Assurance of Student Learning Report 2023-2024	
Gordon Ford College of Business	Economics
MA in Applied Economics 0410	
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Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.

Student Learning Outcome 1: Students will demonstrate ability to conduct economic research.

Instrument 1	Direct: Analysis of Capstone Project		
Based on your results, check whether the program met the goal Student Learning Outcome 1.		☒ Met	☐ Not Met

Student Learning Outcome 2: Students will demonstrate ability to convey their research findings using oral communication.

Instrument 1	Direct: Capstone Project Presentation		
Based on your results, check whether the program met the goal Student Learning Outcome 2.		☒ Met	☐ Not Met

Student Learning Outcome 3: Students will demonstrate ability to apply econometric modeling techniques to study real-world questions.

Instrument 1	Direct: Course project in ECON 465G – Regression and Econometrics		
Based on your results, check whether the program met the goal Student Learning Outcome 3.		☒ Met	☐ Not Met

Student Learning Outcome 4: Students will demonstrate appropriate data skills necessary to conduct economic research.

Instrument 1	Direct: Targeted assignments in ECON 506 – Applied Statistical Methods		
Based on your results, check whether the program met the goal Student Learning Outcome 4.		☒ Met	☐ Not Met

Student Learning Outcome 5: Students will demonstrate knowledge of statistical tools necessary to conduct economic research.

Instrument 1	Direct: Targeted assignments in ECON 506 – Applied Statistical Methods		
Based on your results, check whether the program met the goal Student Learning Outcome 5.		☒ Met	☐ Not Met

Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)

All students met the goal on SLO 1 and SLO 2. In fact, we require students to master those two SLOs in order to graduate. Results from the other SLOs, while not reaching 100%, look encouraging. The faculty will continue to use information obtained in the process of assessment to make adjustments to the to the pedagogy as well as the course content to address the weaknesses that were identified.

Student Learning Outcome 1	
Student Learning Outcome	Students will demonstrate ability to conduct economic research.
Measurement Instrument 1	DIRECT measures of student learning: Students in the MA in Applied Economics (0410) are required to complete an applied project at the end of the program. Under the mentorship of a faculty member, students choose a research topic, find the relevant data to conduct empirical study, create an econometric model, and perform necessary data analysis to answer their research questions. Students are instructed to structure their papers similarly to an economics journal article and include an introduction, literature review, data and methodology section, analysis of empirical results, and a conclusion. Therefore, the project allows the students to demonstrating various levels from remembering and understanding the concepts, to applying their knowledge to study real-world problems, analyzing data and creating policy recommendations based on their findings. Papers are evaluated on the following criteria: 1. Did the student formulate an appropriate research question grounded in economic theory? 2. Does the paper contain an adequate literature review? 3. Does the student clearly state the hypothesis and chose an appropriate econometric model to test the hypothesis? 4. Did the student correctly interpret the findings in the paper? 5. Did the student draw correct conclusions based on the results presented in the paper? 6. Did the student discuss limitations of the study and the general applicability of its results?
Criteria for Student Success	At the end of the program, students should be able to perform at the level of Capstone (4) or Milestone (3) according to LEAP *Inquiry and Analysis* rubric.

Program Success Target for this Measurement	80%	**Percent of Program Achieving Target**	100%
Methods	Direct artifacts were collected from all students who completed ECON 596, the capstone course for the masters' program. The data cover the entire population of 2023-24 graduates of the program (N=5). The papers were evaluated by two economics faculty using a 1-4 scale for each criterion. The scores were assigned based on LEAP Inquiry and Analysis rubric items (1) Topic Selection, (2) Existing Knowledge, Research and/or Views, (3) Design Process, (4) Analysis, (5) Conclusion and (6) Limitations and Implications. Using this rubric, each evaluator produced an average score for each paper by computing a simple average of the six items in the rubric. Therefore, each paper received two scores – one from each evaluator – and the mean of these three score was computed for each student.		

Based on your results, highlight whether the program met the goal Student Learning Outcome 1.	☒ Met	☐ Not Met

Actions (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)

The goal for the next assessment cycle is to maintain the overall success rate while increasing the average performance to have more student reach the Capstone ranking. The lowest average was on item 6 of the rubric - Limitations and Implications, and that has been true for several cycles.

Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)

During the next year, in our research methods classes more time will be dedicated for critiques of empirical studies as well as widely used methodologies with the goal of helping students understand limitations of these methodologies.

Next Assessment Cycle Plan

This outcome is assessed on annual basis. During the next assessment cycle, we will use the same rubric for consistency and because it provides us with a detailed data on students' performance. The artifacts, again, will be students' capstone research projects. The data will be gathered by the graduate program coordinator.

Student Learning Outcome 2

Student Learning Outcome	Students will demonstrate ability to convey their research findings using oral communication.
Measurement Instrument 1	DIRECT measures of student learning: Students in the MA in Applied Economics (0410) are required to complete an applied project at the end of the program and present it to the economics faculty. The presentations are organized similarly to a thesis defense: The students deliver a 20-25 presentation of their projects followed by a question/answer session. The presentations are evaluated on the following criteria: 1. Was the information presented effectively? 2. Did the student correctly and effectively used economic concepts to convey his or her ideas? 3. Were the visual aids (slides or handouts) used effectively? 4. Was the presentation well-focused around the central idea of the project?
Criteria for Student Success	At the end of the program, students should be able to perform at the level of Capstone (4) or Milestone (3) according to LEAP Oral Communication rubric.

Program Success Target for this Measurement	80%	**Percent of Program Achieving Target**	100%

Methods	The data are based on direct observations of the students' project presentations. The data were collected from all students in the capstone project (ECON 596) and cover the entire population of graduates. Two faculty members served as the assessment committee tasked with evaluating all of the project presentations to ensure consistency of measurement. Students' presentations were rated on the three criteria listed above using a 1-4 scale for each criterion. The scores were assigned based on LEAP Oral Communication rubric items (1) Organization, (2) Language, (3) Supporting Material, (4) and Central Message. Using this rubric, each evaluator produced an average score for each presentation by computing a simple average of the four items of the rubric, with each student receiving two scores – one from each evaluator – and the mean of these two score was computed for each student.

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.	☒ Met	☐ Not Met

Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)

The goal for the next assessment cycle is to maintain the overall success rate while increasing the average performance.

Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)

During the next assessment cycle, greater emphasis will be placed on helping students better prepare for their project presentations.

Next Assessment Cycle Plan (Please describe your assessment plan timetable for this outcome)

This outcome is assessed on annual basis. During the next assessment cycle, we will use the same rubric for consistency and because it provides us with a detailed data on students' performance. The artifacts, again, will be students' capstone research project presentations. The data will be gathered by the graduate program coordinator.

Student Learning Outcome 3	
Student Learning Outcome	Students will demonstrate ability to apply econometric modeling techniques to study real-world questions.
Measurement Instrument 1	Direct measures of student learning: One of the core courses in the MA in Applied Economics (0410) is Regression and Econometrics (ECON465G), which is also one of the research methods courses in the program. During the course, students learn a variety of econometric techniques. At the end of the course, students have to complete a project during which they have to identify the appropriate econometric technique to study the assigned problem, perform required calculations and interpret their results. This project served as the instrument for measuring this learning objective. Specifically, the following items were assessed: 1. Was the student able to formulate the research question in terms of the appropriate econometric model? 2. Was the student able to perform necessary calculations to estimate the model? 3. Did the student correctly interpret the estimation results?
Criteria for Student Success	At the end of the program, students should be able to perform at the level of Capstone (4) or Milestone (3) according to *LEAP Quantitative Literacy* rubric.

Program Success Target for this Measurement	80%	**Percent of Program Achieving Target**	100%
Methods	The data were collected from all the graduate students enrolled in the ECON 465G course during the spring 2023 semesters. The instructor of the course rated students' projects on the three criteria listed above using a 1-4 scale for each criterion. The scores were assigned based on LEAP Quantitative Literacy rubric items (1) Representation, (2) Calculation, (3) Application/Analysis. Using this rubric, an average score over these three items was computed for each student		

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.	☒ Met	☐ Not Met

Actions (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)

The material in this class is continuously updated to include the changes in research methodology accepted in the economic profession, so even maintain the same level of performance on this metric reflects acceptable levels of students' performance.

Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)

We will continue to monitor performance of students on this SLO.

Next Assessment Cycle Plan (Please describe your assessment plan timetable for this outcome)

This outcome is assessed on annual basis. During the next assessment cycle, we will use the same rubric for consistency and because it provides us with a detailed data on students' performance. The artifacts, again, will be students' papers in ECON 465G course. The data will be gathered by the instructor of the ECON 465G course.

Student Learning Outcome 4			
Student Learning Outcome	Students will demonstrate appropriate data skills necessary to conduct economic research.		
Measurement Instrument 1	Direct: Targeted assignments in ECON 506 – Applied Statistical Methods course. Among the assignment given throughout the course, students were required to complete assignments that measured their competency in choosing and using the appropriate data skills necessary to perform subsequent data analysis. Skills addressed included importing data into statistical software, data management skills (e.g. merging, subsetting datasets) etc.		
Criteria for Student Success	Upon completion of the program, students should perform at the Intermediate or Advanced level.		
Program Success Target for this Measurement	80%	**Percent of Program Achieving Target**	93%
Methods	At the end of the instructor of the ECON 506 course assessed the knowledge of the students on the following scale: 1 – Beginner 2 – Beginner + 3 – Intermediate 4 – Advanced. The ratings are intended to mirror the Calculation item in the LEAP Quantitative Literacy rubric. The data are collected from all of the students in the fall 2021 ECON 506 course (N=13), a core course in the MA in Applied Economics.		

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.	☒ Met	☐ Not Met

Actions (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)

The data indicate an improvement over time with respect to this goal. We plan to continue to emphasize, greater quantitative skills on undergraduate level led to better preparedness of the students, which we believe is helping in this area.

Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)

We will continue to incorporate some of the pedagogical techniques that have led to success here.

Next Assessment Cycle Plan (Please describe your assessment plan timetable for this outcome)

This outcome is assessed on annual basis. During the next assessment cycle, we will use the same rubric for consistency and because it provides us with a detailed data on students' performance. The artifacts, again, will be targeted assignments in ECON 506 course. The data will be gathered by the instructor of the ECON 506 course.

Student Learning Outcome 5			
Student Learning Outcome	Students will demonstrate knowledge of statistical tools necessary to conduct economic research.		
Measurement Instrument 1	Direct: Targeted assignments in ECON 506 – Applied Statistical Methods course. Among the assignment given throughout the course, students were required to complete assignments that measured their competency in choosing and using the appropriate statistical tools necessary to conduct analysis of economic data.		
Criteria for Student Success	Upon completion of the program, students should perform at the Intermediate or Advanced level.		
Program Success Target for this Measurement	80%	**Percent of Program Achieving Target**	100%
Methods	At the end of the instructor of the ECON 506 course assessed the knowledge of the students on the following scale: 1 – Beginner 2 – Beginner + 3 – Intermediate 4 – Advanced. The ratings are intended to mirror the Calculation item in the LEAP Quantitative Literacy rubric. The data are collected from all of the students in the ECON 506 course (N=13), a core course in the MA in Applied Economics.		

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 5.	☒ Met	☐ Not Met

Actions (Describe the decision-making process and actions for program improvement. The actions should include a timeline.)

The material in this class is continuously updated to include the changes in research methodology accepted in the economic profession, so even maintain the same level of performance on this metric reflects acceptable levels of students' performance.

Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)

We will continue to incorporate some of the pedagogical techniques developed to determine if that benefits students.

Next Assessment Cycle Plan (Please describe your assessment plan timetable for this outcome)

This outcome is assessed on annual basis. During the next assessment cycle, we will use the same rubric for consistency and because it provides us with a detailed data on students' performance. The artifacts, again, will be targeted assignments in ECON 506 course. The data will be gathered by the instructor of the ECON 506 course.

SLO 1 Rubric

	Capstone	Milestones		Benchmark
	4	**3**	**2**	**1**
Topic selection *LEAP Inquiry and Analysis*	Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously lessexplored aspects of the topic.	Identifies a focused and manageable/doable topic that appropriately addresses relevant aspects of the topic.	Identifies a topic that while manageable/doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide-ranging as to be manageable and doable.
Existing Knowledge, Research, and/or Views *LEAP Inquiry and Analysis*	Synthesizes in-depth information from relevant sources representing various points of view/approaches.	Presents in-depth information from relevant sources representing various points of view/approaches.	Presents information from relevant sources representing limited points of view/approaches.	Presents information from irrelevant sources representing limited points of view/approaches.
Design Process *LEAP Inquiry and Analysis*	All elements of the methodology or theoretical framework are skillfully developed. Appropriate methodology or theoretical frameworks may be synthesized from across disciplines or from relevant subdisciplines.	Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.	Critical elements of the methodology or theoretical framework are missing, incorrectly developed, or unfocused.	Inquiry design demonstrates a misunderstanding of the methodology or theoretical framework .
Analysis *LEAP Inquiry and Analysis*	Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Organizes evidence to reveal important patterns, differences, or similarities related to focus.	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.	Lists evidence, but it is not organized and/or is unrelated to focus.
Conclusions *LEAP Inquiry and Analysis*	States a conclusion that is a logical extrapolation from the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.
Limitations and Implications *LEAP Inquiry and Analysis*	Insightfully discusses in detail relevant and supported limitations and implications.	Discusses relevant and supported limitations and implications.	Presents relevant and supported limitations and implications.	Presents limitations and implications, but they are possibly irrelevant and unsupported.

SLO 2 Rubric:

	Capstone	Milestones		Benchmark
	4	**3**	**2**	**1**
Organization *LEAP Oral Communication*	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language *LEAP Oral Communication*	Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Supporting Material *LEAP Oral Communication*	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/authority on the topic.
Central Message *LEAP Oral Communication*	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.

SLO 3 Rubric

	Capstone	Milestones		Benchmark
	4	**3**	**2**	**1**
Representation Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words) *LEAP Quantitative Literacy*	Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.	Competently converts relevant information into an appropriate and desired mathematical portrayal.	Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.
Calculation	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.	Calculations are attempted but are both unsuccessful and are not comprehensive.
Application/Analysis Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis *LEAP Quantitative Literacy*	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.

Program: MASTERS IN APPLIED ECONOMICS

Curriculum Map Matrix
(Where are PLOs Introduced, Developed, and Mastered)?

	Econ 506: Econ. Stat.	Econ 465G: Regression	Econ 596: Masters Project
: Students will strate ability to conduct nic research and to nicate their findings /ritten communication.			I D M
: Students will strate ability to convey h ideas and findings ral communication and riate visual aids.			I D M
: Students will strate ability to apply netric modeling ues to study real-world ns.		I	D M
: Students will strate appropriate data ecessary to conduct nic research.		I	D M
: Students will strate knowledge of al tools necessary to t economic research.	I D	I D	M