
	<b>TECHNOLOGICAL EDUCATIONAL INSTITUTE (T.E.I.) OF ATHENS</b>  <b>FACULTY OF TECHNOLOGICAL APPLICATIONS DEPARTMENT OF ENERGY TECHNOLOGY ENGINEERING</b>	
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## DIPLOMA SUPPLEMENT

*This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgments, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.*

### 1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

**1.1 Family Name(s):**

**1.2 Given Name(s) :**

**1.3 Date of birth (day/month/year):**

**1.3.1 Place of Birth:**

**1.3.2 Country:**

**1.4 Student identification number:**

### 2. INFORMATION IDENTIFYING THE QUALIFICATION

**2.1 Name of qualification and (if applicable) title conferred (in original language):**

Ptychio (Degree)

**2.2 Main field(s) of study for the qualification:**

Energy Technology Engineering

**2.3 Name and status of awarding institution (in original language):**

Technologiko Ekpedeytiko Idrima (T.E.I.) Athens, a state institution of Higher Education

**2.4 Name and status of institution (if different from 2.3) administering studies:**

As above.

**2.5 Language(s) of instruction/examination:**

Greek

### 3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

**3.1 Level of qualification:**

Undergraduate (240 ECTS)

**3.2 Official length of programme:**

Duration in years: 4 years (8 semester Teaching weeks per semester: 13 (thirteen) ECTS Course Credits: 240

Workload (WL): 6.000 hours

Training Placement: 6 months at the 8<sup>th</sup> semester of studies

**3.3 Access requirement(s):**

Certificate of Upper Secondary Education (Lyceum) and (Panhellenic) entrance examinations.

#### 4. INFORMATION ON THE CONTENT AND RESULTS GAINED

##### 4.1 Mode of study:

Full-time

##### 4.2 Programme requirements:

The programme is structured in the following two directions: a) Energy mechanical engineering b) Energy electrical engineering

The successful follow-up of the programme ensures the necessary scientific and technological knowledge, abilities and skills of an Energy Technology Engineer, of Technological Education, so that he/she can successfully work in the fields of Energy Mechanical Engineering or Energy Electrical Engineering, depending on the chosen direction.

Students receive their degree when:

- (i) they have successfully completed their compulsory courses, mandatory electives, as well as any optional courses of the undergraduate curriculum;
- (ii) their graduation project (dissertation) has been successfully approved completed and examined;
- (iii) they have successfully completed their Industrial Placement (practical training);
- (iv) they have completed four (4) academic years of study, and have accumulated 240 ECTS credits from (i), (ii) and (iii) above.

##### 4.3 Programme details: (e.g. modules or units studied), and the individual grades/marks/credits obtained:

###### CORE MODULES ©

No	Course ID	Course Title	Semester	ECTS Course Credits	Grades
1	N1-1010	Mathematics I	1	6.00	
2	N1-1020	Physics	1	5.50	
3	N1-1030	Electrical Technology	1	6.00	
4	N1-1040	Mechanics	1	4.50	
5	N1-1050	Informatics	1	5.50	
6	N1-1060	Engineering Drawing	1	2.50	
7	N1-2010	Mathematics II	2	6.00	
8	N1-2050	Computer Programming	2	4.50	
9	N1-3011	Mathematics III	3	3.50	
10	N1-3050	Energy Resources	3	4.50	
		<b>Total</b>		<b>48.50</b>	

###### MODULES OF ADMINISTRATION, ECONOMICS, LEGISLATION AND HUMANITIES (AELH)

No	Course ID	Course Title	Semester	ECTS Course Credits	Grades
11	N1-6020	Technical Legislation and Safety at Work	6	4.00	
12	N1-7030	Economic Analysis & Entrepreneurship	7	4.00	
		<b>Total</b>		<b>8.00</b>	

###### SPECIAL MODULES (S)

No	Course ID	Course Title	Semester	ECTS Course Credits	Grades
13	N1-2020	Electrical Network Analysis	2	7.00	
14	N1-2030	Thermodynamics	2	6.00	
15	N1-2040	Fluid Mechanics	2	6.50	
16	N1-3020	Electrical Machines I	3	6.00	
17	N1-3030	Hydrodynamic Machines	3	4.50	

18	N1-3040	Heat Transfer	3	5.50	
19	N1-3060	Environmental Protection	3	3.00	
20	N1-3070	Energy Storage	3	3.00	
21	N1-4010	Electrical Machines II	4	7.50	
22	N1-4020	Thermal Turbomachines I	4	4.50	
23	N1-4030	Internal Combustion Engines I	4	5.50	
24	N1-4040	Measurement Systems	4	5.50	
25	N1-4050A	Analog & Digital Electronics η	4	7.00	
	N1-4050B	Machining Technology & Tribology	4	7.00	
26	N1-5030	Automatic Control Systems	5	7.50	
		<b>Total</b>		<b>79.00</b>	

#### SPECIALISATION MODULES (SC)

No	Course ID	Course Title	Semester	ECTS Course Credits	Grades
27	N1-5010	Electrical Power Generating Stations	5	5.50	
28	N1-5020	Renewable Energy Sources I	5	4.50	
29	N1-5040A	Electrical Power Transmission & Distribution I	5	6.50	
	N1-5040B	Internal Combustion Engines II	5	6.50	
30	N1-5050A	Power Electronics	5	6.00	
	N1-5050B	Steam Boilers	5	6.00	
31	N1-6010	Renewable Energy Sources II	6	5.50	
32	N1-6030	Energy Efficiency in Buildings and Electromechanical Plants	6	3.00	
33	N1-6040A	Electrical Power Transmission & Distribution II	6	7.00	
	N1-6040B	Heating, Cooling & Air Conditioning I	6	7.00	
34	N1-6050A	Electrical Drives	6	6.50	
	N1-6050B	Thermal Turbomachines II	6	5.00	
35	N1-6060A	Electrotechnical Materials	6	4.00	
	N1-6060B	Machine Elements	6	5.50	
36	N1-7010	Energy Management	7	4.00	
37	N1-7020	Energy Systems Optimisation	7	5.00	
38	N1-7040	Cogeneration Systems	7	3.00	
39	N1-7050A	Study of Energy Systems	7	6.00	
	N1-7050B	Heating, Cooling & Air Conditioning II	7	8.00	
40	N1-7060A	Electrical Installations	7	8.00	
	N1-7060B	Environment Technologies	7	6.00	
		<b>Total</b>		<b>74.50</b>	

#### TRAINING MODULES

No	Course ID	Course Title	Semester	ECTS Course Credits	Grades
41	PRACT	Practical Training	8	10.00	
42	THESIS	Dissertation	8	20.00	
		<b>Total</b>		<b>30.00</b>	
		<b>Total (According to student electives)</b>		<b>240.00</b>	

(\*) **Dissertation Title:**.....

(\*\*) **The Placement (6 months) took place in the enterprise/organization:**.....

#### 4.4 Grading scheme and if available, grade distribution guidance:

The grading scheme is based on the scale of ten as follows:

8.50 - 10.00: «Excellent»

6.50 - 8.49: «Very Good»

5.00 - 6.49: «Good»

4.00 - 4.99: «Insufficient»

0.00 - 3.99: «Fail»

The minimum pass mark is 5.0 (five). For more information: [www.teiath.gr](http://www.teiath.gr) <<http://www.teiath.gr>>

**4.5 Overall classification of the qualification (in original language) :**

**5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION**

**5.1 Access to further study:**

The degree of the Department gives access to postgraduate studies of MASTER's degree level.

**5.2 Professional status (if applicable) :**

The Department's graduate academic and professional title is «Energy Technology Engineer - Technological Education graduate».

Graduates of the Department of Energy technology may be appointed to positions of Mechanical or Electrical Engineers of Technological Education (T.E.) in the public sector (depending on the direction they followed), as per a certificate of equivalence that is issued by the President of the Institute. The certificate is issued according to the Presidential Decree 50/2001 (determination of the qualifications for appointment to posts by public sector bodies), as amended by the Presidential Decree 347/2003 (Official Gazette No 315/2003).

For the private sector, the professional rights of graduates of the Department of Energy Technology are set out in presidential decrees (a) Presidential Decree 55/2000 (Official Gazette: FEK A 44, concerns graduates that followed the energy mechanical engineering direction, and gives them rights of execution, maintenance and repair of thermo-hydraulic service facilities in buildings without any restriction), (b) Presidential Decree 87/ Official Gazette: FEK A 72/25-4-96 (installation, assembly, repair and maintenance of refrigeration facilities of all applications), (c) Presidential Decree 294/ Official Gazette: FEK 138/21-6-1988 (safety engineering services for almost all branches of economic activity) and (d) Presidential Decree 100/2010 (for energy audits of buildings, boilers and air-conditioning systems).

Upon completion of the programme of study, the graduate of the Department of Energy Technology has acquired knowledge and practical experience necessary to successfully serve, either on his own resources or in collaboration with other scientists and technologists, all areas of production, conversion, transmission, distribution and use of energy such as power plants, industry, transport, domestic and tertiary sector services, etc., as it is shown in the following indicative list:

1. Integrated systems of electro-mechanical installations in buildings, networks, industrial plants, workshops.
2. Thermo-hydraulic installations
3. Cooling and Refrigeration systems
4. Energy study, ranking and certification of buildings.
5. Steam boilers and steam networks
6. Air-conditioning and ventilation systems
7. Energy production and energy saving systems by using one or more renewable energy sources, and their application in the Building, Agricultural and Industrial Sectors, as well as Cogeneration systems
8. Installation of liquid and gaseous fuels
9. Driving engines
10. Elevation systems
11. Watering and drainage systems, hydro-pneumatic systems
12. Compressed air systems, and networks of gases used in medical applications
13. Fire protection and fire-fighting systems

In these fields and in the corresponding sub-fields, the Department's graduate is able to undertake responsibilities as follows:

- i. The technical and economic study
- ii. The installation
- iii. The construction

The supervision of the construction

The supervision of operation

- vi. The maintenance
- vii. The environmental impact assessment from the installation and operation of any kind of energy system
- viii. The risk assessment of energy systems

## 6. ADDITIONAL INFORMATION

### 6.1 Additional information:

### 6.2 Further information sources:

#### Address:

Technological Educational Institution (T.E.I.) of Athens Agiou Spyridonos, GR-122 10, Aegaleo -Athens, Greece

## 7. CERTIFICATION OF THE SUPPLEMENT

Date:	
The Secretary of Department	The President of Department
The President of T.E.I. of Athens	

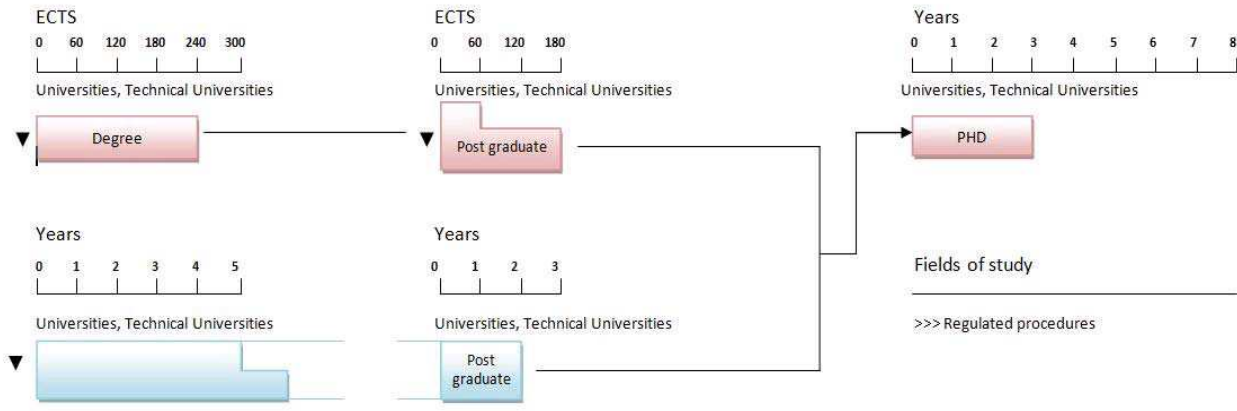
## 8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

(i) Structure According to the Framework Law (2007), higher education consists of two parallel sectors: the University sector (Universities, Polytechnics, Fine Arts Schools, the Open University) and the Technological sector (Technological Education Institutions (TEI) and the School of Pedagogic and Technological Education). The same law regulates issues concerning governance of higher education along the general lines of increased participation, greater transparency, accountability and increased autonomy. There are also State Non-university Tertiary Institutes offering vocationally oriented courses of shorter duration (2 to 3 years) which operate under the authority of other Ministries.

(ii) Access Entrance to the various Schools of the Universities (Panepistimio) and Technological Education Institutions (Technologiko Ekpaideftiko Idryma - TEI) depends on the general score obtained by Lyceum graduates on the Certificate, as described above (Section 5.iv), on the number of available places (numerus clausus) and on the candidates' ranked preferences among schools and sections.

(iii) Qualifications Students who successfully complete their studies in universities and TEI are awarded a Ptychio (first cycle degree). First cycle programmes last from four years for most fields to five years for engineering and certain other applied science fields and six years for medicine. The Ptychio leads to employment or further study at the post-graduate level that includes the one year second cycle leading to the second degree, Metaptychiako Diploma Eidikefsis - equivalent to the Master's degree - and the third cycle leading to the doctorate degree, Didaktoriko Diploma. Recent legislation on quality assurance in Higher Education, the Credit Transfer System and the Diploma Supplement defines the framework and criteria for evaluation of university departments and for certification of student degrees. These measures aim at promoting student mobility and contributing to the creation of a European Higher Education Area.

Higher education structure - 2010



	Most common length of a Bologna cycle	<p><u>ECTS</u></p> <p>Credits according to the European Credit Transfer and Accumulation System.</p>		Decided at national level	Decided at institutional level
	Other length of a Bologna cycle			▼	▲
	Programme outside the typical Bologna model			▽	△
	Professional programme				

[http:// www.eurydice.org](http://www.eurydice.org) [http:// www.eurydice.org/Eurybase/frameset\\_eurybase.html](http://www.eurydice.org/Eurybase/frameset_eurybase.html)