Northwestern | Department of 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 is officially closed from the end of business on Thursday December 22 and reopens on the morning of Tuesday January 3. This is also the first day of Winter Quarter. During the closure period your Wildcard is needed to access the building.

Winter Quarter Start Date

The first day of Winter Quarter is Tuesday, January 3. But on the first day, classes that normally meet on Mondays are held. The first TTh classes are on the Thursday, and MW classes meet TW in the first week.

Distinguished Teaching Assistants

The Distinguished Teaching Assistant Awards for 2021-22 were presented at the start-of-year reception on September 23. 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 **Clement Bohr, Eduardo Campillo Betancourt, Diego Cid Ortiz, Marie Decamps, Tom Fisher, Nina Fluegel Jose Higueras Corona, Gabriel Jardanovski, Anran Li, Yijun Liu, Gaston Lopez, Edmund Yiqi Lou, Kensuke Maeba, Bruno Nunes Fava, Aleksandra Paluszynska, Radhika Ramakrishnan** 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 2021-22 were **Kamen Lyu** for "Agricultural Incomes and Human Capital Formation" and **Jose Salas** for "Screening, Selection, and Asymmetric Regulation: Banks and Shadow Banks in the Mortgage Market."

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 was a fellowship to honor the late faculty member and AEA President Robert Eisner. For 2022-23, the Fellowship is awarded to **Filip Obradovic**. The fellowship is awarded annually to a fourth-year student who has distinguished

themself 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 administrative processes. It meets each quarter.

The three elected student representatives for AY 2022-23 are **Aastha Rajan** (Second Year), **Sebastian Poblete Coddou** (Third Year) and **Hans Zhu** (Fourth Year) and. Students are encouraged to share concerns and suggestions with their representatives.

Faculty News

George-Marios Angeletos, who has been visiting us from MIT for the past two quarters, officially joins the faculty on January 1. You can find him in room 3389.

Dean Karlan has taken a leave of absence to serve as Chief Economist of the U.S. Agency for International Development (USAID).

Staff News

NUIT has assigned two new staff members to provide technical support to Economics and nearby WCAS departments. **Arun Machanickal** and **Max Maloney** will be based in room 3285 starting from December 5.

Congratulations to long serving staff members **John Affrunti** and **Rita Savakis** who have received internal promotions**.**

We have resumed the use of part-time undergraduate student support in our main office. **Katherine Yun** is helping out for several hours, three times a week.

Faculty Honors

Congratulations to **Giorgio Primiceri** on his election as a Fellow of the Econometric Society. Also elected as fellows are courtesy faculty members **Dean Karlan** and **Nancy Qian**, PhD alum **Guido Menzio**, and BA alum **Laura Veldkamp**.

Professors **Sara Hernández-Saborit**, **James Hornsten**, **Sidonia McKenzie**, **Eric Schulz**, **Max Sinitsyn**, **Richard Walker** and **Mark Witte** were chosen for the 2021-22 Faculty Honor Roll award organized by the Associated Student Government. Winners were selected based on nominations by undergraduate students.

Visitors and Postdocs

Visiting us starting in the Winter Quarter and staying through the end of the academic year are econometrician **Lidia Kosenkova** from the University of Virginia, and theorist **Allen Vong** from the University of Macau.

Five of our existing visitors and postdocs remain with us for the entire year: economic historian **Brian Beach** from Vanderbilt University, development economist **Lakshmi Iyer** from the University of Notre Dame, theorist **Romans Pancs** from ITAM in Mexico, economic historian **Lukas Rosenberger**, and development economist **Sarah Deschênes**.

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

Copiers

The current copy machines are at the end of their lease period, and we are getting new machines on Tuesday December 13. They are similar to the current machines. But look for an announcement on any changes in the settings necessary on your computer to send print jobs to the machines.

Initially the machines will function in a similar fashion to the current machines, but NU is transitioning to a new system where print jobs will be managed through a central server. The ultimate intention is that you will also be able to use the chip embedded in your Wildcard to log into the machines rather than having to remember an individual code.

For Your Information

Help and Support

We have collated together a listing 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 New Orleans and run from Friday to Sunday January 6-8.

Martin L. King Jr. Day

On Monday, January 16, the University is closed, and all classes are canceled in observance of Dr. Martin Luther King Jr. Day.

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 fulltime 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.

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.

This Quarter's Course Descriptions

Note that in the first week, MW classes meet on TW, and TTh classes meet on Th only.

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 Olszewski
MW 1:30-3:20   KGH 3301

The course begins with 5-6 classes on the foundations of machine learning. The rest of the course offers a choice of about three topics. The topics are selected jointly with students from: learning in games, testing probabilistic theories, repeated games, communication, experimentation (Gittins index theorem, and models used more frequently in economics), and contests.

For an introduction to machine learning, the instructor recommends *Learning from Data: A Short Course* by Abu-Mostafa, Magdon-Ismail and Lin (AMLBooks, 2012).

Evaluation is by about 3 problem sets and a research proposal on a topic covered by lectures.

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

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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

Half of the course focuses on some recent developments in heterogeneous-agent New Keynesian ("HANK") models, including implications for fiscal policy, monetary policy, and international macro. The other half is a general introduction to computational techniques, both for HANK and for a variety of other models, such as models of firm-level investment or sticky prices.

Evaluation is based on problem sets, an in-class presentation, and a course project. There is some flexibility in the course project, but it must directly relate to the material covered in class.

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 utilized 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 and uncertainty. The course emphasizes the interplay between theory, observation, experimentation, and econometric testing, and how these work within and across papers form research programs. A primary goal of this course is a critical reading of the 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 436-2
Public Finance
Professor Schnell
MW 9:00-10:50   KGH 3301

Health Economics. This course introduces theoretical models and empirical applications in health economics. Topics include the production and measurement of health, the provision and design of health insurance, causes and consequences of provider behavior, and competition in health care markets.

The course complements Professor Dranove's MECS 551-1 (Fall 2022). Some topics build on work discussed in the Fall, but MECS 551-1 is not a prerequisite.

Evaluation is based on in-class presentations of research papers, a final exam, and an original research proposal or project.

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 cover 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 including oral presentations if time permits.

Economics 481-2
Advanced Econometrics
Professor Auerbach
TTh 1:00-12:50   KGH 1410

A gentle introduction to various econometric methods for social and economic network data. The first half of the course is a focused review of network economics and random matrix theory. The second half is about applications. Previous topics include models of social interaction and network formation, community detection, recommender systems, network recovery, interactive fixed effects, and more. About two-thirds of the course focuses on theory (i.e., definitions and proving things), the other one-third is about implementation and computational issues.

Evaluation is by class participation.

Other Departments' Classes
See the Department's field sequence rules before registering for any of these classes.

Finance 585-2
Asset Pricing II
Professor Papanikolaou
W 3:30-6:30   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 models, borrowing constraints and other frictions, models with non-standard preferences, models with production, etc.

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
Professors Benmelech and Sapienza
F 9:00-12:00   KGH 4302

This course reviews selected topics in empirical corporate finance. Topics include: capital structure and payout policy, applied financial contracting and debt structure, incentive contracts and executive compensation, entrepreneurship, internal capital markets, finance and the product market, corporate governance, structural models in corporate finance and household finance.

The goal of this course is to prepare students to do research in empirical corporate finance. This course builds on Finance 586-1. The scope is to discuss empirical papers and help students to develop empirical tools for testing corporate finance hypothesis. The course is organized around published and working papers 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.

MECS 540-2
Political Economy II: Conflict and Cooperation
Professor Baliga
F 2:00-5:00   KGH 4130

This course offers a theoretical treatment of conflict. Strategic 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 even though there is some cooperative solution that would have satisfied all the relevant actors. The course studies the fundamental causes of conflict (positive analysis) and possible solutions that create cooperation (normative analysis).

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

MECS 549-2
Technology & Innovation
Professors Hill and Jones
Th 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 microeconomic and institutional environment influences the gap between private and social welfare. In tandem with theoretical approaches, this course substantially 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 549-0, 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
Th 3:00-6:00   KGH 5201

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, a midterm exam 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).

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 of the instructor. In the past people have 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. 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 12
Winter: Tues Jan 3 - Mon March 20
Spring: Tues March 28 - Mon June 12

Graduate School Deadlines

Deadlines for students wishing to receive a MA or PhD degree in March.
January 27 Application for a Degree.
February 24: Completed dissertation and all supporting materials for the PhD degree.
March 10: Final examination report and any change of grade forms for the MA degree.

If you wishing to receive a MA or PhD degree in June, the Application for a Degree is **February 3**.

Students Funded on NSF Grants

The National Science Foundation (NSF) requires all students supported by them to undergo training in the responsible conduct of research. This is 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 **Marciano Siniscalchi** leads the face-to-face part of the class.

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.

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. The Department contributes $100 from the Eisner

account and requires that the other $100 is covered by the student's advisor.

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 informational on international health insurance coverage.

Notes

Next Graduate Connection

Volume 28, number 3 will be published on March 1.