

ECONOMICS AT THE UNIVERSITY OF WESTERN ONTARIO

A unique opportunity to enter a field you never considered before!!



<http://economics.uwo.ca/graduate/>

What is the program?

- Immediate admission to M.A. and Ph.D. economics program for students with strong quantitative backgrounds but no previous course work in economics.
- Obtain M.A. after 8 months with the option of continuing for Ph.D.
- Primary background of current first year students: 1 math; 1 commerce; 1 computer science; 10 economics.

Why economics?

- Economists employ various methods to study a wide range of topics.
- These topics include, but are not limited to, education, crime, labour markets, the environment, finance, health, terrorism, international development and international trade.
- Apply your quantitative skills to all kinds of interesting problems.

Why physics students?

- The common thread in these problems is a strong reliance on problem solving and math.
- Studying economic systems similar to studying physical systems.
- Physics students develop a strong problem-solving intuition and mathematical prowess.

Why might you be interested in economics?

- Like physics, economics is concerned with understanding reality through the use of mathematical models.
- Contrary to popular belief, economics is not just the study of money and interest rates. Economics is the study of human choice; the only social science which resembles physics in its use of mathematical rigour.
- Strong academic environment as in physics, but also employability in the public & private sectors.
- Tenure-track professor positions are common directly out of the Ph.D. without any post-doctoral terms.
- Social Sciences and Humanities Research Council (SSHRC) and Ontario Graduate Scholarships (OGS) available.

Economics Courses

- Courses are taken in:
 - Microeconomics – Economics at the level of the individual agent.
 - Macroeconomics – Aggregated behaviour over many agents.
 - Econometrics – Probability and statistics applied to economics.
 - Math – General treatment of static and dynamic optimization theory, math for other courses.
- Microeconomics is analogous to statistical mechanics, while macroeconomics is like thermodynamics. Taking aggregates over many individual agents in microeconomics gives us macroeconomic systems with emergent economic concepts, just as aggregating over collections of particles in statistical mechanics gives us emergent thermodynamic concepts such as temperature and pressure.
- All economists have training in these four main areas. This facilitates interactions between researchers in different fields.

The Economics Graduate Degree

- A three-week refresher course is held before classes begin. This ungraded course brings the non-economics undergraduates up to date in economics, and economics undergraduates up to date in mathematics.
- Entrance exams are written in the summer for students deciding to continue to the Ph.D. program.
- The Ph.D. is completed over an additional 3-4 years (the M.A. year counts as the first Ph.D. year). The Ph.D. is similar to a Physics Ph.D. in that it is a combination of coursework and a thesis.

Why Choose Western?

- Unique program which recruits a mix of non-traditional (physics, mathematics, engineering and computer science) and traditional economics graduates. **No previous courses in economics are required.**
- Recent rankings place the Department No. 3 in Canada for research.
- You do not need to commit to a Ph.D. Come and try the first 8 months. If you decide to leave after that, you can leave with an M.A. in economics and get a job, or return to physics. If you like it, write the entrance exams and stay for the Ph.D.! In the last 2 years,

70% of the first year students decided to continue at Western for the Ph.D, including the non-traditional students.

- Traditional and non-traditional students are treated identically and take the same classes.
- In past years students from physics, math, engineering and computer science backgrounds have performed extremely well, typically in the top tier of their class.
- Small class size: 15-20 people in the first year.
- Only program in Canada which has refresher courses in microeconomics, macroeconomics, econometrics and math to bring students up to date before classes begin. During the orientation there are also Departmental events including weekly visits to the Grad Pub and a first-year book discussion.
- Strong funding: Talented students are offered \$16,848 in fellowships and assistantships, plus tuition and fees. Additional external scholarships are also awarded.

What Can You Do With an Economics Degree?

- In the final year, the faculty will assist you with job market placement.
- Work in academics (Economics and Business Schools), public (OECD, IMF, Bank of Canada, Federal Reserve Banks), or the private sector.
- Wide range of good jobs available for people with economics training.
- Western is focused on producing strong candidates for academic positions. Western grads usually move directly into tenure-track professorships out of the Ph.D. without any post-doc terms.
- Assistant professor starting salary at top research institutions is \$100,000.
- All 2012-2022 Western grads received immediate job placements:

Georgia State University
University of Pennsylvania
University of Colorado, Denver
Indiana University at Bloomington
Vanderbilt University
Kansas State University
Central Michigan University
Florida State University
Atlantic Baptist University, Moncton, NB

University of Nebraska - Lincoln

HEC Montreal (U. Montreal Business School)
Simon Fraser University
University of Winnipeg
Carleton University
University of Guelph

University of Waterloo
Bank of Japan
Statistics Canada, Ottawa
LECG, Toronto
Gifford Fong Associates, Lafayette, CA
Department of Finance, Ottawa

Dalhousie University
University of Prince Edward Island
Brock University
Ryerson University
Lakehead University
Wilfrid Laurier University
UWO - BMOS
University of Toronto
University of Singapore Risk Management Institute
Hong Kong University of Sci & Tech
University of Waikato, New Zealand
University of Victoria, Wellington, NZ
Shanghai University of Fin. & Ec.
Zhejiang University

SRDC
Moody's
Deloitte
Bank of Canada
Bank of Montreal
Industry Canada

Sample Faculty Studying a Wide Variety of Topics in Economics

Lance Lochner's research focuses on human capital and skill development over the life-cycle and on criminal behavior. He is currently interested in issues related to borrowing opportunities and access to higher education. In related research, Lance analyzes the role of family income and borrowing opportunities in affecting earlier family investments in young children and the academic achievement of children at earlier ages. In other recent research, he has explored the relationship between education and crime and whether criminals update their beliefs about the probability they will be arrested if they engage in different types of crime as well as the extent to which those beliefs directly affect criminal behavior. His research has been published in such journals as the American Economic Review, International Economic Review, and the Review of Economic Dynamics.

Stephen Williamson is the Stephen A. Jarislowsky Chair in Central Banking, and holder of a Bank of Canada Fellowship. He specializes in macroeconomics and monetary economics, and his past research has covered topics in monetary theory and policy, unconventional monetary policy, and banking. Stephen is currently conducting research on digital currencies and the implications for monetary policy and economic welfare. He has held positions at the Bank of Canada, the Federal Reserve Bank of Minneapolis, the Federal Reserve Bank of St. Louis, Queen's University, the University of Iowa, and Washington University in St. Louis. Stephen has a strong record of publication in economics journals, including the American Economic Review, the Journal of Political Economy, the Quarterly Journal of Economics, the Review of Economic Studies, the Journal of Monetary Economics, and American Economic Journal: Macroeconomics. Stephen is also the author of "Macroeconomics," an intermediate undergraduate textbook, now in its sixth edition in the United States, and its fifth edition in Canada.

Ananth Ramanarayanan's research is in international economics. In recent work, he studies the effects of immigration on international trade volumes using Canadian micro-level data linking workers, firms, and exports. In other research, he has analyzed how firms' importing decisions affect the gains from trade. He has also worked on understanding the maturity structure of sovereign debt in the presence of commitment problems and on the relationship between asset market participation and international risk sharing. Ananth's research has been supported by the Social Sciences and Humanities Research Council (SSHRC), and his work has been published in the Journal of Political Economy, the Journal of International Economics, and the Scandinavian Journal of Economics.

Victor H. Aguiar's research is on decision-making theory and measurement. Much of it is focused on understanding if the rational decision-making paradigm is a good description of actual human behavior. To answer this question his research develops new theoretical, statistical and computational tools that allow us to test rationality in the field and in the lab. A second part of his research agenda is developing new models of decision-making that are able to explain choice data anomalies and stylized

facts. This line of research focuses on the role of inattention on the quality of decision-making and its consequences for welfare. Aguiar's work has been published in such outlets such as the Journal of Economic Theory and Games and Economics Behavior.

Books to Read

General Interest:

Diane Coyle. *The Soulful Science: What Economists Really Do and Why it Matters*. Princeton: Princeton University Press, 2007.

William Easterly. *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*. Cambridge: The MIT Press, 2002.

Steven E. Landsburg. *The Armchair Economist: Economics & Everyday Life*. New York: The Free Press, 1993

Sample Economics Textbooks:

Undergraduate Micro: David Besanko and Ronald R. Braeutigam, *Microeconomics*, 2/e. Hoboken, NJ: John Wiley & Sons Inc., 2005

Undergraduate Macro: Stephen D. Williamson, *Macroeconomics*, 2nd ed. Canadian Edition. Toronto: Pearson Addison Wesley, 2007.

Graduate Micro: A. Mas-Colell, M.D. Whinston and J.R. Green, *Microeconomic Theory*, Oxford University Press, 1995.

Graduate Macro: Nancy Stokey and Robert Lucas Jr. (With Edward C. Prescott), *Recursive Methods in Economic Dynamics*, 1989.

Testimonials from Students with Non-Economic Backgrounds:

I'm currently a third-year Ph.D. student in the Economics program and I feel at home. It is a very rigorous program, and to be honest, very challenging in the first year. The second year comes with a wide variety of courses offered, including not only the core areas of macro, micro and metrics, but also some exceptional field courses. The passion professors display in every session is inspiring.

Our cohort became close friends early in the first year, and we continue to support each other in the ups and downs on this uphill journey. As for the faculty, they are always available to talk with students about potential research ideas. In my experience, they were willing to help every time I knocked their doors, giving me a piece of advice and a word of encouragement.

Economics is a versatile field which essentially studies human behavior and how it reacts to incentives. Previous experience in Economics is not required. This program has received students from diverse backgrounds and is designed to smooth your transition to this new field. So far it has been an enriching experience for me, and I would strongly recommend you consider this extraordinary program.

Cecilia Diaz Campo, B.A. in Business & M.Sc. in Statistics, Univ. Nac. de Tucuman, Argentina

Switching from Mathematics to Economics was a difficult decision for me. I was always clear on wanting to do something that directly impacted people's lives, hence economics. The issue was, I didn't want to leave behind mathematics. I love mathematics because studying it for me is a lively and thrilling activity which is sufficiently challenging and very rewarding. Much to my delight, I didn't have to. With Economics I get to use mathematical tools ranging from calculus to topology, and the punch line is, you get to see your work impact lives and inform policy decisions that might one day affect your own life.

I was very thrilled to discover the rigour of the economics program at Western. Because I had a weak foundation in Economics, I was very delighted to find out that my extensive training in mathematics was directly applicable here. The content of the lectures in the PhD program do not shy away from the fundamental pure and applied mathematics foundations based on which economic theories are built, and it is very refreshing to know that we have excellent professors who are exceedingly capable of teaching us these concepts.

Now, looking back, I am glad I decided to make the switch to Economics and especially so because I chose to do it here at Western. I get to study things that informs policies with the tools in mathematics that I continue to acquire in this program. This program is also challenging and even more rewarding to me.

Rowena Cornelius, B.A. in Mathematics, University of Ghana and M.Sc. in Mathematics, African Institute for Mathematical Sciences

Starting my undergraduate degree in an honours chemistry program, I found myself searching for a different route that would allow me to apply math to the world outside of the natural sciences. Accordingly, I switched to a joint honours program in mathematics and chemistry. In the course of deciding whether to study applied math at a graduate level, I spoke with a two math/physics graduates who then studied in the Western Economics program and spoke highly of the mathematical focus of the graduate courses. My undergraduate thesis work, in applied math, focused on modeling the collective behavior of people, so I decided economics was the right next step for me.

Before starting the program at Western, I had managed to complete a handful of courses in each of micro, macro, and econometrics. Despite my initial concern that I had not studied enough economics, the courses in the Western Economics program were both accessible and comprehensive. Furthermore, I appreciated that the majority of courses were examined through a rigid mathematical lens. The diverse academic backgrounds of students meant that sharing of ideas and harnessing individuals' comparative advantages was not only necessary but also extremely beneficial when learning the material.

The class of students in the Western Economics graduate program was both small yet very diverse. My classmates cultivated an incredible sharing of ideas, culture, and support throughout the first year program. Moreover, the faculty encouraged collaboration at all levels and provided considerable support and advice. The Western MA Economics program was highly challenging, but it provided me with a versatile immersion into the field of economics and a sincere appreciation and connection with my classmates.

Michael Thomson, B.Sc. Joint Honours in Mathematics and Chemistry, St. Francis Xavier University

Contact Information:

We are currently accepting students for the Fall 2023 term. If you have any interest in this program, please contact us immediately. We are very happy to help you determine whether our program might be a good match for you.

Graduate Director/Professor: Nirav Mehta, nirav.mehta@uwo.ca

Graduate Program Coordinator: Sandra Augustine, econ-gradcoordinator@uwo.ca