

## ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ **Α .Δ Ι .Π** . ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ & ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

H.Q.A.

HELLENIC QUALITY ASSURANCE

AND ACCREDITATION AGENCY

ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΑΝΑΤΟΛΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ ΚΑΙ ΘΡΑΚΗΣ ΜΟΝΑΔΑ ΔΙΑΣΦΑΛΙΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΕΙ ΑΜΘ

Quality Assurance in Higher Education Course Data Collection Form

ΤΕΧΝΟΛΟΓΙΚΟ ΕΚΠΑΙΔΕΥΤΙΚΟ ΙΔΡΥΜΑ ΑΝΑΤΟΛΙΚΗΣ ΜΑΚΕΔΟΝΙΑΣ & ΘΡΑΚΗΣ ΑΓΙΟΣ ΛΟΥΚΑΣ, 65404 ΚΑΒΑΛΑ EASTERN MACEDONIA AND THRACE INSTITUTE OF TECHNOLOGY AGIOS LOUKAS 65404 KAVALA

## **COURSE OUTLINE**

# (1) GENERAL

Name and surname		Jacob Fantidis		
lectu SCHC		of Tashnalaciaal Applications		
ACADEMIC UI		of Technological Applications  Department of Electrical Engineering		
LEVEL OF STUD	*			
COURSE CO		<u> </u>		
COURSE TIT	<b>LE</b> Electrical installations I	Electrical installations II		
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 and Exercises		4 Th.	6	
Laboratory exercises		3 Th.	2	
the teaching methods u  COURSE TYPE general background, special background, specialised general knowledge, skills development  PREREQUISITE COURSES:	The organisation of teaching and sed are described in detail at (d).  Specialised general knowledge Skills development			
INSTRUCTION and EXAMINATIONS: IS THE COURSE OFFERED TO ERASMUS STUDENTS	No TDM			
COURSE WEBSITE (URL)	http://eclass.teikav.edu.gr/ED161/			

## (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

The aim of the course is to provide scientific and technical knowledge to students on the Industrial Electrical Installations.

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

- Know the legislation and regulations for MV electrical installations, grounding systems and lighting protection in Greece and the EU
- Know & select the parts & components of MV electrical installations, grounding systems and lighting protection systems
- Select a MV/LV transformer and its protection
- Design structured cabling installations
- Design lighting protection systems
- Design the power factor correction installation
- Write a full technical report with drawings and calculation

#### **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

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 thinking

Others...

Search for, analysis and synthesis of data and information, with the use of the necessary technology

**Decision-making** 

Working independently

Adapting to new situations

Working in an interdisciplinary environment

Production of new research ideas

#### (3) SYLLABUS

- Industrial use electrical installations. I.
- II. Load calculation. Power calculation, selection, installation, starting and control of motors.
- III. Classical automation circuits.
- IV. Improvement of power factor – quadrature power – compensating capacitors.
- V. Medium voltage consumers' substation design: selection and protection of transformers, earthling, materials and devices used in substations.
- Introduction to intelligent installations.

#### (4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face (in the classroom)
Face-to-face, Distance learning, etc.	
USE OF INFORMATION AND	Use slides, website of the course with supporting and
COMMUNICATIONS TECHNOLOGY	auxiliary material,

Use of ICT in teaching, laboratory education, communication with 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 nondirected study according to the principles of the ECTS

Activity	Semester workload
Lectures	52
Laboratory practice	39
Independent study	119
Course total	200

# 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.

#### Theoretical Course

Written work (20%), final written examination (80%), that combines theoretical questions with critical ones as well as problems covering all the sections of the course.

### (5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:
- Related academic journals:
  - 1. HD384 Electrical Installations Regulations
  - 2. P. Dokopoulos "Electrical Installations", Ziti, 2005.
  - 3. J. Watkins, Chris Kitcher, Electrical installation calculations, Vols. 1-2, Elsevier, 2004
  - Electrical installation handbook Protection, control and electrical devices, Technical Guide
     2010 ABB