

COURSE OUTLINE: ECONOMICS OF TECHNOLOGY

GENERAL

SCHOOL	ECONOMICS AND BUSINESS		
ACADEMIC UNIT	ECONOMICS		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	OE804	SEMESTER	8th (Major C)
COURSE TITLE	ECONOMICS OF TECHNOLOGY		
INSTRUCTOR(S)	Professor Y. Stamboulis		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	6
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialized general knowledge, skills development</i>	<i>Economic analysis, specialized general knowledge</i>		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek or English		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/ECON_U_184/		

LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The aim of the course is to highlight the importance and role of technology and technological development in the economy and to delve deeper into the mechanisms that concern the interaction between economy and technology.

The aim is for students to understand the nature of knowledge as an economic good and technological development as an endogenous function of the socio-economic system and their importance for theories of business and development. Also, understand the role of learning in the production process and basic elements of the relationship between technology and strategy.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and</i>
<i>Team work</i>	<i>sensitivity to gender issues</i>
<i>Working in an international environment</i>	<i>Criticism and self-criticism</i>
<i>Working in an interdisciplinary environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Production of new research ideas</i>	<i>.....</i>
	<i>Others...</i>
	<i>.....</i>

- Search, analysis and synthesis of data and information, using the necessary technologies
- Decision making
- Evaluation of validity of obtained results
- Teamwork

SYLLABUS

The course content is organized into the following thematic sections:

- Introduction. What is technology. The importance of technical change and innovation, Technological change in economic thinking
- Innovation Theories: The dimensions of innovation, "innovation models", dominant design, product cycle, Pavitt classification
- Technical change and economic crises: techno-economic paradigm. Information Society and Artificial Intelligence
- Economics of R&D, economics of increasing returns and network externalities, innovation technology and SMEs
- Technology diffusion
- Codified and tacit knowledge, assimilation ability
- Path dependence
- Technological standards
- Technology, Innovation, Entrepreneurship and business theories:
- Intellectual property:
- Socio-technical transitions:
- Innovation Systems & Innovation Clusters:
- R&T&I Policy:
- Technology policy: policy for science, research and innovation, information society and employment, technology and environment.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face												
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of the e-class platform for posting (a) notes, (b) assignments, (c) links, (d) announcements												
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the</i>	<table border="1"> <thead> <tr> <th data-bbox="643 1518 978 1563">Activity</th><th data-bbox="978 1518 1311 1563">Semester workload</th></tr> </thead> <tbody> <tr> <td data-bbox="643 1563 978 1608">Lectures</td><td data-bbox="978 1563 1311 1608">39</td></tr> <tr> <td data-bbox="643 1608 978 1839">Tutorials that Focus on implementation methodologies and study analysis case study</td><td data-bbox="978 1608 1311 1839">6</td></tr> <tr> <td data-bbox="643 1839 978 1917">Homework preparation</td><td data-bbox="978 1839 1311 1917">70</td></tr> <tr> <td data-bbox="643 1917 978 1962">Independent Study</td><td data-bbox="978 1917 1311 1962">65</td></tr> <tr> <td data-bbox="643 1962 978 2007">Course total</td><td data-bbox="978 1962 1311 2007">180</td></tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Tutorials that Focus on implementation methodologies and study analysis case study	6	Homework preparation	70	Independent Study	65	Course total	180
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ECTS	
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other.</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Student assessment is based on group or individual assignments. Students present two case studies or theoretical assignments during the semester and an essay on a topic related to the course content as a final assignment. The final grade takes into account: • the written text of each assignment • the presentation of each assignment ERASMUS students follow the same examination methods, but are taught and examined in English.

ATTACHED BIBLIOGRAPHY

- *Dominique Foray - Economics of knowledge-The MIT Press (2004),*
- *John R. Bessant, Joe Tidd - Innovation and Entrepreneurship-Wiley (2015),*
- *Melissa A. Schilling - Strategic Management of Technological Innovation, McGraw Hill (2022)*