

Syllabus – Economics of Education (PhD)  
Aix-Marseille School of Economics (AMSE)  
Fall 2024

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**Course Description:**

The course deals with important economic issues related to education and will present an overview of the main theoretical and empirical knowledge available. The topics covered in this course will include: the impact of class size, the role of teachers, the return to education, the role of school choice and of tuition fees in higher education, and the role of early investment in long term labor outcomes. The course will discuss empirical methodologies used to analyze education systems worldwide. Examples will be taken from both low- and high-income countries.

**Objectives of the course:**

Introducing students to the available literature of economics of education and to the methodology used to analyze education systems worldwide. At the end the semester, students will be acquainted to most rigorous quantitative methods used to analyze education and will have been in contact with the most prominent results available in economics of education.

**Grading rules:**

The course will be pass/no pass. A total of five *simple* Problem Sets (PS) will have to be submitted weekly *on time*. I will simply verify that the each problem set has been properly completed. The student will also have to attend and engage in all of the six sessions.

**Grade composition:**

The final grade will be based on :

- **Attendance:** 6 points, one per session
- **Class participation and engagement:** 6 points i.e. answer questions, ask questions, come to office hours, send an email... 1 point if you made at least one contribution per week.
- **Problem set submission** 10 points, 1 for submitting something **on time** and one for completing the problem set entirely.

Students who reach 16 or above will pass the class.

**Pre-reqs for this course:**

Knowledge of R is required

## Course content

Week	Lecture topic
Week 1	IDB Nov. 5 <sup>th</sup> Human Capital Theory
Week 2	MEGA Nov. 12 <sup>th</sup> Return to education
Week 3	IDB Nov. 19 <sup>th</sup> The Market of Education
Week 4	IDB Nov. 26 <sup>th</sup> Improving Education
Week 5	IDB Dec. 3 <sup>rd</sup> Teachers
Week 6	MEGA Dec. 10 <sup>th</sup> Early Childcare Education

### Week 1 - Human Capital Theory

- **To go further:** Investing in Human Capital: a Theoretical Analysis, Gary Becker Journal of Political Economy, Gary Becker introductory video
- **empirical techniques:** OLS
- **Assignment:** Problem set 1: OLS regression – Return to Education - Data analysis using R and a dataset from the USA.

### Week 2 Return to Education

- Analyze the existing literature on the return to education and describe the empirical difficulties that applied economists often encounter.
- **Empirical techniques:** Fixed effect and Difference-in-Differences
- **To go further:** Priceless: The Nonpecuniary Benefits of Schooling, Philip Oreopoulos and Kjell G. Salvanes. Journal of Economic Perspectives, Volume 25, Number 1, Winter 2011, Pages 159–184
- **Assignment:** Problem set 2: Bad alternative to OLS and Difference in Differences

### Week 3 – Market of Human Capital

- Are students credit constrained? What are the main impediment to school participation in high and low income countries?
- **Reading:** The Evidence of Credit Constraint in Post-secondary education, Carneiro, Heckman, The Economic Journal, 2002
- **Empirical method:** IV
- **Assignment:** Problem set 3: Return to education using Twins and IV

#### Week 4 Improving Education

- School choice (voucher) versus effect of increasing resources
- **Empirical Method:** RCT
- **Assignment:** Problem set 4: Randomized Controlled Trials - Boarding School of Excellence

#### Week 5 Teachers

- Teachers are one of the main inputs of the education production function: How can we improve their productivity? Is it desirable? From an empirical perspective, can we assess the size of the teacher effect?
- **Assignment** Problem set 5 - Randomized Controlled Trials - Deworming

#### Week 6 Early Learning Environment, Cognitive skills and Inequality

- Liquidity constraints cannot solely explain why some children do not pursue education. Children sometimes drop out because they do not have the cognitive skills, socio-emotional maturity or simply the interest or the motivation to pursue their education further. Why some have skills than others do not? Is it entirely genetics? We will explore here the origin of the inequalities and solutions to fill the cognitive gap.
- Assignment: No problem set.