

Program: BS Economics					
Measure/Benchmarks	2017/2018	2018/2019*		2019/2020	2020/2021
Learning Objective 1A: Students who graduate will formulate mathematical models to solve microeconomic problems.					
ECON 301: Faculty will use course final exam as assessment artifact. Scores of the individual student exams will be compared to department determined and faculty specific benchmarks for proficiency levels. <u>Current Benchmark:</u> 60% of students will score >/= to 70%	Implementing improvement actions	<u>Assessments:</u> Spring 2019: [n = 41] 39% of students met benchmark; 61% of students did not meet benchmark. <u>Closing the Loop:</u> As of Fall 2018, BS Economics students are required to take an additional class (ECON 210) that applies mathematical and statistical tools to analyze microeconomic and econometric problems. Problem-solving skills relevant to this objective require algebra, basic graphing, and calculus. These skills are emphasized in ECON 210. Assessment of Learning Objective 1 was moved from ECON 300 to ECON 301. One of four questions on the ECON 301 final exam is now a decision problem with optimization. It has familiar elements but is not the type of problem students have seen before. 39% met the benchmark, which is below the benchmark of 70%. However, a deeper analysis reveals evidence that the addition of ECON 210 has been effective. In the class of 44 students, 18 were (or are now classified as) BS Economics students, 24 were BA Economics students, and 2 were other. Of the 17 BS Economics students who took the final, 11 (64.7%) met the benchmark. Of the 23 BA Economics students who took the final, 5 (21.7%) met the benchmark. Since BS Economics students are required to take ECON 210 while the BA Economics are not, this is evidence that past improvement actions have been effective in improving students' ability to form and solve mathematical problems in economics. <u>Improvements:</u> -Use "Learning Glass" technology available through Media and Academic Technology Services (MATS) to provide several videos of instructor solving the more algebra and calculus intensive problems in microeconomics. These videos will be posted online to complement in-person instruction. Target is to produce five 15-minute videos covering material from ECON 301 by the end of spring 2020.		Closing the loop discussions	Refining AOL system
Learning Objective 2A: Students who graduate will formulate mathematical models to solve macroeconomic problems.					
ECON 305: Faculty will use course final exam as assessment artifact. Scores of the individual student exams will be compared to department determined and faculty specific benchmarks for proficiency. <u>Current Benchmark:</u> 60% of students will score >/= to 70%	Implementing improvement actions	<u>Assessments:</u> Spring 2019: [n = 44] 89% of students met benchmark; 11% of students did not meet benchmark. <u>Closing the Loop:</u> As of Fall 2018, BS Economics students are required to take an additional class (ECON 210) that applies mathematical and statistical tools to analyze microeconomic and econometric problems. Problem-solving skills relevant to this objective require algebra, basic graphing, and calculus. These skills are emphasized in ECON 210. A portion of the final exam was used to assess this learning objective. The portion selected for assessment is a cumulative multi-step/multi-questioned problem that measures student proficiency in the knowledge-based learning objective. 89% scored above the benchmark of 70%. An analysis of the scores indicates that, of the 43 students who took the exam, 23 BA Economics students or from another program and 20 were BS Economics students. 83% of BA Economics or other students met the benchmark and 100% of BS Economics students met the benchmark. Since only BS Economics are required to take ECON 210, the results provide evidence that changes to the Economics program to include ECON 210 have been successful in raising the quantitative skills of students. <u>Improvements:</u> -Construct a sample macro final exam problem (mathematical in nature) that can be tweaked each year. The question would involve some kind of policy or economic shock (that can be varied each year) and students would be asked to analyze its implications using the quantitative tools that they have learned in macro. -Additional quantitative assignments that match the level of students' quantitative skills.		Closing the loop discussions	Refining AOL system
Learning Objective 3A: Students who graduate will analyze research data using modern statistical software packages.					

<p>ECON 499: Faculty will use embedded assignment as assessment artifact. Scores of the individual student assignments will be compared to department determined and faculty specific benchmarks for proficiency.</p> <p><u>Current Benchmark:</u> 70% of students will meet expectations.</p>	<p>Implementing improvement actions</p>	<p>Assessments: Fall 2018: [n = 25] <i>Overall Rubric Score: 75% met expectations; Individual Rubric Traits:</i> Trait 1: Statistical Methodology, 64% Trait 2: Interpretation of Results, 72% Trait 3: Software Skills, 88%</p> <p>Closing the Loop: Results from Fall 2018 reveal that 75% of 25 students met or exceeded the benchmark. This compares to 69% from Winter 2017 and 50% from Winter 2016. The improved assessment results are evidence that adding an empirical exercise with a write-up in Winter 2016, one of the improvement actions, was effective. Also, homeworks were augmented to include empirical analyses similar to the final project for which assessment is based.</p> <p>Improvements: -Replace Stata with the Python programming language in ECON 310 and 499. Since many students take CS 100: Programming for Everyone to satisfy the BS Economics programming requirement, and this course teaches Python, using a consistent programming language throughout the program will hopefully improve students' skills related to this learning objective.</p>	<p>Closing the loop discussions</p>	<p>Refining AOL system</p>
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Learning Objective 4A: Students who graduate will construct coherent economic policy arguments, grounded in economic theory.

<p>ECON 499: Faculty will use embedded assignment as assessment artifact. Scores of the individual student assignments will be compared to department determined and faculty specific benchmarks for proficiency.</p> <p><u>Current Benchmark:</u> 70% of students will meet expectations.</p>	<p>Implementing improvement actions</p>	<p>Assessments: Fall 2018: [n = 25] <i>Overall Rubric Score: 77% met expectations; Individual Rubric Traits:</i> Trait 1: Context/Purpose, 92% Trait 2: Economic Theory, 72% Trait 3: Written Exposition, 68%</p> <p>Closing the Loop: Results from Fall 2018 reveal that 77% of 25 students met or exceeded the benchmark. This compares to 72% from Winter 2017 and 44% from Winter 2016. The improved assessment results are evidence that adding an empirical exercise with a write-up in Winter 2016, one of the improvement actions, was effective.</p> <p>Improvements: -In part to address related concerns, the Economics program at CSUEB was transformed beginning Fall 2018 to include a second required course in econometrics following ECON 310 (ECON 499) to further develop students' statistics and software/programming skills. Unfortunately, ECON 499 was not offered for the first time until spring 2020 so we are not able to assess the effectiveness of this significant program change. At this point, we will not consider further improvement actions until feedback from ECON 499 becomes available.</p>	<p>Closing the loop discussions</p>	<p>Refining AOL system</p>
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Footnotes:
*Totals may not add up to 100 due to rounding.