

# Research Colloquium

## AAE 780

Spring 2017

### 1 Preliminaries

Course schedule: Monday 2:30-5:00, 113 Taylor Hall (Kristjanson Room)

Professor Laura Schechter, 334 Taylor Hall.

Office Hours: By appointment.

Please read through this syllabus in full. It contains much detailed relevant information, and reading through it should answer many of your questions.

### 2 Course description

This colloquium was created to help reduce dwell time for PhD students, who could benefit from support as they transition from course work and prelims to starting a dissertation. It is intended for AAE PhD students to develop their dissertation proposal. Students will receive feedback from the instructor, their advisor, and their peers. Course content includes developing research questions, literature search, economic modeling, testable hypotheses, econometric identification strategies, using  $\LaTeX$ , and giving presentations. Peer review of weekly assignments will develop skill in critical analysis. A secondary goal of the seminar is for students to develop a cohort for subsequent feedback and support through dissertation writing and the job search. A dissertation proposal is the end deliverable.

### 3 Overarching Details

This course is intended to help you produce a dissertation proposal. The focus will be on producing a proposal for an empirical paper. This course is required for AAE Ph.D. students in their third year and can count as a course towards your minor. We will have one preliminary meeting and one preliminary assignment in the fall semester, described below in more detail.

I expect you to come into the first day of class in the spring with your research question and elevator spiel. (The ‘elevator spiel’ is explained in more detail in the deliverable section.) I expect you to end the class with a draft of your dissertation proposal. I also hope that you end the class as a cohesive group of colleagues who can continue to provide feedback for one another through writing your dissertations and through the job market experience. There will be a deliverable to

be handed in every week of the class. Your dissertation proposal will be due on Wednesday May 10th. Grading will be based on all deliverables.

## 4 Some Recommended References

This website is filled with wonderful hints for how to conduct your academic career. [“Tips 4 Economists”](#)

Below are listed some fun and extremely useful books with good advice on how to conduct research and write. You are required to read some chapters from some of these books throughout the course, which are posted on the course website. However, you might find additional chapters of these books to be of use, and I encourage you to consult them.

- Ethridge, D. (2004). *Research Methodology in Applied Economics: Organizing, Planning, and Conducting Economic Research*. Ames, Iowa: Blackwell Publishing.
- McCloskey, D. N. (2000). *Economical Writing*. Long Grove, IL: Waveland Press Inc.
- Silva, P. J. (2007). *How to Write a Lot: A Practical Guide to Productive Academic Writing*. Washington DC: American Psychological Association.
- Szenber, M. (Ed.). (2001). *Passion and Craft: Economists at Work*. Ann Arbor, MI: University of Michigan Press.
- Thomson, W. (2011). *A Guide for the Young Economist: Writing and Speaking Effectively about Economics*. Cambridge, MA: MIT Press.

## 5 Interactions with Your Advisor

There is one deliverable in the fall and five in the spring which you will need to send to your advisor in addition to sending to me. In the fall you will have to send your research question and elevator spiel to both your advisor and me. In the spring, you will have to send your word model, math model, identification strategy, literature review, and final proposal to both your advisor and me.

For each deliverable which you send to your advisor, your advisor should, at a minimum, send me an email confirming that s/he has received your deliverable. Your advisor is encouraged to send both of us comments on your deliverable. This serves both as a mechanism for students to get more feedback from their advisors, and to ensure that I am not giving you feedback which is in contradiction to the feedback of your advisor. To maximize communication and minimize misunderstandings, I will also send my comments to your advisor for each of these deliverables.

## 6 Fall Activities

This course is offered in the spring of each academic year. As mentioned above, the goal of this course is to help you complete a draft of your dissertation proposal. One semester (four months) may sound like it is more than enough time to write a dissertation proposal. But for those who do not enter the class with a clear vision of what their dissertation will be about, it ends up feeling extremely rushed.

Because this class is most useful at the stage when you have a clear vision of your dissertation, we will have one initial introductory meeting in November at which we talk about the logistics of the course. By November 30th, you will have to submit to both your advisor and me your research question and your elevator spiel (described in more detail under deliverables below). Both your advisor and I will give you comments on this document soon thereafter. This will give you time to work on the document for the first day of class when you must submit a revised version, as well as telling your elevator spiel to the rest of the class.

## 7 Course Outline

Every day of class you will have to email deliverables to some set of individuals. A description of each deliverable appears at the end of this document. Below each deliverable it tells you to whom you need to send the document. [P] means the professor (me), [A] means your advisor, and [G] means the other two students in your group. There are three types of assignments which determine to whom you must send copies.

- Some assignments will only be sent to me. These assignments usually end up being inputs to a later stage of research and do not need to be read and commented on by many people.
- You will send some assignments to me, to your advisor, and to two of your classmates. There are four such assignments throughout the year, and these assignments are the major building blocks of the dissertation proposal. You will be paired in groups of three to comment on each other's work, and these groups will change across each of the four assignments. I will post the group composition on the course website.
- For the four assignments described in the previous bullet point, you will have to write comments on two of your classmates' work. You should send your comments to the classmate who wrote the assignment, in addition to sending a copy to me.

Because economists believe in incentives, each deliverable will be graded. That said, I don't want you to get stressed about grades. The important thing is that you start moving forward on doing great exciting research. Future employers do not care about your grades.

For each day I usually have an assigned reading which should be read before class. Some days these readings are required (denoted [Rq]) and some days the readings are recommended (denoted [Rc]). On many days we have outside speakers. It is always important that you come on time, but it is especially important on the days we have outside speakers to be respectful to them.

- Pre-class
  - Date: November 30
  - Deliverable: Version 1 of research question and elevator spiel
  - Send to: [P], [A]
- Week: 1
  - Date: Jan 23

- Class Activity: Discussion of research questions. *Presentation by Librarian*: Google for Research Purposes. Introduction to literature search.
  - Reading: [Rq] Davis, D. (2001), [Ph.D. Thesis Research: Where do I start?](#)
  - Deliverable: Your research question and elevator spiel.
  - Send to: [P], [A]
- Week: 2
    - Date: Jan 30
    - Lecture: Word models.
    - Reading 1: [Rq, Section 3 only, pages 149-151] Fafchamps, M. (1992), [“Solidarity Networks in Preindustrial Societies: Rational Peasants with a Moral Economy,”](#) *Economic Development and Cultural Change* 41(1), 147-174.
    - Reading 2: [Rq, Section 3 only, pages 10-13] Parker, D. & Phaneuf, D. (2013), [“The Potential Impacts of Frac Sand Transport and Mining on Tourism and Property Values in Lake Pepin Communities.”](#)
    - Deliverable 1: Annotated bibliography with references from 10 good journals.
    - Send to: [P]
    - Deliverable 2: Answers to word model questions.
    - Send to: [P]
- Week: 3
    - Date: Feb 6
    - Lecture: Math Models
    - Reading: [Rq, pages 51-64 and 74-90] Thomson, Chapter 2, *Writing Papers*.
    - Deliverable: Word model.
    - Send to: [P], [A], [G]
- Week: 4
    - Date: Feb 13
    - Class Activity: Feedback on word models.
    - Reading: [Rc] Varian, H. R. (2009), [“How to Build an Economic Model in Your Spare Time,”](#)
    - Deliverable 1: Comment on two other students’ word models.
    - Send to: [P], [G]
    - Deliverable 2: Find 3 papers with related models and write blurbs.
    - Send to: [P]
- Week: 5
    - Date: Feb 20

- Lecture: *Presentation by DoIT: How to use L<sup>A</sup>T<sub>E</sub>X.*
  - Reading:
  - Deliverable: Basic math model.
  - Send to: [P], [A], [G]
- Week: 6
    - Date: Feb 27
    - Class Activity: Feedback on math models.
    - Reading:
    - Deliverable: Comment on two other students' math models.
    - Send to: [P], [G]
- Week: 7
    - Date: Mar 6
    - Lecture: Identification I.
    - Reading: [Rq] Kennedy, P. E. (2002), “[Sinning in the Basement: What are the Rules? The Ten Commandments of Applied Econometrics,](#)” *Journal of Economic Surveys* 16(4), 569-589 .
    - Deliverable: Testable Hypotheses.
    - Send to: [P]
- Week: 8
    - Date: Mar 13
    - Lecture: Identification II.
    - Reading: [Rq] McCloskey, D. N. & Ziliak, S. T. (1996), “[The Standard Error of Regressions,](#)” *Journal of Economic Literature* 34, 97-114.
    - Deliverable: Data description and challenges to identification.
    - Send to: [P]
- Week: 9
    - Date: Mar 27
    - Class Activity: *Presentation by Writing Center: Writing Literature Reviews.*
    - Reading 1: [Rq, pp 31-33] Irwin, E.G. & N.E. Bockstael. (2002), “[Interacting Agents, Spatial Externalities and the Evolution of Residential Land Use Patterns,](#)” *Journal of Economic Geography* 2, 31-54.
    - Reading 2: [Rq, pp 140-144] Robinson, J. (2012), “[Limited Insurance within the Household: Evidence from a Field Experiment in Kenya,](#)” *American Economic Journal: Applied Economics* 4(4), 140-164.

- Reading 3: [Rq, pp 568-570] Sexton, R. J. C.L. Kling, & H.F. Carman. (1991), “[Market Integration, Efficiency of Arbitrage, and Imperfect Competition: Methodology and Application to US Celery,](#)” *American Journal of Agricultural Economics* 73(3), 568-580.
- Deliverable 1: Answer Literature Review Questions
- Send to: [P]
- Deliverable 2: Identification Strategy.
- Send to: [P], [A], [G]
- Week: 10
  - Date: April 3
  - Class Activity: Feedback on identification strategies.
  - Reading: [Rc] McCloskey, Chapters 1-14.
  - Deliverable: Comment on two other students’ identification strategies.
  - Send to: [P], [G]
- Week: 11
  - Date: Apr 10
  - Class Activity: *Presentation by IRB: Human Subjects Q & A.*
  - Reading: [Rc] McCloskey, Chapters 15-31.
  - Deliverable: Introduction and Literature Review.
  - Send to: [P], [A], [G]
- All students should schedule one-on-one 20 minute meetings with me during week 12 or 13.
- Week: 12
  - Date: Apr 17
  - Class Activity: Feedback on introduction and lit review.
  - Reading: [Rq] Cochrane, J. H. (2005), “[Writing Tips for Ph.D. Students,](#)”
  - Deliverable: Comment on two other students’ intros and lit reviews.
  - Send to: [P], [G]
- Week: 13
  - Date: Apr 24
  - Lecture: How to give presentations.
  - Reading: [Rq] Thomson, Chapter 3, *Giving Talks.*
  - Deliverable: None
  - # of Copies: NA
- Week: 14

- Date: May 1 [If the class is especially large this year, we may have to schedule an additional date to complete all the presentations.]
- Lecture/Class Activities: Presentations.
- Reading:
- Deliverable: Slides.
- Send to: Bring paper copies for everyone in class.

## 8 Description of Deliverables

- **Research Question and Elevator Spiel (5 points first time and 10 points second time):** Your question should be written so as to have a yes/no answer and it should be quite specific. This should also be followed by a write-up of your elevator spiel. An elevator spiel is what you would say if you went to the ASSA meetings and were in an elevator with the president of the AEA and he asked you what your research is about. It is an informal concise description of your research that would take around five minutes to speak and should be less than a page written. It should answer the following questions: what is your topic, what is your research question, why is it important and/or where does it fit into the literature, and how do you plan on answering it. You will hand one version in during the fall semester before the class begins, and a second revised version on the first day of class, where you will also speak your elevator spiel out-loud to your classmates.
- **Annotated Bibliography (10 points):** The annotated bibliography should contain references to 10 articles from good journals in economics. You should write a blurb of approximately one paragraph about each article. This blurb should state what the main point and finding of the article is. But, more importantly, it should also discuss how the article relates to your research. Please write your research question again at the top of the bibliography as a reminder to me. I define a “good journal” as one that is in the top 75 in the left-most column of Table 2 of [New Approaches to Ranking Economics Journals](#). You can also consider the four new AEJ journals to be good, although they are too new to have made it onto that ranking list. All NBER working papers are fair game to be considered good as well.
- **Answers to Word Model Questions (5 points):** You will read two short word-models. Please answer the following 6 questions about each word model in words (not math): 1. What is the setting? 2. Who are the actors? 3. What are the objective functions and choice variables? 4. What are the constraints? (In other words, the “subject to” part of the maximization.) 4. What are the frictions? (Frictions are things that prevent the actors from achieving first best and include things like asymmetric information, credit constraints, limited commitment, etc.) 6. How is the equilibrium determined?
- **Theoretical Model in Words (10 points):** The word model should describe in words, with no equations, the economic theory in your dissertation. By model I do not mean an econometric model, but rather a microeconomic theoretical model (or macroeconomic or trade, as the case may be). This word model should not include any discussion of the data you will be using nor should it include long descriptions of the background in reality. It should purely be a verbal description of the theoretical model you have in mind. Elements which it

should include are discussions of i) who the main actors are, ii) what constraints they face (some typical constraints are budget constraints and credit constraints) iii) what frictions are in the market (some typical frictions are information asymmetries, limited commitment, and transportation costs) iv) what the actors' utility functions or production functions look like and what they are maximizing, and v) how equilibrium is solved.

- **3 Papers with Related Models (5 points):** Here you should find three papers that have models which will help you in turning your word model into a math model. Write a blurb about each paper and how the model in that paper will influence your math model.
- **Comments on Word Models of Two Classmates (10 points)**
- **Theoretical Model in Math (10 points):** Now you will convert the word model you wrote previously into equations. All the same elements which were included in the word model should be included here, but now written out in equations. You may solve the model, but you do not have to. You do have to set up the maximization problem and discuss how you will solve it. Again, there should be no discussion of econometrics or of data. This is purely the theory underpinning your dissertation. Even if theoretical innovation is not part of your dissertation, you still must complete this assignment. Consider it an exercise in structuring your thinking about the behavior in which you are interested.
- **Comments on Math Models of Two Classmates (10 points)**
- **Testable Hypotheses (10 points):** Write out the predictions which you have derived from your model, or which you think you will be able to derive from your model. You should focus on those hypotheses which can be tested using the data to which you have (or will have) access. These hypotheses will form the basis for your empirical investigation, however, please do not describe your data or identification strategy for this assignment. Focus on what your theory tells you.
- **Data Description and Challenges to Identification (10 points):** You should describe the data set which you plan to use to answer your research question. You should also state whether you already have access to the data and, if not, how and when you plan on gaining access to it. The description of the data should include things like how many observations (households, firms, counties, etc), at how many points in time, collected by whom, collected when, and what kinds of variables are in the survey. If you are using multiple data sources talk a bit about how you will merge them. You should also identify in the data the main dependent variable(s) and the main explanatory variables you will be using.

Please discuss the main identification challenge (or challenges) which you will face in trying to identify the causal impact of the explanatory variables on the dependent variables. Examples include simultaneity, endogeneity, and measurement error. Please include an estimation equation. Be specific about how this challenge pertains to your specific question and your specific data. You do not need to come up with a solution for these challenges. You will do that in a later assignment.
- **Literature Review Questions (5 points):** Please answer the following three questions for all of the literature reviews listed in the syllabus. 1) What organizational strategy does the author(s) use to structure the literature review? 2) Discuss some stylistic elements of the



literature review that you like or you think work well. 3) Discuss some stylistic elements of the literature review that you don't like or find annoying.

- **Identification Strategy (10 points):** This is a tricky and important assignment. In it you will discuss your strategy for overcoming the challenges you mentioned earlier. More common strategies include instrumental variables, matching, and regression discontinuity design. You must be very specific about your strategy. For example, if your strategy is instrumental variables, what instrument will you use and why is it a valid instrument. It would be good to take this assignment seriously and really spend time thinking through the issues.
- **Comments on Identification Strategy of Two Classmates (10 points)**
- **Introduction and Literature Review (10 points):** The introduction should focus on telling the reader what your question is and motivating why the question is important and interesting. It should also briefly discuss what the main innovation of your project is. The literature review should not read as a laundry list of all the literature written on topics similar to your proposed research. Rather, it should be an explanation of what has been done before, focussing on how the previous literature relates to your work, and how your work builds on the previous work.

In economics, many literature reviews are found in the introduction of papers and are quite short. Dissertation proposals tend to have longer literature reviews than published papers, partly to show professors that you have done your due diligence and you know the relevant literature well.

- **Comments on Identification and Literature Review of Two Classmates (10 points)**
- **Slides and Presentation (10 points):** As part of your proposal defense, you will have to give a presentation anywhere from 10 to 20 minutes long depending on your advisor and your field. Usually the only interruptions during these presentations are for clarifications. These presentations are followed by questions from the members of your committee. The last week of class will be spent with each of you presenting your proposal to the class and also handing in copies of your slides.
- **Dissertation Proposal (40 points):** This is the final product of this class which you will hand in during finals week on Wednesday May 14th. Proposals vary a lot from person to person, and from field to field. As a vague estimate, they are probably usually around 20-30 pages. They should definitely include all of the elements that you handed in previously, but should not simply be a cut and paste together of these assignments. They may or may not include summary statistics and preliminary empirical results.