



ECON 6600 Labour Economics
 Winter 2025
 0.5 Credits

General Course Information

Instructor:	Miana Plesca
<i>Email</i>	miplesca@uoguelph.ca
<i>Office Location</i>	MCKN 742
<i>Office Hours</i>	Remote (Teams/Zoom) by appointment
<i>Department/School</i>	Economics and Finance
Class Schedule:	M, W 2:30 PM - 3:50 PM ROZ 107
Pre-requisites:	
Restrictions:	

Course Description

This course examines the economics of labour markets, focusing on theoretical models, empirical research, and policy implications. We will explore topics such as labour supply and demand, wage determination, income inequality, technological change, discrimination, and the impact of labour market policies. Emphasis will be placed on recent research papers and advanced econometric techniques used in labour economics.

Course Learning Outcomes

Upon successfully completing this course, you will be able to:

Knowledge and Understanding:

1. Analyze key theoretical models in labour economics.

Discipline/Professional and Transferable Skills:

2. Interpret empirical findings from recent research.
3. Use econometric tools to evaluate labour market data.

Attitudes and Values

4. Critically assess the impact of policies on labour market outcomes and society.

Summary of Course Content and Materials

Course Outline

Weeks 1-3: Labour supply and Labour demand

1: Introduction to Labour Economics

- Overview of labour markets and key concepts.
- Historical trends in labour economics research.
- **Key Paper: Heckman, J. J. (2000).** *Policies to Foster Human Capital. NBER Working Paper No. 7288.*

2: Labour Supply

- Neoclassical model of labour supply.
- Household decisions and lifecycle models.
- Empirical applications: Elasticity of labour supply.

Key Paper: Chetty, R., Guren, A., Manoli, D., & Weber, A. (2013). *Does Indivisible Labor Explain the Difference between Micro and Macro Elasticities? A Meta-Analysis of Extensive Margin Elasticities. NBER Macroeconomics Annual, 27(1), 1-56.*

DOI: 10.1086/669171

Chapter 1 in grad textbook Cahuc and Zylberberg (2014).

3: Labour Demand

- Theory of labour demand.
- Substitution and scale effects.
- Minimum wages and employment.

Key Paper: Card, D., & Krueger, A. B. (2000). Minimum wages and employment: a case study of the fast-food industry in New Jersey and Pennsylvania: reply. *American Economic Review, 90(5), 1397-1420.*

Lemieux, T. (2017). Book Review: On Myth and Measurement. *ILR Review, 70(3), 823-826.*
<https://doi.org/10.1177/0019793917696309c>

4: Dynamic Equilibrium Unemployment

- **Key Topics:**

- Theories of equilibrium unemployment.
- The Mortensen-Pissarides matching model:
 - Job creation and destruction.
 - Matching function and search frictions.
 - Beveridge Curve dynamics.
- Implications of labour market policies (e.g., unemployment insurance, minimum wages).
- Extensions: Business cycle fluctuations, on-the-job search.
- **Applications:**
 - Understanding unemployment persistence.
 - Policy evaluation: How unemployment benefits affect job search intensity and market dynamics.
- **Key Papers:**

Mortensen, D. T., & Pissarides, C. A. (1994). *Job Creation and Job Destruction in the Theory of Unemployment*. *Review of Economic Studies*, 61(3), 397–415.
DOI: 10.2307/2297896

Hall, R. E. (2005). *Employment Fluctuations with Equilibrium Wage Stickiness*. *American Economic Review*, 95(1), 50–65.
DOI: 10.1257/0002828053828476

Chapter 1 in Pissarides (2000).

Weeks 4-6: Human capital, Wage structures and decomposition

5: Wage Determination and Human Capital

- Becker's human capital theory.
- Education, skills, and wage inequality.
- Returns to education in developed and developing countries.

Key Paper: Goldin, C., & Katz, L. F. (2008). *The Race Between Education and Technology*. Harvard University Press. [ISBN: 978-0674035300](https://doi.org/10.2307/2297896) Also NBER WP 12984 <https://www.nber.org/papers/w12984>

6: Labour Market Discrimination

- Theories of discrimination: Taste-based and statistical.

- Measuring discrimination: Audit studies and decomposition methods.
- Extending Oaxaca-Blinder decomposition to quantiles and inequality measures.
- Empirical evidence on gender and racial wage gaps.

Key Paper: Bertrand, M., & Mullainathan, S. (2004). *Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination.* *American Economic Review*, 94(4), 991-1013.

DOI: 10.1257/0002828042002561

Key Paper: Firpo, S. P., Fortin, N. M., & Lemieux, T. (2009). *Unconditional Quantile Regressions.* *Econometrica*, 77(3), 953–973.

DOI: 10.3982/ECTA6822

Weeks 7-8

7: Experimental and Quasi-Experimental Methods

- Randomized control trials (RCTs) in labour economics.
- Basic Difference-in-differences (DiD) and instrumental variables (IV).
- Applications to labour market research.

Key Paper: Duflo, E., & Saez, E. (2003). *The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment.* *Quarterly Journal of Economics*, 118(3), 815–842.

DOI: 10.1162/00335530360698432

8: Event studies and Dynamic DID:

- Estimating treatment effects over time.
- Event-study framework to assess pre-treatment trends and treatment dynamics.

Key Papers

Callaway, B., & Sant’Anna, P. H. C. (2021). *Difference-in-Differences with Multiple Time Periods.* *Journal of Econometrics*, 225(2), 200–230.

[DOI: 10.1016/j.jeconom.2021.03.007](https://doi.org/10.1016/j.jeconom.2021.03.007)

Sant’Anna, P. H. C., & Zhao, J. (2020). *Doubly Robust Difference-in-Differences Estimators.* *Journal of Econometrics*, 219(1), 101–122.

[DOI: 10.1016/j.jeconom.2020.06.003](https://doi.org/10.1016/j.jeconom.2020.06.003)

Weeks 9-11: Machine learning

9: Machine Learning Applications in Labour Economics

- Overview of machine learning techniques:
 - Regression trees, random forests, gradient boosting.
 - Neural networks and deep learning.
- Applications to predicting wages, job matching, and worker productivity.
- Policy analysis using ML methods.

Key Paper: Mullainathan, S., & Spiess, J. (2017). *Machine Learning: An Applied Econometric Approach*. *Journal of Economic Perspectives*, 31(2), 87–106.
DOI: 10.1257/jep.31.2.87

10: Natural Language Processing (NLP) in Labour Economics

- Text analysis of job descriptions, resumes, and labour market trends.
- Sentiment analysis and economic uncertainty in labour markets.
- Skills extraction and job-matching algorithms.

Key Paper: Deming, D. J., & Kahn, L. B. (2018). *Skill Requirements Across Firms and Labor Markets: Evidence from Job Postings for Engineers*. *Journal of Labor Economics*, 36(S1), S337–S369.
DOI: 10.1086/694106

11: AI, Automation, and Future of Work

- Impact of automation on employment and wages.
- AI and the future of work.
- Policy responses to technological unemployment.

Key Paper: Acemoglu, D., & Restrepo, P. (2018). *Automation and New Tasks: How Technology Displaces and Reinstates Labor*. *Journal of Economic Perspectives*, 33(2), 3–30.
DOI: 10.1257/jep.33.2.3

- Predicting job displacement using ML.
- Modelling task-based changes due to automation.
- Identifying transferable skills with NLP for displaced workers.

Key Paper: Brynjolfsson, E., & McAfee, A. (2017). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. Norton.

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Course Assessment

Some of these dates are tentative.

			Associated Learning Outcomes	Due Date/ location
Assessment 1:	15%	In-class participation and discussion	LO 1 - 4	<i>Weekly</i>
Assessment 2:	10%	In-class presentation	LO 1 - 4	<i>Schedule TBD</i>
Assessment 3:	30%	Problem sets (empirical)	LO 1 - 4	<i>Weeks 4, 8, 12</i>
Assessment 4:	15%	Proposal	LO 1 - 4	<i>Weeks 11-12</i>
Assessment 5:	30%	Final project	LO 1 - 4	<i>Due by April 16 2025</i>
Total	100%			

Teaching and Learning Practices

Lectures

You should read in advance the suggested Key Papers so you can participate fully to in-class discussions. When appropriate, I will upload presentation material (like .pptx) in advance.

The written proposal is due by the Wednesday of Week 11. A defense of the proposal will take place in class on the Monday and Wednesday of Week 12.

For empirical applications, we will use Python. R or Stata are also acceptable.

Course Resources

Required Text: None. See readings above.

Other resources (will be made available as necessary):

Pissarides, Equilibrium unemployment theory, MIT Press, 2000. Chapter 1.

Cahuc, P., Carcillo, S., & Zylberberg, A. (2014). *Labor economics*. MIT press. Chapter 1.

D. Benjamin, M. Gunderson, T. Lemieux, C. Ridell. Labour Market Economics. 9th edition, McGraw-Hill Ryerson, 2019.

Wooldridge, Introduction to Econometrics, 7th edition, 2019

Course Policies

Grading Policies

Unless you have discussed an extension well ahead of the due date with the instructor, late penalties of 5% of the total grade earned per day (including weekends) will be assigned to any assessment (i.e. deducted from the total mark). Extensions will only be granted on the basis of valid medical or personal reasons, and need to be requested via email to the instructor as soon as possible. Late assignments will not be accepted once graded assignments have been returned officially to the class at large, unless circumstances permit and alternative arrangements have been made.

Students who find themselves unable to meet course requirements by the deadlines or the criteria expected because of medical or personal reasons, should review the regulations on academic consideration in the Academic Calendar and discuss their situation with the instructor, program counselor or other academic counselor as appropriate.

Missed Assignments:

A grade of zero will be assigned if you fail to submit an assignment, unless you are ill or have other compassionate reasons. Please read your Undergraduate Calendar for the regulations regarding illness and compassionate grounds. Please note, vacation travel, moving house, or outside work commitments will not be accepted as valid reasons for missing deadlines.

If you have religious observances which conflict with the course schedule or if you are registered with Student Accessibility Services, please contact the course instructor in order to make arrangements for your assessment if appropriate.

University Policies

Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

<https://www.uoguelph.ca/registrar/calendars/graduate/current/>

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors

have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Graduate Calendar:

<https://calendar.uoguelph.ca/graduate-calendar/general-regulations/academic-misconduct/>

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or see the website: <https://wellness.uoguelph.ca/accessibility/>

Course Evaluation Information

Please refer to the [Blue by Explorance system](#).

Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Drop date

The last date to drop one-semester courses, without academic penalty, is **Friday, April 4, 2025** For regulations and procedures for Dropping Courses, see the Academic Calendar:

<https://calendar.uoguelph.ca/graduate-calendar/general-regulations/>