## Memorandum of Understanding

Department of Science Education, MS in Science Education Optional assessment: Single Subject Credential Program College of Natural Science and Mathematics March 2017

This Memorandum of Understanding outlines the consensus reached by the Department of Science Education, the College of Natural Sciences and Mathematics, and the Division of Academic Affairs, based on the recently conducted program review. It describes the goals to be achieved, and the actions to be undertaken by all parties to this MOU to achieve these goals, during the next program review cycle. Progress toward goals is to be addressed in the biennial report.

The previous review of the Department of Science Education concluded in 2008. That review was very positive, and in the interval the department has continued to be, in the words of the external review report, "a vibrant professional learning community." Faculty members are leaders in their research and in their accomplishments in improving science teaching and learning. They contribute to multiple programs on campus, including Liberal Studies and the credential programs. The impact of their activity is significant, given that CSULB is the largest producer of science teachers in California. The department has long been a leader in the assessment of student learning, has a model assessment program, and shares its expertise with other programs on campus. In fall 2015, the department became engaged with undergraduate General Education to better support STEM students. In addition to reviewing the MS in Science Education, the current program review assessed the Single Subject Credential Program.

The review found that time to degree can be lengthy for MS students. Since many students are working teachers, it is not surprising that they may take longer to graduate. However, a recent trend of shorter time to degree might be analyzed to see if further improvements could be made.

The external reviewers noted various possible areas of expansion, including a certificate in Informal Science Education and an undergraduate minor aimed at Liberal Studies majors. Growth in these areas might lead to expansion of the faculty through the hiring of new junior-level faculty.

It is therefore agreed that:

- 1. The department will continue active recruitment of master's degree students in the Science Education programs.
- 2. The department will continue to advise master's students and offer coursework for appropriate time to degree.
- 3. The department will develop a second course for informal science education students within the MS.

- 4. The department will embed more informal science education emphasis in the current master's core courses so that it is well represented along with the other areas of emphasis (elementary/middle and secondary education).
- 5. The department will develop SCED 404, Nature of Science and Scientific Reasoning, into a writing intensive capstone course.
- 6. The department will work with other science departments on possible expansion of science education undergraduate concentrations in other disciplines (currently there is one in biology).
- 7. The program will provide a biennial update on progress made towards the actions agreed to in this MOU, to be submitted in conjunction with its biennial assessment report.

This MOU has been read and approved by:

Department Chair: Sisa M. Martin Hangen Date: 4-4-2017

College Dean: Jame Sung Spec Date: 4/4/17

Vice Provost: Criedandsan Date: 4-4-17