

ECONOMICS 4900-4910 COURSE OUTLINE

Professor Jere R. Behrman

21 August 2023

e-mail: jbehrman@econ.upenn.edu Start subject line with “ECON 4900” and then your surname on all e-mails to me.

Dropbox: Students in the course have been invited to a dropbox folder entitled “ECON 4900 2023-24” that will be used for various course materials. For materials that you deposit in dropbox (see below) always put them in the correct folder as indicated below and name the files with your surname first and then the topic of the file (as indicated below). When you open a file in dropbox, PLEASE REMEMBER TO CLOSE IT so we can avoid “conflicted” copies. Feel free to copy the papers from dropbox, BUT BE SURE TO COPY AND NOT TO MOVE.

Office Hours In-Person or Zoom: If you want an appointment, please send me e-mail with several time options and an indication of why you want to meet. If we agree on a Zoom meeting, I will send you a Zoom invitation right before the agreed-upon scheduled time.

Class Meetings In-Person: We will meet in PCPSE 510 in three separate groups to facilitate discussion and interaction within class. You should attend all the meetings for your group, but NOT the meetings for the other two groups. Group 3 is a fast-track group that will move at a somewhat faster pace that may be advantageous for some students if they want, e.g., to use their paper as part of the basis for Ph.D. applications in December or for me writing a letter for such or other applications. In the table below the first column is for Group 1, the second column is for Group 2, and the third column is for Group 3 (Fast Track).

	Group 1 Wednesday 3:30-5:00	Group 2 Wednesday 5:10-7:00	Group 3 (Fast Track) Monday 2:10-4:00
Oral Presentation Assignment 1 (Previous Thesis)	6 September 2023	6 September 2023	29 August 2023 (TUESDAY 12:00-1:30)
Individual Zoom Appointments (Your Topic) [Signup in dropbox file ECON 4900 Individual Appointments]	11-20 September 2023		
Follow-up Individual Zoom Appointments [Timing Determined in First Individual Appointments]	19 September – 3 October 2023		
Oral Presentation Assignment 2 (Article Related to Your Topic)	20 September 2023	20 September 2023	18 September 2023
Tentative Bibliography	11 October 2023	11 October 2023	22 September 2023
Written Thesis Proposal	8 November 2023	10 November 2023	5 October 2023
Oral Presentation Assignment 3 (Thesis Outline)	15 November 2023	15 November 2023	9 October 2023
Literature Review	20 December 2023	22 December 2023	3 November 2023
Oral Presentation Assignment 4 (Work in Progress)	17 January 2024	17 January 2024	4 December 2023
Title, Abstract, Introduction, Literature Review and Outline	7 February 2024	9 February 2024	8 December 2023
Oral Presentation Assignment 5 (Work in Progress)	13 March 2024	13 March 2024	12 February 2024
Final date to email me if interested in departmental or University theses prizes	12 March 2024	12 March 2024	12 March 2024
Oral Presentation Assignment 6 (Final Oral Presentation)	24 April 2024	24 April 2024	22 April 2024
Final Written Submission of Thesis to Dropbox Folder and to your Co-Advisor and of Academic Integrity Statement to Dropbox Folder	28 April 2024	28 April 2024	26 April 2024

Most of you have chosen your group by the requested time of noon on Friday 21 July. If you have not, I have randomly put you into either group 1 or 2 in the dropbox folder file named “Group Assignments”.

General Information: This course is a seminar in which advanced undergraduate economics students learn how to do research by reading and discussing recent research in economics and by applying research methods in writing a senior honors essay. This is a single course that meets for two semesters and counts as two course units but you must actively register for both semesters (not just for the Fall). A grade is initially given for the Fall semester, but this may be changed at the end of the Spring semester when I have much more information about your performance over the academic year. ECON 4900 counts as only one course toward the major, and may count toward one of the four 4000-level course requirements. Consequently, honors majors have 11 economics course units. Enrollment in ECON 4900 is only possible with the permission of the instructor. As a guideline for admission, students should have taken ECON 2100 (formerly 101), 2200 (formerly 102), 2300 (formerly 1333303), 2310 (formerly 104; ECON 2310 may be taken concurrently in the Fall), and two 4000-level economics courses with an Economics or Math Economics GPA of at least 3.5 (the Economics and Math Economics GPAs are based solely on economics and mathec courses). Enrollment in the Honors Seminar is during the Fall semester only. Credit is awarded only upon completion of both semesters of ECON 4900. Students who do not enroll in and complete the second semester of the Honors Seminar do not receive credit for the first semester. Grades are based on the quality of the honors paper, on oral presentations and on classroom participation.

A senior honors essay is a major research paper, with the text approximately 20-30 single-spaced pages with tables and figures and with citations to the literature in any standard reference style, which makes some original contribution either to economic theory or to the accumulation of empirical knowledge. The paper may, for example, propose and implement an empirical test for an existing economic hypothesis or it may offer a new explanation for some economic phenomenon. The paper topic is chosen by you with guidance from me (and possibly other faculty members) in choosing one that is manageable. You will have a professor generally in the economics department to serve as a co-advisor in addition to me, most likely one of the members of the Undergraduate Research Advisory Committee (the membership of which for 2023-4 is: Jere Behrman (chair), Francesco Agostinelli, Juan Pablo Atal, Luca Bossi, Camilo Castillo, Anne Duchene, Wayne Gao, Kevin He, Xiao Lin, Margaux Luflade, Steven Matthews, Iouri Manovskii, Victor Rios-Rull, but possibly some other faculty member in economics or, in some cases, outside of economics who seems a good match for your interests, perhaps in part because of your previous experience with particular faculty members. If you have a preference for a co-advisor who seems like a good match for your interests, you may reach out to such a faculty member about serving as your co-advisor, but please keep me in the loop so I know what is happening and can be supportive. You should have a co-advisor by mid-November (mid-October for Group 3), either from your reaching out or from me helping you to do so. At a minimum, you should provide your co-advisor with a copy of your thesis proposal (item 5 in the list below for the fall activities), your Oral Presentation 4 and 5 slides, and your final thesis at the same time that you upload these assignments to the course dropbox (see assignments below) You should work out with your co-advisor in-person or zoom meetings if you have substantive questions to raise (they are busy people so please be prepared before you meet with them and make clear when you try to arrange meetings what you want to discuss). It may be mutually convenient for you to check about meeting with them when you send them the four items mentioned above.

To receive honors in the economics major, you need grades of B- or better in ECON 4900. You also need a GPA of 3.5 or higher in your economics courses.

Requirements: You will be expected to complete assignments on time (see below) and to participate in class discussions. You will be expected to meet deadlines in submitting thesis outlines and drafts, to make oral comments on presentations of peers in the class (particularly as a Designated Peer Commentator), to make oral presentations to other members of the seminar about your work in progress and to give a final presentation of your completed paper. You will also be asked to serve as a Designated Peer Commentator on presentations of two other classmates.

Grading: Your grade is determined by the quality of your honors essay, the quality of your presentations and your participation in the class. The essay is graded by me in consultation with your co-advisor. Approximately 80% of your grade will be based on the essay and 20% on class presentations and participation in class including your roles as Designated Peer Commentators on two classmates' presentations (see below).

Types of Essays: In principle, there are two broad options. But almost all, perhaps all, students will select the first option because, given their backgrounds, the second option is likely to be too challenging.

1. *An empirical essay:* For this type of essay, you develop an empirical question, either one that you take from the literature or one that you develop, and you use data to provide evidence about it. To answer your question of interest, you

use economic models that help identify the important variables and how they interact. Data are analyzed using rigorous statistical methods, which means that you may have to learn on your own or through other mechanisms, if you do not know already, how to use some standard software for statistical analysis (e.g., Stata, EVIEWS, R)¹. The data that you analyze can come from published sources or you can gather them yourself. Published data may be available on-line or you may have to enter them yourself. Locating interesting data that can be used to investigate your question is a major component of your project, and you should not delay in attempting to find such data. For some possible data (e.g. if you collect primary data), Human Subjects and Institutional Review Board (IRB) approvals may be necessary (but not generally for de-identified public-use data that you download from the web).

2. *A theoretical essay*: This type of essay develops an economic model to better understand some economic phenomenon. A theoretical essay should (1) motivate the need for the model and (2) discuss how your model differs from and improves on others in the literature as well as discuss its limitations. Naturally, any model you propose will be more convincing if you can also present some empirical support for it. You may use previously published tables or figures to support your model as long as they are cited correctly.

Steps in Writing the Essay:

1. *Search for a Topic*: Find a topic that is of interest to you, well-suited to your skills, and tractable within the time constraints of ECON 4900 and your other commitments. You probably have many diverse interests, but it is important that you focus for this course on a well-defined and tractable topic. The titles of past papers (grouped by broad topic areas) in an excel file in the dropbox entitled “ECON 4900 Thesis Titles” might be useful to understand the range of past topics and possibilities for your study. Also of use may be the excel file entitled “ECON 4900 Examples of Good Papers” which lists the titles of the papers available in the folder “Papers from Previous Years” through which you may want to look. Some past students have written very good theses by building on or extending work in previous publications, in some cases with the advantage of starting with the online data available for such studies.

2. *Review Literature*: Do extensive reading in your area of interest and take notes on your readings. A section of your final thesis will be devoted to a discussion of the existing literature in your area and how your research contributes to it. A good place to start is with an intermediate-level economics textbook and with economics journals. Also, look through reading lists and class notes from your previous courses. Try to make your topic as focused as possible and plan your research strategy accordingly.

3. *Locate Data*. If you are doing an empirical study, find out what data sources are available to you. Many interesting data sources are online, including data related to particular articles that may be of interest to you. You may have to make formal application to use some data. You also may need to revise your topic because of data availability. Collecting your own data is an option, although you will need to carefully design the method by which you collect the data and may need Human Subjects and IRB approvals. For empirical work, you will also need to choose and to learn how to use the software for your data analysis. Empirical research should be carried out in a way that someone else could take the same data and replicate your results, so it is important to document how variables are created, etc. (this is usually done in a data appendix to the paper). Examine your data carefully (graphs are usually very helpful for this) to be sure that there are not peculiar variable values that probably reflect some data errors and, if ignored, could confound your analysis. Document decisions you make in analyzing your data (for example, how many observations are deleted because of missing values or do you impute missing values?). You may be able to obtain help in locating data from Lauris Olson: olson@upenn.edu <https://www.library.upenn.edu/people/staff/lauris-olson> in the library. Also here are links to the data guides on the Penn Libraries pages: https://guides.library.upenn.edu/sb.php?subject_id=92962.

¹ A previous student found useful the platform called “Udemy,” “introduction to regressions using R” at the following link: <https://www.udemy.com/course/introduction-to-regression-using-r/>. She also noted that the same platform also has a course for “introduction to R programming” that she personally didn’t use but had heard is helpful as well for a more broad understanding of the language: https://www.udemy.com/course/introduction-to-r-programming/?utm_source=adwords&utm_medium=udemyads&utm_campaign=R_v.PROF_la.EN_cc.US_ti.7432&utm_content=dea14584&utm_term=.ag.79286085246_.ad.420694847717_.kw_.de.m_.dm_.pl_.ti.dsa-7749490038089_.li.9012044_.pd_.&matchtype=b&gclid=EAiaIQobChMI8K-Q1ebI6AIVFmKGCh3QsghXEAAYASAAEgI-JvD_BwE

4. *Develop Outline:* When you have a good idea of the main points you plan to make in the paper, write an outline of how they will be organized and try a rough draft of an abstract and the introduction. As you learn more about your topic, refine your outline, abstract and introduction.

5. *Write Paper Components:* A good way to approach the writing of a large research paper is to view it as a collection of smaller 3-5 page essays (introduction, literature review, economic model, data sources and basic statistics, estimates, conclusion) linked together. Work towards completing each of these smaller essays one at a time and then tie them all together into one paper. Keep in mind that your first draft merely gets your ideas on paper and will be revised, probably multiple times. When you have finished presenting your empirical findings and/or economic models, draw thoughtful and honest conclusions from your work. The model you develop, the data that you use, and your estimation methods all will have limitations and you can suggest useful extensions to your research. Your empirical results may have turned out differently from your expectations or may seem counterintuitive. If so, do not panic. The objective is not to get statistically significant coefficient estimates of a priori desired signs, but to undertake systematic well-documented research. Whenever possible, turn adversity into an advantage by learning the most you can from your findings. Discuss empirical results that are puzzling or contradict your economic model as well as those that support it. Important advances in economics have come about in trying to explain results that may at first seem puzzling.

Assignments Related to Writing the Essay (Dates Given for Individual Groups in Table Above)

Fall Semester:

1. Oral Presentation Assignment 1: Oral presentation of a previous senior honors thesis. **Note that this assignment is for the first time your group meets.** The objective of this presentation is to educate you and other members of your group about what might constitute good senior theses. The class dropbox folder contains, inter alia, a folder entitled “Papers from Previous Years (included individually by title and listed in word file entitled “ECON 4900 Examples of Good Papers”). Pick a paper that you would like to present that still is available for your group (see last three columns in file entitled “ECON 4900 Examples of Good Papers”) and put your name in the column for your group. (There are hard copies in storage of a number of other papers from past years available that you can see if you wish; please send me an e-mail if you are interested. The titles of these papers are grouped by topic areas in a word file also in the dropbox entitled “ECON 4900 Thesis Titles” that you might find useful to browse to have an idea of the range of past topics.) Make a 13-minute maximum oral presentation of a previous senior honors thesis in which you answer the following questions:

- a. Who are you? From where are you? What are your interests in economics? What idea or area are you currently considering for your thesis? What do you hope to be doing next year? What do you like to do outside of academics?
- b. What is the major question or issue addressed in the thesis?
- c. What economic theory or principles were used to address the issue?
- d. What data were used? What was the source of the data?
- e. What was the empirical approach or estimation method employed? Examples might be comparing means, analysis of variance, regression analysis.
- f. What were the major findings?

The oral presentation should have one slide for each of the above six questions. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 1” at least 18 hours in advance; name your file with your surname first and then “OPA 1”.

2. Choose a topic: Students in each group should sign-up by 10 September 2023 in excel spreadsheet in dropbox entitled “ECON 4900 Individual Appointments” and put file with paragraph with idea and how you would approach it by 7:00 am the day we meet in dropbox folder “Submissions/Initial Idea/Group 1, 2, or 3 (whichever you are in); name your file with your surname first and then “Initial Idea”.

3. Tentative bibliography: Put file with tentative bibliography by 9:00 am on day that it is due in dropbox folder “Submissions/Tentative Bibliography; name your file with your surname first and then “Tentative Bibliography”.

4. Oral Presentation Assignment 2: Oral presentation of a paper in the literature on your topic. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 2” at least 18 hours in advance; name your file with your surname first and then “OPA 2”. Choose one paper you have read, preferably published in an economics journal, related to your topic and summarize it in a 13-minute maximum oral presentation by answering the following questions.

1. What is the major question or issue addressed in the paper?
2. What economic theory or principles were used to address the issue?
3. What data were used? What was the source of the data?
4. What was the empirical approach or estimation method employed? Examples might be comparing means, analysis of variance, regression analysis.
5. What were the major findings?
6. How is this paper related to the topic of your senior thesis.

5. Written thesis proposal (preliminary title, objective (question, hypothesis), model, and research plan, including data sources and contemplated analysis) – maximum of four pages (put file with tentative bibliography by 5:00 pm on date in schedule in dropbox folder “Submissions/Thesis Proposal/ Group 1, 2, or 3; name your file with your surname first and then “Thesis Proposal”). Provide copy to your co-advisor.

6. Oral Presentation Assignment 3: Oral thesis proposal presentation. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 3” at least 18 hours in advance; name your file with your surname first and then “OPA 3”. Give a 13-minute maximum oral presentation of your proposed thesis including the following:

1. What is the major question or issue you plan on addressing?
2. What is the motivation for the question?
3. What economic theory or principles will you use to address the issue?
4. What data source(s) are you planning to use?
5. If possible, present some preliminary descriptive statistics (means, correlations, graphs) either from your data or from the literature that illustrates the issue.
6. Describe briefly the type of analysis you plan on doing.

Your Designated Peer Commentator 1 will initiate the discussion with ~2-3 minutes of (hopefully constructive) comments.

7. Preliminary literature review – *maximum* of 10 pages that are tied in tightly with the questions/hypotheses that motivate your thesis and clarify what is the value added of your thesis. Put file with tentative bibliography in dropbox folder “Submissions/Literature Review/Group 1, 2, or 3 by 6:00 pm on date in schedule; name your file with your surname first and then “Literature Review”.

Spring Semester for Groups 1 and 2, some Fall and some Spring for Group 3:

1. Oral Presentation Assignment 4: Oral presentation on thesis work in progress. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 4” at least 18 hours in advance; name your file with your surname first and then “OPA 4”]. Give a 13-minute maximum oral presentation on your thesis work in progress: how have you advanced, what are preliminary results (including basic statistics – means, standard deviations, minimums, maximums – of your key empirical variables), what puzzles or problems have you encountered, what is next. Your Designated Peer Commentator 1 will give ~2-3 minute comments to initiate discussion. Provide copy to your co-advisor.

2. Draft of Title, Abstract, Introduction, Literature Review and Outline: Put file with draft of your title, abstract (200-400 words, though you possibly will not be able to include any or many results), introduction, literature review (probably updated as your work has progressed) and outline by 6:00 pm on date in schedule in dropbox folder “Submissions/Introduction Outline/Group 1, 2, or 3 (whichever you are in); name your file with your surname first and then “Title Abstract Introduction Literature Review Outline”. A good abstract will indicate (a) what is the basic question being asked or hypothesis being tested, (b) why is this of interest – what is the valued added, (c) what methodology is being used, including what data, (d) what are the empirical results, and (e) why are they important (e.g., how do they change understanding or policy recommendations). Obviously for most students at this point (d) and therefore probably (e) are fairly speculative, but put down your tentative thoughts that you can update later. **Indeed you should update your abstract in the dropbox folder by 14 March.**

3. Oral Presentation Assignment 5: Oral presentation on thesis work in progress. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 5” at least 18 hours in advance; name your file with your surname first and then “OPA 5”]. Give a 13-minute maximum oral presentation on your thesis work in progress: how have you advanced, what are preliminary results, what puzzles or problems have you encountered, what is next. Your Designated Peer Commentator 2 will give ~2-3 minute comments to initiate discussion. Provide copy to your co-advisor.

4. Oral Presentation Assignment 6: Final oral presentation. Put slides in the dropbox folder “Presentation Slides/Group 1, 2, or 3 (whichever you are in)/Oral Presentation Assignment 6” at least 18 hours in advance; name your file with your surname first and then “OPA 6”. Give a 13-minute maximum oral presentation on your thesis covering your motivation (question, hypothesis), literature review, model, data, results and conclusion. Your Designated Peer Commentator 2 will give ~2-3 minute comments to initiate discussion.

5. Final thesis: Put file with final thesis by 6:00 pm on the date indicated in the table above in dropbox folder “Submissions/Final Thesis/Group 1, 2, or 3 (whichever you are in); name your file with your surname first and then “Final Thesis”; also put file with scanned or photographed signed copy of academic integrity statement and confirmation of agreement to make your paper available to future students on cover page by 6:00 pm on the due date in dropbox folder “Submissions/Academic Integrity/Group 1, 2, or 3 (whichever you are in); name your file with your surname first and then “Academic Integrity”. Provide copy of your final thesis to your co-advisor.

FOR THE INTEGRITY AND AGREEMENT TO MAKE YOUR THESIS AVAILABLE TO FUTURE STUDENTS, PLEASE SUBMIT SOMETHING LIKE THE FOLLOWING IN THE DROPBOX

I am familiar with familiar with and have complied with Penn’s Code of Academic Integrity, which is available in the Pennbook, or online at <https://catalog.upenn.edu/pennbook/code-of-academic-integrity/>.

SIGNATURE, DATE

Print your name below your signature.

I agree to make my paper available to future students.

SIGNATURE, DATE

Print your name below your signature.

Notes:

- 1) I will assign each student to be a Designated Peer Commentator 1 on another student’s presentations for Oral Presentation Assignments 3-4 and a Designated Peer Commentator 2 on yet another student’s presentations for

Oral Presentation Assignments 5-6. This will enable each student to benefit from observations of peers and assure that each student is knowledgeable about and engaged in what peer students are doing. Designated Peer Commentators will be able to find the presentations on which they are commenting in the relevant dropbox folder. The assigned Designated Peer Commentator will initiate the discussion after each presentation.

- 2) Group class meetings are not scheduled for every week. Individual meetings will be scheduled from time to time on days on which there are not class meetings.
- 3) You will be asked to confirm, as noted above, that your paper can be used for future classes to illustrate what past students in the course have done (including for Oral Presentation Assignment 1 in future classes).
- 4) The deadlines are deadlines, not fuzzy “more-or-less” targets. You are welcome to submit before the deadlines. Late submissions may receive no feedback or, if they are graded, be penalized 3% per 24 hours or portion thereof they are late. Please be respectful of your classmates, particularly your Designated Peer Commentators, by honoring the deadlines.

Academic Integrity: Academic integrity is a very important part of student life, and the Department of Economics takes it seriously. The department reserves the right to undertake procedures that would catch breaches of academic integrity, should any arise. Students who are suspected of committing infractions will be reported to the Office of Student Conduct. If a student is found in violation of academic integrity, it is at the professor's discretion to give the student a failing grade for the assignment and the course. You will be asked to confirm in writing that you have followed the strictures of academic integrity in preparing your own paper and in citing appropriately all sources that you have used on the cover page of your final submission.

PREDOC.org: This may be a useful website for those of you thinking about continuing in economics and/or looking for a predoc research position for next year.

Grants to Support Undergraduate Research: Following is information about these grants for the 2021-22 a previous academic year (which I presume will be updated in the 2023-24 academic year on the same websites or you can contact directly Dr. Ann Vernon-Grey):

Ann Vernon-Grey, PhD
Associate Director for Undergraduate Research
Center for Undergraduate Research and Fellowships
The University of Pennsylvania
The ARCH, 3601 Locust Walk
Philadelphia, PA 19104-6224
curf@upenn.edu
phone - (215) 746-6488
fax - (215) 573-4869
<http://www.upenn.edu/curf/>
anneliza@upenn.edu

The University of Pennsylvania considers research experience integral to an undergraduate student's education. Penn's alumni community has created a number of grants to support the scholarly work of undergraduates in the College of Arts and Sciences. Research in any field is eligible for support. For more information, examples of previously funded projects and to apply for a **College Alumni Society Grant** please visit: <https://www.curf.upenn.edu/content/college-alumni-society-undergraduate-research-grant>. Applications and all supporting materials are due electronically to CURF by **date indicated on website**.

The **Vagelos Undergraduate Research Grant** is open to all undergraduates at Penn and provides funds to pursue an independent scholarly project in any field. Funds can be used for costs of materials and supplies, travel costs, or other project costs. **Students in the College should apply for the College Alumni Society Undergraduate Research Grant.** For more information, examples of previously funded projects and to apply, **please visit** (<https://www.curf.upenn.edu/content/vagelos-undergraduate-research-grant>). Applications and all supporting materials are due electronically to CURF by **date indicated on website**.

The **Center for the Study of Ethnicity, Race and Immigration (CSERI)** will award undergraduate research fellowships for projects completed during the academic year. This CFA is a rolling submission - there is no deadline. **Students may receive grants for up to \$1,000 of research expenses.** CSERI research support may be combined with funding from other programs. **Funding can be applied toward one of two goals:**

- Research that will contribute to the writing of a senior thesis or the completion of an independent study course during the academic year. Work may include research at libraries, archives, field or interview sites; data acquisition; transcription costs; etc.
- Research assistantships (RAs) on faculty-directed projects. Note that funding for assistantships will be directed to the account of the supervising professor.

If you are interested, please check the URL to make sure it makes sense for you to apply and let me know (since I will have to write a letter of recommendation) in adequate time before the deadline.

Student Statistical Software Consultants: Penn Libraries provides student statistical software consultants who offer virtual appointments to provide assistance with statistical software, including R, Stata, and SPSS. They can assist with writing and improving code, data visualization, conducting analysis or tests, and much more. Their assistance is not intended to provide consultations on homework assignments, statistical methods, interpretation of results, or other questions that should be based on the researcher's ideas and disciplinary expectations. If you are looking for help with statistical software contact: <https://libcal.library.upenn.edu/appointments/techconsults>. If you have any further questions, please contact Lynda Kellam (she/her), Head of Research Data Services, Research Data & Digital Scholarship, University of Pennsylvania Libraries, <https://www.library.upenn.edu/people/staff/lynda-kellam>.

Paper/Thesis Prizes: There are several thesis/paper prizes that have been won by ECON 4900 papers in past years, both internal departmental (e.g., Klein) and University theses prizes (e.g., Rose, Yardley, Phi Beta Kappa) and external prizes such as the fourth item below (in recent years at least three ECON 4900 students have been among the final four globally and one won the prize). I give recent announcements below (there probably will be updates during the 2023-24 academic year). I am willing to consider nominating some of this year's theses for these prizes, though for the nominations to be most effective I will need to limit them to a few possibilities among the students who are interested in each nomination and who have advanced sufficiently with their theses in time. If you are interested in the possibility of your thesis being nominated for a specific prize, please let me know by email by 12 March 2024 at latest for Klein, Rose and Yardley Prizes and at least a week before the submission deadline for other prizes since I will have to write a supporting letter in most cases. For the first two prizes below, polished theses must be ready by the time of the deadlines (that usually are the last Sunday in March, over a month before the course deadline for theses for the second group of prizes). For the third prize below, theses must be sufficiently advanced by late March 2024 to form a basis for recommendation to the faculty selection committee, though polished final versions are not necessary at that time (but the more polished the higher the probabilities of success). Below is material about a number of these prizes from previous years (such information is not available yet for the 2023-24 academic year but if you are interested you should check the relevant websites to obtain updated information for 2023-24 academic year).

<https://curf.upenn.edu/research-offering-type/senior-thesis-award>

1) Phi Beta Kappa Prizes

Announcement for previous year at <https://www.college.upenn.edu/node/967>:

"Phi Beta Kappa awards several prizes for outstanding scholarship. Students are not required to be members of Phi Beta Kappa to submit an entry.

- Entries may be submitted for consideration by faculty or by student authors.
- All submissions should be sent via email to [Danielle Venit](#) by 11:59 PM EDT on ...the last day of classes in Spring '24).
- The competition will be conducted by the Executive Committee and Electoral Board of Phi Beta Kappa, with judging by ad hoc committees.

The Frederick W. Meier Jr. Thesis Prize \$1,000

Three	Phi	Beta	Kappa	Thesis	Prizes	\$1,000	each
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- A written evaluation by the thesis advisor must be included with the nomination. This evaluation should be sent via email to [Danielle Venit](#) by 11:59 PM EDT on the last day of classes in spring '24.
- Students or faculty may nominate a thesis, which must be accompanied by a letter of endorsement by a faculty advisor.

The Elmaleh Prize for an Undergraduate Essay in the Social Sciences \$150."

2) Penn's Center for Undergraduate Research and Fellowships (CURF) Paper Prizes:

Senior Thesis Prizes (1) Bodek Prize: <https://www.curf.upenn.edu/content/bodek-prize>; (2) Rose Award <https://www.curf.upenn.edu/content/rose-award>; (3) Yardley Prize <https://www.curf.upenn.edu/content/joseph-warner-yardley-prize>

2A. Graduating Senior Theses Rose Awards (announcement at <https://www.curf.upenn.edu/content/rose-award>)

Rose Award

Application Deadline

Last Sunday in March 2024

Only Spring 2024 graduates are eligible

The Rose Foundation generously funds the Rose Undergraduate Research Award recognizing outstanding undergraduate research projects completed by graduating seniors under the supervision of a Penn faculty member. The Rose Fund is administered by the Center for Undergraduate Research and Fellowships, and awards are determined each April on a competitive basis. Seniors (fourth-year students) graduating in the Spring semester from any undergraduate school are eligible. Applicants must be in good standing in the University of Pennsylvania community. Ten student research projects will be recognized each year with individual awards of \$1000.

Student projects will be evaluated by a faculty committee designated by CURF on the basis of the project's quality, originality, independence, and contribution to the field. Projects need not have been funded by undergraduate research grants in order to qualify for the Rose Award.

Research projects submitted for recognition must be supported by a letter from the Penn faculty member who supervised the research project. Projects may be in any discipline or may have an interdisciplinary scope. Applications from academic departments and individual faculty members are encouraged. Students may self-nominate, but applications will not be considered complete until all materials (including the Faculty Nomination Letter) are received. Students should submit the Project Abstract, the completed Project, and a digital copy of their Penn transcript through CURF's [Common Research Award form](#). The Faculty Nomination Letter from the faculty member who supervised the project should be requested through the [Recommendation Request Form](#).

Application Procedure—Deadline: last Sunday in March

While various departmental deadlines may be significantly earlier or later than that for the Rose Award, this date is required to ensure submissions may be reviewed and decisions can be made prior to the end of the academic year. Exceptions will not be made.

To be considered for the Rose Award, students should follow this application procedure:

Prepare a Project Abstract in a word processing program, without any formatting. The Project Abstract should not exceed 750 words (roughly three double-spaced typewritten pages) and should contain the following information:

- Project Description intelligible to an educated non-specialist
- Description of Methodology
- Key Findings

- Conclusions and Implications
- List any grants received to support this project

Create a single .pdf containing:

1. the completed Project
2. electronic copy of your Penn transcript.

You must submit the project and your transcript together as a single file in .pdf format. No other format will be accepted. To create a copy of your Penn transcript, go to Penn InTouch and print your transcript to pdf. (If you don't have Adobe installed on your computer, download the free installer or use a Penn computer that has Adobe installed.) Print and save each document as a pdf, then use Adobe to create a single pdf file naming it your Pennkey as indicated above by navigating to Adobe's "File -> Create -> Combine Files into a Single PDF" feature.

Go to the [Common Research Award form](#) with your document prepared, fill out all appropriate fields, and upload your document using the document upload field.

Faculty Nomination Letter

The student's faculty research advisor must separately submit a supporting letter of recommendation. Please request a letter from your faculty advisor via the [Recommendation Request Form](#). In the letter, the faculty advisor should address four criteria:

- the significance of the project within the discipline(s)
- the project's originality or creativity
- the independence of the research project (particularly if the student's project is part of a larger faculty research effort)
- Please make clear the nature and extent of the student's contribution in formulating and carrying out the project

This letter should be sent via the recommendation form interface no later than **midnight on the last Sunday in March**.

Deadlines and Timeframes

Completed applications and letters from advisors must be submitted by **midnight on the last Sunday in March**. Late applications will not be considered. Proposals will be reviewed by a faculty committee designated by CURF. All applicants will be notified of selection results by early May. Awards will be announced before Commencement and publicized in the appropriate campus media.

Research Offering Type

[Senior Thesis Award](#)

Undergraduate School

[College Engineering Nursing Wharton](#)

Class Year:

[Senior](#)

Research Offering Source

[CURF-Administered](#)

2B. Joseph Warner Yardley Prize

Application Deadline

Last Sunday in March 2024

In June of 1877, Joseph Warner Yardley graduated as Valedictorian and Spoon Man. He died in August 1877. In 1878, the members of the Class of 1877 established the Joseph Warner Yardley Prize in his memory. The Yardley Prize is awarded to the best thesis on political economy written by a member of the senior class in any undergraduate school at Penn. The Yardley Award is administered by the Center for Undergraduate Research and Fellowships, and awards are determined each April on a competitive basis. Seniors graduating in the Spring semester from any undergraduate school are eligible. Applicants must be in good standing in the University of Pennsylvania community. There will be one awardee annually.

Student projects will be evaluated by a faculty committee designated by CURF on the basis of the project's quality, originality, independence, and contribution to the field. Projects need not have been funded by undergraduate research grants in order to qualify for the Yardley Award.

Research projects submitted for recognition must be supported by a letter from the Penn faculty member who supervised the research project. Projects may be in any discipline or may have an interdisciplinary scope. Applications from academic departments and individual faculty members are encouraged. Students may self-nominate, but applications will not be considered complete until all materials (including the Faculty Nomination Letter) are received. Students should submit the Project Abstract, the completed Project, and a digital copy of their Penn transcript through CURF's Common Research Award form. The Faculty Nomination Letter from the faculty member who supervised the project should be requested through the [Recommendation Request Form](#).

Application Procedure – Deadline: last Sunday in March 2024

To be considered for the Yardley Award, students should follow this application procedure:

Prepare a Project Abstract in a word processing program, without any formatting. The Project Abstract should not exceed 750 words (roughly three double-spaced typewritten pages) and should contain the following information:

- Project Description intelligible to an educated non-specialist
- Description of Methodology
- Key Findings
- Conclusions and Implications
- List any grants received to support this project

Create a single .pdf containing:

1. the completed Project
2. electronic copy of your Penn transcript.

You must submit the project and your transcript together as a single file in .pdf format. No other format will be accepted. To create a copy of your Penn transcript, go to Penn InTouch and print your transcript to pdf. (If you don't have Adobe installed on your computer, download the free installer or use a Penn computer that has Adobe installed.) Print and save each document as a pdf, then use Adobe to create a single pdf file as indicated above by navigating to Adobe's "File -> Create -> Combine Files into a Single PDF" feature.

Go to the [Common Research Award form](#) with your document prepared, fill out all appropriate fields, and upload your document using the document upload field.)

Faculty Nomination Letter

The student's faculty research advisor must separately submit a supporting letter of recommendation. Please request a letter from your faculty advisor via the [Recommendation Request Form](#). In the letter, the faculty advisor should address four criteria:

- the significance of the project within the discipline(s)
- the project's originality or creativity
- the independence of the research project (particularly if the student's project is part of a larger faculty research effort)
- Please make clear the nature and extent of the student's contribution in formulating and carrying out the project

This letter should be sent via the recommendation form interface no later than **midnight on the last Sunday in March**.

Deadlines and Timeframes

Completed applications and letters from advisors must be submitted by the last Sunday in **March**. Late applications will not be considered. Proposals will be reviewed by a faculty committee designated by CURF. All applicants will be notified of selection results by early May. Awards will be announced before Commencement and publicized in the appropriate campus media.

Research Offering Type

[Senior Thesis Award](#)

Undergraduate School

[College Engineering](#) [Wharton](#) [Nursing](#)

Class Year:

[Senior](#)

Research Offering Source

[CURF-Administered](#)

Contact Information

Dr. Ann Vernon-Grey

anneliza@upenn.edu

Phone: 215-746-6488

Fax: 215-573-4869

3) The Lawrence R. Klein Prize for Outstanding Research in Economics by an Undergraduate (Awarded by [Penn Institute for Economic Research](#)) is awarded to a senior for outstanding research in Economics, upon recommendation of the faculty. The winner receives a cash award of no less than \$250. Emphasis is placed on a research paper, usually written in the Honors Seminar or in an Independent Study. The deadline for submission of your paper to me is one week before the deadline for uploading the Rose prize application.

4) International Atlantic Economic Society Best Undergraduate Paper Competition (below is previous announcement at <http://www.iaes.org/best-undergraduate-paper-award/>):

“To encourage undergraduate interest in economic issues, [the] President and [the] Vice President of the International Atlantic Economic Society cordially invite students to compete in the IAES annual Best Undergraduate Paper Award (BUPA) competition.... The IAES strives to recognize and reward outstanding research conducted by undergraduate students worldwide. BUPA winners receive:

1. A \$500 check;
2. A handsome commemorative plaque recognizing their accomplishment; and
3. Complimentary publication of the paper in the *Atlantic Economic Journal*.
4. Special awards and publication opportunities are also available for the 3 finalists....

[Guidelines for submission](#)

To be considered for the Best Undergraduate Paper competition, all entries must follow the guidelines below:

1. The paper must conform to *AEJ* manuscript style instructions, be 10 – 20 pages in length including tables, and be submitted in MS Word format. Papers not following these guidelines will be rejected. *AEJ* instructions can be found [HERE](#).

2. Submit the paper to journals@iaes.org by 15 June ... with the subject line: “Best Undergraduate Paper Competition – Last Name of Student”. Please send the paper in a Microsoft Word document. **PDF and LaTeX files are NOT acceptable.** Title page must include: (a) full name of student; (b) affiliation; (c) e-mail address; and (d) phone number.
3. Include an e-mail from the Department Chair certifying: (a) that the paper was written while the author was an undergraduate; (b) if the student has already graduated from the undergraduate program, that the degree was conferred within the past academic year; (c) that the paper has not been submitted for publication elsewhere; and (d) that the department will sponsor the student’s hotel and travel if the student is selected as a finalist.” (I will facilitate obtaining this letter for a limited selected number of submissions.)

5) Pennsylvania Economic Association Annual Best Undergraduate Paper Competition

- * To encourage undergraduate interest in all fields of economics, the Board of Directors of the Pennsylvania Economic Association cordially invites undergraduate students to enter the Pennsylvania Economic Association Undergraduate Paper Contest.... The **winning student author(s)** will receive:
 - A \$1000 award (first place), \$750 (second place) and \$500 (third place)
 - A commemorative **plaque** for the first place and certificates for the second and third places
 - Complimentary publication of the paper in the ***Pennsylvania Economic Review*** and Picture of the winning student(s) with the PEA President posted on the PEA website
- * To enter a paper into the contest, please send the following by **[date in early May]**:
 - A cover letter as an email attachment to the PEA webmaster that includes your name, class/year, and also full contact information of your **faculty sponsor**
 - Your complete paper (with a minimum of **7 pages** and a maximum of **25 pages**) including the abstract as an email attachment to the PEA webmaster, Dr. Orhan Kara (okara@wcupa.edu)
- * Eligibility
 - Authors must be an undergraduate student
 - No faculty-student co-authored submissions will be accepted.
- * All manuscripts must be submitted according to the APA guidelines.
- * As part of the selection process, papers will be reviewed by a panel consisting of **five economist judges** representing Pennsylvania educational and research institutions. Reviewers assigned to each paper will be external to the student's institution and will follow the same [scoring rubric](#).
- * All students will present their papers in a dedicated session(s) of the Annual Conference of the Pennsylvania Economic Association. The winning paper will be announced at the **conference luncheon....**

Contest Notes:

- (1) Co-authors will split the monetary prize.
- (2) The PEA will reserve the right to cancel the contest for insufficient submissions.
- (3) Faculty should encourage their students' participation early in the spring semester.

If you are an undergraduate student who plans to submit and present a paper for consideration of this prize, you must also complete the electronic paper submission form and indicate using the appropriate button that you will participate in the paper contest. Also, ... you must also register for the conference by following the Registration button below.

6) Penn Program on Gender, Sexuality, and Women's Studies (GSWS) Awards

<https://www.sas.upenn.edu/gsws/program/undergraduate/gsws-awards>

“ Carroll Smith-Rosenberg Senior Thesis Award in Women's Studies

The Carroll Smith-Rosenberg Prize awards \$350 each year for a superior senior thesis paper in the field of Gender, Sexuality & Women's Studies. The prize is named in honor of distinguished historian Carroll Smith-Rosenberg, a founder of the Women's Studies Program at Penn.

To apply, please submit your paper to gsws-apc@sas.upenn.edu with the subject header "Carroll Smith-Rosenberg Prize submission." Include a cover sheet with the title "Carroll Smith-Rosenberg Prize" and the title of your paper, your name, and your contact information (your major, your advisor, your email address).

Lynda S. Hart Award in Sexuality Studies

A prize of \$350 will be given each year for a senior thesis or seminar/course paper in the field of LGBTQ Studies. Awarded in memory of Lynda Hart, Professor of English at Penn and groundbreaking scholar in feminist performance studies and queer theory, the prize recognizes original, rigorous scholarship on gender and sexuality by a Penn undergraduate in any field.

To apply, please submit your paper to gsws-apc@sas.upenn.edu with the subject header "Lynda S. Hart Prize submission." Include a cover sheet with the title "Lynda S. Hart Prize" and the title of your paper, your name, and your contact information (your major, your advisor, your email address)."

7. The José Miguel Oviedo Undergraduate Student Paper Award in Latin American and Latinx Studies

Submissions due by end of March.

The José Miguel Oviedo Undergraduate Student Paper Award is given annually to the best paper in Latin American and Latinx Studies written by an undergraduate student at the University of Pennsylvania. The prize honors the scholarly tradition of a recognized critic of Latin American literature and Professor in the Department of Spanish and Portuguese Studies at Penn....Submissions for the... Award are due by the end of March. The submission must be a single-authored paper written while the student is still in an undergraduate program at Penn. The prize, including a cash award, will be announced in April. All submissions should be [uploaded here](#). If you have any questions, please reach out to clals-upenn@sas.upenn.edu. The prize, including a cash award, will be announced in April.

8. Global Undergraduate Awards: <https://undergraduateawards.com/> "The Global Undergraduate Awards is the world's leading undergraduate awards programme which recognises top undergraduate work, shares this work with a global audience and connects students across cultures and disciplines....Every year, UA coordinates an awards programme for penultimate and final year undergraduate students, as well as students who have graduated within the programme year. Entrants can submit their work to one of our 25 categories, which represent a broad range of academic disciplines. This work is then anonymously assessed by a panel of international academics and industry leaders. The best 10% of work is shortlisted as Highly Commended, and the top submission in each category is deemed the Global Winner."

9. American Economic Association Andrew Brimmer Undergraduate Essay Prize: This paper prize was established in honor of Andrew Brimmer, the first African American to serve on the Board of Governors of the Federal Reserve. The annual award is presented to an undergraduate student at a US-based institution of higher learning majoring in economics, political science, public policy, or related fields for the best essay on the "economic well-being of Black Americans." The winner receives a check for \$1,000 and a certificate from the president of the AEA.

PRE-DOCS

From Economics Undergraduate Chair: "PREDOC.ORG FOR ECONOMICS MAJORS Please continue to steer your undergrads to www.PREDOC.org. PREDOC is now visited by approximately 5,000 unique visitors per month on average; the median job posting on PREDOC is clicked over 630 times; early numbers show that 25% of Yale Ph.D. program applicants and 17% of Chicago Booth Ph.D. program applicants arrive via PREDOC; etc."

UNDERGRADUATE ECONOMICS RESEARCH PAPER PUBLICATION POSSIBILITIES: There are several undergraduate publication possibilities, though they seem to wax and wane as the generations of students change across years. Several past Econ 4900 students have published in such venues. If interested, you might look at:

<https://economics.illinois.edu/research/undergraduate-research/publishing-your-work>

<https://unl.libguides.com/c.php?g=51642&p=333911>