



# The Economics of Innovation and Sustainable Growth

Fall Semester 2017-2018

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### Course Overview and Objectives

Rapid economic growth worldwide puts into danger future generations since there are valid concerns about exhaustion of natural resources and severe environmental problems. At the same time, the biotechnology industry across the globe is growing dramatically in line with rapidly emerging scientific and technological developments. This course aims at providing necessary knowledge regarding two basic pillars: on the macroeconomic side, it will describe growth models with emphasis on the role of technology, innovation and sustainable growth, environment as an economy's capital, income and natural resources, institutions. On the microeconomic side, emphasis will be placed on protection of innovation, economics of patents, measuring of patents and their relationship with the market value of firms, knowledge dissemination, other significant types of property rights such as trademarks etc.

### Teaching Method

The class will include basic theoretical concepts and applications. Case studies will be presented along the timeline to support the theoretical predictions.

### Student Evaluation

Evaluation of the course will be based on one final exam, case studies group presentations and case study –write up as well as your overall class participation and preparation. The relative weights of each are:

Attendance/Participation	10%
Group Case presentation-Write -up	45%
Final Exam	<u>45%</u>
<b>Total</b>	<b>100%</b>

### Reading Material

1. Jones, Ch. (1998). Introduction to Economic Growth. W.W. Norton and Company.
2. Markandya, A., Harou, P., Bellu, L.G. and Cistulli, V. (2002). Environmental Economics for Sustainable Growth
3. Swan. P. (2009). The Economics of Innovation – An introduction. Edward Elgar.
4. Weil, David (2012). Economic Growth. Pearson.
5. Victor, P. And Dolter, B. (2017). Handbook on Growth and Sustainability, Edward Elgar.
6. Βερναρδάκης, Ν. (2006). Οικονομική της τεχνολογίας. Τόμος Α. Τυποθήτω - Δαρδανός

### CLASS SCHEDULE

WEEK	TOPIC
1	Economics of Innovation and Technology
2	Knowledge Generation and Diffusion
3	Impacts of Innovation
4	Financing of Innovation
5	Patents, Trademarks & Secrecy
6	The basic Solow growth model
7	The role of human capital in growth
8	The role of technology in growth
9	Resources and the environment in growth models
10	Sustainability constraints on growth

**Μαθαίνουμε. . .**  
**10% αυτών που διαβάζουμε**  
**20% αυτών που ακούμε**  
**30% αυτών που βλέπουμε**  
**50% αυτών που βλέπουμε και ακούμε**  
**70% αυτών που συζητούμε**  
**80% αυτών που βιώνουμε**  
**95% αυτών που διδάσκουμε στους άλλους.**

**William Glasser, ψυχοθεραπευτής**