NATIONAL TECHNICAL UNIVERSITY OF ATHENS
SCHOOL OF MECHANICAL ENGINEERING
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DIPLOMA SUPPLEMENT

This Diploma Supplement model was developed by the European Commission, the 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 be given.

1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s)

1.2 Given name(s)

1.3 Date of birth (DD/MM/YY)

1.4 Student identification number or code

2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Title conferred (in original language)
DIPLOMA in MECHANICAL ENGINEERING

2.2 Main field(s) of study
Mechanical Engineering

2.3 Institution awarding the qualification (in original language)
ETHNIKO METSOVIO POLYTECHNEIO (NATIONAL TECHNICAL UNIVERSITY OF ATHENS), STATE UNIVERSITY

2.4 Name and status of institution (if different from 2.3) administering studies (in original language)
Same as in 2.3

2.5 Language(s) of instruction/examination
Greek

3. INFORMATION OF THE LEVEL OF THE QUALIFICATION

3.1 Level of qualification
Integrated Master's Degree in the Field of Mechanical Engineering, level 7 of the National and European Qualifications Framework/300 ECTS/5 years of studies

3.2 Duration of studies
Full-time studies: 5 years
Semesters: 10
ECTS credits: at least 300
Practical Training: Optional

3.3 Admission requirement(s)
Unified upper secondary education (Ενιαίο Λύκειο) degree and success in national entrance exams

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4. INFORMATION OF THE CONTENTS AND RESULTS ACHIEVED

4.1 Mode of study

Full-time

4.2 Program requirements

To obtain the Diploma in Mechanical Engineering, the students are required to:

1. Register, attend and obtain passing grade in 65 semester courses (14 mandatory general courses + 30 mandatory core courses + 21 specialization courses). The ECTS units of all courses are reported in 4.3.
2. Register, work on, write up and successfully defend a Diploma Thesis.

4.3 Program details (e.g. modules or units studied), and individual grades/marks/credits obtained

Modules examined and awarded a pass grade and the ones recognized or exempted from are listed below:

Diploma Thesis:

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Grade: 10.0

ECTS: 30.0

MODULE/COURSE		SEMESTER	TYPE: Core/ /General/ Spec/Optional	ECTS CREDITS	GRADE
CODE	TITLE				
2143	Mathematics IB	1	General (Mandatory)	5	
2008	Mathematics IA	1	General (Mandatory)	4	
2161	Physics I	1	General (Mandatory)	5	
2012	Mechanical Design I	1	Core (Mandatory)	4	
2013	Introduction to Mechanical Engineering	1	Core (Mandatory)	3	
2238	Introduction to Computing	1	General (Mandatory)	4	
2248	Mechanics I	1	General (Mandatory)	6	
2048	History of Science & Technology	1	General (Optional)	2	
2282	Mathematics IIA	2	General (Mandatory)	5	
2283	Mathematics IIB	2	General (Mandatory)	4	
2241	Operating Systems and Programming Languages	2	General (Mandatory)	2	
2170	Physics II	2	General (Mandatory)	5	
2010	Mechanics II	2	General (Mandatory)	6	
2147	Mechanical Design II	2	Core (Mandatory)	5	
2105	Engineering Materials	2	Core (Mandatory)	4	
2242	Electric Circuits and Systems	2	Core (Mandatory)	4	
2246	Mathematics IIIA	3	General (Mandatory)	6	
2200	Introduction to Mechanical Workshop Technology	3	Core (Mandatory)	4	
2148	Numerical Analysis	3	Core (Mandatory)	4	
2247	Mechanics III	3	General (Mandatory)	6	
2167	Machine Elements I	3	Core (Mandatory)	6	
2245	Electromechanical Power Conversion Systems	3	Core (Mandatory)	4	
2160	Engineering Economics I	3	Core (Mandatory)	4	
2067	English language	3	Foreign Language	-	
2219	Mechanisms and Introduction to Mechanical Design	4	Core (Mandatory)	4	
2097	Thermodynamics I	4	Core (Mandatory)	6	
2110	Fluid Mechanics I	4	Core (Mandatory)	4	
2121	English language	4	Foreign Language	2	
2078	Machine Elements II	4	Core (Mandatory)	6	
2132	Heat Transfer I	4	Core (Mandatory)	6	
2039	Industrial Electronics	4	Core (Mandatory)	4	5

2079	Statistics and Measurement in Engineering	5	Core (Mandatory)	6	
2072	Production/Operations Management & Business Administration I	5	Core (Mandatory)	5	
2156	Manufacturing Processes I	5	Core (Mandatory)	4	
2131	Hydraulic Turbomachines	6	Core (Mandatory)	5	
2021	Applied Fluid Mechanics	5	Core (Mandatory)	4	
2089	Machine Dynamics I	5	Core (Mandatory)	4	
2086	Thermal Energy Conversion in Power Plants I & Laboratory	5	Core (Mandatory)	6	
2032	Internal Combustion Engines I & Laboratory	6	Core (Mandatory)	6	
2187	Environmental Technology	6	Core (Mandatory)	3	
2093	Manufacturing Processes II	6	Core (Mandatory)	4	
2029	Analysis of Mechanical Structures I	6	Core (Mandatory)	4	
2007	Introduction to Automatic Control Systems	6	Core (Mandatory)	6	
2045	Thermal Turbomachines	6	Core (Mandatory)	4	
2030	Operational Research I	6	Core (Mandatory)	4	
2253	Optimization Methods in Aerodynamics	7	Spec (Optional)	4	
2043	Applied Thermodynamics of Mixtures	7	Spec (Mandatory)	4	
2016	Fluid Mechanics II	7	Spec (Mandatory)	4	
2075	Physical Principles of Nuclear Power Reactor Plants	7	Spec (Mandatory)	4	
2111	Computational Fluid Dynamics	7	Spec (Mandatory)	4	
2191	Heat Transfer II	7	Spec (Optional)	4	
2236	Combustion/Pollution of Internal Combustion Engines	7	Spec (Mandatory)	4	
2251	Hydroelectric Power	8	Spec (Mandatory)	4	
2285	Gas Exchange & Supercharging of Internal Combustion Engines	8	Spec (Optional)	4	
2162	Combustion Theory and Combustion Systems	8	Spec (Mandatory)	4	
2195	Basic Principles of Refrigeration	8	Spec (Mandatory)	4	
2001	Nuclear Power Reactor Set-Up and Operation	8	Spec (Mandatory)	4	
2025	Thermal Energy Conversion in Power Plants II	8	Spec (Optional)	4	
2178	Wind Energy	8	Spec (Mandatory)	4	
2278	Micro-Nanotechnology	9	Spec (Optional)	4	
2183	Air-Conditioning	9	Spec (Mandatory)	4	
2212	Pollution Abatement Technology for Thermal Plants	9	Spec (Mandatory)	4	
2042	Equipment and Systems of Thermal Processing	9	Spec (Mandatory)	4	
2182	Solar Energy	9	Spec (Mandatory)	4	
2216	Gas and Steam Turbine Operation	9	Spec (Mandatory)	4	
2185	Computer Methods in Turbomachines	9	Spec (Optional)	4	
			ECTS Credit Total:	**313**	

4.4 Grading scheme and, if available, grade distribution guidance

The grades scale through which the academic performance of the students is calculated is a ten-point one (0-10) as follows:

9 – 10	EXCELLENT
7 – 8,99	VERY GOOD
5 – 6,99	GOOD

Minimum passing grade is: 5. Minimum passing grade for the Diploma Thesis is: 5.5

The final grade of the Diploma degree is calculated from the sum:

4.5 Overall classification of the qualification (in original language)

8.31 (Eight point Thirty One)
VERY GOOD, ΛΙΑΝ ΚΑΛΩΣ

• The mean value of all course grades contributing 80/100 to the final grade and
• The grade of the Diploma Thesis, contributing 20/100 to the final grade.

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study

Access to third cycle of studies

5.2 Professional status

The Diploma degree in an engineering discipline entitles its holder to the legally protected professional title "Engineer" and to exercise professional work in the field(s) of engineering for which the degree was awarded. Graduates of the School are licensed to exercise the profession of Mechanical Engineering by the Technical Chamber of Greece, after passing exams.

6. ADDITIONAL INFORMATION

6.1 Other information

The School of Mechanical Engineering NTUA has undergone external evaluation from the Hellenic Quality Assurance Agency for Higher Education (H.Q.A.A. – A.DI.P.), in 2012. The Evaluation Report is available at the following URL address: http://www.hqaa.gr/external/NTUA_MechEng_2012.pdf

6.2 Further information sources

- NATIONAL TECHNICAL UNIVERSITY OF ATHENS: http://www.ntua.gr/
- SCHOOL OF MECHANICAL ENGINEERING: http://www.mech.ntua.gr/
- MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS: http://www.minedu.gov.gr/
- TECHNICAL CHAMBER OF GREECE: http://www.tee.gr/
- EUROPEAN COMMISSION: http://www.ec.europa.eu/
- NARIC: http://www.doatap.gr/

http://www.enic-naric.net/

7. CERTIFICATION OF THE SUPPLEMENT

7.1 Date: **06/05/2019**

7.2 Name and Signature:

7.3 Capacity: DEAN OF SCHOOL OF MECHANICAL ENGINEERING

7.4 Official stamp or seal:

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

(i) Structure

According to the Law 3549/2007, higher education consists of two parallel sectors:
a) the University sector (Universities, Polytechnics, Fine Arts Schools, the Open University) and
b) 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, 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 programs 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 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.

A detailed description of the Greek Education System is offered in:

- **EURYDICE (hyyp://www.eurydice.org) database of the European Education Systems**
- **http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/122EN.pdf (pages 82,83)**

http://www.eurydice.org