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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 on Wednesday, December 24, Thursday 25, Wednesday 31 and Thursday, January 1. The winter quarter commences on Monday, January 5.

Distinguished Teaching Assistants

The Distinguished Teaching Assistant Awards for 2002-03 were presented at the start-of-year buffet on October 8. The winners of a certificate and a year's subscription to *Econometrica* were **Ran Abramitzky, Etienne Gagnon, Maria Goltsman, Jeffrey Prince** (all re-awards), **Ambarish Chandra, Douglas Croker, Kripa Freitas, Guido Menzio, Eugene Orlov, Gregory Pavlov, Joerg Stoye, and Fan Zhang**. Congratulations to the winners. These awards are given to the top third of our TAs, 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.

Robert Eisner Memorial Fellowship

Also, at the start of year buffet, a fellowship in honor of our late colleague Robert Eisner was presented to **Joerg Stoye**. This fellowship is awarded annually to a graduate student who has distinguished him- or herself in *both* teaching and research.

Faculty and Staff Changes

Alex Monge returns to the Department in January following his leave in calendar year 2003. He will be in room 3232 (phone 1-8221).

In the last issue we reported that **Jelani Branch** was temporarily assisting us in our main office. We are pleased to report that he was subsequently appointed to a permanent position. However, after more than four years of service, **Sandra Shaver** has tendered her resignation effective December 3.

Visitors

The Department is pleased to welcome a number of long-term visitors to the Department. The Center for the Study of Industrial Organization is the host for **Ali Hortacsu** from the University of Chicago for the winter and spring quarters. He will be in room 309 (phone 1-4416). We will also be hosting a macroeconomist, **Chris Sleet** from the University of Iowa for the winter quarter. He will be in room 3213 (1-5394). **Patricia Reagan** and **Sam Williamson** continue as visitors

The Department is continuing to bring a series of distinguished visitors to campus for shorter visits. Most of the visitors will be coming during the Spring Quarter. These visitors will be introduced in the March edition. However, we do have three visitors at the end of the Winter Quarter.

Wolfgang Haerdle, an econometrician from Humboldt University in Berlin will be visiting for the week of March 8. For part of the same week, we will be visited by **Joel Watson**, a theorist from the University of California, San Diego. The following week, another theorist **Matthew Jackson** from the California Institute of Technology will be here.

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Events

Martin L. King, Jr. Day

On Monday, January 19, classes are cancelled from 11AM to 2PM in observance of Dr. Martin Luther King Jr. Day. The MW 11-1 classes (414-1, 480-2) will be canceled on this day, and the MW 1-3 class (450-2) will either start at 2PM or be rescheduled. This will also affect the Monday TA sections for Economics 201, and some of those for 311. Departmental offices will be closed, or have limited staffing during these hours. Please join the University-wide observances to celebrate the life and legacy of Dr. King. Celebrations on the Evanston campus include a keynote address by actor, playwright and teacher, Anna Deavere Smith.

Teaching

This Quarter's Course Descriptions

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

The first day of classes for winter quarter is Monday, January 5. This year, the start of the winter quarter overlaps with the American Economic Association annual meetings in San Diego on January 3-5. Therefore we anticipate that there may be a few changes in the first meeting of classes schedule on Mondays and Wednesdays. If these are known, they are listed in the course descriptions below. However, look out for additional announcements.

Economics 412-2

Economics Theory and Methods

Professor Olszewski

MW 9-11

AAH 3245

An introduction to the tools, techniques,

and concepts of game theory. Topics include: repeated games; bargaining; reputation; communication in games; herd behavior and cascades, common knowledge and games. The emphasis will be on recent advances and potential research in repeated games and communication in games. Evaluation will be based on several problem sets and a final exam. The textbook is Drew Fudenberg and Jean Tirole *Game Theory* (The MIT Press) plus selected journal readings.

Economics 414-1

Economics of Information

Professor Wolinsky

MW 11-1

AAH 3245

The course will survey central topics in Economics of Information. The main topics are search, formal descriptions of information and knowledge in single and multiple agent situations, the principal-agent problem with adverse selection, games of incomplete information, implementation/mechanism design and reputation. The course will present both more abstract models and ideas and more applied models dealing with economic problems such as price discrimination, auctions, bargaining and signaling.

Economics 416-2

Advanced Macroeconomics

Professor Nagypál

TTh 11-1

AAH 3245

The aim of this advanced course in macroeconomics is to give you an in-depth knowledge of three areas of macroeconomics that are lively and active areas of current research by introducing you to the basic ideas and the latest research. These three areas are 1) the macroeconomics of labor market fluctuations with particular emphasis on search frictions, 2) models with incomplete markets, including the theory of recursive contracts, and 3) the theory of consumption and saving behavior. It is also the aim of this course to teach you about the research

process directly, above and beyond teaching you what good research is by absorbing you in "good" papers. To this end, there will be several problem sets in the course that will not only ask you to solve "standard" problems, but that will also ask you to perform the many steps involved in the research process, such as formalizing an idea, developing testable predictions of a model, or simulating a model. Evaluation will be based on problem sets (some of which will require the use of Matlab, Gauss, or a similar software --- it will be assumed throughout that you are familiar with such a software), and a take-home final exam or a research paper.

Economics 420-2

European Economic History

Professor Mokyr

TTh 2-3:30

AAH 3245

This course is entirely devoted to the economic history of Europe in the 20th Century, defined somewhat liberally as 1890-1989. It deals with many different aspects of the European experience: macro (depression, inflation, growth), international, micro (business organization, fertility and mortality change) and political economy (rise of the welfare state, war). The readings are rather extensive page-wise but not nearly as demanding as your average *Econometrica* paper. There will be a final (testing you on the reading) and a research paper due a year after the course is over. The paper topics are limited by area but can be on an earlier time period. They are expected to be historical – that is, based on facts and using data.

Economics 436-1

Theory & Practice of Public Finance

Professor Meyer

TTh 9-11

AAH 3204

This course will cover several areas of very active research on the design and effects of taxes and government spending. The areas covered will be welfare economics, income taxation and labor supply, optimal income taxation, the

effects of welfare and social insurance programs including AFDC/TANF, social security, unemployment insurance, workers' compensation, and disability insurance. While the emphasis will be primarily empirical, we will begin each topic with the main theoretical work in that area. Evaluation will be by a 10-15 page research proposal and an in class final exam. There will be selected readings, many in a course packet, but no required text.

Economics 450-2

Industrial Organization and Prices

Professors Porter and Whinston

MW 1-3

AAH 3245

First Meeting: Wednesday, January 7.

An introduction to industrial organization theory and empirical analysis. Topics include: product selection; advertising; auction markets; innovation and R&D; network externalities; contracting issues. The emphasis will be on the specification, estimation and testing of game theoretic models, and especially on recent developments in the field. Economics 450-1 is a prerequisite. Evaluation is by several problem sets and a final exam. There will be selected readings, many in a course packet.

Economics 450-3

Industrial Organization and Prices

Professors Braeutigam and Panzar

MW 9-11

AAH 3204

Economics 450-1 and 450-2 are not formal prerequisites for this course, although students should be familiar with the material covered in 450-1. Topics include: technology, natural monopoly, empirical cost studies, regulatory mechanisms, optimal pricing, interservice subsidy, empirical studies of regulation and regulatory reform, network economics, and incentive regulation. The coverage will include some classic papers, but emphasize recent developments in the field. Evaluation is by problem sets, an in-class presentation, and a final exam. The

reading list will include about 25 articles as required reading, some in a course packet, and some in electronic form.

Economics 481-2

Econometrics

Professor Horowitz

MW 6:30-8:30PM

AAH 3245

First Meeting: Wednesday, January 7.

The bootstrap is a method for estimating the distribution of an estimator or test statistic by resampling one's data or a model estimated from the data. It amounts to treating the data as if they were the population for the purpose of evaluating the distribution of interest. Under conditions that hold in a wide variety of econometric applications, the bootstrap provides approximations to distributions of statistics, coverage probabilities of confidence intervals, and rejection probabilities of hypothesis tests that are more accurate than the approximations of ordinary asymptotic distribution theory (e.g., asymptotic normal and chi-square approximations). The reductions in the differences between true and nominal coverage and rejection probabilities can be very large. Therefore, the bootstrap greatly improves the reliability of finite-sample inference in econometrics. The bootstrap is a practical technique that is ready for use in applications. This course explains and illustrates the usefulness and limitations of the bootstrap and why it matters in applied econometrics. (Hint: It matters a lot.) The course covers the theory of the bootstrap, provides numerical examples of its performance, and uses in applied research, and explains how it can be applied to time-series data and non-smooth estimators like the least-absolute deviations estimator. There will be simple instructions on how to implement the bootstrap in applications. There will be occasional problem sets. Each student will write a paper and make a 20-minute presentation of it to the class. There will be no examinations. The text for the course is my chapter in the *Handbook of Econometrics*, Vol. 5. It can be downloaded from the class web page. There will also be readings assigned from

the statistics and econometrics literature on the bootstrap.

Economics 483

Applied Econometrics: Cross-Section Methods

Professor Hu

TTh 9-11

AAH 3245

The purpose of this course is to prepare the students for doing applied work using cross-sectional or panel data. It will cover many commonly used techniques that are available in the "micro-econometrics" literature. Topics include M-estimator, GMM, and standard error correction; quantile regression; discrete choice models; censored regression and sample selection models; duration models; linear and nonlinear panel data models. Special attention will be given to some practical issues in applying these techniques.

MECS 460-2

Foundations of Management Economics

Professor Hörner

T 5-8PM

LEV 561

The second quarter in the two quarter optimization sequence. Topics cover: (Deterministic and Stochastic) Calculus of Variations, Maximum Principle, Discounted, Positive and Negative Dynamic Programming, Transversality Conditions. For each of these methods, both discrete-time and continuous-time will be considered. Applications include Bandit Problems, Optimal Investment Policies, and Moon Landing Problems.

Evaluation is by several problem sets (50%) and a final exam (50%). The course is based on lecture notes and on Sheldon M. Ross *Introduction to Stochastic Dynamic Programming*, (Academic Press, 1983).

MECS 468

Selected Topics in Economic Theory

Professor Yeltekin

TF 4-5:30

LEV 586

Computational analysis of contracts, games and markets. This course is intended to provide students with numerical techniques to solve a variety of problems, including optimal contracts, repeated and dynamic games, competitive equilibria in various markets. It will have three main parts:

1. Fundamentals of computation (linear systems, optimization, nonlinear equations, approximation techniques, numerical integration)

2. Numerical methods for functional problems (finite difference methods, projection and perturbation methods and numerical dynamic programming)

3. Applications from Macro, IO, Finance, Dynamic Contracting, Political Economy

Class grades will be determined by a set of problem sets and a final take home exam. The required text is by Kenneth Judd. *Numerical Methods in Economics*. (MIT Press, 1998)

Finance 487

Dynamic Asset Pricing Theory

Professor Skiadas

MW 3-5

AAH 4214

First Meeting: Wednesday, January 7.

This course covers the basic arbitrage and equilibrium models of asset pricing in dynamic settings. Topics include the implications of no arbitrage for derivative security pricing and term-structure models, optimal portfolio selection, equilibrium models of asset pricing, and the representative agent. The necessary mathematical tools are introduced, including the Ito calculus and stochastic control. Grades will be based on demanding weekly assignments and a take-home final. Finance 485 is a prerequisite.

Economics 501 Seminar

The presentation of the first paper by the third year class is nearly complete.

Presentation of the second paper will be predominantly held in the spring quarter, but also in the last weeks of the winter quarter. Listed below are the date allocations. Pareto-improving exchanges are permissible, and should be communicated to Professor Pavan.

The seminar will meet on Monday and Wednesdays during the Winter and Spring Quarter at 5:15PM in the Seminar Room (Andersen 3245). There will be one presentation and the seminar will last for fifty minutes including the question-and-answer period. Full practical details for the seminar are posted on our web site.

| Week of | Monday | Wednesday |
|---------|--------------|-----------|
| 3/8 | Trivisvavet | Guerron |
| 3/15 | Liu | Pingali |
| 3/22 | Spring Break | |
| 3/29 | Laschever | Sher |
| 4/5 | Vlaicu | Kastl |
| 4/12 | Coates | Zhang |
| 4/19 | No Seminars | |
| 4/26 | Todd | Rosen |
| 5/3 | No Seminars | |
| 5/10 | Freitas | Wood |
| 5/17 | Piccolo | Huang |
| 5/24 | Antov | Salgado |
| 5/31 | Memorial Day | Kuszewski |
| 6/7* | Boffa | Halaburda |

* additional seminar on Tuesday, June 8 - Maruyama

Second years students may wish to attend some of the spring seminars in order to get some idea of expectations for field papers.

Formal Announcements**Funding Guidelines**

The Department has formal rules for the allocation of funding for students in years two through five. This document is posted on our web site. Please read this document as *the Department strictly enforces these*

funding criteria.

Preliminary Examinations

The Department has rules on the number of times that students are allowed to take prelim examinations, and the conditions for such retaking. These effect whether some second and third year students will be allowed to continue in the program. The rules are posted on our web site. Please make sure that you are familiar with them.

Dates for future prelim examinations have been set. The ordering of the three examinations will rotate each year. For the coming year, the dates are:

Spring 2004 Sitting

Wed June 16 Microeconomics

Wed June 23 Macroeconomics

Wed June 30 Econometrics

All examinations will be held 1PM - 4PM.

Fall 2004 Sitting

Wed Sept 1 Microeconomics

Thur Sept 2 Macroeconomics

Fri Sept 3 Econometrics

All examinations will be held 1PM - 4PM.

Note: examinations are *before* Labor Day.**TA Periods in Residence**

Each quarter that you are a TA, you must be in Evanston from the first day of classes until the Monday after examinations end (which is the day that grades are filed). 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 remainder of this year the dates for which you must be in attendance are:

Fall: Until Mon Dec 15

Winter: Mon January 5 - Mon March 22

Spring: Mon March 29 - Mon June 14

Graduate School Deadlines

December 30 for admission to doctoral candidacy for the winter quarter. (However, if you are already registered for 598, you can apply by January 9 to change your registration to 599.)

March 31 for admission to doctoral candidacy for the spring quarter

April 2 to submit an "Application for a Degree" for all candidates who expect their degrees to be awarded in June. In addition, students wishing to obtain a Master's degree in June must file for admission to candidacy.

May 14 is the deadline for submission of completed dissertation and all supporting materials to receive the Ph.D. degree in June.

May 21 is the last day for receipt of "Final Examination Report" and any "Change of Grade" forms for 499 Projects or 590 Research for students who expect a master's degree to be awarded in June.

Funding Opportunities

Teaching Opportunities 2004-05

Application forms for teaching as an instructor in the evening program (School of Continuing Studies) and in the regular WCAS day school will be circulated on February 1. Students will be appointed on the basis of excellent performance as a lecturer or as a TA.

Funding Web Page

The web page listing non-departmental sources of funding has been updated. You can connect to it from the page giving information for current graduate students.

The page gives information and links to internal and external fellowships, and also how to obtain funds for research expenses and attending conferences.

NU Dissertation Year Fellowships

The Department will be nominating students for the Dissertation Year Fellowship (DYF) competitions offered by The Graduate School and by the College of Arts and Sciences. To apply you need to:

C Prepare a brief (<1500 word) description of your dissertation, your progress to date, and the timetable to completion.

C Obtain two NU faculty references.

Completed nominations should be given to Professor Ferrie by Friday, January 9. Application forms and further information are available as links from the funding page on our web site.

NU Alumnae Dissertation Fellowships

This award offers a year of stipend and tuition to women who will be registered for 503 in 2004/05. Special preference will be given to those who have had to interrupt their academic careers. Note that the deadline is December 19. Applications are made directly to the Graduate School. Information and forms are available at links from the funding web page.

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 \$1,500, and there is funding for up to two conferences a year that covers 2/3 of the cost up to a maximum of \$1,000. Full details of the

application procedures and links to application forms are on the funding web page.

Federal Aid Forms

If you are a U.S. citizen or a U.S. permanent resident you should renew your FAFSA (Free Application for Federal Student Aid) application for the 2004-05 school year. Forms should be arriving by mail sometime in December to those of you who have previously filed these forms. If you have moved, the post office will not forward it; you will have to obtain and complete a new form. You will be able to pick up a FAFSA form from the Financial Aid office at the Graduate School after the middle of January. You can also complete the forms on-line at www.fafsa.ed.gov after January 1 and before June 30. The best thing to do is wait until after you have filed your income tax returns for 2003 before filling out these forms.

Notes

Personal copy accounts

Graduate students can obtain a personal account on our copy machines. You will be billed at the end of each month at 5¢ a copy. To obtain an account please send an e-mail to the Assistant Chair <ipsavage@northwestern.edu> with your name and a 5-digit number to be used as your personal access code (the number must not start with a 0).

Next Graduate Connection

Volume 9, number 3 will be published in the week of March 8.