Contents

The following syllabus is an overview of the different engines of economic growth. It will not be completely done in the course, but only those themes previously chosen by the professor.

Part I. Can we grow without growth of the number of workers if the technology has Constant Returns to Scale? Accumulation of factors

1. Human capital

1.1. Arrow and learning-by-doing

1.2. The two-sectors model of Uzawa-Lucas

1.3. Education and altruism

1.4. Application: from Malthus to Uzawa-Lucas

1.5. Application: from an agricultural economy to an urban economy

2. R+D: Research and Development

2.1. Romer and the goods variety

2.2. Jones and the scale effects

2.3. Grossman and Helpman and the quality ladder

2.4. Aghion and Howitt and the creative destruction of Schumpeter
3. Capital intensification

3.1. R+D oriented to capital deepening

4. Institutions or social capital: their influence on the accumulation of factors

4.1. Hall and Jones and the growth differences among countries

Part II. Can we grow without growth of the efficiency units of labor? From Constant Returns to Scale to Increasing Returns to Scale at the aggregate level through the accumulation of some production factor

5. Capital externalities

5.1. The model of Romer

5.2. Absolute or per capita externalities?

6. Productive public expenditure

6.1. The model of Barro

7. TFP: generalization of the capital externalities and the Ak model

7.1. Human capital externalities and the Ak model

7.2. Poverty traps

8. TFP: Inada conditions and substitution capital-labor

8.1. Inada conditions

8.2. Substitution capital-labor and Inada conditions
Part III. Can we go from Constant Returns to Scale to Increasing Returns to Scale at the aggregate level without the accumulation of any production factor? Competition and firms

9. Industrial structure

9.1. Returns to specialization and monopolistic competition

9.2. Competition and the number of firms as the engine of growth

9.2.1. Monopolistic competition in intermediate goods

9.2.2. Monopolistic competition in final goods

Part IV. Can we grow more than our neighbor? Total Factor Productivity and production factors

10. TFP and production factors

10.1. TFP and physical capital

10.2. TFP and firms’ size

10.3. TFP and labor

10.4. TFP and structural change

10.5. TFP and genetic diversity
Bibliography

Unit 1


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1 The basic articles that the students should read are in black.
Unit 2


Unit 3


Unit 4


Unit 5


Unit 6


Unit 7


Unit 8


Unit 9


Unit 10


**Books**


**Knowledge evaluation**

Assistance to class (80% at least) is required to be evaluated.

The evaluation of the student is divided in two compulsory parts:
1) A presentation in class of one article in small groups.
2) A homework consisting in applying the knowledge acquired in class to a theme chosen by the student. For example, if I like health, Fernando will give me 2 or 3 papers of health and growth. Then, I will read them, write the strong and weak points of the papers and, finally, I will propose a new idea and try to model it.