The University of Akron

MASTER OF ARTS, ECONOMICS

SAS CERTIFICATE, ECONOMIC DATA ANALYTICS

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APPLIED ECONOMICS & DATA SCIENCE

Data Acquisition
Data Management
Data Analysis
Data Reporting

Businesses have more data than ever at their disposal. But actually deriving meaningful insights from that data – and converting knowledge into action – requires a skilled data analyst. Build your skills in a career-focused graduate program in applied economics and data science. Our state-of-the-art graduate program is designed with input from leading employers and leverages the strengths of economics in data acquisition, management, analysis, and reporting.

You will learn to apply economic theory, causal inference and predictive modeling using sophisticated statistical and mathematical applications of SAS, Excel, R, Tableau, and more to make strategic data-driven recommendations. You will graduate with hands-on experience conducting original research. With economic and business acumen, you will be able to effectively communicate analyses and influence decision makers and business outcomes.

Our flexible program can be completed in just 1 year (or 2 years for part-time students), on campus or from your desktop. You will earn a SAS Certificate in Economic Data Analytics with just four courses. Six more classes and you will hold the M.A. specializing in Applied Economics and Data Science. Recent graduates have found employment at companies such as KeyBank, PNC, FirstEnergy, Timken, The Federal Reserve Bank of Cleveland, First Merit, and Goodyear.

The University of Akron
College of Business Administration
Department of Economics

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Department of Economics

College of Business Administration

MA in Economics

(Proposed program name change, pending approval: Masters in Applied Economics and Data Science)

Three pillars support our proposed **Masters in Applied Economics and Data Science** degree:

Pillars of Data Science

- Data acquisition
- Data management
- Data analysis
- Data visualization and reporting

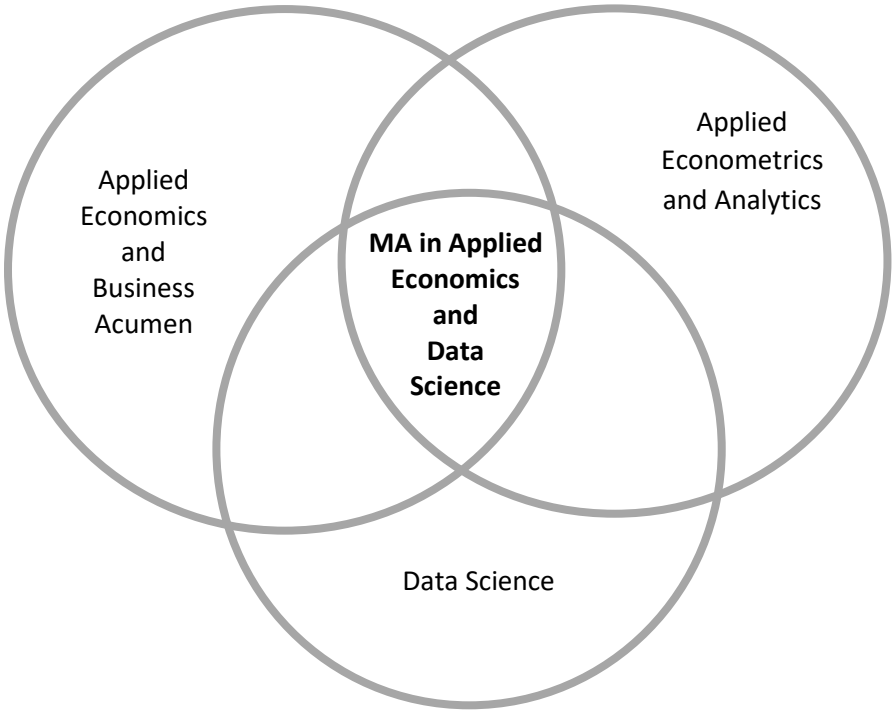
Pillars of Applied Econometrics

- Articulating the problem at hand as a clear, testable hypothesis
- Applying the pillars of data science to the problem being studied which includes data cleaning
- Choosing among different model specifications and evaluating the empirical results

Pillars of Applied Economics and Business Acumen

- Problem solving
- Critically thinking like an economist which requires you to apply sound economic reasoning to solve the problem at hand given all information
- Interpreting the results and communicating the underlying economic story clearly and succinctly
- Understanding history so as to predict the future

Each of the above pillars support the proposed **MA in Applied Economics and Data Science** degree, which builds on and uses classical statistical and mathematical techniques, economic thought, and economic theory at both the microeconomic and macroeconomic levels.



Masters of Arts, Economics
(Applied Economics and Data Science)
30 credits
Curriculum

Core Courses

Economic Analysis for Decision Making
(Economics 610 - Framework of Economic Analysis)
Development of theoretical and analytical framework for decision-making. Discussion of applications of the framework to situations concerning demand, cost, supply, production, price, employment and wage.

Math for Economics Data Analytics
(Economics 620 – Application of Math Models in Economics)
Provides a foundation in math tools necessary for economics coursework at the master's level and for applying data analytic tools and techniques.

Economic Data Analytics
(Economics 626 – Applied Econometrics, I)
Addresses problem articulation, data generation processes, data cleaning, model specification, model choice and hypothesis testing. Provides foundation in managing and analyzing data using Excel, SAS and SQL.

Causal Inference for Business Decisions
(Economics 626 – Applied Econometrics, II)
Covers tools and models for causal inference between economic variables. Reinforces and builds on software skills learned in Applied Econometrics employing a variety of structured data sets.

Economic Forecasting
(Economics 627 – Economic Forecasting)
This course focuses on statistical techniques to predict movements in the economy, in either a specific sector or the economy as a whole. Overview of open source software (R) and its use in forecasting economic variables.

Managerial Economics
(Economics 611- Microeconomics)
This course applies microeconomic theory and methodology to decision-making problems faced by managers in both public and private institutions. Spreadsheet modelling and optimization techniques are applied to real-world data.

International Monetary Macroeconomics
(Economics 602 – Macroeconomics)
An analysis of foreign exchange markets and the study of the macro-economy in a global framework with alternative exchange rate systems. Excel/Tableau and SAS programming used in a required comprehensive research paper.

Master of Arts, Economics
(Applied Economics and Data Science)
Fall 2018 Part-time Cohort
Schedule of classes[1]

Fall 2018[2]
Economics 610 – Framework of Economic Analysis
Economics 626 – Applied Econometrics I
(Economic Data Analytics)

Spring 2019[2]
Economics 627 – Applied Econometrics II
(Causal Inference for Business Decisions)
Economics Elective

Completion of these courses earns SAS Certificate

Summer 2019
Economics 695 – Graduate Internship[3]
Economics Elective
OR
Economics Elective
Elective offered by another department in the College of Business Administration

Fall 2019
Economics 620 – Application of Math Models in Economics
(Math for Economic Data Analytics)
Economics 602 – Macroeconomics
(International Monetary Economics)

Spring 2020
Economics 611 – Microeconomics (Managerial Economics)
Economics 627 – Economic Forecasting

Notes:

1. All coursework offered on a two night per week schedule.
2. First year synchronous instruction from your desktop may be possible.
3. Graduate internship is program option, not a program requirement.

Master of Arts, Economics
(Applied Economics and Data Science)
Program Costs – Tuition and Fees*

(effective Fall 2016)

	Ohio Resident	Non-Resident
One Course (3 credit hours)	$1,489	$2,407
Four Courses (SAS Certificate)	$5,957	$9,628
MA Program (30 credit hours)	$14,890	$24,070

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* Rates subject to change by University of Akron Board of Trustees