# Northwestern Economics

## **Graduate Connection**

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## **News**

## Happy Holidays!

The faculty and staff extend their best wishes for a happy holiday season. The University will be officially closed from the end of business on Friday December 21 and reopen on the morning of Wednesday January 2. Winter quarter commences on Monday, January 7. During the closure period, you will need your Wildcard to access the building.

## Distinguished Teaching Assistants

The Distinguished Teaching Assistant Awards for 2017-18 were presented at the start-of-year buffet on September 30. The winners of a certificate, a limited edition coffee mug, and a year's membership to the Econometric Society or the American Economic Association were José Carreno-Garcia, Gabriela Cugat, Ana Danieli, Michael Gmeiner. Joseph Hardwick. Matthew Leisten, Giacomo Magistretti, Utsav Manjeer, Joris Mueller, Laia Navarro-Sola. Jordan Norris. Ludvig Sinander and David Stillerman. 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 at the Buffet, the Department presented the annual 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 2017-18 were Ricardo Dahis for a paper on "Voluntary Secessions Development: Evidence from Brazilian Municipalities," and Riccardo Marchingiglio for the paper "Statistical Discrimination and the Choice Licensing: Evidence from Banthe-Box Laws." The prizes were generously donated by alumna 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 at the buffet was a fellowship to honor the late faculty member and AEA President Robert Eisner. For 2018-19, the Fellowship was awarded to **Ana Danieli**. The fellowship is awarded annually to a fourth year student who has distinguished her or himself in both teaching and research.

## Congratulations

Professors Daley Kutzman, Scott Ogawa and Eric Schulz were chosen for the 2017-18 Faculty Honor Roll award organized by the Associated Student Government. Undergraduate students nominated professors that go above and beyond expectations, and

the winners were selected from the list of nominations as faculty members who are truly exceptional.

**Joel Horowitz** has been elected as a Fellow of the International Association for Applied Econometrics

#### Staff News

**Cindy Pingry** joined us from the Dean's Office on November 5 to fill the position of event coordinator and faculty support.

Laura Rossi who was also in our front office left the University in early October. We cannot fill this position immediately, but have hired **Catherine Mory**, an undergraduate senior economics major part time to help out in the main office.

After ten years as the librarian responsible for economics, **John Hernandez** is taking a position in California. We will let you know when a replacement is appointed.

#### **Visitors**

Five of our existing visitors will remain with us for the entire academic year: historian Melanie Meng Xue, industrial Organization economist Koichiro Ito, macroeconomist Thibaut Lamadon and theorists Jioangtao Li and Byung Soo Lee.

Arriving in the New Year is history post-doc **Giampaolo Lecce** who will be here for the remainder of the academic year. Industrial organization economist **Bruno Julien** from the Toulouse School of Economics will arrive in mid-February for a 6-week visit.

We will have additional visitors in the Spring Quarter, including Nemmers Prize winner **David Kreps**. Further details will be provided in the March *Graduate Connection*.

#### **Events**

#### AEA Annual Meeting

The annual meetings of the American Economic Association will be held in Atlanta on Friday to Sunday, January 4-6. If you are at the conference, stop by the NU annual cocktail party in Room M202 of the Atlanta Marriott Marquis, 265 Peachtree Center Ave NE, from 6-8pm on the Friday.

## Martin L. King Jr. Day

On Monday, January 21, the University is closed and all classes are canceled in observance of Dr. Martin Luther King Jr. Day.

## Unveiling of the Mortensen Nobel Prize

You may have noticed the display case that has been installed near the main office. This will contain the Nobel Prize awarded to our former longtime colleague the late **Dale Mortensen**. The medal and certificate were given to the University by the Mortensen family.

An unveiling ceremony and reception will be held on Friday February 1 at 3pm.

#### Mark Your Calendars

Mark your calendars for these special events in the Spring Quarter. Full details will be given in the March *Graduate Connection*.

- Thursday April 18: The annual Susan Bies (PhD, 1972) departmental lecture on economic policy. This year's speaker will be Thomas Piketty from Paris.
- Wednesday May 1: Nancy L. Schwartz Memorial Lecture featuring Stephen Morris of Princeton University at 5:30 at the Allen Center.

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- Wednesday May 8, 2019: Nemmers Prize lecture by **David Kreps**.
- Thursday and Friday, May 9-10: Nemmers Prize conference.
- Friday and Saturday May 31 and June 1: The joint industrial organization conference between Northwestern and the University of Toulouse will be held at Northwestern.

## **Teaching**

## Seminar Registrations

The Department will not be offering Econ 501 and the 500-level workshop classes in the Winter Quarter when these classes usually do not meet. They will return in the Spring Quarter. Students who need to register for additional credits to maintain full-time status should use Econ 590 (for second year students) and TGS 500 (for older students).

### 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.

### **Updated Course Titles**

After an absence of some years, the *Graduate School Catalog* will return in electronic form next summer. As part of this process, the Department has updated some of the titles of our graduate courses and the catalog course descriptions. There are no changes in course numbers, degree requirements or the content of courses. This exercise was meant to simplify some overly long titles and archaic language. You may see these

appearing on websites and in CAESAR in the coming months.

## This Quarter's Course Descriptions

The Department has a policy to avoid the problem of excessive awarding of incomplete grades. Please see the "Goals for Second and Third Year Students" page of our web site for a complete statement. Report any problems to the Director of Graduate Studies.

#### **Economics 415-1**

Advanced Microeconomics
Professor Dworczak
MW 1:30-3:20 KGH 3301

This is a theory topics course intended for graduate students who are about to start (or have already started) doing research. The course is a review of recent papers applying theoretical tools (mechanism design, information design, and game theory) to important financial market design issues such as the optimal frequency of trade, size and price discovery, preand post-trade transparency, design of financial benchmarks, stress tests, and cryptocurrencies.

The course is suitable both for theory students who had little prior exposure to finance and for theoryminded finance students who would like to expand their toolkit.

Evaluation will be based on in-class participation, presentation of a research paper, and a research proposal.

#### **Economics 416-1**

Advanced Macroeconomics
Professors Lorenzoni and Rognlie
TTh 11-12:50 KGH 1410

The course covers three sets of advanced topics in macroeconomics. The first part will focus on models that emphasize the role of heterogeneity in the economy, especially focusing on heterogeneity on the household side,

and how this affects the evaluation of monetary and fiscal policy. The second part will cover different ways of modeling financial market frictions and the role of financial intermediaries in the economy (incomplete markets, limited default. enforcement, asymmetric information). The last part will explore some deviations from rational expectations and relevance for the study of bubbles, financial stability and inflation.

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

European Economic History Professor Mokyr TTh 9:00-10:50 KGH 3301

The course will be devoted to recent papers in economic history written in the language and tradition of modern economics. In the past decade, a great deal of economic history has been written by scholars (some fulltime economic historians, others parttimers and interlopers) who are applying economic theory econometric methods to historical issues and have produced and utilized new and innovative databases. The purpose is to survey a sample of this recent literature, provide it with more historical context and motivation, and stimulate similar research.

After an introductory lecture by the instructor, the course will be studentdriven. Each student will be in charge of a number of class presentations of book chapters and papers. The readings (a substantial proportion which are "packages" of two papers) will be allocated on a first-ask firstserve basis, subject to the constraints (1) that all papers have to be covered and (2) that distribution is about as equitable as is humanly possible and (3) nobody presents twice in one week. Each student will prepare a PowerPoint lecture of about 30-45 minutes on her/his assigned papers, summarizing the most interesting and important findings, while reviewing the methodology and sources used.

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

Development Economics Professor Udry MW 3:30-5:20

KGH 3301

The focus is the study of household organization, agriculture, savings, risk and uncertainty. A primary goal of this course is a critical reading of the current literature on the empirical microeconomics of development.

Students are expected to do all of the required reading and to participate in class discussion. Evaluation will be based on a series of assignments and a research project.

#### **Economics 440-1**

Labor Economics Professor Notowidigdo MW 1:00-2:50

KGH 1410

This course studies topics in labor economics, surveying both theoretical and empirical work in the field. The topics will be focused around the core areas of labor supply, labor demand, and human capital.

The theoretical models will include dynamic labor supply models, models of skill-biased technological change, and models of signaling, skill premia, and self-selection. The empirical work will focus on recent papers studying human capital, inequality, trade / offshoring, and immigration.

Evaluation will be by several problem sets, which include both theoretical and empirical work, as well as a comprehensive final exam.

#### **Economics 450-2**

Industrial Organization
Professors Bhattacharya and Reguant
MW 11:00-12:50 KGH 1410

This course is an introduction to several topics in industrial organization theory and empirical analysis. Topics include entry, price discrimination, search, bargaining, moment inequalities, and dynamics. The emphasis will be on the estimation and testing of game

theoretic models, and especially on recent developments in the field.

Evaluation will be by several problem sets and a final exam. Economics 450-1 is a prerequisite for this course.

#### **Economics 460-1**

International Economics
Professors Eichenbaum and
Lorenzoni
TTh 1:30-3:20 KGH 3301

The class covers topics international finance and open economy macro. Topics include the determinants of cross-border financial flows, current account balances, and exchange rate both from an asset pricing perspective and in terms of its effects on competitiveness and the trade balance. The course will also consider the behavior of goods prices across borders and discuss the merits of different monetary arrangements (flexible vs fixed exchange rates, currency unions).

Evaluation will be based on problem sets and a take-home final exam.

#### **Economics 481-2**

Advanced Econometrics Professor Auerbach MW 9:00-10:50

Econometric Tools for Network An introduction to various Data. econometric methods for social and economic networks. Preliminary topics include models of social interaction and network formation, community detection, contagion and shock propagation, and sampling. About two-thirds of the course will focus on theory (i.e. proving things) while the remaining one-third will focus on computational issues and empirical applications. Some course material may be altered to reflect the interests of enrollees.

Evaluation will be by a project proposal that may be theoretical or empirical in nature.

#### Finance 585-2

Asset Pricing II Professor Papanikolaou T 3:45-6:45

KGH 5301

This course covers advanced topics in the intersection of finance and macro. The class will emphasize current topics in financial economics along with the state-of-the art tools necessary to make progress towards answering the important questions in the field.

The first part of the course covers the basics of dynamic models of arbitrage pricing, portfolio choice, and equilibrium in frictionless markets. The second part of the course covers a selection of topics of current interest: asymmetric information models, borrowing constraints and other frictions, models with non-standard preferences, models with production, etc.

Students will be required to hand in problem sets, which will emphasize both analytical as well as numerical skills. Familiarity with a modern computing language (MATLAB, Julia or C++) will be assumed.

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

#### Finance 586-2

KGH 3301

Corporate Finance II
Professors Benmelech and Sapienza
F 9-11:50 KGH 4302

This course provides a theoretical and empirical treatment of major topics in empirical corporate finance, including capital structure and financial contracting; real investment behavior; financial intermediation; financial distress; corporate governance; and law and finance.

FINC 586-1 is a prerequisite. The aim of this course is to prepare Ph.D. students to do research in empirical corporate finance.

The course discusses empirical papers that are related to the theories formulated in FINC 586-1. In addition, it will help students to develop

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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.

Part of the course will be devoted to teaching how to use the basic databases in Finance (Computstat, CRSP, WRDS databases), including an introduction to UNIX and SAS. Stata knowledge is assumed. Empirical exercises to learn to extract and manipulate those data will be given to the students. At the end of the course, the students will master how to use the most common databases in finance.

#### MECS 540-2

Political Economy II: Conflict and Cooperation Professor Baliga F 11-2 KGH 4418

This course will offer a theoretical Strategic treatment of conflict. interaction within and across nations involves conflict and cooperation. Disagreement between a country's population and its leadership can cause internal conflict, oppression and terrorism. Disagreement between countries can lead to war, costly arms races and impede economic development. Conflict often arises though there is some cooperative solution that would have satisfied all the relevant actors. The course will study the fundamental causes of conflict (positive analysis) and possible solutions that create cooperation (normative analysis).

Evaluation will be based on in class presentations of papers or new research ideas that might form part of a dissertation.

#### **MECS 550-3**

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

Professor Sandroni

W 4-7 KGH 4130

This course relies on student presentations of papers and on informal discussions of ideas. Hence, there are no exams. The main objective is to find good dissertation projects and, hence, facilitate the transition from student to researcher.

The topics depend on students' interests and are typically determined in the first and second classes. Some suggestions include: initial censorship; diversity and economic activity; selection bias; psychological games; the theory of mind and its application in game theory; diplomacy; law and economics; networks and communications: the structure of parties; taxes political and endogenous social welfare functions.

#### **MECS 551-2**

Health Economics II
Professors Dranove and others
TTh 12-1:30 KGH 4273

This is the second quarter of a twoquarter sequence. Enrollment in MECS 551-1 this past Fall Quarter is a strict prerequisite.

#### MECS 560-2

Dynamic Optimization in Economics Professor Shmaya M 4-7 KGH 4301

The course covers the basic models and mathematical techniques for discrete time dynamic optimization under uncertainty: Bellman equation and the principle of optimality in finite and infinite horizon environments, stopping time problems, multi-armed bandit and Gittins' index theorem, machine learning approaches to bandit problems: adversarial and stochastic bandits, minimal regret,

upper confidence bounds, and Thompson sampling.

Evaluation will be based on a final exam, probably a take-home exam.

#### MECS 570-1

Economics of Organizations
Professor Powell
Th 3:30-6:30 KGH 4301

The first in a two-quarter sequence. 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 ultimate aim of understanding how firm practices affect and are affected by the broader The economy. main practical emphasis will be on developing applied modeling skills.

Evaluation will be by model-development essays and in-class presentations of recent papers. The required text is *The Handbook of Organizational Economics*, edited by Robert Gibbons and John Roberts, (Princeton U.P. 2013).

## Formal Announcements

## Funding Guidelines

The Department has formal rules for the allocation of funding for students in years two through six. These are described on the Graduate > Funding page of our web site. Please read this document as the Department strictly enforces these funding criteria.

## Preliminary Examinations

First year students should familiarize themselves with the Department's rules on continuation to the second year. These are posted in the "Goals for First Year Graduate Students" page of our web site.

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Dates for the prelim examinations for the coming year have been set. The ordering of the three examinations rotates each year. Monday July 15: Microeconomics Friday July 19: Macroeconomics Wed. July 24: Econometrics All examinations will be held 1:30PM – 4:30PM in room 1410.

Students should note that they are exempt from the prelim exam in any area in which they achieved a GPA of 3.60 or greater in the three first-year classes (e.g. in 410-1,2,3 for the microeconomics prelim exam).

#### TA Periods in Residence

Each quarter that you are a TA, you are expected to be in Evanston on weekdays from the first day of classes until the Monday after examinations end (which is the day that grades are filed). Absences during this period require permission of the instructor. In the past people have left early and arrived back late, in some cases without informing the instructor. The Department will not tolerate this. You must arrange your vacation airline flights so as to be able to fulfill your duties. This is especially true as you make travel arrangements for the coming holiday season. Failure to do so will be grounds for rescinding your TAship. For the coming year the dates for which you should be in attendance are:

Fall: until Mon Dec 17

Winter: Mon Jan 7 - Mon March 25 Spring: Mon Apr 1 - Mon June 17

#### Graduate School Deadlines

**February 8** is the last day for return of the Application for a Degree for all candidates who expect their degrees to be awarded in March.

March 8 is the last day for submission of the COMPLETED dissertation and all supporting materials to the Graduate School for students who expect to receive the Ph.D. degree in March.

March 15 is the last day for receipt of the Final Examination Report and any Change of Grade forms to the Graduate School for Master's candidates who expect their degrees to be awarded in March.

## Students Working on NSF Grants

The National Science Foundation (NSF) requires all students supported by them to undergo training in the responsible conduct of research. This will be accomplished by a one-time registration in ECON 519 that has two components: an online class and a "face-to-face" component. The online part asks the student to complete a 2-3 hour online class administered by a private company that Northwestern has hired. DGS Professor **Wojciech Olszewski** will lead the face-to-face part of the class.

If you are being supported on an NSF grants for the first time, please contact Professor Olszewski for instructions.

## **Funding Opportunities**

## NU Dissertation Year Fellowships

The Department has taken the pedagogical decision that Dissertation Year University Fellowships (DYUF) should be 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 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 Coordinator between February 1 and February 15. This form is available from the Graduate.> Current Student Resources > Frequently Used Forms section of our web site.

#### NU Summer Fellowships

Summer Fellowships will again be available to students in years two through five (first year students will have been notified about summer funding in their offer letter). A signed acceptance form and contract will have to be submitted. This will occur in May. More details will be given 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

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

One of the necessary conditions for obtaining TGS conference support is the commitment of the department to contribute \$200 in matching funds to the expenses if a student's application is successful. For many years the Department contributing the \$200 from the Eisner fund which comes from gifts, and required the students' advisors only to endorse students' applications. The number of our students who apply for the travel grants has increased over time. Moreover, the current University financial situation has resulted in a cut in gift fund spending this year. As a result, the Department will contribute only \$100 from the Eisner account, and require the additional \$100 to be covered from the advisor's discretionary account.

#### Federal Aid Forms

If you are a U.S. citizen or a U.S. permanent resident you need to renew your FAFSA (Free Application for Federal Student Aid) application. You can complete the forms on-line at: https://studentaid.ed.gov/sa/fafsa before June 30. The Graduate School recommends that you file by March 1. It is often useful to have completed and filed your 2018 income tax form (1040) before you complete the FAFSA.

#### **Notes**

#### Next Graduate Connection

Volume 24, number 3 will be published on March 1.