COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF SCIENCES		
DEPARTMENT	DEPARTMENT OF CHEMISTRY		
LEVEL OF STUDIES	ISCED level 6 – Bachelor's or equivalent level		
COURSE CODE	EN19	**SEMESTER**	7th Semester
COURSE TITLE	Additive Manufacturing Technologies		

TEACHING ACTIVITIES *If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
	4	6
Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	Background
PREREQUISITES:	
TEACHING & EXAMINATION LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS:	NO
COURSE URL:	https://eclass2.emt.duth.gr/courses/CHEM_H113/

(2) LEARNING OUTCOMES

Learning Outcomes
Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

At the end of this course, students will be able to:
1. Understand prosthetic construction techniques.
2. Describe prosthetic construction procedures.
3. Apply prosthetic construction techniques in areas of chemistry.
4. Select the appropriate technique depending on the application.
5. Select the appropriate material based on the requirements of the application.

General Skills
Name the desirable general skills upon successful completion of the module

Search, analysis and synthesis of data and information,
ICT Use
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive reasoning

At the end of the course, students will have further developed the following general skills:
1. Decision making
2. Teamwork
3. Production of new research ideas
4. Respect for the natural environment
5. Promoting free, creative, and inductive thinking

(3) COURSE CONTENT

Introduction to Additive Manufacturing, Additive Manufacturing Processes, CAD Systems, Three-dimensional Modeling, Extrusion and Material Deposition Manufacturing, Directed Energy Beam Manufacturing, Photopolymerization Manufacturing, Other Additive Manufacturing Technologies, Post-Processing, Design for Additive Manufacturing, STL Files

(4) LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Face to face
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in Teaching Use of ICT in Communication with students
TEACHING ORGANIZATION *The ways and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.* *The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.*	**Activity** / **Workload/semester** Lectures: 39 Bibliographic research & analysis: 36 Total: 75
STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others* *Please indicate all relevant information about the course assessment and how students are informed*	**Student evaluation languages** Greek **Method (Formative or Concluding)** Summative **Student evaluation methods** Written Exam with Problem Solving **Rate** **100**

(5) SUGGESTED BIBLIOGRAPHY

1. Τεχνολογίες προσθετικής κατασκευής
Κωδικός Βιβλίου στον Εύδοξο: 68379767
Έκδοση: 1η έκδ./2017
Συγγραφείς: Gibson Ian, Rosen David, Stucker Brent
ISBN: 9789605861896
Τύπος: Σύγγραμμα
Διαθέτης (Εκδότης): ΕΚΔΟΣΕΙΣ ΚΡΙΤΙΚΗ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΛΟΓΟΤΕΧΝΙΚΩΝ ΚΑΙ ΚΑΛΛΙΤΕΧΝΙΚΩΝ ΕΚΔΟΣΕΩΝ