

# Graduate Connection

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December 2023

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## News

### *Happy Holidays!*

The faculty and staff extend their best wishes for a happy holiday season. The University is officially closed from the end of business on Thursday December 21 and reopens on the morning of Tuesday January 2. During the closure period your Wildcard is needed to access the building.

### *Winter Quarter Start Date*

The first day of Winter Quarter is Wednesday, January 3.

### *Distinguished Teaching Assistants*

The Distinguished Teaching Assistant Awards for 2022-23 were presented at the start-of-year reception on October 12. The winners of a certificate, a limited-edition travel mug, and a year's membership to the Econometric Society or the American Economic Association were **Clement Bohr, Marie Decamps, Andrea Di Giovan Paolo, Jose Higuera, Diego Huerta, Miguel Jorquera, Avner Kreps, Gaston Lopez, Edmund Lou, Maria Petri Betto, Genia Rachkovski, Pablo Sanchez, Jingyuan Wang, Jin Yang** and **Tomer Yehoshua-Sandak**.

These awards are given to the top third of our Teaching Assistants, based on student and faculty evaluations. These awards have been listed prominently on the vita of our students on the job market, and act as a strong signal to potential employers

of your teaching capabilities. This is especially true for students from countries where English is not the first language.

### *Susan Bies Research Prizes*

Also awarded were the Susan Schmidt Bies Prizes for Doctoral Student Research on Economics and Public Policy. The awards are given to the best public policy papers presented as part of the Economics 501 seminar. The winners for 2022-23 were **Filipe Berrutti** and **Matteo Ruzzante** for the joint paper "Price Regulation of Agricultural Technology" and **Bruno Fava** for "Flexible Inference on Distributional Treatment Effects."

The prizes were generously donated by alum **Susan Schmidt Bies** (PhD, 1972). Her professional career included serving on the Board of Governors of the Federal Reserve System.

### *Robert Eisner Memorial Fellowship*

Also awarded was a fellowship to honor the late faculty member and AEA President Robert Eisner. For 2023-24, the Fellowship is awarded to **Amilcar Velez**. The fellowship is awarded annually to a student who has distinguished themselves in both teaching and research.

### *Graduate Studies Committee*

The Graduate Studies Committee is a forum for feedback from graduate students to the faculty on the graduate curriculum, programming, and

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Department of Economics  
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Ian Savage, *editor*  
 847-491-8241  
[ipsavage@northwestern.edu](mailto:ipsavage@northwestern.edu)

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administrative processes. It meets each quarter.

The three elected student representatives for AY 2023-24 are **James Atkins** (Second Year), **Myera Rashid** (Third Year) and **Federico Crippa** (Fourth Year). Students are encouraged to share concerns and suggestions with their representatives.

### Faculty News

**Dean Karlan** has returned to campus after his leave of absence to serve as Chief Economist of the U.S. Agency for International Development (USAID).

### Faculty Honors

Congratulations to **Ben Golub** and **Marciano Siniscalchi** on their election as Fellows of the Econometric Society.

### Visitors and Postdocs

Four of our existing visitors and postdocs remain with us for the entire year: theorist **Philip Reny** from the University of Chicago, **Chen Lian** a macroeconomist from the University of California, Berkeley, and historians **Davide Coluccia** and **Katherine Hauck**. In addition, **Kilian Rieder**, an economist with the Austrian National Bank is here until the end of January.

Additional visitors in the Spring Quarter will be introduced in the March *Graduate Connection*

## For Your Information

### Help and Support

We have collated together a list of help and support resources, both within the department and within the university. It is in the [Graduate > Current Student Resources](#) part of our website, and also in the *Graduate*

*Student Handbook*. If you have any suggestions for additional topics, please tell **Lola Ittner**.

### Graduate Student Opportunities Website

The Department has a website for graduate students with information on:

- Conferences
- Resources at NU
- Fellowships
- Programming at NU
- Events outside NU
- Counseling Services (CAPS)
- Job Opportunities

See the weekly update e-mail or visit:

<https://sites.google.com/view/nuecon-grad-opportunities/home>

## Events

### AEA Annual Meeting

The annual meetings of the American Economic Association are in San Antonio and run from Friday to Sunday January 5-7.

### Martin L. King Jr. Day

On Monday, January 15, the University is closed, and all classes are canceled in observance of Dr. Martin Luther King Jr. Day.

### Honoring Dale Mortensen

It has been ten years since the death of former longtime faculty member and Nobel Prize winner **Dale Mortensen**. On Thursday, February 1, there is a lecture and reception celebrating Dale Mortensen's legacy. The lecture is by **Robert Shimer** (University of Chicago) at 5pm in KGH 1410. This is followed by a reception in the Department's light court at 5:45.

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### Save the Date

- The prospective PhD visit day is Wednesday, March 27.
- The Center for Economic History hosts a two-day conference on "Historical Lessons for Monetary and Financial Policy" on March 29-30.
- The Center for the Study of Industrial Organization hosts a conference on Friday and Saturday, April 5-6.
- **Gita Gopinath** the First Deputy Managing Director of the International Monetary Fund (IMF) presents the annual Susan Bies Lecture on Economics and Public Policy on Thursday April 25.

More details on all these events will be in the March *Graduate Connection*.

## Teaching

### Maintaining Full-time Status

You must be registered for at least three course credits each quarter to be considered a full-time student.

First year students are automatically full time in Fall, Winter and Spring as they are registered for 410, 411 and 480.

For students in years 2 and 3 in Fall, Winter and Spring Quarters, if you are registered for two courses add 1 unit of Economics 590. If you are registered for one or zero courses add TGS 500. TGS 500 is listed for zero credits but assures full-time status (and allows registration in up to one course).

Students in years 4 and above should register for TGS 500 (or TGS 512 in certain circumstances) which is considered a full-time registration.

Students in all years should register for TGS 500 in summer quarter.

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### *Incomplete Grades*

The Department has a policy to avoid excessive awarding of incomplete grades. Please see our [web site](#) for a complete statement. Report any problems to the Director of Graduate Studies.

### *410-2 and 411-2 Discussion Sections*

The Friday discussion sections for 410-2 and 411-2 have swapped time slots from those listed initially. The 410-2 section will be from 11am to 12:50pm. The 411-2 section will start at 2pm and continue to 3:50pm on most days. It will end at 3:20pm on days when there is a junior recruiting seminar. Both are in KGH 1410.

### *This Quarter's Course Descriptions*

#### *Advice on Field Sequences*

The Department has guidance on [acceptable field course sequences](#). These are posted in the Graduate > Degree Requirements and Goals > Second- and Third-Year Goals section of our website.

### **Department of Economics Classes**

#### **Economics 412-2**

Economic Theory and Methods

Professor Strulovici

MW 1:30-3:20

KGH 3301

The course introduces conceptual frameworks, recent advances, and open research questions in applied fields for which theory is underdeveloped, including law and economics, health economics, institutional economics, and specific topics such as the economics of privacy, discrimination, and systems of evaluation. In addition, part of the class is dedicated to recent work at the

intersection of economics and computer science.

The course has two audiences: theorists looking for meaningful applications, applied economists looking for interesting theoretical tools. It also aims to develop skills for identifying, formalizing, and analyzing questions in applied fields using mechanism design, information economics, and other modern theoretical methods and concepts.

Evaluation is by two or three assignments and the submission or presentation of a research project.

#### **Economics 414-2**

Economics of Information

Professor Guo

TTh 1:30-3:20

KGH 3301

The course covers two major research areas: mechanism design without transfers and robust mechanism design. It reviews a series of papers including the very recent contributions and has a focus on analytical tools. Topics covered include delegation, dynamic mechanisms without money, information design, evidence models, mechanism design under worst-case payoff or worst-case regret. The main objective is to explore the frontier of these topics and to help students find research projects.

Evaluation is by submission of two referee reports and one presentation.

#### **Economics 416-2**

Advanced Macroeconomics

Professor Rognlie

TTh 3:30-5:20

KGH 3301

This course covers frontier topics in quantitative macroeconomics, with two main parts. The first part covers models of household consumption-savings behavior, and discusses their micro fit, their implications for long-run questions like the natural interest rate, and how they can be developed into a heterogeneous-agent New Keynesian

("HANK") framework. It then covers the implications of HANK for fiscal policy, monetary policy, and international macro.

The second part covers useful computational techniques and their applications in macro more generally. This includes core tools like splines and quadrature, and some state-of-the-art techniques that make it possible to combine heterogeneity with other topics—such as departures from rational expectations, portfolio choice, and optimal policy.

Evaluation is based on problem sets, an in-class presentation, and a replication project.

#### **Economics 420-2**

European Economic History

Professor Mokyr

TTh 9:00-10:50

KGH 3301

The course is devoted to recent papers in economic history written in the language and tradition of modern economics. Economic theory and econometric methods have been applied to historical issues utilizing new and innovative databases. The course surveys a sample of this recent literature, provides a historical context to them, and aims to motivate and stimulate similar research.

There are two lectures each week. Each meeting is devoted to a different topic that has been of concern to researchers in the field. Class attendance is required and is monitored, and non-attending students may be dropped from the course.

#### **Economics 425-2**

Development Economics

Professor Udry

MW 1:00-2:50

KGH 1410

The focus is the study of the microeconomics of development. Topics include household organization, gender, agriculture, technological change, finance, risk

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and uncertainty. The course emphasizes the interplay between theory, observation, experimentation, and econometric testing, and how these work within and across papers from research programs. The primary goal of this course is critical reading of current literature.

Students are expected to read and comment on all the required reading and to participate in class discussion. Evaluation is based on a series of assignments (referee reports and presentations) and a research proposal.

### Economics 450-2

Industrial Organization  
Professor Bhattacharya  
MW 11:00-12:50 KGH 1410

This course covers core topics in industrial organization. It focuses on empirics but covers relevant theory as needed. Topics include entry, search, price discrimination, bargaining, auctions, and matching markets. The emphasis can shift in response to student preferences.

Evaluation is based on problem sets and a research proposal. and may include oral presentations if time permits.

### Economics 481-2

Advanced Econometrics  
Professor Horowitz  
TTh 11:00-12:50 KGH 1410

*High-Dimensional Estimation and Inference.* Many data sets used in empirical economics contain hundreds or thousands of variables that are potentially relevant to the phenomenon being investigated. For example, the NLSY contains hundreds of variables that may be related to an individual's wage. In some applications, the number of potentially relevant variables exceeds the sample size. An empirical researcher must decide which variables are and are not relevant to the application. The

LASSO is one method for doing this, but it is not the only method and is not necessarily the best one. This course describes methods for selecting relevant variables (model selection) and conducting inference about the parameters of the selected model (e.g., forming confidence intervals).

Topics include penalized estimation methods for model selection, computational methods for penalized estimation, empirical methods for selecting tuning parameters, high-dimensional instrumental variables estimation, inference with penalized estimators, and high-dimensional causal inference.

Evaluation is based on two or three problem sets, weekly one-page memos, and a paper. In addition, each registered student must give a presentation to the class. There are no examinations.

*Students who took Econ 481-2 previously and wish to take this course for credit, should register for an independent study with Prof Horowitz as Econ 499-0-38.*

### Economics 483

Applied Microeconometrics  
Professor Manski  
MW 9:00-10:50 KGH 3301

This course integrates elements of welfare economics and consequentialist decision theory with econometric study of identification and statistical imprecision to study the broad problem of social planning under uncertainty. Specific planning questions to be analyzed include individualistic treatment under ambiguity, treatment choice using data from randomized trials, policy to mitigate infectious disease, income tax policy, and climate policy.

Evaluation is by writing an original research paper. There are no exams or problem sets.

### Other Departments' Classes

See the Department's field sequence guidance before registering for any of these classes.

### Finance 585-2

Asset Pricing II  
Professors Jiang / Papanikolaou  
W 1:00-4:00 KGH 4302

This course covers advanced topics in the intersection of finance and macroeconomics. The class emphasizes current topics along with state-of-the-art tools.

The first part covers the basics of dynamic models of arbitrage pricing, portfolio choice, and equilibrium in frictionless markets. The second part covers a selection of topics of current interest: asymmetric information, incomplete markets, financial intermediation, international finance, and production-based models.

Evaluation is based on problem sets which emphasize both analytical as well as numerical skills. Familiarity with a modern computing language (MATLAB, Julia, or C++) is assumed.

Though the course proceeds at a brisk pace, familiarity with the material in FINC 585-1 is not required.

### Finance 586-2

Corporate Finance II  
Professor Benmelech  
F 9:00-12:00 KGH 4302

This course reviews selected topics in empirical corporate finance. Topics include financial constraints, banks and the macro economy, internal capital markets, finance and the product market, executive compensation, corporate governance, law and finance, financial development and growth, securitization, and household finance.

The aim of this course is to prepare students to write a thesis in finance. This course builds on Finance 586-1. The scope is to discuss empirical papers that are related to the theories formulated in the corporate finance

theory class, as well as to help students to develop identification strategies for testing corporate finance hypothesis. The course is organized around published and working papers in the field with an emphasis on understanding how to develop good research ideas. Rather than providing an exhaustive overview of the field, the course focuses in depth on selected topics to illustrate different empirical approaches to the same or related questions. The course requires a good knowledge of applied econometrics.

**MECS 540-2**

Political Economy II: Conflict and Cooperation  
Professor Baliga

Course moved to the Spring Quarter.

**MECS 540-3**

Political Economy: Social Choice and Voting Models  
Professor Egorov  
Th 9:00-12:00 KGH 4273

This course is about various aspects of collective decision-making, both on the micro level (how people aggregate information and preferences through voting) and on the big picture level (how societies choose institutions to live under).

Initially some classical results from social choice are reviewed and limitations of the cooperative approach are highlighted. The course then analyzes strategic behavior in collective decision-making such as voting over agendas and legislative bargaining. The next topic deals with elections and decisions on whether and how to vote, whether to run, and how to campaign. The course then considers institutions including revolutions and coup d'états, and how, when and why countries democratize. The final topic is models of forward-looking behavior in collective decision-making and dynamics of institutions.

Evaluation is based on attendance and presentations of a few papers from the syllabus.

**MECS 548-0 (was 549-2)**

Innovation and the Science of Science  
Professors Hill and Jones  
M 3:30-6:30 KGH 5301

The course introduces both macroeconomic and microeconomic approaches to assessing the “ideas production function”, with special attention to the roles of human capital, institutions, and incentive systems. The role of science and scientific progress are also considered in depth.

The course emphasizes how the unusual characteristics of ideas can result in social inefficiency, and how the institutional and policy environment influences the gap between private and social welfare. In tandem with theoretical approaches, this course reviews the core empirical literature, including methods and data sets that are suited to studying ideas and innovation.

The course is appropriate for students in economics, as innovation touches virtually all fields of economics -- including economic growth, industrial organization, labor economics, finance, the economics of organizations, and urban economics. The course also provides an inroad to the growing field of the “science of science,” which emphasizes the use of high-scale data, network methods, and machine learning, together with more traditional econometric approaches, to understand the science and innovation process and implications for society.

Evaluation is based on two referee reports and a group research paper proposal (8-10 pages) relevant to the topics of the class. This course can form a sequence with MECS 549-1, but either course may be taken as stand-alone material.

**MECS 550-3**

Economic Theory III: Doing Research in Economic Theory and Related Areas

Professor Sandroni

Th 6:00-9:00pm

KGH 4130

This course relies on informal discussions of research ideas. The main objective is to find good dissertation projects and to develop these projects. In sum, the main idea is to facilitate the transition from student to researcher using a learning by doing approach. The research topics depend on students' interest and are typically determined in the first and second classes. There are no exams.

**MECS 560-2**

Dynamic Optimization in Economics

Professor Molavi

W 3:00-6:00

KGH 5301

The course covers the models and mathematical techniques for discrete and continuous-time dynamic optimization under uncertainty, with an emphasis on applications in economics. It covers the variational approach, dynamic programming, Bellman equation and the principle of optimality, the optimal-control approach, the HJB equation, stopping-time problems, multi-armed bandits, and the Gittins' index theorem.

Evaluation is based on several problem sets and a final exam. The main textbooks are *Recursive Methods in Economic Dynamics* by Stokey, Lucas, and Prescott (Harvard U.P., 1989), *Introduction to Modern Economic Growth* by Acemoglu (Princeton U. P., 2009), and *Optimal Stopping and Applications* by Ferguson (online lecture notes).

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### MECS 570-1

Economics of Organizations

Professor Powell

T 3:30-6:30

KGH 5201

This course is an introduction to research in organizational economics, which can be succinctly described as the economics of managed relationships. This course focuses on theories of incentives, adaptation, and firm boundaries, with the aim of understanding how firm practices affect and are affected by the broader economy. The main practical emphasis is on developing applied modeling skills.

Evaluation is by an in-class presentations of a recent paper.

The required text is *The Handbook of Organizational Economics*, edited by Gibbons and Roberts, (Princeton U.P. 2013).

## Formal Announcements

### *Good Progress Milestones*

The Department has formal guidance on good progress at the end of each year. Please take a moment to review these on our [website](#) so that you are well prepared for certifying good progress next summer.

### *TA Periods in Residence*

Each quarter that you are a TA, you are expected to be available on weekdays starting on the first day of classes and continuing until the Monday after examinations end (the day that grades are filed).

Absences during this period require permission from the instructor. In the past people left early and arrived back late, in some cases without informing the instructor. The Department does not tolerate this. You must arrange your vacation airline flights to be able to fulfill your duties. This is especially true as you make travel arrangements

for the coming holiday season and Spring Break. Failure to do so is grounds for rescinding your TAship. For the rest of this year the dates for which you should be in attendance are:

Fall: until Mon Dec 11

Winter: Wed Jan 3 - Mon March 18

Spring: Tues March 26 - Mon June 10

### *Graduate School Deadlines*

Deadlines for students wishing to receive a MA or PhD degree in March.

**January 26** Application for a Degree.

**February 23:** Completed dissertation and all supporting materials for the PhD degree.

**March 8:** Final examination report and any change of grade forms for the MA degree.

If you wish to receive an MA or PhD degree in June, the Application for a Degree is **February 2**.

## Funding Opportunities

### *NU Dissertation Year Fellowships*

Dissertation Year University Fellowships (DYUF) are usually taken in the spring quarter of the year prior to going on the job market, and the fall and winter quarters of the job market year. To qualify for the spring quarter fellowship, students should ask their advisor to file the [Spring Certification of Intent to Enter the Job Market](#) (Form GS5) with the Graduate Program Manager between February 1 and February 15.

### *NU Summer Fellowships*

Summer Fellowships are available to students in years one through five. An online acceptance form and contract is submitted in May. More details in the next *Graduate Connection*.

Sixth year (and above) students should note that The Graduate School specifies that Summer University Fellowships are not available for students beyond year 5.

### *Funding for Research-Related Travel and Expenses*

TGS has available funds to pay for research expenses and for travel to conferences. The maximum one-time research grant is \$3,000. There is funding for two conferences during your time at Northwestern that covers up to a maximum of \$800 for each conference. Full details of the application procedures and links to application forms are on the [funding web page](#).

A special note. TGS allocates a budget every three months for conference travel. If you are planning conference travel in the period December 1 – February 29, you should apply immediately as applications are denied when the budget runs out.

### *Overseas Travel*

If you are traveling internationally on professional business, the NU Office of Global Safety and Security (OGSS) asks you to [register your itinerary](#). This allows practical assistance in an emergency. The website also has information on international health insurance coverage.

## Notes

### *Next Graduate Connection*

Volume 29, number 3 will be published on March 1.

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