

**Faculty of Arts  
Department of Economics**

**Economics Courses in 2024-2025  
Course Selection**

**Dr. Lucia Vojtassak**  
Associate Professor (Teaching)  
Undergraduate Program Director

March 2024

# Course Selection: Build Your “Portfolio”

- Professional economist after graduation
- Recent job postings have highlighted the following qualifications:
  - Demonstrated experience applying concepts from economic theory and literature, principles, and techniques in field(s) of economics.
  - Demonstrated ability to define relevant questions, establish hypotheses (answers), analyze complex data to test hypotheses, measure relevant magnitudes, evaluate results, and draw conclusions.
  - Demonstrated experience with statistical software. Experience with SQL, R, or Linux is an asset.
  - Strong written and oral communications skills, including the ability to effectively present information to colleagues, management, industry professionals, and public groups, including writing reports and making presentations.
  - Ability to work effectively on teams and under inflexible time constraints.

# Agenda

- Learning objectives for an economics major
  - **Dr. Lucia Vojtassak**, Undergraduate Program Director
- Opportunity Streams
  - **Professor Church** – Summer Internship in Regulatory Economics (SIRE) program
- Course Selection in
  - Data Science
  - Economics of Accounting and Finance
  - APEE
  - Macroeconomics
- Links to resources guidance and advice

# Economics at a Glance

- BA major in Economics
  - 14 to 20 courses in economics (ECON)
- Minor in Economics
  - 10 to 12 courses in economics (ECON)
- Required courses in economics for the major
  - ECON 201, 203, 301, 303, 357, 359 and 395 (7 courses)
  - Four ECON courses at 400+ level
  - At least three ECON at the 300 level (or above)
- Other requirements
  - MATH 249, STAT 213 and 217



# Major: Course Sequencing

## First Year

- **ECON 201 and 203**
- **STAT 213 and 217**
- **MATH 249 or 265**
- **MATH 211 (optional)**

## Second Year

- **ECON 301, 303, 357, and 359**
- **ECON 395**
- **MATH 211 (optional)**
- **ECON options**  
For example: ECON 311 (Excel), ECON 321 (Trade), ECON 355 (Public Finance), ...



# Major: Course Sequencing

## Third Year - ECON Options

### Contextual courses

ECON 339 (Canadian Economic History), 349 (Social Problems), 379 (Health), 479 (Experimental), 481 (Behavioural), 483 (History of Thought), 485 (Welfare State)

### Skills-based courses

- ECON 491 (Managerial Economics)
- ECON 495 (Econometrics)
- ECON 457 (Accounting and Finance)
- ECON 411 (Python)

## Fourth Year - Upper-Level Courses

- 400- and 500-level courses (apply the theories you'll learn in ECON 357 and ECON 359)



# Honours Degree: Additional Requirements

B.A. honours in economics: 20 to 24 courses in ECON

## Math and Statistics

MATH 211

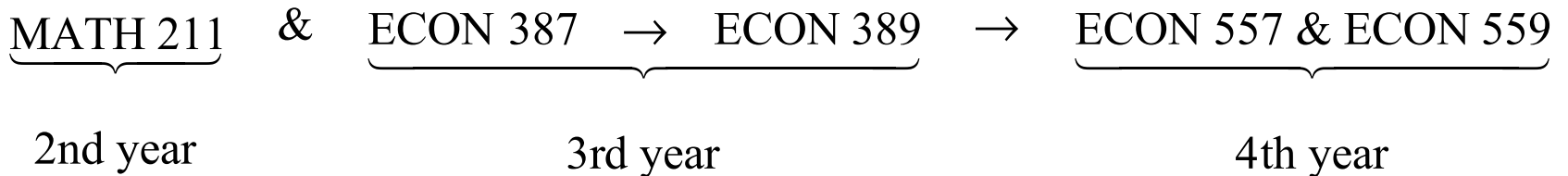
ECON 387 and 389 (Math Econ)

ECON 495 and 497 (Econometrics)

## Theory

ECON 557 and 559

## Sequencing



Recommended for graduate school

- MATH 271, 277, 335

# Course Selection: Build Your “Portfolio”

- Professional economist after graduation
- Recent job postings have highlighted the following qualifications:
  - Demonstrated experience applying concepts from economic theory and literature, principles, and techniques in field(s) of economics.
  - Demonstrated ability to define relevant questions, establish hypotheses (answers), analyze complex data to test hypotheses, measure relevant magnitudes, evaluate results, and draw conclusions.
  - Demonstrated experience with statistical software. Experience with SQL, R, or Linux is an asset.
  - Strong written and oral communications skills, including the ability to effectively present information to colleagues, management, industry professionals, and public groups, including writing reports and making presentations.
  - Ability to work effectively on teams and under inflexible time constraints.



# Professional Skills

- Use of Excel in economic analysis [ECON 311]
  - Additional online section will be offered in Fall 2024, TR 17:00
- Greater facility and familiarity with quantitative reasoning, modelling, and mathematical tools [ECON 387]
  - Tutorial moved to W 16:00 in Fall 2024
- Data analysis and programming/coding [ECON 411]
- Familiarity with the tools and language of business, in particular, accounting and finance [ECON 457]
- Greater facility and familiarity with statistics and econometrics [ECON 495]
  - Lab moved to M 16:00 in Fall 2024

# Field Expertise

- Knowledge base
  - Multiple courses in the same field, for example
    - Industrial Organization (ECON 471, 477, and 571)
    - Data Science (ECON 411, 588, 599.97)
    - Energy Economics (ECON 427, 493, 429)
- Expertise in performing and communicating economic analysis
  - Research requirements/Capstone Experience
    - Applied analysis, real-world problem solving, directed research
    - Papers in capstone courses

# Building a “portfolio”

- Professional Skills
- Field Expertise & Expertise in Economic Analysis
  - **Professor Church** – Summer Internship in Regulatory Economics (SIRE) program
- Course Selection in
  - Data Science
  - Economics of Accounting and Finance
  - APEE
  - Macroeconomics

# Options to Build a “portfolio”

- **Pathways to differentiation**
  - **Data Science Specialization**
    - Data Driven Economist
    - ECON 311, 395, 411, 495, 588, 599.97 (Machine Learning)
    - ECON 411: Economic application and utilization of computational methods, programming, and data management. Introduction and use of programming in economic analysis, examples include VBA, R, Python, Mathematica, and MATLAB.
    - ECON 588: Digital economics research project. Students will use economic reasoning and apply econometric approaches to data to conceptualize and develop a data-based tool that provides value to an organization.
    - ECON 588 involves matching teams of students with sponsors to develop insight into a question of interest using economics and data science.



# Options to Build a “portfolio”

- Pathways to differentiation

ECON 457

## The Economics of Business Fundamentals

Goal is to familiarize students with basics of accounting and finance, but also on using the student’s microeconomic background to assess and critique common business practice.

Includes a case study that mimics a real-world situation/problem that can be solved using the skills learned in ECON 457





# Options to Build a “portfolio”

- Pathways to differentiation

ECON 443

## The Economics of Financial Markets

Basic functions and structure of financial markets. Economic analysis of trading strategies in financial markets and determinants of equilibrium prices. Institutional features, and analysis, of bond, stock, options, forward and futures markets.

Uses the Rotman Trading platform to learn how to trade. A project that requires trading is also a part of the course. Students who complete the course will have an added advantage if competing in the RITC (Rotman Interactive Trading Challenge)





# Options to Build a “portfolio”

- **Pathways to differentiation**
  - **Concentration in Applied Energy Economics (APEE)**
    - Provides students with understanding of the operation of North American and world energy markets, including development of analytical and problem-solving skills.
    - Students gain real-world skills and knowledge that will make them stand out in energy-orientated job interviews
    - Key courses Physics 371, ECON 427 and 493
      - Microeconomic analysis of the allocation of energy resources with a focus on policy issues including the environment, OPEC, national security, price and entry regulation, market design, and the potential for new energy sources.
      - Students will study and learn how to apply methods of data analysis that are particularly useful in the context of energy economics.
      - Physics 371: Energy and power. Sources of energy such as wind power, solar power, nuclear power, geothermal energy and fossil fuels and related limitations. Generation and distribution of electricity.
    - Additional 18 units from supporting 300, 400, and 500-level courses

# Options to Build a “portfolio”

- **Pathways to differentiation**

- **Macroeconomics**

- ECON 599.59: Students learn to apply the theoretical models from ECON 303 and 359 to think about real macroeconomic problems (less theory, more hands-on work). The course will involve a lot of reading, writing and class discussion. It will also involve basic research tasks like collection, organization, presentation, and analysis of data, and searching for relevant sources of information.
- Bank of Canada Governor’s Challenge
  - The BCGC has two rounds in which a Department team competes: the first round is in November, with selected teams advancing to a second round in February in Ottawa at the Bank of Canada.
- Key courses ECON 303, 341, 359, and 541.



# Learn About and Use Resources that are Available

arts.ucalgary.ca/economics

→ Current Students

→ Students Advising



<https://arts.ucalgary.ca/economics/current-students/undergraduate/student-advising>



# More about Available Resources

- ASC (Arts Student Centre) - Undergraduate Program Advisors
  - Economics specialist Ms. Rachel Blake
  - artsads@ucalgary.ca
  - Program advising questions, e.g., Prerequisite waivers, Course overloads, Transfer credit assessments, Program requirements
  - <https://arts.ucalgary.ca/current-students/undergraduate/academic-advising>
- Degree requirements [University of Calgary Calendar]
  - <https://arts.ucalgary.ca/economics/current-students/undergraduate/economics-program-requirements>



# More about Available Resources

- Enrolment Start Time
  - <https://www.ucalgary.ca/registrar/registration/enrolment-start-time>
  
- Academic Program Specialist Mr. Raj Lakhan
  - ECON updates in your email every two weeks!
  - [neeraj.lakhan1@ucalgary.ca](mailto:neeraj.lakhan1@ucalgary.ca)
  
- Undergraduate Program Director Dr. Lucia Vojtassak
  - [lucia.vojtassak@ucalgary.ca](mailto:lucia.vojtassak@ucalgary.ca)



# Learn About and Use Resources that are Available

- Go to class!
  - Tutorials and PASS (ECON 201, 203, 301, 357, and 395)
- Keep up with material through the term
  - Practice, practice, practice
  - Learn from mistakes so DEMAND solutions
- Form communities of practice
  - Discuss course material
  - The Economist
- Use office hours of the TA and the Professor

# Danger, Watch Out

- Be aware of ECON 201 and 203
  - Large classes
  - Multiple choice assignments and exams
  - Promotes passive memorization, not learning
  - Not representative of higher-level courses - Econ 301 and 357
  - Resist temptation, develop good learning habits in first year
- Prerequisites are not waived
  - Developing expertise, prerequisites are the foundation
  - Avoid “I just have to pass”. Not true, C- in ECON 357 not likely going to do well in 400 level courses.
- Almost never is a third attempt granted for ECON 301 and 357
  - Without passing grade in ECON 301 cannot get into 357, without passing grade in ECON 357 cannot take any 400 level courses.