

PrincetonEconomics

JUNIOR

INDEPENDENT

WORK

HANDBOOK

Class of 2024

Updated March 2023

This handbook describes the economics department's junior independent work (JIW) program and includes requirements and guidelines for the preparation of a prospectus and junior paper. You are expected to be familiar with its contents. It will answer many of your questions and will help you avoid misunderstandings as you prepare your paper. If you are uncertain about any aspect of the program, please contact:

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Undergraduate Program Manager

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Questions on forms & surveys

Ole Agersnap

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Attendance-related questions

Your faculty advisor and AI

Research-related questions (assigned in early September)

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All other questions

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1. Introduction

Welcome to the Department of Economics

Juniors in our department undertake a yearlong research project, with two work products to be submitted for a grade. During the fall term, students investigate a topic and write a **prospectus** for a research project. This prospectus will be **due Thursday, December 8, 2022 by 11:59 p.m.** The junior paper (JP) builds on the prospectus and is written in the spring term. The **JP** will be **due Monday, April 24, 2023 by 11:59 p.m.**

Learning Goals

Junior Independent Work is meant to prepare students for senior independent work. By the end of the junior year,

- Students should understand how to access the resources needed to complete independent work.
- Students should learn how to structure their time to meet deadlines.
- Students should be able to pose a research question and clearly identify the contribution of their work within the field (or subfield).
- Students should be able to write in a *style and tone* that reflects current conventions and preferences.
- Students should be able to identify and state the limitations of their research.
- Students should have some understanding of the *methods* suitable for independent work which may be either empirical, theoretical or experimental.

How Junior Independent Work is structured

The JP is a scaled-down version of the senior thesis. Students are expected to conduct original research and gain knowledge of the substantive topics they study. However, the JPs are significantly shorter and typically less ambitious than a senior thesis. The focus is on training students how to do research in economics in general, and how to write a senior thesis in particular.

To expose students to common tools that are essential to research in economics, the department offers a comprehensive series of lectures and workshops. Topics of lectures in the fall include (1) introduction to junior independent work (the “kick-off” meeting), (2) literature/data sources, and (3) Griswold Seminar. Moreover, there will be a senior thesis planning meeting during the May 2023 reading period. There will be workshops on four topics: (1) data sources, (2) writing in economics, (3) data management, and (4) data analysis. Juniors must attend all lectures and four workshops, one in each of the four topics. (Students who excelled in ECO 313, ECO 312, or ECO 302, may be exempt from the data management and data analysis workshops if they meet the conditions laid out on pages 6 & 7).

To learn about doing research in a specific area of economics, juniors will be divided into advising groups led by a faculty advisor and supported by an AI. Students with similar interests will be grouped together and assigned to an appropriate faculty advisor. These smaller advising groups will meet periodically throughout the year to discuss specific research topics and to provide feedback on students’ progress. The faculty advisors will also meet individually with students to read and grade student assignments. During 2022/23, we will have eleven groups.

Important logistical information and advice

- Meeting times: Most JIW-related meetings take place on **Mondays and Wednesdays, from 3:00-4:20 p.m.**, but there will not be meetings every week. **Juniors ARE REQUIRED to keep this time slot free on either Monday or Wednesday in the fall.** However, it is **strongly recommended that juniors**

keep both days (Monday and Wednesday) free. Many of the workshops will only be offered on Monday or Wednesday. Keeping your schedule free on both days will allow attendance at the workshops most relevant to your research interests. There will be no restriction on your spring schedule.

- Useful courses: Undergraduate research in economics may be theoretical or empirical, but in practice most junior papers are empirical. Empirical evidence takes a variety of forms, from stylized facts to descriptive statistics to statistical regression analyses. Students writing empirical papers are strongly recommended to take ECO 313 (Econometric Applications, offered in spring), and those writing primarily theoretical papers are strongly recommended to take ECO 317 (Economics of Uncertainty, offered in fall) or ECO 418 (Strategy and Information, offered in fall). These courses convey knowledge that is even more important for senior theses, so if at all possible take them now.
- Read the handbook: The remainder of this handbook contains detailed information on lectures, workshops, and advising group meetings. It also includes information on the areas of expertise of the eleven faculty advisors for 2022/23, grading guidelines for JIW, a detailed calendar of meetings and deadlines, and information on the Program in Political Economy (PPE).
- Use the Canvas site: The Canvas site for JIW will contain the most up-to-date information about JIW. In addition to this handbook, the site will include announcements, times and locations of meetings, sign-up information for workshops, materials from the lectures and workshops, and information relevant for your particular advising group. You are encouraged to check the site frequently throughout the year.

2. Class lectures and workshops

Lectures

Lecture 1 – Introduction to independent work in economics (K. Noonan)

Wednesday, September 7, 3:00 to 4:20 p.m. or 7:30-8:50 p.m.

Attend ONE of two lectures.

This meeting introduces juniors to the economics department and JIW. Professor Noonan will discuss requirements and organizational matters. She will point to characteristics of good prospectuses and JPs as well as advise on how to find an interesting and feasible research question. Professor Noonan will also briefly talk about research strategies, and the typical structure of an economics paper.

Note: As almost all juniors pursue empirical projects, this lecture will focus on empirical work. If there is sufficient interest, Professor Noonan will try to organize an *optional* meeting for students interested in theory.

Lecture 2 – Literature and data sources in economics (B. Bordelon, B. Coffey & C. Jefferson)

Monday, September 12 and Wednesday, September 14, 3:00 to 4:20 p.m.

Attend ONE of two lectures.

Bobray Bordelon (Economics, Finance and Data Services Librarian), Bobbi Coffey (Finance Research Librarian), and Charissa Jefferson (Labor Economics Librarian), will teach students how to do literature searches in economics. They will also introduce students to data sources in economics and finance and give a general overview of Princeton's data holdings. Awareness of the latter is important because it determines the feasibility of your research question.

Lecture 3 – Griswold Junior Independent Work Research Forum

Wednesday, September 28, 3-4:20 p.m.

Attendance required. Students with a course conflict for Wednesday must contact Professor Noonan **prior** to the Griswold JIW research form to discuss alternative.

Six select students from the class of 2023 will present their junior independent work.

Asher Joy

Is the Common Core at the Core of Educational Equity? Exploring the Effect of the Common Core State Standards on Race- and Income-Based Achievement Gaps

Georgia Nabors

Revisiting Mortgage Discrimination and Racial Redlining: An Analysis of HMDA Data Before, During, and After the Great Recession

JC Martinez

The Political Implications of Corporate Philanthropy: Evidence from Pivotal Politics and Legislator Behavior on Environmental Issues

Katherine McIntire

The Effects of ESG and Environmental Practices on Corporate Financial Performance: An Analysis of S&P 500 Companies from 2007 to 2020

Shruti Venkat

The Effect of Online Gambling Regulation on Cannabis and Alcohol Addiction Based on Region of Residence in Québec

Jean Suttasunthorn

The Effect of the 2015 Refugee Influx on Native Employment Rates in Germany: A Differences-in-Differences Analysis

Lecture 4 – Planning for the senior thesis (K. Noonan, B. Bordelon, B Coffey & C. Jefferson)

Wednesday, May 3, 3:00-3:50 p.m.

Attendance required.

This meeting will cover planning for the senior thesis. Topics of this meeting will include choosing a topic, applying for funding, and finding an advisor. Bobray Bordelon, Bobbi Coffey, and Charissa Jefferson, will discuss data issues for senior theses.

Workshops

Workshop series 1 – Data sources

Bobray Bordelon, Economics and Finance Librarian/Data Services Librarian,

bordelon@princeton.edu

Barbara (Bobbi) Coffey, Finance Research Librarian, bcoffey@princeton.edu

Charissa Jefferson, Labor Librarian, charissaj@princeton.edu

Subject librarians will survey data sources and Princeton's holdings of various types of data.

1. *Health, Crime and Other Socioeconomic Data* (Bobray Bordelon)

Monday, September 26, 3:00- 4:20 p.m., room TBA

Micro-level data are necessary to examine why an individual makes specific choices. Bordelon will discuss micro-level data for the economic study of areas such as health, crime, art and culture, elections, and social attitudes.

2. *Labor and Education Data* (Charissa Jefferson)

Monday, October 3, 3:00- 4:20 p.m., room TBA

Micro-level data for the economic study of labor and education areas will be discussed.

3. *Macroeconomics and Trade Data* (Bobray Bordelon)

Monday, October 3, 3:00- 4:20 p.m., room TBA

Most statistical studies make use of some macroeconomic data. Bordelon will discuss sources for domestic and international macroeconomic data and trade data. This workshop is useful for students studying macroeconomic indicators, trade, monetary policy, fiscal policy, development, and political economy.

4. *Environmental Data* (Bobray Bordelon)

Monday, October 3, 7:30-8:50 p.m., room TBA

Bordelon will go over environmental data sources and Princeton's holdings of such data.

5. *Financial Data* (Bobbi Coffey)

Thursday, October 6, 7:30-8:50 p.m., room TBA

Coffey will discuss sources of data for studying financial instruments and markets. She will discuss Princeton's holdings, which are stellar in many areas of finance but limited in others.

Attendance requirement: Students need to register by 11:59 p.m. on September 23rd and attend one workshop of their choice. Registration is available on Canvas.

Workshop series 2 – Writing an economics prospectus

[Dr. Judy. Swan](#), Associate Director, Writing Program and [Sebastian Guarda](#)

We will offer seven identical workshops aiming to teach students how to present and discuss information in economics. Topics include how to structure a prospectus, how to introduce a research question, how to present the relevant literature, etc. The workshop will draw on samples of economics prospectuses submitted in prior years.

- **Monday, October 24, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Wednesday, October 26, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Monday, October 31, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Wednesday, November 2, 3-4:20 p.m.**

Attendance requirement: Students need to register by 11:59 p.m. on October 14th and attend one workshop of their choice. Registration is available on Canvas.

Workshop series 3 – Data management in Stata

[Oscar Torres-Reyna](#), Head of Economics Statistical Services

We will offer seven identical hands-on workshops designed to teach data management in Stata. These workshops will cover topics such as how to pull data into Stata and how to use basic data manipulation commands (i.e., recording variables, creating new variables, etc.).

- **Monday, October 24, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Wednesday, October 26, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Monday, October 31, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Wednesday, November 2, 3-4:20 p.m.**

Attendance requirement: Students need to register by 11:59 p.m. on October 14th and attend one workshop of their choice. Registration is available on Canvas. Exemption from attendance: Juniors that completed ECO 313 (with a passing grade) or ECO 312 (with a grade of A- or higher) *before their junior year* do not need to attend this workshop.

Workshop series 4 – Data analysis in Stata

[Oscar Torres-Reyna](#), Head of Economics Statistical Services

These workshops will teach data analysis in Stata. They will cover basic Stata analysis commands such as summarize, tabulate, and regress and also elements of “best practices” in analyzing data (treatment of missing values, sample selection, etc.).

- **Wednesday, February 1, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Monday, February 6, 3-4:20 p.m. & 7:30-8:50 p.m.**
- **Wednesday, February 8, 3-4:20 p.m. & 7:30-8:50 p.m.**

Attendance requirement: Students need to register by 11:59 p.m. on 1/25 and attend one workshop of their choice. Registration is available on Canvas. Exemption from attendance: Juniors that completed ECO 313 (with a passing grade), ECO 312 (with a grade of A- or higher) or ECO 302 (with a grade of A and higher) before their junior spring do not need to attend this workshop.

Additional Resources

Economics Statistical Services

The Economics Statistical Services (ESS) unit provides data analysis assistance to students enrolled in the economics department. Visit <https://economics.princeton.edu/undergraduate-program/ess/> for tutorials and to schedule one-on-one appointments with the ESS team. For additional support, ESS will be hosting a *Data Analysis Kick-Off Sessions* during the Wintersession.

Data and Statistical Services

Data and Statistical Services (DSS) works with students to find appropriate data and assists with data analysis. Visit <https://library.princeton.edu/dss> to schedule an appointment.

PU Library workshops – Citing sources

Princeton University Library offers workshops on citing sources using bibliographic managers such as Zotero, EndNote, and RefWorks. These programs interact with Microsoft Office or LaTeX to automatically format your references and create footnotes, endnotes, and bibliographies in any citation style you choose. You may register at <http://library.princeton.edu/help/citation-tools>.

The Writing Center

The Writing Center offers one-on-one conferences to help with the writing process. Visit <https://writing.princeton.edu/writing-center> to schedule an appointment.

The McGraw Center

The McGraw Center provides programs to help develop skills such as time management and focus needed to complete independent work. Visit <https://mcgraw.princeton.edu/undergraduates/programs> for program offerings.

3. Advising groups and meetings

All juniors will be assigned to an advising group led by a faculty member in Economics and supported by an AI. Faculty members will usually advise on projects close to their larger area of research interests. There will be ten advising groups in 2022/23.

Requesting an advising group

After reviewing the list of faculty advisors and their research interests, fill out the [JIW advising group request survey](#) on Canvas form no later than **11:59 p.m., Sunday, September 11, 2022**. Any technical questions on accessing the form should be addressed to [Gina Holland](#). Please give your preference for an advising group by indicating your top 6 choices. If you have a conflict on Mondays or Wednesdays, make sure to only list advising groups meeting on the day that you are available. There is space on this form to indicate your areas of research interest and to indicate your proposed JP topic. Do not worry if you do not have a topic yet. The great majority of students will not have a specific research question at the start of the fall term. Instead, be as specific as you can be about your research ideas.

Self-matching: Sometimes, juniors with specific research interests approach one of the faculty advisors. If a faculty member agrees to take you on as an advisee, an email from the faculty advisor or an email from you copying the faculty advisor must be sent to Professor Noonan, confirming the match *by* **Friday September 9, 2022 at 11:59 p.m.** All self matches will be posted on Canvas by 11:59 p.m. on **Saturday September 10, 2022**.

Be sure to fill out the JIW advising group form even if you self-match!

Advising group assignments will be made by Professor Noonan and posted by 11:59 p.m. on **Wednesday, September 14th** on Canvas. The first advising group meetings will take place; on **Monday, September 19, or Wednesday, September 21 from 3-4:20 p.m.**

We make every effort to match you with your most-preferred advisor/advising group. However, given the distribution of students' research interests relative to those of the faculty advisors, students cannot expect to be placed in one of their top choices. We will do the best we can, given the constraints. All faculty members advising JPs can guide you through the process of writing a JP with sound economic reasoning. You are encouraged to seek out the advice of other faculty members, especially those with expertise in your area of interest, but your advisor alone is responsible for grading. As such, it is important for you to review grading criteria with your advisor.

On occasion, although quite rarely, your advisor can be a total mismatch. If this happens, talk to Professor Noonan, who will try to make alternative or supplementary arrangements to help you. The deadline for any advising group changes is **October 14, 2022**. Please let Professor Noonan know about any concerns regarding your advising group/advisor/AI throughout the year.

Advising Group Meetings

Each junior will attend three advising group meetings throughout the year; two during the fall and one during the spring. Advising group meetings will provide opportunities for students to interact and learn from their faculty advisors and from each other. The vast majority of fall advising group meetings will take place on either Mondays or Wednesdays from 3-4:20 p.m. However, once advising groups are formed, groups may change to meeting times that are better for the faculty advisor and group members. Meetings in the spring will be arranged by the AIs.

Advising group meeting 1 – Discussion of topic areas

Students will meet their faculty advisor and AI to discuss specific topics in their area of interest, with a focus on which topics are feasible and which are not. Students may be given a reading list of useful review articles that can help them identify specific topics or they may discuss a successful and an unsuccessful prospectus. The advisor may also clarify his or her expectations regarding the outline, prospectus, and JP.

Advising group meeting 2 – Discussion of the research prospectus

Students will meet with their advising groups to discuss the research prospectus. Students may be asked to present their draft prospectus and/or to respond to comments they received on their draft. They will receive feedback from the group and instructors.

Advising group meeting 3 – Discussion of junior paper

Students will meet with their advising groups to discuss their progress on their junior papers. Advisors will usually ask students to present their JP draft. To allow for more in-depth feedback, each advising group will be divided into small groups. Meetings will take place around the seventh week of spring. AIs will coordinate with students to find appropriate times.

Attendance: Students are required to attend all group meetings (two in the fall and one the spring).

One-on-One Meetings

In addition to group meetings, students and their faculty advisor are expected to meet individually at least four times throughout the year. In a first meeting (during the fourth or fifth week of the fall term) advisor and advisee discuss possible topics and appropriate research strategies. In a second meeting (during the seventh to ninth week of the term) the faculty advisor will give feedback on the students' outline and bibliography. During a third meeting at the start of the spring semester, the graded prospectus and next steps can be discussed. A final one-on-one meeting, to take place during the seventh to eleventh week, may deal with questions regarding the completion of the final paper. Each group has an AI. AIs are also available for meetings throughout the academic year.

For most advisors, you can sign up for JIW-related appointments on Calendly or Microsoft Bookings. You should have your first one-on-one meeting with your advisor no later than October 7, 2022.

4. Faculty Advisors and AIs

Faculty advisors and their research interests

Swati Bhatt, sbhatt@princeton.edu

Meeting Day: Wednesday

Office: 202B Julis Romo Rabinowitz Building

Areas of specialization: Economics of Digitization, Industrial Organization, Finance, Applied Micro

Teaching: Economics of the Internet, Connection and Communication in the Digital Bazar, Industrial Organization, Intermediate Microeconomics

Professor Bhatt's research centers on the economics of digitization, industrial organization with a focus on the technology industry, and finance. Her 2017 book, *How Digital Communication Technology Shapes Markets*, explores how digital technology has affected the functioning of markets and her 2019 book, *The Attention Deficit*, examines the consequences of information overload - the content tsunami. Bhatt has advised hundreds of juniors and seniors, and was Director of Student Programs at the Bendheim Center for Finance from 2000-2007. She is a faculty fellow of Forbes College and academic advisor to the varsity football team. She received her Ph.D. in economics from Princeton.

Smita Brunnermeier, smita@princeton.edu

Meeting Day: Monday

Office: 228 Julis Romo Rabinowitz Building

Areas of specialization: Environmental Economics, Applied Microeconomics

Teaching: Environmental Economics, Issues in Environmental & Natural Resource Economics, Intermediate Microeconomics, Environment and Development

Professor Brunnermeier's research covers topics in environmental economics. She has studied the costs and benefits of regulating hazardous air pollutants, the effects of environmental regulation on technological innovation and on industry location decisions, voluntary environmental programs, and the links between corporate environmental and financial performance. She has advised hundreds of JIW and senior thesis projects on applied microeconomics topics at Princeton and is the Executive Director of the Undergraduate Program in Economics. Her Ph.D. is from Vanderbilt University.

Nicholas W. Buchholz, nbuchholz@princeton.edu

Meeting Day: Monday

Office: 281 Julis Romo Rabinowitz Building

Areas of specialization: Industrial Organization, Applied Microeconomics, Transportation and Urban Economics

Teaching: Industrial Organization; Firm Competition and Strategy

Professor Buchholz studies and teaches topics in industrial organization, including questions about market regulation and antitrust behavior. His research specifically examines the design and regulation of transportation markets and urban infrastructure. His work has covers topics such as: how should transportation services be allocated within a city? How does pricing impact the equilibrium availability of for-hire transportation? What is the tradeoff between equity and efficiency in cities' transportation infrastructure? How does transportation access impact the value of spending time in different places? Are ride-hail platforms like Uber and Lyft too big or too small? His broader interests include analyses of markets in spatial settings, (such as real estate markets, zoning laws, and firms' location strategies), platform markets, and the empirical analysis of dynamic games. Professor Buchholz received his Ph.D. in economics from The University of Texas at Austin.

Hope Corman, hc9188@princeton.edu

Meeting Day: Wednesday

Office 232 Julis Romo Rabinowitz Building

Areas of Specialization: Health Economics, Family Economics

Teaching: Introduction to Microeconomics, Intermediate Microeconomics, Introduction to Macroeconomics, Health Economics

Professor Corman's research focuses on issues related to human capital. These topics include: health, education, crime and delinquency, child development, disability, housing, and social capital. Recent work has focused on the impact of welfare policies on mothers and their children, and causes and consequences of poor child health. She is a Research Associate with the National Bureau of Economic Research and an editor of the journal *Review of Economics of the Household*. She holds a Ph.D. from City University of New York.

Adrien Matray, amatray@princeton.edu

Meeting Day: Monday

Office: 207 Julis Romo Rabinowitz Building

Areas of specialization: Entrepreneurship and Innovation, household finance, labor economics

Teaching: Corporate Finance; Entrepreneurship, Innovation and Venture Capital

Professor Matray's interests include entrepreneurship, innovation, and access to banking services for low-income households. He has done research on the real effects of lending relationships on innovative firms and inventor mobility and on the effect of whether R&D-intensive firms are more resilient to trade shocks, in particular increased competition from Chinese imports. His current work on the topic involves understanding the frictions affecting entrepreneurship, SME growth, and technology adoption and how new technologies affect SME productivity, employment, and income growth. These studies are conducted both in developed countries and in developing countries (India and Brazil).

Related to these questions, Adrien studies more broadly the allocation of workers across sectors and geographic areas and how the emergence of "bubbles" can affect the investment in human capital (decision to drop out of high school, to pursue an undergrad degree) and produce misallocation and affect long term earnings.

His second main line of research is on the determinants and consequences of access to banking services for low-income households. In particular, he studies how the supply bank branches affect financial inclusion, how health risk, and the expansion of publicly-provided health insurance (Medicaid and "Obamacare") affect low-income household access to debt and ability to accumulate wealth. Finally, he is currently investigating the existence of potential racial discrimination in the banking sector regarding loan applications and the offer of affordable saving products.

Matray holds a Ph.D. in finance from HEC Paris and has previously been a Consultant for the French Ministry of Economy and Finance and for the World Bank.

Kelly Noonan, knoonan@princeton.edu

Meeting Day: Monday

Office: 222 Julis Romo Rabinowitz Building

Areas of Specialization: Health Economics, Family Economics

Teaching: Introduction to Microeconomics, Intermediate Microeconomics, Health Economics

Professor Noonan's research focuses on the impact of maternal and child health on family resources and the economics of the family. She is particularly interested in child-policy issues. Noonan has explored the effects of maternal depression on, among others, family food insecurity and family homelessness and the impact of the 2008-11 crisis in Iceland on health behaviors. She is a faculty fellow of Butler College, a faculty fellow for the men's volleyball team and an affiliate with Princeton's Center for Health and Wellbeing. Noonan holds a Ph.D. in economics from SUNY Stony Brook.

Jonathan Payne, jepayne@princeton.edu

Meeting Day: Monday

Office: 307 Julis Romo Rabinowitz Building

Area of specialization: Money and Banking, Macroeconomics, Financial Economic History, and Computational Economics

Teaching: Money, Finance & Macroeconomics with Agent Heterogeneity

Professor Payne's primary research focuses on money, banking, macroeconomics, and financial history. He has studied how to redesign the banking system to eliminate runs, how banks contract with firms during financial crises, and how to calculate historical yield curves for US government debt. His current research is focused on the future of the financial system. He is working on the potential role of private digital currencies as well as the impact of introducing a central bank digital currency. He is also working on developing new computational tools for solving the differential equations that arise in macroeconomic models. He is part of a group working on using neural networks to solve high dimensional differential equations. He received his Ph.D. in Economics from New York University before coming to Princeton.

Can Urgun, curgun@princeton.edu

Meeting Day: Wednesday

Office: 277 Julis Romo Rabinowitz Building

Areas of specialization: Micro Theory, Game Theory, Organizational Economics, Applied Micro

Teaching: Microeconomic Theory

Professor Urgun's areas of research interest are micro theory, game theory and organization economics. He has studied basic principles underlying Sun Tzu's classic treatise Art of War in a dynamic decision-theoretic model. Another paper examines the effects of patience in ordinary conflicts such as divorce, price wars and commercial litigation. More recent research explores contract manufacturing relationships and the role of costly inspection and money burning activities such as influence activities and bureaucracies in internal capital markets of multidivisional firms. Urgun holds a Ph.D. in managerial economics and strategy from Northwestern University.

Wei Xiong, wxiong@princeton.edu

Meeting Day: Monday

Office: 192A Julis Romo Rabinowitz Building

Area of specialization: Capital Market Imperfections, Behavioral Finance, Digital Economy, China's Financial System

Teaching: Chinese Financial Markets and Monetary Systems

Professor Xiong is the Trumbull-Adams Professor of Finance and Professor of Economics in the Department of Economics and Bendheim Center for Finance, Princeton University. His research interests

center on capital market imperfections, behavioral finance, digital economy, and China's financial system. He has received various awards, including 2018 China Economics Prize, 2014 Inaugural Sun Yefang Financial Innovation Award, 2013 NASDAQ OMX Award by Western Finance Association, and 2012 Smith Breeden Award (first prize) by American Finance Association. He received his Ph.D. in finance from Duke University in 2001, M.A. in physics from Columbia University in 1995, and B.S. in physics from University of Science and Technology of China in 1993. He is Research Associate of the National Bureau of Economic Research and Co-Editor of Journal of Finance (the flagship journal of American Finance Association), as well as Academic Dean of School of Management and Economics, Chinese University of Hong Kong, Shenzhen.

Iqbal Zaidi, izaidi@princeton.edu

Meeting Day: Wednesday

Office: A26 Julis Romo Rabinowitz Building

Areas of specialization: Macroeconomics, International Economics, Financial Economics, Applied Econometrics

Teaching: Macroeconomics, International Monetary Economics, Applied Econometrics

Professor Zaidi's research covers macroeconomics and financial economics, with a particular focus on econometric estimation of policy-oriented models. He has studied fiscal and monetary policy, structural adjustment in developing countries, financial markets, and financial regulation. Zaidi worked 25+ years in senior positions at the International Monetary Fund before coming to Princeton. He holds a Ph.D. in economics from Princeton University.

JIW Faculty Director

Kelly Noonan

knoonan@princeton.edu, office: 222 Julis Romo Rabinowitz Bldg.

JIW Organizer

Ole Agersnap

agersnap@princeton.edu

JIW Assistant Instructors (AIs)

Each AI will support one or two advising groups. They will attend, participate, and take attendance in all group meetings. They will manage the Canvas site for their groups and comment on the outline/bibliography, draft prospectus, and draft paper. They will also hold regular office hours.

AI	Email	Research Interest	Advisor(s)
Ole Agersnap	agersnap@princeton.edu	Public economics	Professor Noonan
Patrick Agte	pagte@princeton.edu	Development, Health, Education, Industrial Organization	Professor Corman
Zhang Chen	zhangc@princeton.edu	International Trade, Macro	Professor Zaidi
Pier Creanza	pcreanza@princeton.edu	Labor, Public Finance, Economic History	Professor Bhatt Professor Brunnermeier
Nicolas Hommel	nhommel@princeton.edu	Finance and International Economics	Professor Matray
Jiwon Lee	jiwonlee@princeton.edu	Finance and Industrial Organization	Professor Urgun
Lucas Mann	lmann@princeton.edu	Macro, Macro labor	Professor Buchholz
Shumiao Ouyang	souyang@princeton.edu	Finance and Applied Micro	Professor Xiong
Yinuo Zhang	yinuoz@princeton.edu	Macro and Macro labor	Professor Payne

5. Important submission deadlines

9/11 (S)	Advising group request survey due.
9/12 (M)	Political Economy applications due.
9/23 (F)	Registration for a data sources workshop
10/7 (F)	Outline/bibliography Submit a two-page synopsis of your JP to Canvas. The synopsis should include a well-defined research question, your expected contribution to the existing literature and a bibliography with AT LEAST five annotated references. This document will serve as the starting point for your prospectus.
10/14 (F)	Registration for a writing workshop and a data management workshop
11/11 (F)	Draft prospectus
12/8 (F)	Prospectus & mid-year JIW evaluation
1/25 (W)	Registration for Data Analysis Workshops
4/3 (M)	Draft JP
4/24 (M)	Final JP & final JIW evaluation

All assignments should be submitted to Canvas by 11:59 p.m. on the due date. Please submit the prospectus and JP in PDF format. The file names should be your last and first name and the last name of your advisor. Make sure your PDF file is not corrupted or otherwise unreadable.

6. JIW Schedule Class of 2024

Please consult Master Calendar *on Canvas* for updates throughout the year. This version was updated on 9/5/2022.

Fall term—first six weeks	
9/7 (W), 3-4:20 p.m. or 7:30-8:50 p.m.	<i>Class lecture: Introduction to JIW</i> Students attend ONE of two meetings. Presenter: K. Noonan
9/9 (F)	<i>Self -Match Requests</i>
9/11 (S)	<i>Advising group requests</i>
9/11 (S)	<i>Canvas photo</i>
9/12 (M)	<i>PPE applications</i>
9/12 (M) or 9/14 (W), 3-4:20 p.m.	<i>Class lecture: Literature and data in economics</i> Students attend ONE of two meetings. Presenters: B. Bordelon, B. Coffey & C. Jefferson
9/14 (W)	Group assignments posted and Canvas invites sent
9/16 (F)	<i>Accept Canvas advising group invites</i>
9/19 (M) 3-4:20 p.m.	<i>Advising group meeting:</i> Discussion of research area. Attendance required. Prof. Smita Brunnermeier Prof. Nicholas Buchholz Prof. Adrian Matray Prof. Kelly Noonan Prof. Jonathan Payne Prof. Wei Xiong
9/21 (W) 3-4:20 p.m.	Prof. Swati Bhatt Prof. Hope Corman Prof. Can Urgan Prof. Iqbal Zaidi
9/23 (F)	<i>Registration for Data Source Workshops</i>
9/28 (W) 3-4:20 p.m.	<i>Class Lecture: Griswold Seminar:</i> Attendance required. Presentations by select students from class of 2022
9/26 (M) 3-4:20 p.m. 10/3 (M) 3-4:20 p.m. 10/3 (M) 3-4:20 p.m. 10/3 (M) 7:30-8:50 p.m. 10/6 (Th) 7:30-8:50 p.m.	<i>Data sources workshops:</i> students register and attend at least ONE workshop. Attend ONE of five workshops. Health, crime, and other socioeconomic data (Bordelon) Labor and education micro data (Jefferson) Macroeconomics and trade data (Bordelon) Environmental data (Bordelon) Finance data (Coffey)

9/26-10/7	One-on-one meetings with advisors Students schedule and meet one time individually with advisor
10/7 (F)	<i>Outline/bibliography</i> See Canvas for a description of assignment
10/14 (F)	<i>Registration for Writing and Data Management Workshops</i>
10/14 (F)	<i>Outline/bibliography</i> returned

Fall term—second six weeks

10/24 (M) 3-4:20 p.m. and 7:30-8:50 p.m. 10/26 (W) 3-4:20 p.m. and 7:30-8:50 p.m. 10/31 (M) 3-4:20 p.m. and 7:30-8:50 p.m. 11/2 (W) 3-4:20 p.m.	<i>Writing Workshops</i> , J. Swan/S. Guarda Students register and attend one workshop
10/24 (M) 3-4:20 p.m. and 7:30-8:50 p.m. 10/26 (W) 3-4:20 p.m. and 7:30-8:50 p.m. 10/31 (M) 3-4:20 p.m. and 7:30-8:50 p.m. 11/2 (W) 3-4:20 p.m.	<i>Data Management Workshops</i> , O. Torres Students register and attend one workshop (unless exempt)
10/24-11/11	One-on-one meetings with advisor Students schedule and meet one time individually with advisor
11/11 (F)	<i>Draft prospectus</i>
11/18 (F)	<i>Draft prospectus</i> returned
11/28 (M) 3-4:20 p.m.	<i>Advising group meeting</i> : Student presentations. Attendance required. Prof. Smita Brunnermeier Prof. Nicholas Buchholz Prof. Adrian Matray Prof. Kelly Noonan Prof. Jonathan Payne Prof. Wei Xiong
11/30 (W) 3-4:20 p.m.	Prof. Swati Bhatt Prof. Hope Corman Prof. Can Urgan Prof. Iqbal Zaidi
12/8 (Th)	Prospectus and mid-year JIW evaluation

Winter Session

1/13 (F)	Prospectus comments and grades available
1/23-1/27	BOOTCAMP More information coming!

1/25 (W)

Registration for Data Analysis Workshops

Spring term—first six week

2/1 (W) 3-4:20 p.m. & 7:30-8:50 p.m.

Data Analysis Workshops, O. Torres

2/6 (M) 3-4:20 p.m. & 7:30-8:50 p.m.

Students register and attend one workshop (unless exempt).

2/8 (W) 3-4:20 p.m. & 7:30-8:50 p.m.

The workshops will focus on *Cross-section, panel* and *time-series data*.

1/30-2/10

One-on-one meetings with advisor

Students schedule and meet one time individually with advisor

Spring term—second six week

3/20-3/24

Advising group meeting: Student presentations

Group will be split into 2 or 3 subgroups. Schedule TBA by individual advisor/AI

3/20-4/21

One-on-one meetings with advisor

Students schedule and meet one time individually with advisor

4/3 (M)

Draft JP

4/12 (W)

Draft JP returned

4/24-4/28

Advisor office hours for students wishing to discuss senior thesis plans

4/24 (M)

Final JP and year end evaluation

5/3 (W) 3-3:50 p.m.

Class lecture: Senior thesis planning meeting

Attendance required. Presenters: Noonan, Bordelon, Coffey and Jefferson

5/23 (I)

Final JP Grades & Comments available on Canvas

****All assignments due by 11:59 p.m. on due date.**

7. Grading

On your transcript, you will receive a single JIW grade, which will be based on the prospectus, the junior paper, and attendance and participation in lectures, workshops, and advising group meetings. A very good or excellent junior paper must provide correct and novel empirical analysis, theoretical analysis or experimental work that illustrates knowledge of methodological tools and applications to conduct original research.

The prospectus

Criteria for Grading

The prospectus can be thought of as falling above, below, or on an imaginary line in the grading scale. In general, prospectuses that meet the top five of our criteria will receive grades above the line (A+, A, or A-). Those that don't meet these five criteria will receive grades below the line (regardless of how well they fulfill the other criteria). See the following page for a detailed grading rubric.

1. Question or Problem. A well-defined question or problem that requires economic analysis and that is motivated (in terms of the economics/finance literature and/or the proposed methodology), feasible (in terms of the available data for empirical projects, and the mathematical and computational methods for theoretical projects), and presented explicitly and early in the document.

2. Innovation and Independence. Demonstration of insight and independence of thought or approach, whether in terms of the question or problem posed, the methodology specified, or (for empirical projects) the data to be analyzed.

3. Methodology. A well-developed and appropriate methodology (an empirical approach or a theoretical modeling strategy) that can informatively address the question or problem. For empirical projects, this means (1) a clear statement of the hypothesis or hypotheses to be tested, and (2) the identification and justification of the statistical and econometric technique to be used (for example, linear or probit regression analysis). For theoretical projects, this means (1) a tentative but essentially complete statement of the structure of the model, (2) a clear statement of the solution methods that will be used (for example, closed-form analytical or numerical solutions), (3) preferably, some preliminary results, and (4) a statement of ways in which the model will be developed and refined in the following semester.

4. Data. For empirical projects, well-chosen data that are appropriate to the question or problem and are readily available.

5. Structure. A visible, easy-to-follow structure consistent with the conventions of economics.

6. Literature Review. The situating of the question or problem in the literature—not an attempt to exhaustively cite the literature but rather to establish a link between the question/problem and the existing literature in economics/finance.

7. Expected or Preliminary Results. This should include (1) discussion of the outcomes, or results, that the author anticipates, (2) a brief explanation of the reasons for the expectation, whether economic intuition or the findings of related previous research, and (3) the discussion of possible pitfalls and thoughts about further research.

8. Style. Lucid, informative, readable sentences; well-defined key terms and concepts; appropriate gauging of readers' knowledge; presentation of sufficient context; clear and concise writing.

9. Source citations. The proper and consistent use of a citation style found in the economics/finance literature—such as APA style or Chicago style.

Grading Rubric

A+	An A+ prospectus meets all of the criteria and could lead to a publishable paper in an Economics or Finance journal.
A range	An A prospectus fully meets all criteria. An A- prospectus fully meets the top five criteria and is competent with respect to the other four.
B range	A prospectus in the B range is problematic in terms of any of the top five criteria (e.g., has a well-defined question/problem but a poorly rationalized methodology or an imprecise question/problem but a well-chosen data set and promising methodology) and is competent with respect to the other four.
C range	A prospectus in the C range is faulty in terms of any of the top five criteria and may be less than competent with respect to the other four.
D	A D prospectus is deficient in most of the criteria and adds nothing to one's understanding of the subject beyond what might be gleaned from superficial reading in the area. Even a D prospectus, however, must demonstrate that the writer has some knowledge and understanding of the economic issues.
F	An F prospectus is similar to a D prospectus but is less than half the expected length and/or fails to bring economic tools to bear on the problem.

The expected length of a junior prospectus is ten pages (excluding the bibliography).

The paper

The same grading criteria apply to junior papers and senior theses. When assessing independent work in terms of innovation, sophistication and completeness, JP advisors should consider that juniors have significantly less time to work on their papers and have taken fewer economics courses than seniors.

Criteria for Grading

A junior paper (JP) or senior thesis can be thought of as falling above, below, or on an imaginary line in the grading scale. In general, independent work that meets the top four criteria below will receive grades above the line (A+, A, or A-). Those that don't meet these four criteria will receive grades below the line (regardless of how well they fulfill the other criteria). See the next page for a detailed grading rubric.

1. Question or Problem. A well-defined question or problem that requires economic analysis and that is motivated (in terms of the economics/finance literature and/or the proposed methodology), feasible (in terms of the available data for empirical projects, and the available mathematical and computational methods for theoretical projects), and presented explicitly and early in the document.

2. Innovation and Independence. Demonstration of insight and independence of thought or approach, whether in terms of the question or problem posed, the methodology specified, or the results.

3. Methodology. A well-developed, appropriate, and sophisticated methodology (an empirical approach or a theoretical modeling strategy) that informatively addresses the question or problem. For empirical projects, this means (1) a clear statement of the hypothesis or hypotheses, (2) a detailed characterization of the data set and why it was chosen, (3) the identification and justification of the statistical and econometric technique used (for example, linear or probit regression analysis), (4) careful and thorough implementation of the technique, and (5) review and discussion of applicable test statistics. For theoretical projects, this means (1) a complete statement of the structure of the model, (2) justification of solution methods (for example, closed-form analytical or numerical solutions), and (3) solution of the model.

4. Results. An explicit statement and discussion of the new results emerging from the project and their relevance to economics and/or finance. This discussion should also include a discussion of (1) how the results relate to economic intuition and/or the findings of related previous research, (2) possible limitations of the results, and (3) directions for further research.

5. Structure. A visible, easy-to-follow structure consistent with the conventions of economics. A reader can easily identify sections that typically occur in papers in the economics/finance literature, such as Title, Abstract, Introduction, Literature Review, Methodology, Results, Conclusion, and References.

6. Literature Review. The situating of the question or problem in the literature—not an attempt to exhaustively cite the literature, but rather to establish a link between the question/problem and the existing literature in economics/finance.

7. Style. Lucid, informative, readable sentences; well-defined key terms and concepts; appropriate gauging of readers' knowledge; presentation of sufficient context; clear and concise writing.

8. Source Citations. The proper and consistent use of a citation style found in the economics/finance literature—such as APA style or Chicago style.

Grading Rubric

A+ An A+ JP or thesis meets all of the criteria and makes a significant contribution to the Economics/Finance literature.

A range An A JP or thesis fully meets all criteria. An A- JP or thesis fully meets the top four criteria and is competent with respect to the other four.

B range A JP or thesis in the B range is problematic in terms of any of the top four criteria (e.g., has a well-defined question/problem but a poorly rationalized methodology and inconclusive analysis, or an imprecise question/problem but an interesting set of results derived with appropriate methodology, or a competent analysis of a well-defined question but with only limited new insight or limited applicability) and is competent with respect to the other four criteria.

C range A JP or thesis in the C range is faulty in terms of any of the top four criteria and may be less than competent with respect to the other four.

D A D JP or thesis is deficient in most of the criteria and adds nothing to one's understanding of the subject beyond what might be gleaned from superficial reading in the area. Even a D

independent research project, however, must demonstrate that the writer has some knowledge and understanding of the economic issues.

F An F JP or thesis is similar to D work in that it fails to meet most criteria. A failing grade indicates that the student did not research the subject at all adequately and/or fails to bring economic tools to bear on the problem.

Juniors and seniors are asked to stay within the recommended page limits for their JPs (25-35 pages) and senior theses (60-80 pages) and to follow formal requirements specified in the memos on independent work. The page limits do not include bibliographies and appendices.

For practical purposes, faculty advisors will assign between 1 and 100 points to your prospectus and final JP.

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Points	97-100	93-96	90-92	87-89	83-86	80-82	77-79	73-76	70-72	60-69	<60

Examples of A-level prospectuses and junior papers can be found on Canvas.

Attendance

Students are **required to attend** eleven meetings: four lectures, four workshops, and three group advising meetings. Some juniors are exempt from the data workshops. Please see workshop descriptions for specific exemptions.

Students may receive between 0 and 100 points for attendance. Points received for attendance will be equal to the weighted average of the points received on the prospectus and JP minus a penalty for missed meetings. *You may miss one meeting without penalty.* If you miss more than one meeting, we will reduce your 'attendance points' by 3 points for each additional meeting you miss.

The weighted average is given by $\left(\frac{25}{85} * \text{prospectus grade} + \frac{60}{85} * \text{JP grade}\right)$ before grading penalties.

Example: If you miss three out of eleven meetings, you will be penalized for missing two meetings. Suppose the weighted average of your points on the prospectus and JP is 91. We will then subtract 6 points (2 times 3 points) from this average; you will receive 85 points for attendance.

Participation

Students are **required** to complete each of the following 'participation activities' by the due dates specified: the advisor preference survey, add a photo to Canvas profile, accept the canvas advising group invite, register for workshops (data sources, writing, data management and data analysis) unless exempt from the workshop, submit all ungraded assignments (outline, draft prospectus and draft JP), and complete the mid-year and end of year evaluations.

Students may receive between 0 and 100 points for participation. Points received for participation will be equal to the weighted average of the points received on the prospectus and JP minus a penalty for missing or late 'participation activities.' *You may miss one 'participation activity' without penalty.* If you miss more than one, we will reduce your 'participation points' by 3 points for each additional missing 'participation activity.'

Example: If your weighted average is 91 points on your prospectus and JP, and you didn't register for the writing workshop or the data analysis workshop, you will receive 85 points for participation.

Grading weights

The following weights will be used to calculate your final grade. We will use points rather than letter grades to calculate your overall JIW grade. **Note that if you receive an F on your paper, your overall JIW grade will be a failing grade.**

	Prospectus	Paper	Attendance	Participation
Students at Princeton University or studying abroad in the spring.	25%	60%	7.5%	7.5%
Juniors studying abroad in fall	26.25%	62.5%	3.75%	7.5%

On your transcript, you will receive a single JIW grade, which will be based on the prospectus, the junior paper, attendance and participation.

8. Submission Requirements

The prospectus and the final paper should be typed and double spaced, and should show the title, your name, your advisor's name, and the date on the front page. Also type the honor pledge on the front page. Please follow the *American Economics Review* citations style. This in turn is based on the Chicago Manual of Style Author-Date system.

The prospectus and paper should be submitted electronically on the JIW Canvas site before the due date. Please save your work in PDF format and label your file with your last and first name and your advisor's last name. In Canvas, go to Assignments and click on the applicable heading. Follow the instructions and make sure to click submit after you attach your file. (It is not enough to just save your work). We will use the time stamp on your submission when deciding on late penalties. Do not submit corrupted or otherwise unreadable files; check your PDF file to make sure that the conversion to PDF was successful.

Please do not submit your work piecemeal. A prospectus or paper must be complete upon submission. If the body of a paper is submitted on time, but a file including footnotes, figures, or complete references is submitted two days late, then the entire paper will be considered two days late. (See "9. Extensions and penalties" below).

9. Extensions and Penalties

In the interest of equal treatment, extensions of time for graded works can only be granted by the department office. Please direct any requests to Professor Noonan. **Your advisor cannot grant extensions of time on the prospectus or the final JP.** In addition, in practice, extensions are almost never granted. It is the student's responsibility to ensure that the deadlines for the prospectus and the final JP are met. Neither time pressure from other academic or extra-curricular commitments, nor computer problems are sufficient grounds for grants of extra time. Be sure to budget your time prudently.

All late submissions will be penalized. The penalties are one-tenth of a letter grade (1 point) for a submission that is up to eight hours late, one-third of a letter grade (3 points) for a submission that is up to one day late, and two-thirds of a letter grade (6 points) for a submission that is two days late, with greater penalties for later submissions as determined by a faculty committee.

Back up your computer files: Please be sure to routinely back up your computer files. A single hard-drive copy is not sufficient insurance. A hard drive failure will not excuse a late submission.

10. Academic Infractions and Academic Fraud

Other individuals may read a draft of your paper, identify flawed or unpersuasive arguments, and circle grammatical errors or awkwardly written sentences. They may NOT contribute new or better arguments that you did not come up with yourself. You are responsible for the content of the paper and its style. Please be sure to acknowledge, in writing, the contributions of others on your submitted work.

A prospectus or paper which contains academic infractions or which is in any way the result of academic fraud **will automatically receive a failing grade**. Please be sure to cite correctly, and to give proper credit to other authors for their ideas and language. Document your references using the style used in the *American Economic Review*. It is a good idea to look at a recent paper in the *American Economic Review* or *Journal of Economic Perspectives* to have an example of how it is done.

11. A Note on Data

The feasibility of an empirical paper depends on the existence, availability, quality, and cost of your data. While the library's data holdings are superb, and Firestone will be able meet most students' needs, there are some specialized areas where the data tend to be proprietary or the data cost is prohibitive. In finance, for example, Firestone is strong in stocks, bonds, futures, commodities, mutual funds, mergers and acquisitions, IPOs, fundamentals, earnings forecasts, REITs, and options but data are limited for hedge funds, venture capital, and real estate. International macroeconomic data are excellent, but international microeconomic data are harder to obtain. Proprietary data from corporate sources are generally expensive and sometimes unobtainable. Privacy restrictions may encroach on US microdata in health and education.

These caveats should not discourage you in any way. Firestone can support most projects on a limited capacity, but your project is more likely to succeed if you consult **early** with our knowledgeable Economics and Data Librarians: [Bobray Bordelon](#), [Bobbi Coffey](#), and [Charissa Jefferson](#).

12. Research Involving Human Subjects

If you plan to conduct research that directly involves human subjects (e.g., asking classmates to respond to a survey, research using identifiable data) you must apply for permission to the Institutional Review Board (IRB) for Human Subjects. All human-subjects research must be approved by IRB *before initiation*. Moreover, the faculty advisor and student need to complete an online training and certification process prior to submitting their materials to IRB for review. The required training can be completed at: <https://www.princeton.edu/ria/human-research-protection/training/>. These are university (and federal) requirements. For more information, please visit the IRB website: <https://www.princeton.edu/ria/human-research-protection/hrpp-home/> **IRB applications should be filed before December 8, 2022.**

13. Juniors Studying Abroad

Students who plan to study abroad during their junior year should plan to do so in the spring semester. Special permission from the department is *required* for students to study abroad during the fall semester of the junior year.

Juniors studying abroad are expected to keep in regular contact with their advisor, review material posted on the Canvas site and adhere to the deadlines in the junior calendar.

Juniors who study abroad in the spring will receive an attendance grade for both semesters. However, they will be exempt from *Lecture 4 – Planning for the senior thesis* and *Workshop series 4 – Data analysis in Stata*. Based on the preference of the advisor, students are expected to participate in the third advising group meeting (either via Zoom or by submitting a video presentation).

Juniors with special approval to study abroad in the fall will not receive a grade for attendance during the fall semester.

Please contact Professor Noonan if you plan to go abroad and/or have any questions.

14. Political Economy Concentrators

Juniors in the Department who wish to join the Program in Political Economy should submit PPE Applications by 11:59 p.m. on **Monday, September 12, 2022**. Political Economy concentrators are required to write a junior paper with sufficient political economy content, as judged by the advisor. Several of the faculty advisors have specific expertise in public economics. However, PE students are not restricted to these advisors, since it is possible to identify paper topics within each of the areas (e.g., macroeconomics, labor economics, and development economics) that are concerned with political economy issues. More information about the Program in Political Economy is available at <https://economics.princeton.edu/undergraduate-program/certificates/program-in-political-economy/>. Please address any questions related to this program to the Political Economy advisor, [Professor Thomas Fujiwara](#).

15. Exemplary prospectuses and junior papers

Examples of successful prospectuses and JPs from previous years have been posted on the JIW Canvas site.