



HELLENIC REPUBLIC
ARISTOTELEIO PANEPISTIMIO THESSALONIKIS (ARISTOTLE UNIVERSITY OF THESSALONIKI)
FACULTY OF HEALTH SCIENCES
SCHOOL OF PHARMACY

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DIPLOMA SUPPLEMENT

This Diploma Supplement is based on the model 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 accompanying 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): ANGELOU
1.2 Given Name(s) : ANTONIA
1.3 Date of birth (day/month/year), Place, Country of Birth 20/3/1989, GIANNITSA, GREECE
1.4 Student identification number or code: 9500120070070297

2. INFORMATION IDENTIFYING THE QUALIFICATION

- 2.1 Name of the qualification and (if applicable) title conferred (in original language):
Ptychio Farmakeftikis (Degree in Pharmacy)
2.2 Main field(s) of study for the qualification:
Pharmacy with specialization field: DIRECTION II
2.3 Name and status of awarding institution (in original language):
Aristoteleio Panepistimio Thessalonikis
(Aristotle University of Thessaloniki), A.U.Th., Public University.
2.4 Name and status of institution (if different from 2.3) administering studies (in original language) :
As in 2.3.
2.5 Language(s) of instruction/examination: Greek

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1 Level of qualification: 1st Cycle
3.2 Official length of programme:
10 SEMESTERS, 300 ECTS.
A full academic year is equivalent to 60 ECTS units and each semester to 30 ECTS (European Credits Transfer System) (1 ECTS= 25-30 student work load hours) (according to the Greek Law 1466/13-8-2007, No 5/89656/B3, art. 1,2,3). To each course is given a number of ECTS (>=2) according to the student's work load (contact hours, laboratory work, examination etc) for the full completion of the course.
3.3 Access requirement(s):
Upper secondary degree (six years of studies)- national level examination.
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INFORMATION ON THE CONTENT AND RESULTS GAINED

Mode of study:

Full time

4.2 Programme requirements:

The students complete their studies and obtain the degree in Pharmacy when having succeeded in the anticipated courses (compulsory and elective) and accumulated 300 ECTS. The courses are allocated to eight semesters and the practical training is pursued for 2 semesters (30 ECTS per semester, 4x3 quarters) (9th to 10th) and includes: a) a pharmacy opened to the public (min: 6 months) b) a hospital pharmacy (min: 3 months) c) a pharmaceutical industry (elective)).

The students at the 8th semester must choose one of the two Directions (Direction I-Direction II) and be examined in all the courses of the selected direction. The examination is written/oral or in an assignment form.

The undergraduate study program (USP) provided by the School of Pharmacy aims at training pharmacists to understand the chemical structure and the pharmacological activity of the drugs, their bioavailability, biodegradation, metabolism, the used methods for drugs synthesis as well as the used methods for their evaluation (synthesis and drug formulation).

At the applied level, USP also aims in training and providing the graduates with the necessary skills related to the sector of drug and health. Specifically, upon successful completion of their studies graduates of the School of Pharmacy based on their courses, diploma and practical training can acquire training and skills closely related to:

- a) The chemical and pharmacological study of substances of pharmaceutical and of broader biological interest, the chemical and pharmacological study of chemical compounds (organic, inorganic, metallo-organic) of broader pharmaceutical-biological interest, Design, synthesis (isolation), separation, properties, control (identification, purity, content), the chemical and pharmacological study (biological response, biodegradation, bioavailability, metabolism, interaction) of the biologically active agents, the structure-activity relationship between molecular structure/action of biologically active agents, the quantitative structure-properties-activities relationships of all the above, the study of chemical principles and methods that support the development of pharmacology and the chemical aspect of immunology.
- b) the pharmaceutical practices and legislation (prescription execution and pharmacotechnical tasks at the Pharmacy and the Hospital), the consideration of pharmaceutical agents and preparations and of their application and action systems (physical and physicochemical laws) from a pharmaceutical point of view, the basic pharmacotechnical elaborations at semi-industrial and industrial scale of the raw material and pharmaceutical agents, as well as their design, technology and formulation into preparations and cosmetics, the assessment of the quality of medicines, cosmetics and generally of natural products, of preparations and substances by applying control methods (physicochemical, technological, microbiological, in vivo, etc.), the pharmaceutical technology of the preparations and the factors affecting their efficiency during their in vivo implementation and the technological study of factors affecting the obtaining, treatment and control of natural products and of their components.
- c) the chemistry of natural products (of vegetative, animal, mineral origin), that is, isolation of active components, identification, control and chemical study, the pharmaceutical study of medicines and aromatic plants (essential oils, alkaloids, etc.: analysis, standards and improvement methods), description of medicines, classification, microscopic control, isolation, identification, control and biogenesis of their natural products, the Biotechnology of Pharmaceutical Plants and the implementation of physicochemical methods used in Pharmacognosy.
- d) the pharmacological development of new medicines, the improvement of known pharmaceutical agents and the study of the structure and pharmacological action at biochemical, molecular level (in vitro), as well as in situ (isolated organs) and in vivo (laboratory animals), the pharmacodynamic study of the pharmacological actions, undesirable effects, and interactions between medicines, the analysis of the action of chemotherapeutic agents for microbial infections, parasitic diseases, viruses and neoplasms, the pharmacological analysis and clinical testing of medicines (absorption, distribution, elimination mechanisms of medicines), dosage determination, therapeutic protocols, medicine interactions, the pharmacogenetic study of the idiosyncrasy, metabolism, addiction, psychic and natural dependence and resistance to medicines, the immunopharmacological analysis of allergenic factors, pharmaceutical agents, mechanisms of immunosuppression by medicines and the pharmacological basis of hyperaesthesia phenomena, the toxicological study of medicine undesirable effects mechanisms, of natural products, poisons, teratogens and mutagens in vitro or in vivo, the study of the pharmacological action of micro-molecular factors (vaccines, sera, proteins, hormones, etc.) and of microorganisms' metabolism products, which are prepared with biotechnology methods and the development of therapeutic reagents for neurodegenerative diseases.

Graduates of the School of Pharmacy, further to the basic knowledge of their discipline and profession are able to: 1) apply knowledge in practice, 2) communicate in a foreign language, 3) search, process, analyse and synthesize data and information, use also the necessary technologies, 4) adapt to novel situations and make decisions, 5) work independently or in groups in international and/or interdisciplinary contexts, 6) generate new research ideas and design and manage projects, 7) respect diversity, multiculturalism and the natural environment, 8) demonstrate social, professional and moral responsibility and sensitivity to gender issues, 9) view themselves as well as others critically, 10) promote free, inductive and deductive thinking.

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

The student has successfully completed practical training of 4 quarters (60 ECTS).

Courses that the student has successfully attended, as well as subjects for which the student has received recognition or exemption (COR = Core courses, COM = Compulsory courses belonging to the selected specialization, ELC = Elective

courses, ELM=Elective courses belonging to the selected specialization, FL= Foreign Language (Foreign Language is taught from 1 to 6 semesters and contributes as one grade in the Degree), EX = Exchange, DIS = Dissertation):

Code	Courses	Type	ECTS credits	Grade	Examination period	ECTS Grading
1	GENERAL MATHEMATICS	COR	7.0	7.0	JUN 2013	B
2	GENERAL PHYSICS	COR	7.0	7.0	FEB 2013	B
3	GENERAL CHEMISTRY	COR	7.0	5.0	FEB 2012	D
4	QUALITATIVE ANALYTICAL CHEMISTRY	COR	6.5	5.0	FEB 2013	D
10	MICROBIOLOGY	COR	4.0	5.0	SEP 2010	D
11	QUANTITATIVE ANALYTICAL CHEMISTRY	COR	6.5	5.0	JUN 2013	D
7	BOTANY	COR	4.0	7.0	SEP 2013	C
8	GEN. ORGANIC CHEMISTRY	COR	9.0	5.0	FEB 2014	D
9	CELL BIOLOGY	COR	6.0	5.0	JUN 2014	E
20	INORGANIC PHARMACEUTICAL CHEMISTRY	COR	6.0	5.0	FEB 2012	E
21	BIOCHEMISTRY I	COR	4.0	6.0	JUN 2013	C
22	SPECIFIC ORGANIC CHEMISTRY	COR	4.0	6.0	JUN 2013	C
23	PHARMACEUTICAL ANALYSIS I	COR	7.0	5.0	SEP 2013	D
24	PHYSICAL CHEMISTRY	COR	6.5	5.0	FEB 2014	D
31	BIOCHEMISTRY II	COR	4.0	5.0	FEB 2013	D
33	PHARMACEUTICAL ANALYSIS II	COR	7.0	5.0	FEB 2013	D
34	PHARMACEUTICAL CHEMISTRY (ORGANOMETALLICS AND HORMONES)	COR	6.5	6.0	SEP 2013	C
35	PHYSIOLOGY	COR	4.0	8.0	JUN 2010	A
46	GENERAL PHARMACEUTICAL TECHNOLOGY	COR	6.0	6.0	JUN 2013	C
32	DISPENSING	COR	6.0	7.0	FEB 2013	B
47	GENERAL PHARMACOGNOSY	COR	6.5	5.0	FEB 2013	D
48	ORGANIC PHARMACEUTICAL CHEMISTRY I	COR	6.5	5.0	FEB 2014	D
49	PHARMACOLOGY I	COR	6.5	5.0	FEB 2014	D
50	PHYSICAL PHARMACY	COR	4.0	5.0	FEB 2011	D
51	BIOPHARMACEUTICS	COR	5.5	5.0	FEB 2013	D
52	SPECIFIC PHARMACEUTICAL TECHNOLOGY I	COR	6.0	7.0	FEB 2013	C
53	APPLIED PHARMACOGNOSY I	COR	6.0	5.0	JUN 2014	D
54	ORGANIC PHARMACEUTICAL CHEMISTRY II	COR	6.0	8.0	JUN 2014	B
55	PHARMACOLOGY II	COR	6.0	5.0	JUN 2013	D
66	SPECIFIC PHARMACEUTICAL TECHNOLOGY II	COR	6.0	6.0	FEB 2013	C
67	EMERGENCY MEDICAL TREATMENT	COR	2.0	5.0	FEB 2011	E
68	APPLIED PHARMACOGNOSY II	COR	6.0	6.0	FEB 2014	C
69	DRUG QUALITY CONTROL I	COR	4.0	5.0	JUN 2013	D
70	ORGANIC PHARMACEUTICAL CHEMISTRY III	COR	7.0	6.0	JUN 2014	B
71	TOXICOLOGY	COR	5.0	5.0	JUN 2013	D
5	INTRODUCTION TO PHARMACEUTICAL SCIENCES & LEGISLATION	ELC	2.0	5.0	FEB 2012	D
29	ANATOMY	ELC	2.0	8.0	FEB 2011	B
41	HYGIENE	ELC	2.0	7.0	FEB 2013	C
14	GERMAN LANGUAGE I	FL	0.5	7.0	FEB 2014	D
18	GERMAN LANGUAGE II	FL	0.5	9.0	JUN 2014	B
27	GERMAN LANGUAGE III	FL	0.5	9.0	FEB 2014	C
38	GERMAN LANGUAGE IV	FL	0.5	10.0	JUN 2010	B
58	GERMAN LANGUAGE V	FL	0.5	7.0	FEB 2014	D
63	GERMAN LANGUAGE VI	FL	0.5	10.0	JUN 2010	B
78	APPLIED PHARMACOLOGY AND THERAPEUTICS	COM	6.0	6.0	JUN 2014	D
79	CLINICAL PHARMACOKINETICS	COM	6.0	6.0	JUN 2014	C
80	CLINICAL CHEMISTRY	COM	4.0	5.0	FEB 2013	D
81	RADIOPHARMACEUTICAL CHEMISTRY	COM	5.0	6.0	FEB 2013	C
82	DISPENSING (OVER THE COUNTER MEDICATIONS)	COM	5.0	9.0	FEB 2013	A
83	HEALTHY FOOD AND DIET PRODUCTS	COM	4.0	8.0	FEB 2012	C
TOTAL ECTS			240			

The Degree is awarded according to the required minimum local credit units (167.0) and the student may be examined in two more optional courses (Ministerial Decision no Φ.1231/B1/425, art. 60 section 3, Hellenic Government Gazette no 1099/2000/B)

ECTS grading (A=10%, B=25%, C=30%, D=25%, E=10%) is based on a sample of a minimum of 100 students. If the sample is not sufficient then nothing is noted (according to the Ministerial Decision no Φ.5/89656/B3, art. 4, Hellenic Government Gazette no 1466/2007/B). The ECTS grading system is based on the Annex 3 of the ECTS Guide, 2009, and on Crocker, L., & Algina, J. (1986). Introduction to classical and modern test theory. New York: Harcourt Brace Jovanovich College Publishers.

Dissertations or/and Internship projects as well are considered as individual projects and they are not graded based on a previous sample. The same stands for the Erasmus courses for which we accept the grading of the receiving institution and we convert it to the local grade accordingly.

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

A scale of 1 to 10 applies to the marks of each subject in the Hellenic higher education.

Άριστα (Arista) Excellent : 8.50-10.00

Λίαν Καλώς (Lian Kalos) Very Good : 6.50-8.49

Καλώς (Kalos) Good : 5.00-6.49

Ανεπιτυχώς (Anepitichos) Fail : 0.00-4.99

Minimum passing grade : 5

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

"Καλώς" (Good): 5.96

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

The qualification is a terminal award and allows access to postgraduate studies.

5.2 Professional status (if applicable):

Professional licence is required to establish and manage pharmacy retail bussiness, to serve as a pharmacist in a state hospital or to serve in a state health service.

6. ADDITIONAL INFORMATION

6.1 Additional information:

Not applicable.

6.2 Further information sources

School of Pharmacy: <http://www.pharm.auth.gr>

Aristotle University of Thessaloniki: <http://www.auth.gr>

Ministry of Education and Religious Affairs: <http://www.minedu.gov.gr>

European Union Educational Issues: <http://www.europa.eu>

Eurydice: <http://eacea.ec.europa.eu/education/eurydice>

7. CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 22/7/2014

7.2 Name and Signature: Professor C. Panagiotidis



7.3 Capacity:

7.4 Official Stamp or seal:



This certificate is issued for foreign authorities and is signed by the President of the School according to the regulation No. 49923/2008 (Hellenic Government Gazette no 873/2008/B).

INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

Pursuant to the Constitution (article 16, paragraph 5), Greek Tertiary Education is public and gratis. Furthermore, according to the legal framework, it is divided into:

- (a) the University sector (A.E.I.): Universities, Technical Universities, Fine Arts School, etc., and
- (b) the Technological sector (T.E.I.): Technological Education Institutions and the School of Pedagogic and Technological Education.

Part of the University sector is also, since 1998, the Greek Open University, which provides open and distance -undergraduate and postgraduate- education and training.

There are also state post-secondary non-tertiary Institutions offering vocationally oriented courses of shorter duration (2 to 3 years), which operate under the authority of other Ministries.

All graduates of secondary education (Geniko and Epagelmatiko Lykeio) can be admitted to Higher Education Institutions, depending on the general score obtained in national examinations that take place at the end of the final year of Lyceum. The admission system is based on the number of available places (numerus clausus), the candidates' performance, and the candidates' ranked preferences of Schools. Admission to particular schools may also require a special examination (eg drawing for Architecture, etc.).

Study programmes in Higher Education Institutions last from four to six years, depending on the subject area. Students who successfully complete their studies are awarded a Ptychio / Diploma, which permits employment or further studies at post-graduate level leading to a Metaptychiako Diploma Eidikefsis (2nd cycle) - equivalent to the Master's degree- and to the doctorate degree (3d cycle), Didaktoriko Diploma.

Legislation on quality assurance in Higher Education, the Credit Transfer and Accumulation System (ECTS) and the Diploma Supplement defines the framework and the criteria for the evaluation of Higher Education Institutions, and for the certification of programmes of studies. These measures aim, among others, at promoting student mobility and contributing to the creation of the European Higher Education Area.

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

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

