# LABOR ECONOMICS

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## Syllabus

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### 1) THE CURRICULUM

This course is intended for junior students (three-graders) with above-average prior knowledge of micro-economics, mathematics and econometrics (2-3 semesters of each before starting Labor). It would like to bridge, as far as possible, the gap separating the undergraduate and graduate texts. The most widely used undergraduate textbooks including Ehrenberg-Smith (2002) and Borjas (2008) have been written for sophomors with poor (or no) quantitative precognition while the only existing comprehensive graduate text (Cahuc and Zylberberg, 2004) builds on extensive knowledge of analysis, linear algebra, game theory and advanced micro-economics.

Most of the chapters comprise three sections: *Basics*, *Topics* and *Measurement*.

*Basics* primarily follow the Ehrenberg-Smith (2000) textbook but also draw extensively from Borjas (2008). Technically, the slides of these sections do not go beyond verbal discussion and graphic illustration. *Basics* try to summarise what any BA student should routinely know.

*Topics* introduce formal models relevant for the subject under investigation, building on students' prior mathematical knowledge. The curriculum makes no attempt at a comprehensive formal discussion of the key topics in labor economics – it wants to draw attention to some important details, ones which are difficult to understand without formal modelling. These sections draw from the Cahuc- Zylberberg textbook (demand for labor)

and seminal models by Becker (household production), Roy and Borjas (specialisation on unobservables), Mincer (returns to education) and Katz and Murphy (disentangling supply and demand-driven scenarios). The section on life-cycle labor supply draws heavily from a downloadable lecture note written by Peter Kuhn at UCSD. Most of the empirical illustrations come from the works of Hungarian labor economists.

The sections on *Measurement* draw attention to the methods and difficulties of empirically testing the theoretical models. These sections touch upon relatively difficult econometric problems (endogeneity and IV, selectivity bias correction) without engaging into their profound mathematical discussion. At Eötvös University, where this course was developed, juniors learn the related models at an intermediate econometrics course parallel with Labor.

**1. Labor supply – Basics**

- The participation decision
- Optimum and comparative statics graphically
- The effect of taxes and fixed costs

**2. Labor supply – Topics**

- Deriving the static labor supply model
- Household production and labor supply
- The life-cycle model of labor supply
- Added and discouraged workers
- Benefits and labor supply

**3. Labor supply – Measurement**

- The three-equations model of labor supply
- Briefly on the estimation of life-cycle labor supply

**4. Supply of skills – Basics**

- The decision to study
- Why some people study longer than others?
- General on-the-job trainig

**5. Supply of skills – Topics**

- The Mincer-equation
- The Roy model

**6. Supply of skills – Measurement**

- The difficulties of measuring the effects of education

**7. Labor demand – Basics I**

- Short run
- Long run with two factors of production: optimum and comparative statics
- The Hicks-Marshall ‘laws’
- Long run with more than two factors of production (intro)

**8. Labor demand – Basics II**

- Monopoly
- Monopsony
- Quasi-fixed costs

**9. Labor demand – Topics**

- A formal model of labor demand with two and more factors

**10. Labor demand – Measurement**

- Cobb-Douglas and translog demand functions

**11. Equilibrium in a competitive labor market**

- Marshallian equilibrium
- Delays in adjustment – cobweb cycle
- Frictions and search unemployment
- Equilibrium with search and matching
- Supply or demand? The Katz-Murphy cross-products

**12. Equilibrium under state intervention and collective bargaining**

- Taxes
- Minimum wage regulation
- Unemployment insurance
- Efficient bargaining
- The indirect effects of collective bargaining
- Open conflicts and strikes

**13. Equilibrium with heterogeneuous labor**

- Hedonic wage theory
- Risky jobs and the road to equilibrium

Note that the curriculum does not cover a series of issues customarily discussed in Labor courses, such as the screening hypothesis and several topics in human capital theory, migration and discrimination. These issues are covered in two courses developed and taught parallel with Labor (Economics of Education by Júlia Varga and Gender, Race and Discrimiation by Anna Lovász).

## 2. TEXTBOOKS

Ehrenberg, R.–Smith, R. (2000): Modern Labor Economics, Addison-Wesley, Reading, etc.

Borjas, G. J. (2008): Labor Economics, McGraw-Hill/Irwin, Boston, New York etc.

## 3. LESSONS FROM TEACHING

The course was taught to a group of seventeen Applied Economics students at Eötvös University, Budapest.

*Time frame.* Total time devoted to the course amounted to 39 hours (2x90 minutes a week in a semester of 13 weeks). Delivering the lectures took significantly less time than that (no more than between 20 and 25 hours) with the rest of the time devoted to classroom discussion, evaluation of homeworks, presentations by students and the writing of tests.

*Preconditions* included at least two semesters of micro, analysis and econometrics and one semester of linear algebra.

*Tests*. Students wrote 3 tests during the semester, after completing the chapters on Supply, Skills supply and Demand. The tests covered issues discussed in *Basics* with the questions taken from the Ehrenberg-Smith and Borjas test banks and those used at Corvinus and Pannon Universities, Hungary. In most cases, students were required to briefly explain their choice of answers. Students could achieve a maximum of 18 points at the three tests.

*Homework*. Students had to write homework several times during the semester (short essays and econometric estimations with explanations). Good and mistaken points were discussed at lenght in the classroom (with no names mentioned). Max 5 points.

*Presentations*. Groups of 3-4 students were asked to summarise sets of empirical papers (predominantly from Hungary) dealing with issues on the floor. Issues included benefit effects and popular beliefs on benefits, 'overeducation', minimum wage effects and collective bargaining. Since most of the papers covered Hungary I do not give a list of them in this English language syllabus. Max 5 points.

*Exam*. The course was closed by a written exam similar to those during the semester but including questions covered in *Topics* and *Measurement*. It was not required to reproduce the mathematical derivations of the models but students had to understand their assumptions and predictions in order to write the test succesfully. Max 12 points.

Altogether, a maximum of 40 points could be collected. Students on average achieved 31 points with even the worst records exceeding 25 points. Most students evaluated the course as interesting, intellectually demanding but relatively easy to accomplish.