



Document Verification
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HELLENIC REPUBLIC

ARISTOTELEIO PANEPISTIMIO THESSALONIKIS (ARISTOTLE UNIVERSITY OF THESSALONIKI)

FACULTY OF SCIENCES

SCHOOL OF MATHEMATICS

<http://www.math.auth.gr> · Tel.: 00302310997950 · email: info@math.auth.gr · · · 54124 · · · Greece

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):** Efraimidou
1.2 **Given Name(s):** Anna
1.3 **Date of birth (day/month/year),
Place, Country of Birth:** 18/05/1999, Thessaloniki, Greece
1.4 **Student identification number or code:** 1115006897747045

2. INFORMATION IDENTIFYING THE QUALIFICATION

- 2.1 **Name of the qualification and (if applicable) title, conferred (in original language):**
Πτυχίο Μαθηματικών (Ptychio Mathimatikon) (Degree in Mathematics)
2.2 **Main field(s) of study for the qualification:**
MATHEMATICS
2.3 **Name and status of awarding institution (in original language):**
Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης (Α.Π.Θ.), (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:**
8 SEMESTERS, 240 ECTS.
A full academic year is equivalent to 60 ECTS units and each semester to 30 ECTS (European Credit Transfer System) (1ECTS=25-30 student work load hours). Compliance with the ECTS (European Credit Transfer and Accumulation System) regulations started in 2007, when the Greek Legislation was harmonized with the relevant European one (Ministerial Decision no Φ5/89656/β3, art. 1-3, Hellenic Government Gazette no 1466/2007/B). Each course is credited with a number of ECTS (≥ 2) according to the student's workload (contact hours, laboratory work, examination etc) and accumulation of credits (ECTS) is accomplished after successful completion of the course.
3.3 **Access requirement(s):**
Upper secondary degree (6 years of studies). National level examination.

4. INFORMATION OF THE CONTENT AND RESULTS GAINED

4.1 Mode of study:

Full-time

4.2 Programme requirements:

The requirements for the Degree in Mathematics are 240 ECTS units as specified below. In particular the students must pass a) all core courses (COR), b) four Compulsory Elective courses (COME) from four distinct specializations and c) at least twelve more courses: of these at most five might be free Elective (FELC) while the rest might be additional Compulsory Elective course (COME) or Elective Courses (ELC). The examination is oral/written or in an assignment form. The aim of the undergraduate study programme (UPS) provided by the School of Mathematics is to train students to the study and comprehension of the science of mathematics as well as its applications in other sciences and new technologies.

Upon the successful completion of their studies and based upon the courses taken the graduates can teach mathematics in Secondary Education and work in the public or private sector wherever applications of mathematics is required, for example Statistics, Financial Mathematics, Business Management, etc. They can also choose to continue to graduate studies leading to basic and applied research in mathematics.

Graduates of the school of Mathematics, 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 other critically, 10) promote free, inductive and deductive thinking.

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

Courses that the student has successfully attended, as well as subjects for which the student has received recognition or exemption (COR = Core, RELC=Required Elective, ELC = Elective, FRELC= Free Elective , EX =Erasmus Exchange Programme):

| Code | Courses | Type | ECTS Credits Student Workload | Grade | Examination Period | ECTS Grading |
|-------|---|------|-------------------------------|-------|--------------------|--------------|
| 0472 | ADVANCED TECHNIQS IN COMPUTER PROGRAMMING | RELC | 5.5 | 8 | JUNE 2021 | B |
| 0535 | Stochastic Operational Research | RELC | 5.5 | 8 | FEBR 2022 | B |
| 0532 | Matrix Theory | RELC | 5.5 | 5.5 | JUNE 2022 | D |
| 0136 | Number Theory | RELC | 5.5 | 6 | SEPT 2022 | C |
| 0235 | Partial Differential Equations | RELC | 5.5 | 5 | SEPT 2022 | D |
| 0569A | Statistical Inference | RELC | 5.5 | 9.5 | JUNE 2023 | B |
| 0533 | Deterministic Methods of Optimization | RELC | 5.5 | 5 | SEPT 2023 | D |
| 0465 | Error Correcting Codes | RELC | 5.5 | 5 | FEBR 2024 | D |
| 0201 | Calculus I | COR | 7.0 | 5 | FEBR 2019 | D |
| 0430 | Introduction to Computer Programming | COR | 5.0 | 6 | JUNE 2019 | D |
| 0401 | Theoretical Informatics I | COR | 5.5 | 5 | SEPT 2019 | D |
| 0501 | Mathematical Programming | COR | 5.5 | 7 | SEPT 2019 | B |
| 0301 | Analytic Geometry I | COR | 6.0 | 5.5 | FEBR 2020 | D |
| 0206 | Differential Equations | COR | 7.0 | 5 | JUNE 2020 | D |
| 0102 | Introduction to Algebra | COR | 5.5 | 5 | SEPT 2020 | D |
| 0108 | Linear Algebra | COR | 8.0 | 6 | SEPT 2020 | C |
| 0202 | Calculus II | COR | 7.0 | 9 | SEPT 2020 | A |
| 0402 | Numerical Analysis | COR | 5.5 | 6 | FEBR 2021 | C |
| 0204A | Topology of Metric Spaces | COR | 6.0 | 6 | JUNE 2021 | C |
| 0506 | Stochastic Strategies | COR | 5.5 | 5 | JUNE 2021 | D |
| 0508 | STOCHASTIC PROCESSES | COR | 6.0 | 7.2 | JUNE 2021 | B |
| 0203A | Calculus III | COR | 6.0 | 6 | SEPT 2021 | D |
| 0205A | Calculus IV | COR | 6.0 | 5 | SEPT 2021 | E |
| 0207 | Introduction to Real Analysis | COR | 5.5 | 5 | FEBR 2022 | D |
| 0305 | ELEMENTS OF ANALYTIC GEOMETRY | COR | 6.0 | 5 | FEBR 2022 | D |
| 0303A | Classical Differential Geometry I | COR | 6.5 | 6 | SEPT 2022 | C |
| 0106A | Algebraic Structures I | COR | 6.0 | 5 | FEBR 2023 | D |
| 0503 | Statistics | COR | 7.0 | 8.5 | FEBR 2023 | B |
| 0208A | Complex Analysis | COR | 6.0 | 5 | JUNE 2023 | D |
| 0505A | Probability Theory II | COR | 6.0 | 7.5 | JUNE 2023 | C |

| Code | Courses | Type | ECTS Credits Student Workload | Grade | Examination Period | ECTS Grading |
|--------------------|--|-------|-------------------------------|-------|--------------------|--------------|
| 0502A | Probability Theory I | COR | 6.0 | 9 | FEBR 2024 | B |
| N0107A | Algebraic Structures II | COR | 6.0 | 5.5 | FEBR 2024 | D |
| Π1000 | Introduction to Pedagogical Research | FRELC | 5.0 | 9 | JUNE 2022 | B |
| NCO-04-02 | ARTIFICIAL INTELLIGENCE | FRELC | 5.0 | 6.5 | JUNE 2023 | C |
| Π1902 | Introduction to SPSS with Application to the Social Sciences | FRELC | 5.0 | 7 | JUNE 2023 | C |
| NIS-07-03 | DATAWAREHOUSES AND DATA MINING | FRELC | 5.0 | 5.6 | SEPT 2023 | D |
| 0461 | Symbolic Programming Languages | ELC | 5.0 | 7 | JUNE 2022 | D |
| 0564 | Time Series | ELC | 5.0 | 6 | JUNE 2022 | D |
| 0571 | Data Analysis | ELC | 5.0 | 9 | JUNE 2022 | B |
| 0963 | Didactics of Mathematics I | ELC | 5.0 | 5 | SEPT 2022 | D |
| 0464 | File Structures | ELC | 5.0 | 6.5 | JUNE 2023 | C |
| 0570 | Theory of information and chaos | ELC | 5.0 | 9 | JUNE 2023 | D |
| Total ECTS: | | | 240.5 | | | |

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 (Anepitychos) Fail: 0.00-4.99

Minimum passing grade: 5.00

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

«Καλώς» {Good} 6.37

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):

Not applicable.

6. ADDITIONAL INFORMATION

6.1 Additional information:

Not applicable.

6.2 Further information sources:

SCHOOL OF MATHEMATICS: <http://www.math.auth.gr>

ARISTOTLE UNIVERSITY OF THESSALONIKI: [/www.auth.gr](http://www.auth.gr)

GREEK MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS: [/www.minedu.gov.gr](http://www.minedu.gov.gr)

EUROPEAN UNION EDUCATIONAL ISSUES: [/www.europa.eu.int](http://www.europa.eu.int)

EURYDICE: <http://eacea.ec.europa.eu/education/eurydice/index.en.php>

7. CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 22/04/2024

7.2 Name and Signature: Anastasia Stergiou



(signature)

7.3 Capacity: On behalf of the Rector, the Head of the Administration Office

7.4 Official Stamp or seal:

This certificate is issued for use in abroad and is signed by the Head of the Administration Office of the School, according to Rector's Decision No 40528/25-01-2024 (Official Journal of the Hellenic Republic 716/31-1-2024, vol. B.)

8. 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 (3^d 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://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/122EN.pdf> (pages 82,83)

