Course Description: This workshop is designed as a first course in Ph.D.-level Labor Economics, with an emphasis on modeling theoretically and empirically individual life-cycle labor market dynamics and using these models for policy evaluation. As such, it is clearly research oriented. The overall goal is to give a fairly broad overview of topics in labor economics and the different empirical methodologies used therein. This should also give you the tools to read up on literatures that we will not cover, such as the economics of immigration or the economics of minimum wages. We will go over some of the modern empirical methods in program evaluation, such as Regression Discontinuity and Field Experiments, but also more technical methodologies that involve the formulation, numerical implementation and structural estimation of dynamic models. Some background in Dynamic Programming is helpful but not necessary. I will post a non-technical refresher of Dynamic Programming a week before the course starts.

During practice sessions I will ask you to implement some of the methods empirically, using real-world data provided by me. As a consequence, you'll need to bring a laptop. Preferred software is Stata and Matlab.

Some General Thoughts about how to approach this Course: Most likely, you are currently in your second or third year of your graduate studies. You may be particularly interested in empirical questions and methodologies. It is now time to acquire skills and knowledge that will be helpful for your thesis. The first is a good overview of labor market theory. The last decade or so of labor market research was dominated by purely empirical work that was often not firmly grounded in theory. These times are likely over. Whether you use experimental- or quasi-experimental research designs or whether you estimate a structural model, a careful mapping from theory to estimation is having a big comeback. Oftentimes the reason is that a researcher wants to do welfare analysis or establish external validity, which requires "theoretical structure". The second is a good knowledge of existing data. One reason why theory took a step back in the last decade is the large increase in the use of high-quality, often administrative and proprietary data. Nowadays it becomes increasingly hard to write a high-impact paper with publicly available data like the US Census, the PSID or the GSOEP. The best approach to learning about data is reading papers. I have selected some papers on the list explicitly for discussion of administrative data. I thus encourage you to read each paper from front to back. It is simply not enough just reading introduction and conclusion. Third, make sure to know a broad set of empirical approaches. For this reason, the papers listed below draw from an extremely wide set of estimation approaches, from simple descriptive regressions to large-scale structural estimation and calibration.

Textbooks
The course is based on academic papers, many of which we will cover in lecture. I will provide lecture notes for some sections. There are also public-use lecture notes by Daron Acemoglu and David Autor that are quite nice:

- Acemoglu, D. and D. Autor: Lectures in Labor Economics. (available online for free)
There are no required textbooks. However, as a Ph.D.-student you may want to think about looking at the following books, all of which I think are worthwhile having:


  This is a neat little book about the numerical implementation and estimation of dynamic economic models. It exclusively focusses on dynamic models, but it does not cover many of the topics we address.


  Train’s book is the gold standard in discrete choice methods. It is incredibly well written and easy to read, yet it covers some advanced topics. Though it does not cover Dynamic Discrete Choice models, it provides all the necessary basics for developing algorithms for the estimation of such models. It also contains one of the best chapters on simulation methods and simulation-based estimation.


  This is my favorite book in applied micro-econometrics. It is almost 1000 pages long and covers pretty much all econometric methods you need to know as an applied econometrician, including advanced topics such as non-linear panel models, bootstrap, non-parametric econometrics, simulation based estimation, regression discontinuity, and clustering. Needless to say, every applied econometrician should own it.


  The only book in Labor Economics on the graduate level. It covers an impressively extensive list of topics, but it does not go into much depth. I will not use it in this course.


  A great and much undervalued book to learn numerical methods. Although written in 1998 it is still at the frontier of numerical methods used in economics. Judd covers many advanced topics that are hard to find in most of the books on basic numerical analysis. For a structural econometrician, it is a must have.

**Review Papers**

For comprehensive surveys of a specific field of research, sometimes quite narrowly defined, the "Handbooks" are always a good source. Obviously, for this course the *Handbook of Labor Economics* is the most relevant one. Some surveys should be read by any empirical research. Here is a small list:


There are much less review articles in the structural literature, but here is a list that is a good starting point:


I also encourage you to read the summary paper of the literature on intertemporal labor supply by Card:


The following is the syllabus for the course:

1. **Section 1: Labor Supply**
   
   (a) Two Workhorse Models: Neoclassical and Roy
   
   (b) Life-cycle Dynamics in the Neoclassical Model of Labor Supply: Theory and Evidence
   
   
   
   
   (c) Earnings Processes and Life-Cycle Inequality
   
   i.  
   

2. **Section 2: (Dynamic) Discrete Choice and Applications to Occupational Choices**

   (a) Trends in the Occupational Wage and Employment Structure: Facts and Theory
   
   
   

   (b) Life-Cycle Dynamics of Earnings and Occupational Choices

   

3. **Section 3: Human Capital Theory and the Economics of Education**

   (a) The Ben-Porath Model
   
   - Acemoglu-Autor Lecture Notes.
   
   

   (b) The Becker Model

   - Acemoglu-Autor Lecture Notes.

(a) Empirical Evidence of Frictional Labor Markets

(b) Basic Concepts and some Econometrics

(c) Equilibrium Unemployment and Unemployment Insurance

(d) Explaining Negative Duration Dependence in Unemployment Duration

(e) Equilibrium Search Models with Endogenous Residual Earnings Inequality

5. Section 5: Some Recent Policy Issues

(a) Disability Insurance
(b) Teacher Quality and Student Achievement.


