HISTORY OF TECHNOLOGY

1. GENERAL

SCHOOL	ENGINEERING		
SECTION	INFORMATICS & COMPUTER ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE		**SEMESTER OF STUDY**	7th, 9th
COURSE TITLE	HISTORY OF TECHNOLOGY		

INDEPENDENT TEACHING ACTIVITIES _in case the credits are awarded in distinct parts of the course e.g. Lectures, Laboratory Exercises, etc. If_ the credits _are awarded uniformly for_ the _entire course, indicate the weekly teaching_ hours _and the total number of credits._	**WEEKLY HOURS TEACHING**	**CREDIT UNITS**
Lectures	2	
Practice Exercises	1	
Laboratory	1	
Add rows if needed. The organization of teaching and the teaching methods used are described In detail at 4.	**4**	**5**

COURSE TYPE _Background, General Knowledge,_ _Scientific Area, Development Skill_	Background, General Knowledge
PREREQUISITES COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATION:	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes (in English)
ONLINE COURSE PAGE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The learning outcomes of the course are described, the _specific knowledge, skills and abilities_ of _an appropriate level that students will acquire after the successful completion of the course._

Consult Appendix A

- Description _of_ the _Level_ of _Learning Outcomes for each_ course _of study according to the European Higher Education Area Qualifications Framework_
- _Descriptors of Levels 6, 7 & 8 of the European Qualifications Framework_ for _Lifelong Learning and Annex B_
- _Summary Guide for writing Learning Outcomes_

Introduction course in the History of Technology, which focuses on the history of calculation, automation and communication technologies, as well as the history of engineers. It thus covers the history of all the objects of the Department.

Upon successful completion of the course, the student will be able to:

- knows the basics of the history of technology, both in relation to calculation and communication technologies and in relation to a range of important other technologies
- places in a historical context and therefore better understands issues that he will address as a scientist, researcher, professional specializing in computer science and computers
- utilizes an enriched definition of technology as it is shaped in its social use

- combine an overview of the history of technology in the societies of modern times with comparisons with the history of techniques in examples of societies before modernity, as well as to understand the historicity of discrimination between tools, mechanisms, machines, apparatus and other material devices.

In terms of competence, the student will be able to:

- participates in the design and development of programs aimed at utilizing the history of technology in research, education, culture, technological policy formulation
- conducts research on primary and secondary physical and electronic sources of technology history

General Skills

Taking into account the general competencies that the graduate must have acquired (as listed in the Diploma Supplement and listed below) which of them is the subject aimed at?

Search, *analysis* and synthesis *of data* and information, using the necessary technologies *Adapting to new situations Decision making* *Autonomous work* *Teamwork* *Working in an international environment Working in an interdisciplinary environment* *Generating new research ideas*	*Project planning and management* *Respect for diversity and multiculturalism Respect for the natural environment* *Demonstrate social, professional and ethical responsibility and sensitivity to gender issues Criticism and self-criticism* *Promotion of free, creative and inductive thinking*

- Search, analysis and synthesis of data and information, using the necessary technologies
- Autonomous work
- Criticism and self-criticism
- Promotion of free, creative and inductive thinking

3. **COURSE CONTENT**

Overview of the history of technology. Introduction to key periods, concepts and practices. Introduction to key issues and historiographical approaches. Introduction to the history of universal machines (steam engine, electric generator, computer). Introduction to the history of computation technologies and related technologies (automation, communication). Technology comparisons of modernity with technologies of other historical periods. History of classifications and comparisons of computational and other technologies. The history of
- electronics. The history of military computers. From the analog-digital distinction to the software-hardware distinction. The emergence of the home and personal computer. The history of the internet and the world wide web. The history of artificial intelligence. The history of social media. The history of Big Data.
- Introduction to the history of engineering. History of engineering education. History of the formation of scientific and professional engineering communities. History of
- the formation of various branches of engineering. History of the separation of engineers from other technical communities.
- The history of the relationship of technology with the state and the market, government and business. History of technological policy.
The history of the relationship between technology and the environmental crisis.
The history of the formation of computational models of the environmental crisis.

History of the relationship between gender and technology.

- History of the relationship between technology and literature. The history of computer use in arts and culture. The computer in the cinema.
- Introduction to the history of technology in Greece. The history of calculation, automation and communication technologies in Greece.
- introduction to the use of calculation and communication technologies for research and teaching of humanities, the emergence of the interdisciplinary field of Digital Humanities, utilization of Digital Humanities from the History of Technological Engineering.
- The History of Technology as Public History, through Digital History. Physical and electronic archives museums and other sources of history of technology.

4. DIDACTICS and LEARNING METHODS - EVALUATION

HOW TO DELIVER *Face-to-face, Remote education , etc.*	Face-to-face, distance learning
USE OF TECHNOLOGIES INFORMATION AND COMMUNICATIONS *Use of ICT* in *Teaching, in Laboratory Training, in Communication with students*	• Posting material of the course material (references to websites, task topics, etc.) on the University's e-learning platform. • Use of email and announcements on the e-learning platform for communication with students.

TEACHING ORGANIZATION *The way and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliography Study & Analysis, Tutorial, Practice* (placement), *Clinical Practicum, Art Workshop, Interactive teaching, Educational visits, Project preparation, Writing of work / assignments, Artistic creation, etc.* *The student's study hours for each learning activity as well as the hours of unguided study are listed so that the total workload at semester level corresponds to ECTS standards*	Activity	Semester Workload
	Lectures	26
	Practice Exercises	13
	Laboratory Exercises	13
	Elaboration of Assignments	34
	Independent Study	49
	Course Total (25 hours of load working per credit unit)	**125**

| **STUDENT EVALUATION**
Description of the evaluation process
Assessment Language, Assessment Methods, Formative or Inferential, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Report */Report, Oral Exam, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Performance,* Other */ Other*
Explicitly defined assessment criteria are indicated and if and where they are accessible to students. | The Final Course Grade will be based 100% on the writing of 10 written papers weekly assignments (10 assignments x 10% of the final grade each), with a size of 500 words, which will be based on the material to be studied (texts, films, videos, etc.) and his discussion in class.
The evaluation process is communicated to the students during the lectures and through the course website. |

5. RECOMMENDED-BIBLIOGRAPHY

Suggested Bibliography

1. Telis Tymbas and Irene Mergoupi-Savaidou (eds.), Stories of twentieth-century technology: Electric Cars, Wooden Airplanes, French Reactors, Women Computers (University Press of Crete 2013).
2. Telis Tymbas, Analog Work, Digital Capital: History of Computation and Automation Technologies in Energy and Communication (Angelus Novus Publications 2018)

- Additional Bibliography :

1. Paul Ceruzzi, History of Computing Technology: From ENIAC to the Internet (Mirror 2006).
2. Patrick Flissi, The History of Modern Communication (Mirror 2004).
3. Maria Rentetzi (ed.), The gender of technology and the technology of gender (Pendulum 2012).
4. Stathis Arapostathis, Phaedra Papanelopoulou and Telis Tymbas, Technology and Society in Greece: Studies from the History of Technology and Science and Technology Studies (Ekdotike Athinon 2015).
5. Collective, Science and Technology: Historical and Historiographical Studies (Ekdotike Athinon 2013).