INAUGURAL REPORT

ECONOMICS FIELD OF STUDY (EFOS) ASSESSMENT

FALL SEMESTER 2021

The Economics Field of Study (EFOS) is a brand new field of study at Collin College. This continuous improvement plan (CIP) report represents the inaugural assessment report for the Economics Field of Study. As such this report represents the establishment of a baseline assessment for future comparisons. The EFOS certificate represents a 13 credit hours curriculum consisting of the following courses in the recommended course sequence:

FIRST YEAR, First Semester

ECON 2301   Principles of Macroeconomics

FIRST YEAR, Second Semester

ECON 2302   Principles of Microeconomics

MATH 2413   Calculus I

SECOND YEAR, First Semester

BUSI 2305   Business Statistics

The assessment is administered to students who meet the definition of completer in the EFOS. A completer is defined as a student who is in the final stage of completing the above listed four courses of the EFOS. Since BUSI 2305 is recommended to be taken after completing the other three courses, it was concluded that for purposes of this inaugural assessment report the last course taken in the sequence of these four courses, BUSI 2305, would serve as the capstone course capturing completers in the EFOS. Therefore, the assessment instrument was administered during the last two weeks of the Fall 2021 semester in BUSI 2305 classes in order to access a greater sample of completers. Appropriate measures were included to identify assessment takers who were not in the process of completing all four courses. Their results are not included in the report to Institutional Effectiveness.

For the Fall semester 2021, the assessment was administered in face-to-face and hybrid BUSI 2305 classes as well as web based BUSI 2305 classes. Allowing for absentees, dropouts, and identified non-completers, of the 119 students who completed the assessment, 118 of these students were identified as completers. Of these 118 completers, 16 students or 13.6% self-identified as pursuing the EFOS certificate, 52 students or 44.1% self-identified as pursuing the Business Field of Study (BFOS) certificate, 22 students or 18.6% self-identified as pursuing both

the EFOS and the BFOS certificates, and finally the remaining 28 students or 23.7% self-identified as pursuing neither the EFOS certificate nor the BFOS certificate. We are assuming that this last group of students who stated that they are not pursuing either FOS certificate are students who intend to transfer to a 4-year college or university Economics or Business program given that they are completers. In summary, our sample of 118 completers included 38 total students (32.2%) who self-identified as pursuing the EFOS certificate. This is a small sample due to the fact that the EFOS is new. However, we conclude that this is an adequate sample for informational purposes of starting and establishing a baseline assessment for future comparisons.

ASSESSING THE PROGRAM-LEVEL LEARNING OUTCOMES

The below table displays the four program-level learning outcomes (PLOs) for the EFOS:

Program-Level Learning Outcomes	
Program Learning Outcome 1: ECON 2301	Apply the appropriate fiscal or monetary policy to reduce certain macroeconomic problems.
Program Learning Outcome 2: ECON 2302	Identify and compare the importance of trade to a country and apply why free trade is beneficial to all trading countries.
Program Learning Outcome 3: MATH 2413	Relate, apply, and determine the derivative relationships between marginal and total utilities as well as marginal and average costs.
Program Learning Outcome 4: BUSI 2305	Calculate, interpret, and apply discrete and continuous probability Distributions

The first two program-level learning outcomes were selected by the Economics Discipline Lead and are the same that are currently used in the BFOS assessment for ECON 2301 and ECON 2302. These two were previously developed after Economics faculty consultation. The third one was selected by the Economics Discipline Lead after consultation with a Mathematics Department faculty colleague who teaches MATH 2413. The fourth one was selected by an Economics Department faculty colleague assisting with the assessment questions for BUSI 2305 after consultation with other Economics Department faculty all of whom teach BUSI 2305. Please note that at this time only Economics faculty are teaching BUSI 2305 due to required faculty credentialing to teach BUSI 2305. The first program learning outcome is assessed by questions one through four on the assessment instrument, the second one by questions five through eight, the third one by questions nine through twelve, and the fourth program learning outcome by questions thirteen through sixteen on the assessment instrument.

ADMINISTERING THE EFOS ASSESSMENT

The BUSI 2305 faculty administered the assessment during the last two weeks of the Fall 2021 semester. The assessment was administered in face-to-face, hybrid, and web based BUSI 2305

classes. Students were asked to take the assessment online via a faculty created Economics Department Canvas assessment employed in each section of BUSI 2305. Completed assessments were sent as a spreadsheet per course to the Economics Department Discipline Lead who then forwarded it to the two Economics faculty members who volunteered to serve as the inaugural EFOS CIP assessment coordinators. The two Economics Department faculty then compiled the assessment data into one spreadsheet, analyzed the data, evaluated and reported the results, as well as assisted with the drafting of this assessment report.

EVALUATING THE ASSESSMENT RESULTS

The assessment was evaluated per the below EFOS assessment plan approved in 2021.

Program-Level Learning Outcome	Assessment Measure	Targets- Level of Success Expected
PLO #1: Apply the appropriate fiscal or monetary policy to reduce certain macroeconomic problems.	Multiple Choice Assessment on the application of particular fiscal and monetary policy tools to address specific macroeconomic problems given in BUSI 2305-Business Statistics.	For each question in the assessment, the standard to be **met** is 70% correct or higher, to be **partially met** is 50% to less than 70%, and to be **not met** is less than 50%
PLO #2: Identify and compare the importance of trade to a country and apply why free trade is beneficial to all trading countries.	Multiple Choice Assessment on the importance of international trade to a single country and the benefits of free trade to all countries given in BUSI 2305-Business Statistics.	For each question in the assessment, the standard to be **met** is 70% correct or higher, to be **partially met** is 50% to less than 70%, and to be **not met** is less than 50%
PLO #3: Relate, apply, and determine the derivative relationships between marginal and total utilities as well as marginal and average costs.	Multiple Choice Assessment on the determination of the relationships between marginal and total utilities as well as marginal and average costs given in BUSI 2305-Business Statistics.	For each question in the assessment, the standard to be **met** is 70% correct or higher, to be **partially met** is 50% to less than 70%, and to be **not met** is less than 50%
PLO #4: Calculate, interpret, and apply discrete and continuous probability distributions	Multiple Choice Assessment on the application of discrete and continuous probability distributions given in BUSI 2305-Business Statistics.	For each question in the assessment, the standard to be **met** is 70% correct or higher, to be **partially met** is 50% to less than 70%, and to be **not met** is less than 50%

For each program learning outcome, the results of the four applicable questions are aggregated, and the targets in the above assessment plan are applied.

ASSESSMENT SET/QUESTION	COMPLETERS' PERCENT CORRECT
PLO #1, ECON 2301 SET OF FOUR QUESTIONS	91
QUESTION 1	97
QUESTION 2	96
QUESTION 3	86
QUESTION 4	85
PLO #2, ECON 2302 SET OF FOUR QUESTIONS	86
QUESTION 5	82
QUESTION 6	92
QUESTION 7	86
QUESTION 8	85
PLO #3, MATH 2413 SET OF FOUR QUESTIONS	66
QUESTION 9	66
QUESTION 10	84
QUESTION 11	74
QUESTION 12	41
PLO #4, BUSI 2305 SET OF FOUR QUESTIONS	68
QUESTION 13	65
QUESTION 14	52
QUESTION 15	71
QUESTION 16	83

The evaluation of the above results is as follows. The specific assessment questions are reproduced at the end of this report in the appendix.

PLO #1, ECON 2301 SET: Overall, 91% of completers answered the four questions correctly. Standard was **met**.

Question 1 focused on monetary policy. 97% of completers answered correctly. Standard was **met**.

Question 2 focused on fiscal policy. 96% of completers answered correctly. Standard was **met**.

Question 3 focused on money supply. 86% of completers answered correctly. Standard was **met**.

Question 4 focused on tax changes. 85% of completers answered correctly. Standard was **met**.

PLO #2, ECON 2302 SET: Overall, 86% of completers answered the four questions correctly. Standard was **met**.

Question 5 focused on the definition of economics in relation to trade. 82% of completers answered correctly. Standard was **met**.

Question 6 focused on the benefits of specialization and trade. 92% of completers answered correctly. Standard was **met**.

Question 7 focused on comparative advantage. 86% of completers answered correctly. Standard was **met**.

Question 8 focused on the benefits of trade between countries at different development stages. 85% of completers answered correctly. Standard was **met**.

PLO #3, MATH 2413 SET: Overall, 66% of completers answered the four questions correctly. Standard was **partially met**.

Question 9 focused on the application of total utility and marginal utility. 66% of completers answered correctly. Standard was **partially met**.

Question 10 focused on the derivative relationship between total utility and marginal utility. 84% of completers answered correctly. Standard was **met**.

Question 11 focused on the derivative relationship between marginal cost and average cost. 74% of completers answered correctly. Standard was **met**.

Question 12 focused on relationship of cost curves. 41% of completers answered correctly. Standard was **not met**.

PLO #4, BUSI 2305 SET: Overall, 68% of completers answered the four questions correctly. Standard was **partially met**.

Question 13 focused on calculating probabilities. 65% of completers answered correctly. Standard was **partially met**.

Question 14 focused on calculating an application based on probabilities. 52% of completers answered correctly. Standard was **partially met**.

Question 15 focused on a graphical interpretation of a probability distribution. 71% of completers answered correctly. Standard was **met**.

Question 16 focused on an application based on a probability distribution. 83% of completers answered correctly. Standard was **met**.

CONTINUOUS IMPROVEMENT PLAN RECOMMENDATIONS

Of the 4 PLOs, completers **met** standards in two (PLO #1 and PLO #2) and **partially met** standards in two (PLO #3 and PLO #4). More course specific, of the 16 questions completers **met** standards in eleven (all eight of the questions in ECON, two in MATH, and two in BUSI), and **partially met** standards in three (one in MATH and two in BUSI). One question (MATH) fell into the "**did not meet**" standards category.

The following recommendations are rendered for consideration by the discipline lead:

1. Review and examine the quality of the question for which completers did not meet standards. One of the questions for PLO #3 (question 12) fell into the "**did not meet**" standards category. However, given the sample size of this inaugural EFOS assessment one may also consider repeating the next assessment with the same question 12 in order to check if this result of "**did not meet**" standards of the inaugural assessment is robust.

2. Review questions for which completers **partially met** standards. These are questions 9 for PLO #3 and questions 13 and 14 for PLO #4. One may consider how the underlying course material is taught or how the questions are presented in order to ensure clarity. Again, given the sample size of this inaugural EFOS assessment one may also consider repeating the next assessment with the same questions (9, 13, and 14) in order to check if these **partially met** standards results of the inaugural assessment are robust.

3. Review all questions before the next assessment is administered to ensure that they are consistent and conforming with the teaching material as well as capture what completers should retain as knowledge as they depart the EFOS.

4. Please report any modifications to teaching material, teaching emphasis, and any changes to the wording of any assessment questions, or any changes to a program-level learning outcome to the EFOS CIP assessment coordinators.

We have determined that our method of capturing completers is acceptable as a start given that the EFOS is new. As a result, we deem it to be prudent to continue to observe any future changes of student course sequencing trends and enrollment numbers. Such information may result in revisiting how we capture completers. Any potential concern that administering the assessment

to BUSI 2305 students might bias the results to favor higher scoring in that part of the assessment (PLO #4) appears to be unfounded. The next administration of the EFOS CIP assessment may occur during academic year 2023-24.

RESULTS REPORTING

The assessments results, evaluation, and recommendations above are reported to Institutional Effectiveness, to the Discipline Dean, and to the Economics faculty.

Respectfully,

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APPENDIX

CONTINUOUS IMPROVEMENT PLAN (CIP) ASSESSMENT QUESTIONS 2021

Assessment to be administered in all BUSI 2305 Business Statistic courses

Program Learning Outcome 1: Apply the appropriate fiscal or monetary policy to reduce certain macroeconomic problems.

1. The one organization that has the power to conduct monetary policy in the United States is
2. Which fiscal policy would be appropriate to reduce unemployment during a recession?
3. The effect of an increase in the money supply is to
4. As a result of a decrease in the personal income tax rate in a recession, consumers are likely to

Program Learning Outcome 2: Identify and compare the importance of trade to a country and apply why free trade is beneficial to all trading countries.

5. Economics as the foundation for a better understanding of trade may be best defined as the
6. Specialization and trade exploit differences in productivity across workers and
7. A domestic company that does have a comparative advantage will _____ a foreign market and compete by offering a _____ price
8. A rich nation will trade with a poor nation because the

Program Learning Outcome 3: Relate, apply, and determine the derivative relationships between marginal and total utilities as well as marginal and average costs.

9. John has just eaten another serving of blueberries and his total utility did not change. This means that John's marginal utility for this additional serving of blueberries is
10. If marginal utility from consuming a good or service is zero, total utility is
11. When the marginal cost is equal to the average cost, the
12. The marginal cost curve will pass upward through the minimum point of the:

Program Learning Outcome 4: Calculate, interpret, and apply discrete and continuous probability distributions.
13. What is the probability that a customer streams at least four movies per day?
14. On average, how many movies will a customer stream each day?
15. What type of distribution does the graph below illustrate?
16. Company A was told that their market share was 2 standard deviations below the mean. If the market shares were approximately normally distributed with a mean of 86 and a standard deviation of 2, what is the Company A's market share?