

# Syllabus of Economic Growth, 2020-21

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**Coordinator:** Antonia Díaz.

**Professors:** Antonia Díaz and Álvaro Jañe.

**Office:** 15.1.09, Campus de Getafe

**Office hours of Antonia Díaz:** Wednesdays, Fridays, 10:00-11:00, either by Google Meets or a virtual room in Blackboard Collaborate. Please, e-mail to set an appointment.

**Office hours of Álvaro Jañe:** Shown in Aula Global in the corresponding reduced group.

**E-mail:** [andiaz@eco.uc3m.es](mailto:andiaz@eco.uc3m.es)

## Bibliography

- The basic textbook is the book by Charles I. Jones, “Introduction to Economic Growth”, Prentice Hall, 3rd edition, if possible.
- We will also use by David Weil “Economic Growth”.3rd edition, Routledge, Taylor & Francis.
- William Easterly, “The Elusive Quest for Growth”, MIT Press.

## Topics

### 1. Growth facts and methodology

### 2. Foundations of the aggregate production function:

1. The concept of Total Factor Productivity.
2. The factor distribution of income and the aggregate production function.

### 3. Growth and capital accumulation: The Solow model

1. A bit of maths.
2. Steady state.
3. Comparative statics.

### 4. Productivity and growth

1. Technological progress.
2. Transitional dynamics.

**5. Human capital and growth**

**6. Limits to growth: natural resources and climate change**

**7. Innovation and growth**

**8. Infrastructures and growth**

**7. Globalization and growth**

## **Final grade**

The final grade will depend on the final exam (50%), a midterm exam (20%) and a project (20%). The other 10% depends in practice class participation or participating in the online forum available in Aula Global. The project will consist in studying the growth patterns of a particular country. You will need use data bases as Penn World table and software as Excel. Each week the professor will hand out exercises about the material reviewed in the lecture. These exercises will be solved in class but are not graded. However, participating in the discussion in class and forum is graded.

The midterm exam will take place online with a synchronic test.

Those students that cannot take the midterm exam in the announced date because of illness (properly documented by a doctor certificate) will take the exam during the last week of the semester.

The final grade of those students who have to retake the class in the extraordinary exam will be the maximum of the following: (1) the weighted average replacing the final exam grade by the grade in the extraordinary exam or (2) 100% of the grade in the extraordinary exam.

## **The project**

The project consists in studying the growth experience of a country. It will be conducted in teams of two students, at most, registered in the same reduced group. The project is due December 14<sup>th</sup>. The questions of the project will be posted in Aula Global September 28<sup>th</sup> so that students can work on the project as we progress in the class material. There are two sessions of practice class already scheduled to discuss issues and problems with the project. See the weekly timetable of the class at the end of this document.

## **Measures taken for a new health emergency scenario**

- We will be using Aula Global intensively. There the student will find links to electronic material as well as past exams and their answer keys.
- Lectures will be conducted online through the service BlackBoard Collaborate. The material needed for the lectures will be posted in advance. In case of emergency we will celebrate all practice classes online.

- The midterm exam will be conducted online and synchronically. In case of emergency the final exam will also take place online in the same manner that the midterm exam.
- We will use the forum and chats of Aula Global as a way of stimulating the interaction among students. There will be one forum continuously open so that students can discuss the project and help each other solving questions. There is another forum where the professor will ask questions for debate. Participation will be necessary to get the 10% of the final grade. Specifically, to get that 10% we require each student to participate 5 times (meaningfully) in either of the forums.

## Timetable

- **Midterm exam: in the reduced group class, the week of November 2nd.**
- Each week we will solve homeworks in class.

Week	Day	Contents of the session
1	Lecture	14-sept Topic 1: The Facts of Economic Growth
1	Practice	Topic 2: The aggregate production function. A prime on Growth Accounting Exercises.
2	Lecture	21-sept T3: Growth and capital accumulation (I)
2	Practice	<i>Solving Homework #1</i>
3	Lecture	28-sept T3: Growth and capital accumulation (II) <b>Questions of the project posted in Aula Global</b>
3	Practice	<i>Solving the Solow model in the computer</i>
4	Lecture	5-oct T4: Productivity and growth (I)
4	Practice	<i>Solving Homework #2</i>
5	Lecture	12-oct <b>Holiday</b>
5	Practice	<i>Solving Homework #3</i>
6	Lecture	19-oct T4: Productivity and growth (II)
6	Practice	<i>Discussion of issues about the project</i>
7	Lecture	26-oct T5: Human capital and growth
7	Practice	<i>Solving Homework #4</i>
8	Lecture	2-nov <b>Holiday</b>
8	Practice	<b>MIDTERM EXAM</b>
9	Lecture	9-nov T6: Limits to growth: Natural resources
9	Practice	<i>Solving Homework #5</i>
10	Lecture	16-nov T6: Limits to growth: Climate change
10	Practice	<i>Discussion of issues about the project</i>
11	Lecture	23-nov T7: Innovation and growth (I)
11	Practice	<i>Solving Homework #6</i>
12	Lecture	30-nov T8: Infrastructures and growth
12	Practice	<i>Solving Homework #7</i>
13	Lecture	7-dic <b>Holiday</b>
13	Practice	<i>Solving Homework #8</i>
14	Lecture	14-dic T9: Globalization and growth <b>Project due</b>
14	Practice	<i>Solving Homework #9</i>

In blue: contents of the lecture.

In pink: contents of the practice class.