SYLLABUS

Name of the course:	Economics of Knowledge						
Teacher:	Aldo Geuna						
University / organisation:	UNITO						
Language of teaching:	English						
ECTS:	6						
Semester (S1, S2, S3 or S4):	☐☑	S1		S2		S3	S4
Teaching method(s):	☐☑	Lecture courses				Flipped classroom	
	Other:						
Type(s) of evaluation:	☐☑	Sitting exam			☐☑	Written report	
		Oral defence			☐☑	Group project	
	Other / comments:						
Expected deadline(s) for the evaluation(s)	January-February 2026						
Expected date of final results:	January-February 2026						
Summary of the content:	The course aims to develop a critical knowledge of the fundaments of the economics and policy of knowledge production and distribution with particular emphasis on university research. The course will introduce the students to the principal institutions and policies in the area of research and innovation in the G7 countries and other BRIC countries (depending on the interests of the students). Particular attention will be devoted to the comparative analysis. The course is structured into four main modules. The first presents a brief introduction to the economics of innovation paying particular attention to the concepts of knowledge and information. It, then, introduces the rationale for public funding of academic research and examine the main OECD indicators. The second module focuses on the analysis of scientific production and the academic labor market paying particular attention to international mobility. The interaction between science and industrial development and in particular university-industry relationships, academic patenting and other channels of knowledge transfer are examined in the third module. The concepts learnt in previous classes will be used to analyze the focus topic of Innovation in Healthcare. Given the increasing importance of evidence based policy, one or two classes of the course will be devoted the understanding and use of Science and Technology (S&T) Indicators for economic analysis and policy making. The forth module						

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(only for the students that takes the course for 9CFU) focuses on technological diffusion and industrial dynamics.

The course offers the opportunity to follow three classes by experts in the field.

The course provides detailed knowledge on the development and implementation of science and technology policies. Students will acquire the needed theoretical and empirical knowledge to critically evaluate market failure situations that would justify the development specific policies. The analysis of the rationale behind policy action and the problems associated to the development and implementation of specific policies will help the students to develop a critical knowledge of the difficulties inherent to the development of science and technology policy.

The course offers the opportunity to follow a series of seminars on the economics of innovation on Tuesday from 12:30 to 13:30 at the Collegio Carlo Alberto in Piazza Arbarello 8 / CLE. Attendance of the seminars is compulsory. The seminars will offer the unique opportunity to get in touch with ongoing research in innovation.

Students (groups of two/three students can be formed) will be asked to produce a term paper enabling them to improve their reporting skills. The text should be placed at the cross border between academic research and policy report. Each student will be asked to present the structure and summary results of her/his work during the last classes.

Indicative list of lectures[1]:

Class	Date	Title
1.1	19/9	**Introduction** Economics of Knowledge 1
1.2	20/9	Economics of Knowledge 2
2.1	26/9	Sources of Innovation
2.2	27/9	The rationale for university research funding & University research funding – OECD statistics
3.1	3/10	**The Production and Organization of Science** Academic Labor Market 1
3.2	4/10	Productivity of science and gender Research Skills / Term paper /
4.1	10/10	Emerging trends in Science, Technology & Innovation Policy in emerging countries (**Manuel Toselli**)
4.2	11/10	ST&I Indicators 1
5.1	17/10 11-13	Does training in AI affect PhD students' careers? Evidence from France (**Eliana Diodati) - 2h**

[1] Provide, if already possible, an indicative list of topics you will cover in each lecture.

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	5.2	18/10 11-13	Unconventional data for innovation policy (**Marco Guerzoni**) - **2h**
	6.1	24/10	ST&I Indicators 2: Intellectual Property Rights What you should know
	6.2	25/10	**Science Technology Relationships** The empirical analysis of university-industry collaborations
	7.1	31/10	**Work on article discussion/presentation/paper**
	7.2	1/11	**Work on article discussion/presentation/paper**
	8.1	7/11	**Diffusion and organization of innovation** Technical Standards, Network Externalities, Lock-in and Path Dependence
	8.2	8/11	Appropriability Tools
	9.1	14/11	**Innovation and industrial dynamics** Agglomeration of Innovative activities and Clusters
	9.2	15/11	Industrial dynamics: The case of the Italian Automobile Industry
	9.3	15/11	**Visit to the Automobile Museum 14-16**
	10.1	21/11	Science and technology policy
	10.2	22/11	**Students' presentations**
	11.1	28/11	**Students' presentations** **Conclusions and Q&A**
Short bibliography:	A. Geuna ed. (2015), *Global Mobility of Research Scientists. The Economics of Who Goes Where*. Academic Press, 2015 A. Geuna and F. Rossi (2015), *The University and the Economy: Pathways to growth and development*, Cheltenham: Edward Elgar, [translation with three new chapters of the 2013 book in Italian]. A. Geuna, (1999), *The Economics of Knowledge Production: Funding and the Structure of University Research*, Cheltenham: Edward Elgar. (Freely available at my home page: http://www.personalweb.unito.it/aldo.geuna/) D. Foray (2004), *The Economics of Knowledge*, MIT press. Bronwyn H. Hall, Nathan Rosenberg (eds.) (2010) *Handbook of the economics of innovation*. MIT Press.		