Assurance of Learning Goals for the MS in Economic Analytics Program 2024-2025

The explosion of data has transformed the landscape for businesses, non-profits, and governments- bringing both significant challenges and promising new opportunities. Economists now play an increasingly important role in helping different organizations to interpret this data and extract meaningful value from it. Their ability to disentangle causation from correlation, forecast using a variety of models, and evaluate those models through empirical analysis offers an vital complement to the technical skills of data scientists. Furthermore, economists' insights into incentives and market structures equip them to guide decision-making in today's rapidly evolving economy. These capabilities make economists indispensable to organizations navigating the complexities of innovation-driven markets.

The Master of Science in Economic Analytics (MSEA) prepares students for successful careers in a wide range of industries, not-for-profit entities, and government agencies. Coursework in the MSEA program develops students' knowledge and applied skills in micro- and macroeconomics, causal econometrics and forecasting, machine learning, data collection, management, exploration, and analysis, coding, and communication skills.

The goals of the MS in Economic Analytics program are to graduate students with:

1. The ability to use applied micro- and macroeconomics tools to model behavior and predict outcomes.
2. Strong data skills, enabling them to identify data sources, then gather, load, wrangle, explore, and analyze data to answer a research question.
3. A broad and deep tool kit for conducting economic analytics, including regression and advanced causal econometric methods, forecasting techniques, bootstrapping, and machine learning tools.
4. The ability to inform managerial decision making using marginal analysis, consideration of incentives (and the possible unintended consequences they may produce), and causal modeling—economists can explain outcomes, not simply present them.
5. Professional oral and written communication skills, allowing them to clearly explain their findings to others.

Critical thinking skills are inherent in the conduct of economic analytics. To meet the program objectives, students must demonstrate that they can: (1) identify relevant, focused problems, (2) appropriately model the problem, (3) identify, lay out, and test assumptions, (4) analyze and evaluate data, (5) establish economic and statistical significance, (6) draw inferences/draw conclusions, and (7) communicate results in a clear and informative fashion with the appropriate use of data visualization.

Assurance of learning will be measured with respect to objectives associated with each of the program's five goals. Assessments will be conducted by the instructors in the program. The work products used in the assessment include problem sets, exams, presentations, and projects. Assessments levels are Good (1 point), Very Good (2 points), and Exemplary (3 points). The mean score for each objective is expected to be 2 (Very Good) or higher. The specific courses and specific assessment tools are specified below.

AoL from the 2024-2025 Cohort

Goal 1: A Student Will Acquire the Ability to Use Applied Micro- and Macroeconomics Analysis					
		Good	Very Good	Exemplary	Measures
	Score	1	2	3	
Objective: Explain the implications of economic models	2.5		50%	50%	ECON 52603, Applied Microeconomics: Presentation, data project, and three exams

Goal 2: A Student Will Develop Strong Data Skills					
		Good	Very Good	Exemplary	Measures
	Score	1	2	3	
Objective: Analytical thinking and problem solving. Apply analytical and econometric tools to solve real world problems	2.7		30%	70%	ECON 57403, Introduction to Econometrics: Empirical Exercise
Objective: Identify, obtain, clean, explore, and analyze data to answer a research question	2.6		40%	60%	ECON 57803, Applied Microeconometrics: Project Assignment Grade

Goal 3: A Student Will Develop Advanced Data Analytics Skills					
		Good	Very Good	Exemplary	Measures
	Score	1	2	3	
Objective: Implement analytic techniques using software/programming languages	2.8		20%	80%	ECON 58203, Economic Analytics II: Project Assignment Grade

Goal 4: A Student Will Be Able to Inform Managerial Decision Making					
		Good	Very Good	Exemplary	Measures
	Score	1	2	3	
Objective: Use forecasting to advise managers on decisions	2.7		30%	70%	ECON 57503, Forecasting: Mid-term Exam and Project I

Goal 5: A Student Will Acquire Strong Professional Written and Oral Communications					
		Good	Very Good	Exemplary	Measures
	Score	1	2	3	
Objective1: Prepare written report of empirical findings and implications of analysis	2.5		50%	50%	ECON 58303, Written and Oral Communications: Final report
Objective 2: Effectively present empirical findings and implications of analysis	2.5		50%	50%	ECON 58303, Written and Oral Communications: Final presentation

Indirect Measures of Learning

As indirect measures of learning, we collected measures of graduation rates and graduation surveys.

Graduation rates. Graduation rates for our first four-year cohorts are 100% (2020/21), 100% (2021/22), 83.3% (2022/23), 100% (2023/24). We have a 100% graduation rate in the 2024/25 cohort.

Graduation surveys. We conducted two sets of graduation surveys from students.

Feedback. First, we ask students for feedback about the courses at the end of the year. We focus on understanding courses that students believed: (a) provide them with valuable skills to become an economic/data analyst; (b) not very effective or redundant; (c) other feedback on challenges they faced and aspects that they thought could be improved.

We used the survey feedback to enhance the courses offered in the program. Based on input from a previous cohort, we introduced two new courses for the 2024-2025 academic year. First, we consolidated the Special Topics course into **ECON 58303 - Data Exploration and Communication**. Second, we added **ECON 58302 – Economic Policy and Data Analysis.** According to the survey of the most recent students, both courses received positive feedback. We are also currently considering changing the sequence of two existing courses: **ECON 57503 – Forecasting** and **ECON 57803 – Applied Microeconometrics**.

Initial Placements. The second set of data tracks students' initial job placements. The survey results shows that students have been successful in the job market. From 2020-2024, graduates were placed in positions such as an econometrician, financial analyst, price analyst, or data analyst in places such as JB Hunt, Tyson Foods, Blue Cross and Blue Shields, Nielsen, as well as a government policy institution (Federal Reserve Bank, St. Louis). The average gross salary of our graduates, including the class of 2024, was $83K. Among the most recent graduates in May 2025, two have already accepted the job offers- from Tyson Foods and CapSpire.