

Program Assessment Report
M.S. in Crop, Soil, and Environmental Sciences
University of Arkansas
2020-2021

Program: M.S. in Crop, Soil, and Environmental Sciences

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- **Results of analysis of assessment of Student Learning Outcome**

Rubric completion decreased from academic year 2019-2020 to 2020-2021. Previously, 17 CSES Graduate Student Learning Objectives (SLO) Assessment rubrics were completed for seven different CSES M.S. students, while this academic year 13 rubrics were completed for five M.S. graduating students. It is unclear at this time if fewer M.S. students graduated this year compared to the previous year or if fewer rubrics were completed and submitted for graduating students. Among the rubrics completed, faculty indicated basic to mastery level for problem solving, and oral and written communication skills among students. Knowledge, critical thinking, and research and analytical skills and contributions were rated at basic to proficient. Acceptable target goals are for 70% of M.S. students defending their thesis to score “proficient” or greater, and ideally, 90% of M.S. students defending their thesis will score “proficient” or greater. The median ratings for all outcomes were proficient for more than half (54% of those evaluated for research) to up to 77% of those students evaluated for problem solving abilities. Thus, target goals were met or close to being met for outcomes except for written communication and research, which were not met by 70% of the evaluated population.

- **Any changes to degree/certificate planned or made on the basis of the assessment and analysis**

There are currently no changes planned for the M.S. degree; however, the CSES Department should continue to monitor performance closely in student learner outcomes. Knowledge, oral communication skills, and research and analytical skills have appeared to be strengths for CSES. Critical thinking and problem solving are more difficult skills for students to develop. This past year students and faculty have been dealing with COVID-19, remote delivery, delays in teaching, learning, and research, and isolation from colleagues. Communication skills and research skill performance may have decreased slightly even among a small population subset due to strains from COVID-19. A few notes on individual rubrics from 2019-2020 indicated that some students have learning disabilities and others have interests that do not include further graduate school; these and other factors may need to be considered in curriculum design. Whether there were factors in remote learning that played in graduate learning that were apparent in outcome performance may become evident over the next few academic years. Problem solving was the strongest outcome and may speak to the resilience of those who were able to graduate this academic year.

- **Any changes to the assessment process made or planned.**

With a decrease in the number of rubrics being completed for graduating CSES M.S students, the department has to be diligent and persistent in making sure that advisors and graduate students remember to have advisory committee members complete Graduate SLO Assessment rubrics at the conclusion of every defense. To institutionalize the implementation of assessment during thesis defenses, the departmental practice of informing new graduate students about the CSES Graduate Student Handbook, including that each CSES graduate student **must** inform the CSES Department (i.e. the CSES Department Head and CSES Office Manager) of a scheduled defense **two weeks prior** to the defense and obtain a “CSES Exit” packet that includes the CSES Graduate SLO Assessment rubric should continue and become routine. The promotion of this informal CSES policy has been important in getting rubrics completed and returned to Daniela Kidd in 115 PTSC. Every student and advisor must continue to be encouraged to complete the rubrics and encourage all committee members to complete the rubrics. Otherwise, with limited data, it is difficult to determine if a sufficient percentage of the student body is achieving proficiency in all stated learning outcomes. The difficulties of dealing with COVID-19 may affect student learner outcome performance, but may also be difficult to determine with a small population of students graduating each year, especially if faculty committee members do not complete and submit SLO rubrics for each student who completes a thesis defense. Consideration of an electronic form could be helpful in promoting submission of Graduate SLO Assessment rubrics while maintaining anonymity.