COURSE OUTLINE

(1) GENERAL

SCHOOL	Engineering		
ACADEMIC UNIT	Mechanical Engineering		
LEVEL OF STUDIES	*B2 upper intermediate to C2 advanced*		
COURSE CODE	ΞΓ0101	**SEMESTER**	1st
COURSE TITLE	Foreign Language-English I		

INDEPENDENT TEACHING ACTIVITIES *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*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures, Practical Exercises	3	2
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialized general knowledge, skills development*	Core [Specialization of General knowledge and Skiils' Development]
PREREQUISITE COURSES:	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	http://www.mie.uth.gr/n_one_mathima.asp?id=120&cat=1&tp=%CE%A5

(2) 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*

This course targets the undergraduate students o the Department of Mechanical Engineering, either having a lot or some knowledge of the English language as a means of communication. It aims to full understanding by the students of issues related to their specialization (e.g. conventional machine tools, internal combustion engine, electricity generation). When the student finishes this course, he/she will be able to:

- Be well enough acquainted with the English language of his/her specialization in the form of speech and writing.

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?

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

The students after finishing this course learn to:

- Search, analyze and compose data and information wit the use of the English language
- *Work in groups*

- Work in international Environments
- Respect the diversity and multiculturalism
- Critisize
- Develop their developmental thinking
- Respect the sexes' diversity

(3) SYLLABUS

1st week
- What is engineering?

2nd week
- Basic concepts in Engineering Materials

3rd week
- Manufacturing processes and Machine Tools

4th week
- Conventional Machines: Lathe

5th week
- Conventional Machine tools: Milling Machine

6th week
- Computer Numerical (CMC) Machines

7th week
- Internal Combustion Engine

8th week
- Electricity Generation

10th week
- Turbines

11th week
- Heating-Ventilation-Air-Condiioning (HVAC)

12th week
- Computer-Integrated Manufacturing

13th week
- Revision

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY ***Face-to-face, Distance learning, etc.***	In class lectures.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	Usage of ICT for education for both Lecturing and communication with the students

TEACHING METHODS

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 ECTS

Activity	*Semester workload*
Lectures	39 hours of lecturing and homework
Self-evaluating exercises	
Autonomous work	12 hours for each student
Course Total	***51 hours (the studying hours of students for the exams are not included)***

STUDENT PERFORMANCE EVALUATION ***Description of the evaluation procedure*** *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* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	I. Written final exam

(5) **ATTACHED BIBLIOGRAPHY**

- Suggested bibliography:

1. Halliday D., Resnick R., Φυσική, τόμ. ΙΙ, Εκδ. Πνευματικός Griffiths D., Εισαγωγή στην Ηλεκτροδυναμική σε έναν τόμο ή Ι-ΙΙ, Π.Ε.Κ.
2. Young H.D., Πανεπιστημιακή Φυσική, τόμ.Β΄, 1994, Εκδ. Παπαζήση.
3. Berkeley Φυσική, τόμ. Β΄ (ηλεκτρισμός και μαγνητισμός), 2η έκδ., 2004, Πανεπ. Εκδ. Ε.Μ.Π
4. Ασημέλλης Γ., Μαθήματα Οπτικής, 2007, Εκδ. Σύγχρονη Γνώση, Αθήνα.
5. Alonso M., Finn E., Θεμελιώδης Πανεπιστημιακή Φυσική, τόμ. ΙΙ, 1979, Αθήνα.
6 Griffiths D., Εισαγωγή στην Ηλεκτροδυναμική σε έναν τόμο ή Ι-ΙΙ, Π.Ε.Κ.
7. Kraus J., Ηλεκτρομαγνητισμός, Εκδ. Τζιόλα
8. Ohanian H., Φυσική, τόμ. Β΄, Εκδ. Συμμετρία
9. Reitz J., Milford F., Christy R., Τα Θεμέλια της Ηλεκτρομαγνητικής Θεωρίας, 2004, Πανεπ. Εκδ. Ε.Μ.Π.
*10. Serway R., Φυσική για Επιστήμονες και Μηχανικούς, τόμ.ΙΙ-ΙΙΙ, Έκδ. Λ. Ρεσβά**νης.***