a student outcome. This outcome is being eliminated.