# THE FLORIDA STATE UNIVERSITY ECO5205 Labor Markets

### Fall 2019

| Instructor:   | Javier Cano-Urbina  |
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| Office:       | 257 Bellamy Building  |
| Phone:        | (850) 644-7090  |
| E-mail:       | jcanourbina@fsu.edu   |
| Office Hours: | By appointment  |
| Class:        | Tuesday & Thursday / $3:\!35\mathrm{PM}-4:\!50\mathrm{PM}$ / BEL 0033 |

### **Prerequisites:**

This is a PhD-level class, and so it is geared towards graduate students. Graduate courses in Macroeconomics, Microeconomics, and Econometrics are a good asset for this class.

## **Course Description:**

This class is intended to give students an opportunity to learn and discuss topics in modern labor economics. The course starts with a discussion of labor supply focusing on the theoretical treatment of classical results in labor economics. Next, a significant amount of time will be spent discussing search and matching models. These type of models have become a powerful tool to understand labor markets in recent years and have applications in other fields of economics, such as finance, industrial organization, and marriage and divorce. The last part of the class is devoted to the topic of human capital, which has become one of the most important contributions of Labor Economics to the science. The discussion in class will emphasize the importance of both: the theoretical framework and the empirical methods of the papers being discussed. The empirical implementation will be reinforced by performing replications of published papers. Each student is responsible for presenting recent working papers that fall into the domain of the topics discussed in class. The list of working papers available for presentation will be provided by the Instructor. Throughout the semester the Instructor will provide homework exercises that usually involve proving some results discussed in class.

### Assessment:

| Replication   | 30%                     |
|---------------|-------------------------|
| Homeworks     | 30%                     |
| Presentation  | 35%                     |
| Participation | 5%                      |
| The Grading   | Scale for the class is: |
|               |                         |

| 93-100 | А  | 83-86 | В  | 73-76 | С  | 63-66 | D  |
|--------|----|-------|----|-------|----|-------|----|
| 90-92  | A– | 80-82 | B– | 70-72 | C– | 60-62 | D- |
| 87-89  | B+ | 77-79 | C+ | 67-69 | D+ | 0-59  | F  |

## Replications

During the semester, students will work in replicating some of the results of one paper. Replications will be due for the last weeks of the semester.

- The student will select the paper to replicate.
- The paper could be one of the papers covered in the reading list below or another paper that is of interest to the student.
- The suggestion is to choose a paper that either:
  - has a topic of interest to the student, or
  - uses a data set of interest to the student.
- Make sure that the data set that is used in the paper is freely available online. For example: US Census, CPS, NLSY, PSID, etc.
- Once you make your selection you must ask the Instructor for his approval of the paper.
- The tables/figures to replicated will depend on the paper chosen by the student. At a minimum, the student must replicate:
  - a table or tables of summary statistics.
  - the table or tables with the main results.

#### **Replication Report and Presentation**

Each student will submit a report of the replication.

- The report must be professional. Present the original table and the replicated table together in one page, either side-by-side or one above the other, and clearly identify the replicated and the original tables.
- The SAS or Stata code(s) used for replication must be included as an appendix. The code should be clean, clear, and well organized; use titles and comments to describe blocks of the code so another person, e.g. a coauthor, with intermediate knowledge of SAS or Stata can understand it.

At the end of the semester students will present their replications to the class. In the presentation the student must cover the following:

- The research question of the paper.
- The authors' strategy to answer the research question.
- Explain the data set used by the authors.
- Explain why these data was used by the authors, strengths and weaknesses of the data set to answer the research question.
- Present the original and replicated tables side-by-side.

**Note:** In performing this replication, students must avoid contacting the authors of these papers directly. If necessary, students must talk to the Instructor first before contacting the authors.

## Homework

During the semester the instructor will assign small proofs, exercises, or computational exercises related to the topic discussed in class.

- Homework must be done individually.
- The day that the exercise is done the Instructor might go over the proof or exercise that was assigned.
- No late assignments are allowed.

### Presentation

Students will be responsible for presenting one or two papers in the list of recent working papers provided by the Instructor. The date of the presentation will be decided according to the evolution of the course. Grading of the student's presentation is based on the fulfillment of the format of the presentation described next.

#### Format of Presentation

- 1. The time for the presentation is 25 minutes. So the presentation should not have more 20 slides. But the number of slides vary from one presentation to another.
- 2. In the first four or five slides of the presentation, the student must clearly state:
  - (a) The research question (this is supposed to be one or two lines).
  - (b) Intuition or motivation of the research question.
  - (c) Relevance of the research question:
    - $\Rightarrow$  Why should I care? Why should we listen to the presentation?
    - $\rightsquigarrow$  This is a very important part and it usually boils down to policy implications for papers in Labor Economics.
  - (d) Strategy of the paper to answer the research question.
  - (e) Main results.
- 3. Go into the details of the paper. For example: related literature, data set, model, methodology, etc. This may vary from one paper to another.
  - $\rightsquigarrow$  Suggestion: Try to limit the presentation to the most indispensable equations, but have a back-up for less important ones in an Appendix.
- 4. Conclude the presentation with a discussion of the main findings and the strengths and weaknesses of the paper.

### **Reading List:**

This list is too long to read it entirely. It is meant to be a guidance for students interested in a deeper understanding of the topics discussed in class. The items market with a  $\star$  will be discussed in class. If there is another paper or material not marked with a  $\star$  and that will be covered in class the Instructor will announce it in advance.

Students are expected to review in advance the material covered in class.

### I. Labor Supply

- Ashenfelter, O. and Heckman, J. (1974). The estimation of income and substitution effects in a model of family labor supply. *Econometrica*, 42(1):73–85
- \* Blundell, R. and MaCurdy, T. (1999). Labor supply: A review of alternative approaches. In Ashenfelter, O. C. and Card, D., editors, *Handbook of Labor Economics*, volume 3A, chapter 27, pages 1559 1695. Amsterdam: Elsevier
- Browning, M., Deaton, A., and Irish, M. (1985). A profitable approach to labor supply and commodity demands over the life-cycle. *Econometrica*, 53(3):503–544
- Cahuc, P. and Zylberberg, A. (2004). *Labor Economics*. The MIT Press, Cambridge, Mass — Chapter 1
- Chiappori, P.-A. (1988). Rational household labor supply. *Econometrica*, 56(1):63–90
- Chiappori, P.-A. (1992). Collective labor supply and welfare. *Journal of Political Economy*, 100(3):437–467
- ★ Eissa, N. and Liebman, J. B. (1996). Labor supply response to the earned income tax credit. *The Quarterly Journal of Economics*, 111(2):605–637
- Heckman, J. (1974). Shadow prices, market wages, and labor supply. *Econometrica*, 42(4):679–694
- ★ Heckman, J. J. (1993). What has been learned about labor supply in the past twenty years? *The American Economic Review*, 83(2):116–121
- Killingsworth, M. R. (1983). Labor supply. New York : Cambridge University Press
- MaCurdy, T. E. (1981). An empirical model of labor supply in a life-cycle setting. Journal of Political Economy, 89(6):1059–1085
- Fortin, B. and Lacroix, G. (1997). A test of the unitary and collective models of household labour supply. *The Economic Journal*, 107(443):933–955

#### II. Search and Matching Models

- ★ Albrecht, J. W. and Axell, B. (1984). An equilibrium model of search unemployment. The Journal of Political Economy, 92(5):824-840
- ★ Albrecht, J. and Vroman, S. (2002). A matching model with endogenous skill requirements. *International Economic Review*, 43(1):283–305
- ★ Albrecht, J., Navarro, L., and Vroman, S. (2009). The effects of labour market policies in an economy with an informal sector. *The Economic Journal*, 119(539):1105–1129
- ★ Bosch, M. and Esteban-Pretel, J. (2012). Job creation and job destruction in the presence of informal markets. *Journal of Development Economics*, 98(2):270 286
- \* Bowlus, A. J., Kiefer, N. M., and Neumann, G. R. (1995). Estimation of equilibrium wage distributions with heterogeneity. *Journal of Applied Econometrics (1986-1998)*, 10:123
- ★ Bowlus, A. J., Kiefer, N. M., and Neumann, G. R. (2001). Equilibrium search models and the transition from school to work. *International Economic Review*, 42(2):317–343
- ★ Bowlus, A. J., Miyairi, M., and Robinson, C. (2016). Immigrant job search assimilation in Canada. *Canadian Journal of Economics*, 49(1):5 – 51
- Burdett, K. and Judd, K. L. (1983). Equilibrium price dispersion. *Econometrica*, 51(4):955–969
- ★ Burdett, K. and Mortensen, D. T. (1998). Wage differentials, employer size, and unemployment. *International Economic Review*, 39(2):257–273
- ★ Cano-Urbina, J. (2015). The role of the informal sector in the early careers of lesseducated workers. Journal of Development Economics, 112(0):33 - 55
- ★ Cahuc, P. and Zylberberg, A. (2004). Labor Economics. The MIT Press, Cambridge, Mass — Chapter 3
- Diamond, P. A. (1971). A model of price adjustment. *Journal of Economic Theory*, 3(2):156 168
- Dolado, J. J., Jansen, M., and Jimeno, J. F. (2009). On-the-job search in a matching model with heterogeneous jobs and workers. *The Economic Journal*, 119(534):200–228
- Jovanovic, B. (1979). Job matching and the theory of turnover. *Journal of Political Economy*, 87(5):972–990
- Farber, H. S. (1994). The analysis of interfirm worker mobility. *Journal of Labor Economics*, 12(4):554–593

- \* Ljungqvist, L. and Sargent, T. (2004). *Recursive Macroeconomic Theory*, volume 1. The MIT Press, 2nd edition — Chapter 6
- McCall, J. J. (1970). Economics of information and job search. *The Quarterly Journal* of *Economics*, 84(1):113–126
- Mortensen, D. T. (1970). Job search, the duration of unemployment, and the phillips curve. *The American Economic Review*, 60(5):847–862
- Mortensen, D. T. (2003). Wage dispersion: Why are similar workers paid differently? MIT Press, Cambridge, Mass
- ★ Mortensen, D. T. and Pissarides, C. A. (1994). Job creation and job destruction in the theory of unemployment. *The Review of Economic Studies*, 61(3):397–415
- Moscarini, G. (2005). Job matching and the wage distribution. *Econometrica*, 73(2):481–516
- Nagypál, É. (2007). Learning by doing vs. learning about match quality: Can we tell them apart? The Review of Economic Studies, 74(2):537–566
- Nash, J. (1951). Non-cooperative games. Annals of Mathematics, 54(2):286–295
- Pissarides, C. A. (1994). Search unemployment with on-the-job search. *The Review of Economic Studies*, 61(3):457–475
- ★ Pissarides, C. A. (2000). Equilibrium unemployment theory. MIT Press, Cambridge, Mass., 2nd ed. edition — Chapters 1 & 2
- Postel-Vinay, F. and Robin, J.-M. (2002). Equilibrium wage dispersion with worker and employer heterogeneity. *Econometrica*, 70(6):2295–2350
- Rebière, T. (2012). Young workers' professional experience and access to high-skill jobs: a note. *Economics Bulletin*, 32(1):969 980
- Salop, S. and Stiglitz, J. (1977). Bargains and ripoffs: A model of monopolistically competitive price dispersion. *The Review of Economic Studies*, 44(3):493–510
- Shimer, R. (2005). The cyclical behavior of equilibrium unemployment and vacancies. The American Economic Review, 95(1):25 – 49
- Shimer, R. (2006). On-the-job search and strategic bargaining. In Bunzel, H., Christensen, B. J., Neumann, G. R., and Robin, J. M., editors, *Structural Models of Wage and Employment Dynamics*, pages 33–58. Elsevier B.V., Amsterdam
- Zenou, Y. (2008). Job search and mobility in developing countries. Theory and policy implications. *Journal of Development Economics*, 86(2):336–355

#### III. Human Capital

- Acemoglu, D. and Pischke, J.-S. (1999a). Beyond becker: Training in imperfect labour markets. *The Economic Journal*, 109(453):F112–F142
- ★ Acemoglu, D. and Pischke, J.-S. (1999b). The structure of wages and investment in general training. The Journal of Political Economy, 107(3):539–572
- Autor, D. H. (2001). Why do temporary help firms provide free general skills training? *The Quarterly Journal of Economics*, 116(4):1409–1448
- \* Becker, G. S. (1993). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. The University of Chicago Press (for NBER), Chicago, 3d edition
- ★ Ben-Porath, Y. (1967). The production of human capital and the life cycle of earnings. Journal of Political Economy, 75(4):352-365
- ★ Bowlus, A. J. and Liu, H. (2013). The contributions of search and human capital to earnings growth over the life cycle. *European Economic Review*, 64:305 331
- ★ Cunha, F. and Heckman, J. (2007). The technology of skill formation. *The American Economic Review*, 97(2):31–47
- ★ Cunha, F. and Heckman, J. J. (2008). Formulating, identifying and estimating the technology of cognitive and noncognitive skill formation. *Journal of Human Resources*, 43(4):738 782
- Cunha, F., Heckman, J. J., and Schennach, S. M. (2010). Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3):883–931
- Dahl, G. B. and Lochner, L. (2012). The impact of family income on child achievement: Evidence from the earned income tax credit. *The American Economic Review*, 102(5):1927 – 1956
- \* DeJong, D. N. and Dave, C. (2007). Structural macroeconometrics. Princeton University Press Chapters 5, 6, & 7
- Neumark, D. and Rothstein, D. (2006). School-to-career programs and transitions to employment and higher education. *Economics of Education Review*, 25(4):374 393. School-to-Work and Educational Reform Symposium
- Poletaev, M. and Robinson, C. (2008). Human capital specificity: Evidence from the dictionary of occupational titles and displaced worker surveys, 1984-2000. *Journal of Labor Economics*, 26(3):387–420
- ★ Rosen, S. (1972). Learning and experience in the labor market. The Journal of Human Resources, 7(3):326-342

- Stevens, M. (1994). A theoretical model of on-the-job training with imperfect competition. Oxford Economic Papers, 46(4):537–562
- Stinebrickner, R. and Stinebrickner, T. R. (2008). The causal effect of studying on academic performance. B.E. Journal of Economic Analysis & Policy: Frontiers of Economic Analysis & Policy, 8(1):1 53

#### IV. Schooling Decisions and Returns to Education

- \* Angrist, J. D. and Krueger, A. B. (1991). Does compulsory school attendance affect schooling and earnings? *The Quarterly Journal of Economics*, 106(4):979–1014
- Ashenfelter, O. and Krueger, A. (1994). Estimates of the economic return to schooling from a new sample of twins. *The American Economic Review*, 84(5):1157–1173
- ★ Bound, J., Jaeger, D. A., and Baker, R. M. (1995). Problems with instrumental variables estimation when the correlation between the instruments and the endogeneous explanatory variable is weak. *Journal of the American Statistical Association*, 90(430):443-450
- Bowlus, A. J. and Robinson, C. (2012). Human capital prices, productivity, and growth. The American Economic Review, 102(7):3483–3515
- Card, D. (1994). Earnings, schooling, and ability revisited. Working Paper 4832, National Bureau of Economic Research
- Card, D. and Lemieux, T. (2001). Can falling supply explain the rising return to college for younger men? A cohort-based analysis. The Quarterly Journal of Economics, 116(2):705 746
- ★ Card, D. and Krueger, A. B. (1992a). Does school quality matter? Returns to education and the characteristics of public schools in the united states. *Journal of Political Economy*, 100(1):1–40
- Card, D. and Krueger, A. B. (1992b). School quality and black-white relative earnings: A direct assessment. *The Quarterly Journal of Economics*, 107(1):151–200
- Charles, K. K., Hurst, E., and Notowidigdo, M. J. (2015). Housing booms and busts, labor market opportunities, and college attendance. Working Paper 21587, National Bureau of Economic Research
- Dahl, G. B. (2002). Mobility and the return to education: Testing a roy model with multiple markets. *Econometrica*, 70(6):2367 2420
- Heckman, J., Layne-Farrar, A., and Todd, P. (1996). Human capital pricing equations with an application to estimating the effect of schooling quality on earnings. *The Review of Economics and Statistics*, 78(4):562–610

- Farber, H. S. and Gibbons, R. (1996). Learning and wage dynamics. *Quarterly Journal* of *Economics*, 111(4):1007–1047
- ★ Mincer, J. (1974). Schooling, experience, and earnings. Columbia University Press, New York
- Roy, A. D. (1951). Some thoughts on the distribution of earnings. Oxford Economic Papers, 3(2):135–146
- Staiger, D. and Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, 65(3):557–586
- Willis, R. J. and Rosen, S. (1979). Education and self-selection. *Journal of Political Economy*, 87(5):S7–S36

#### V. Externalities of Human Capital

- \* Acemoglu, D. and Angrist, J. (2000). How large are human-capital externalities? evidence from compulsory schooling laws. *NBER Macroeconomics Annual*, 15:9–59
- Currie, J. and Moretti, E. (2003). Mother's education and the intergenerational transmission of human capital: Evidence from college openings. *The Quarterly Journal of Economics*, 118(4):1495–1532
- \* Cano-Urbina, J. and Lochner, L. (2019). The effect of education and school quality on female crime. *Journal of Human Capital*, 13(2):188–235
- Lleras-Muney, A. (2002). Were compulsory attendance and child labor laws effective? An analysis from 1915 to 1939. *Journal of Law and Economics*, 45(2):401–435
- ★ Lochner, L. (2004). Education, work, and crime: A human capital approach. International Economic Review, 45(3):811-843
- \* Lochner, L. and Moretti, E. (2004). The effect of education on crime: Evidence from prison inmates, arrests, and self-reports. *The American Economic Review*, 94(1):155– 189
- ★ Stephens, M. and Yang, D.-Y. (2014). Compulsory education and the benefits of schooling. *American Economic Review*, 104(6):1777–1792

### **In-Class Communication:**

All cell phones or any type of personal communication device must be turned off in class. If a student is expecting an emergency call prior to class, that student must let the Instructor know.

### **University Attendance Policy:**

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience a serious illness.

## Academic Honor Policy:

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://dof.fsu.edu/honorpolicy.htm.)

#### Please Note:

- **Plagiarism:** Students must write their assignments in their own words. Whenever the student uses an idea from another author, this must be clearly acknowledged by citing the source where this idea was taken. The Department of Economics takes plagiarism very seriously.
- Unauthorized Group Work: Even though students can communicate with their peers while competing the homework assignments, each student is responsible for submitting their own original work.
- Multiple Submission: Students are not supposed to submit academic work that was previously used in another course without letting the instructor know.

### Americans with Disabilities Act:

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the Instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD) sdrc@admin.fsu.edu http://www.disabilitycenter.fsu.edu/

## Syllabus Change Policy:

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.