

CBE AOL Closing the Loop Form

Program: MS Economics Date: 9/03/20

Learning Goal: 3. Students who graduate will be knowledgeable in advanced econometrics.

Learning Objective: 3A. Students who graduate will identify and apply appropriate empirical techniques for estimation problems.

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Closing-the-Loop

1. Review Learning Objective (LO) assessment data in the current Assessment Report.
2. Review previous LO assessment data and improvement actions taken since then in the AOL Summary Report.
3. Document below the effectiveness of past improvement actions in improving student learning or the AOL process (this is what is known as "closing-the-loop").

Spring 2017 results document that 95 percent of students met expectations for this Learning Objective. In Spring 2019, 97 percent met expectations. This suggests that our program continues to meet expectations for this Learning Objective. The Learning Objective is assessed in ECON 688 and ECON 693 (co-requisites), which were heavily modified when the MS Economics program was modified during the University's conversion from quarters to semesters. In particular, the pair of courses require students to complete five smaller empirical assignments rather than one larger empirical paper. The fifth assignment gives students similar freedom to choose their topic that the single assignment under the original course did. However, students now have experience with a wider array of empirical techniques.

4. Document below your evaluation of current LO assessment data compared to the benchmark and the need for new improvement actions. Consider not just the overall average LO score but also score on individual traits shown in the Assessment Report and derived from the LO rubric.

A more detailed analysis of the data reveals that 100 percent of students met or exceeded expectations for the first two traits (Estimating Econometric Models, and Use of Data for Econometric Analysis) while 91 percent of students met or exceeded expectations for the third trait (Quantitative Techniques). In addition to the changes listed above, we also changed the programming language students use from Stata to R beginning in Fall 2019. Given this recent change, coupled with the larger change beginning in Spring 2019 to the structure of assessment, we do not believe additional improvement actions are required. Nonetheless, we make one proposal below that involves the creation of a class that would teach programming in R. Because this course could focus on programming and software skills, ECON 688 and ECON 693 could use time previously devoted to software skills to more fully developing students' understanding of empirical techniques.

*While trait 3 had 9% of students below expectations, due to the number of students in the program this was effectively only 1 student.

***Consider raising the performance target to 80% of students meeting or exceeding expectations.

5. Record below a list of recommended course-level or programmatic actions to improve student learning or the AOL process.
 - a. Sort the list from most recommended to least.
 - b. Given our mature AOL system, ideas should not be limited to just AOL system improvements.

- c. For each improvement action proposal, list the project leader, timeline to completion, required resources, expected ease of implementation (hard, medium, easy), and expected impact on student learning (low, medium, high).
- d. You may use ease of implementation and impact on student learning to rank improvements.
- e. There is no guarantee that improvement ideas will be approved. They need to be reviewed by the program director, curriculum committee and dean.

Creation of a required programming class for the MS Economics program, "Computational Methods for Economists," that would introduce computer programming in R with an emphasis on data collection and management. This would support students' learning of empirical techniques in both ECON 610 and ECON 688/693.

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