



FUNDAMENTALS OF GRADUATE ECONOMICS AND FINANCE

STRENGTHEN FOUNDATIONAL
ECONOMIC CONCEPTS FOR
ACADEMIC SUCCESS.

7 - 11 APRIL
ONLINE

21 - 25 JULY
IN-PERSON

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ABOUT US | OXFORD ECONOMICS SUMMER SCHOOLS

At the University of Oxford's Department of Economics, our summer schools provide an exceptional opportunity for students and professionals to gain foundational and advanced economics knowledge in an immersive, academic setting.

Through courses like Fundamentals of Graduate Economics and Finance, participants build essential skills in maths, econometrics, and economic analysis, preparing for further studies or careers in diverse economics fields. Taught by Oxford's expert faculty, our programmes blend rigorous academic instruction with real-world insights, creating a bespoke learning experience within Oxford's renowned academic community.

FUNDAMENTALS OF GRADUATE ECONOMICS AND FINANCE:

Prepare for **graduate studies in Economics** or deepen your understanding of **core principles** with the Fundamentals of Graduate Economics and Finance.

This intensive programme, offered **online in April and in-person at Oxford in July**, is designed to help **undergraduates aiming for postgraduate study, graduate students who want to strengthen their skills, and professionals seeking to advance their expertise**. In just one week, you'll delve into key areas such as economic theory, applied mathematics, and econometrics, equipping yourself with **essential quantitative skills and analytical tools**.

Through expert-led lectures and hands-on workshops, you'll gain a solid grounding in the fundamentals, while our Faculty Research Inspiration Sessions—talks by Oxford faculty—are designed to **ignite your research interests** and help Undergraduate students shape a **compelling Statement of Purpose**. Additionally, the programme offers **graduates and professionals insights into recent economic advancements**, keeping you updated with the latest developments in the field.

KEY LEARNING OUTCOMES:



- 1 Master Core Economic Principles:** Develop a solid understanding of essential economic theories and models, providing a strong foundation for graduate-level coursework.
- 2 Enhance Quantitative Skills:** Gain proficiency in applied mathematics and econometric techniques, equipping you to tackle complex quantitative challenges in economics.
- 3 Build Analytical Confidence:** Apply economic concepts to real-world scenarios through problem-solving sessions, empowering you to approach advanced topics and research with confidence.

TOPICS COVERED:

INTRODUCTION TO MATHEMATICAL METHODS

Objective: This course will introduce students to elements of mathematical analysis and of probability theory with a special emphasis on methods that are important in economics.

1 Mathematical Analysis:

Study essential topics including logic, proofs, sets, relations, functions, sequences, limits, continuity, and differentiability. Emphasis is on understanding key results and their application to economic questions, with examples from decision theory and game theory.

“The Fundamentals of Graduate Economics course at Oxford was a transformative experience. It bridged the gap between undergraduate and graduate Economics, giving me a solid foundation in Economic Maths and Econometrics. This course not only sharpened my research skills but also inspired me to push myself further, surrounded by passionate classmates and brilliant professors. If you’re ready for an academic challenge and a taste of the Oxford student life, I highly recommend applying!”- 2024 Participant



2 Probability Theory:

Learn probability fundamentals such as probability axioms, independence, conditional probability, Bayes’ rule, distributions (discrete and continuous), expectations, moments, correlation, the law of large numbers, and the central limit theorem. Applications focus on decisions under risk and risk mitigation.

3 Quantitative Problem Solving:

Apply mathematical concepts to real-world economic problems in hands-on sessions, building practical skills in economic modelling and quantitative analysis.

INTRODUCTION TO ECONOMETRICS

Objective: Develop a thorough understanding of econometric techniques, focusing on regression analysis and instrumental variables—key methods for empirical economic research.

1

Statistical Inference Introduction:

Introduction to hypothesis testing, confidence intervals, and uncertainty measurement, providing a foundation for interpreting economic data.

2

Linear Regression:

Gain an understanding of how linear regression can uncover causal effects within observational data. Examples include the impact of university and degree choices on career earnings.

3

Advanced Regression Techniques:

Build on regression skills by learning to handle nonlinear relationships and improve estimate accuracy. Applications demonstrate how to model complex economic interactions.

4

Dealing with Endogeneity:

Understand the limitations of linear regression in estimating causal effects due to issues like unobserved variables and reverse causation. Explore strategies to address these challenges, including the use of randomised control trials.

5

Introduction to Instrumental Variables:

Discover instrumental variables as a powerful tool for estimating causal effects when traditional regression methods encounter limitations.



EXTRA-CURRICULAR AND NETWORKING OPPORTUNITIES

The Fundamentals of Graduate Economics and Finance course offers more than just academic learning — it's an opportunity to connect with leading Academics and a vibrant community of aspiring economists from around the world. Participants have unique access to engage with Oxford's academic environment through:

- 1 Faculty Research Inspiration Sessions:**
Discover your research interests and build a compelling Statement of Purpose. Hear from Oxford faculty on specialised topics and cutting-edge research, designed to inspire your own academic journey.
- 2 Lectures by Leading Economists:**
Hear from distinguished economists who share their expertise on cutting-edge research, real-world economic challenges, and diverse career trajectories in economics.
- 3 Welcome Reception & College Formal Dinner (In-Person):**
Enjoy a formal dinner at one of Oxford's historic colleges and a welcome reception, perfect for connecting with peers, faculty, and industry professionals in a memorable setting.
- 4 Social Activities and Tours (In-Person):**
Enhance your Oxford experience with optional college tours and social events that celebrate Oxford's rich academic heritage and foster a sense of community among participants.



OUR TUTORS



BANU DEMIR-PAKEL

Banu is the Academic Director of Oxford Economics Summer Schools, Associate Head (Communications and External Engagement) and a specialist in international trade and development economics, with research on firms' responses to trade shocks and their impact on economic growth and income distribution.



JAMES DUFFY

James is an Associate Professor of Economics at Corpus Christi College who teaches the Introduction to Econometrics section; his research in macroeconometrics focuses on inference and identification in time series, with contributions on nonlinear cointegration, nonparametric methods, and structural macroeconomic models.



INÉS MORENO DE BARREDA

Ines is an Associate Professor of Economics at St Peter's College, specialising in the Introduction to Mathematical Methods course, where she brings her expertise in foundational mathematical concepts essential for advanced economic analysis.

COURSE DELIVERY AND DETAILS

The Fundamentals of Graduate Economics and Finance Summer School offers two flexible formats to suit your needs:

One Week
7 April, 2025
Online, Zoom
30 hours
£1,350

One Week
21 July, 2025
In-Person, Oxford
40 hours
£2,700

Apply via our website at <https://ouess.web.ox.ac.uk/apply> by filling out the application form and submitting the deposit, which is deducted from course fees if accepted.

Accommodation for the in-person option is not included in the course fee. For assistance with booking hotel rooms, college accommodation, or homestays, please contact: summerschool@economics.ox.ac.uk.





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