

DECISION

Approval of the Postgraduate Studies Program of the Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens and of the "ATHENA" Research Center and of the Biomedical Research Foundation of the Academy of Athens under the name of "**Data Science and Information Technologies**"

ARTICLE 1

GOAL - SCOPE

The aim of the Postgraduate Program "**Data Science and Information Technologies**" is to provide high quality postgraduate education in the scientific fields of Informatics, Data Science, Artificial Intelligence, Machine Learning and Bioinformatics.

This Postgraduate Program is internationally oriented and it leads to the awarding of a Postgraduate Diploma (Masters of Science) in two specializations:

1. "Big Data and Artificial Intelligence"

2. "Bioinformatics - Biomedical Data Science"

upon the successful completion of studies, based on the program's curriculum.

The degrees are awarded by the Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens with mention to the partner institutions.

ARTICLE 2

STRUCTURE AND OFFICIAL BODIES OF THE POSTGRADUATE PROGRAM

Competent bodies for the operation of the Postgraduate Program according to Law 4485/2017 are:

1. The Special Cross-Institutional Committee (SCC): The SCC is a nine-member committee. It is comprised of seven (7) professors of the Department of Informatics and Telecommunications, elected by its General Assembly, and researchers nominated by the collaborating research centers, in proportion to the number of their teaching staff in the Postgraduate Program, for a two-year term, as well as two (2) student representatives, elected by the students of the postgraduate program, for a one-year term. The Chairperson of SCC, as the Director of the Program, belongs to the Department of Informatics and Telecommunications.

The appropriation of members per partner institution, in accordance to the proportion of the number of teaching staff in the Postgraduate Program, is as follows:

- Three faculty members of the Department of Informatics and Telecommunications,
- Two researchers from "ATHENA" Research Center,
- Two researchers from the Biomedical Research Foundation of the Academy of Athens.

The SCC decides on financial management issues and, in particular, on the approval of the program's expenses and ensures the relationship of the training needs of the specific program to the costs claimed.

2. The Coordinating Committee (CC): consists of one Researcher from each Research Institute participating in the graduate program while the Department of Informatics and Telecommunications (DIT) is represented by three (3) faculty members participating in the program. All members are elected by the SCC for a two-year term. CC members are not entitled to any additional remuneration or compensation for their participation in the committee.

The Chairperson of the CC is the Director of the Postgraduate Program, who is selected by the SCC among the CC members. The term of the CC Chairperson may be renewed once.

The CC is responsible for monitoring and coordinating the operation of the program and:

- Recommends to the SCC the distribution of the teaching load among the teaching staff of the Postgraduate Program.
- Appoints the research advisor and members of the three-member committee for the examination of the postgraduate thesis.
- Deliberates on student issues, such as petitions for suspension of studies, extension of the period of studies, transfer of courses from previous postgraduate education, replacement of courses with courses of other postgraduate programs.

3. The Director of the Postgraduate Program and its Deputy: The Director of the Postgraduate Program is a faculty member of the first or second level (Full or Associate Professor) of the Department of Informatics and Telecommunications, of the same or related expertise as the subject of the Postgraduate Program. In addition, he / she is a member and Chairperson of the CC. He/ she is appointed together with his / her Deputy by a the SCC among the elected members of the CC for a two-year term. The Director may not serve for more than two (2) consecutive terms of office and shall not be entitled to additional remuneration for his / her administrative work as the Director.

The Director of the Postgraduate Program shall recommend to the competent bodies any matter concerning the effective operation of the program. He / she has the following responsibilities:

- a. Calls the meetings of the CC.
- b. Prepares the agenda of the meetings, taking into account the suggestions of the members and bodies of the Program.
- c. Sets elections to replace members of committees who resigned.
- d. He / she is responsible for drafting the budget of the Program, which he / she submits to the SCC for approval.
- e. He / she is responsible for monitoring the implementation of the budget and for issuing payment orders for the expenditures concerned.
- f. At the end of his / her term as well as that of the CC, he / she prepares and presents a detailed account of the research and educational work of the Postgraduate Program, as well as of its other activities, aiming at improving studies, making better use of human resources, optimizing the existing infrastructures and the socially beneficial use of the available resources of the Postgraduate Program.

The Deputy Director of the postgraduate program is a Professor or Associate Professor at the Department of Informatics and Telecommunications and assumes the duties of the Director in his / her absence.

The postgraduate program "Data Science and Information Technologies" is supported by the program's Secretariat, located at the Department of Informatics and Telecommunications of the University of Athens, that is under the supervision of the Secretariat of the Department. The Secretariat of the program has the responsibility to provide secretarial support to the program, such as preparation of the students admissions process, monitoring and compliance of the program's financial data, secretarial support of the CC, proper filling of course grades, etc.

ARTICLE 3

CATEGORIES AND NUMBER OF ADMITTED STUDENTS

The Postgraduate Program "Data Science and Information Technologies" admits students holding a first degrees issued by the following Departments: Computer Science, Informatics, Applied

Mathematics, Mathematics, Engineering, Biology, Medicine and other related fields of Academic Institutions in Greece or abroad, recognized by the Hellenic NARIC (National Academic Recognition Information Center) organization. Foreign students as well as graduates of other departments of Greek or foreign academic institutions, recognized by the Hellenic NARIC are welcomed as well.

The post graduate program "Data Science and Information Technologies" will admit up to forty (40) students per academic year and it is planned to employ about twenty (20) in total teaching staff, at least 80% from the Department of Informatics and Telecommunications of the University of Athens and the other collaborating Institutions in the program, and up to 20% from other Universities and Research Centers in Greece and abroad, as well as recognized scientists with PhD and extensive experience, or postdoctoral researchers with experience in the field they teach. The categories of teaching staff are described in detail in Article 10. The students to teachers ratio corresponds to 1/2 (0.5). It is noted that the maximum number of postgraduate students per year in the Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens is about one hundred and fifty (150), in relation to the number of about three hundred (300) undergraduate students per year and thirty-nine (39) faculty members. The above numbers are approximate and correspond to the figures for the year of this Regulations document.

ARTICLE 4

ADMITTANCE TO THE PROGRAM

Students selection for admittance to the program is administered in accordance with Law 4485/2017 and the provisions of the Regulations governing presently postgraduate studies in the Department. Every May, upon decision of the SCC, a call for applications is publically announced and posted on the Department's website as well as on the pertinent website of the University. The student applications along with the necessary supporting documents shall be filed with the Secretariat of the postgraduate program within a time frame set by the call which may be extended by the SCC.

Required supporting documents are:

1. The Application Form
2. Curriculum vitae
3. Certified Copy of the first Degree, Certified first degree Transcripts, or current transcript of courses completed so far (if the first degree of studies has not been completed)
4. Publications to scientific journals and conferences (if available)
5. Evidence of professional or research experience (if available)
6. Photocopy of the Identification Card (Passport for international students)
7. Two letters of recommendation
8. Certificate of English language proficiency, level C1
9. Work experience certificate(if available).

The Hellenic NARIC is an organization supervised by the Hellenic Ministry of Education. It is responsible for the recognition of degrees awarded by foreign Higher Education Institutions (H.E.I.). The Hellenic NARIC is also responsible for providing information about educational systems and accreditation of Institutions in Greece and abroad.

Students with a first degree from a foreign Academic Institution should submit a certificate of recognition from the Hellenic NARIC organization in accordance to article 34, paragraph 7 of law N. 4485/17.

The selection of applicants to be admitted is made by the SCC, following a recommendation of a three-member evaluation committee appointed for this purpose for each specialization. Specifically,

each three-member evaluation committee creates and submits to the SCC an evaluation table assessing all students applied to each specialization.

The three-member evaluation committee makes its recommendation, upon examination of the students application, dossier of supporting documents, and the results of an interview to which candidates are invited on the basis of the following two categories of criteria:

A. Primary Criteria

- Grade point average of the first degree of studies, or current grade point average in case the first degree is not yet completed (but is expected by the time the student should enroll to the post graduate program).
- Average grade in three undergraduate courses related to the subject matter of the post graduate program
- Performance in the undergraduate thesis, if such a thesis is required
- Certificate of knowledge of the English language proficiency at least at level C1
- Recommendation Letters
- Research or related work experience
- Interview with the committee

B. Secondary Criteria

- Possession of an additional (second) degree of undergraduate or graduate level studies
- Scientific Publications

Successful candidates must register with the Secretariat of the postgraduate program within thirty (30) days upon the SCC's decision.

In the event of a tie score, all applicants with the same tie score are admitted to the program. If one or more of the admitted students is not enrolled, runner-up students, if any, will be called to enroll to the program, based on their rank order in the evaluation table.

ARTICLE 5

DURATION OF STUDIES

The duration of the postgraduate studies leading to a Master's of Science Degree is set at three (3) academic semesters, including one semester for the Diploma Thesis.

The duration of studies can be extended and the maximum permissible duration for completion is set to five (5) academic semesters, upon petition of the student to the SCC providing proper justification.

For working graduate students, part-time studies is an option. Students in this category must provide proof that they are employed for at least twenty (20) hours per week and submit a relevant employment contract and employer verification. The duration of part-time studies cannot exceed six (6) academic semesters.

A graduate student can request a suspension of his / her studies if properly justified. The semesters of suspension are not counted towards the total period of studies. The reasons for the suspension may include health or family related reasons, military service, etc. In the application for suspension of studies the number of semesters for which the suspension is requested and the reasons for the suspension must be stated, supported by relevant documentation. The suspension decision is taken by the SCC. During the suspension period, the student does not participate in the educational and

research activities of the program (attendance of courses, submission of course assignments, course examinations, postgraduate theses submission research activities, etc).

ARTICLE 6

EDUCATIONAL PROGRAM

The postgraduate program commences in the winter semester each academic year. A total of ninety (90) credit units (ECTS) are required to obtain the Master’s degree. The courses of the program correspond to sixty (60) credit units. The remaining 30 credit units correspond to the postgraduate Diploma Thesis.

During their studies, graduate students are required to attend the classes and successfully pass exams of the graduate courses, as well as to pursue and complete a postgraduate diploma thesis. The minimum class hours per course are three (3) per week. Students who may have specific deficiencies in the required background may be required to attend and be successfully examined by the end of the second semester in up to three (3) properly selected undergraduate courses.

The instruction of courses is done live in classroom and using distant learning technologies. Distance learning is carried out with the presence of the students in a teleconference room provided by the Institutions participating in the postgraduate program. Distance learning courses should not exceed twenty percent (20%) of the offered courses.

Courses are organized in semesters, conducted on a weekly basis and taught in English, unless if, in exceptional cases, there is a decision of the SCC to be conducted in Greek. If a session of a course is missed, it should be made up. The new date and time are posted on the program’s website.

Every academic semester, a sufficient number of elective courses is offered, depending also on the availability of teaching staff. Each offered course must be attended by at least five (5) students of the program.

A. The courses for each specialization are as follows:

1. Specialization: Big data and artificial intelligence

1st Semester	
Compulsory Courses	ECTS
Big Data Analytics	6
Database Systems	6
Knowledge Technologies	6
Machine Learning	6
Elective Courses (select one)	
Clustering Algorithms	6
Biostatistics	6

Natural Language Processing	6
Social Implications of the technologies of knowledge and 4th industrial revolution	6
Time series data analysis and applications	6
Introduction to Bioinformatics	6
Information Theory	6
Optimization - Theory and Algorithms	6
Special topics in Big Data and Artificial Intelligence	6
Total	30

2nd Semester	
Compulsory Courses	ECTS
Deep Neural Networks	6
The Internet of Things	6
Big data management	6
Image processing and analysis	6
Elective Courses (select one)	
Geometric data analysis	6
Application of Data Science and Information Technologies in Neurosciences	6
Applications of Data Science and Information Technologies in Medicine	6
Innovations in Data Science and Information Technologies	6
Algorithms in Molecular Biology	6
Machine learning in computational biology	6
Computer Vision	6
Special Topics in Big Data and Artificial Intelligence	6
Total	30

3rd Semester	
Compulsory Courses	ECTS
Master's Thesis	30
Total	30

2. Specialization: Bioinformatics - Biomedical Data Science

1st Semester	
Compulsory courses	ECTS
Biology - Physiology	6
Introduction to Bioinformatics	6
Introduction to Biotechnology	6
Machine Learning	6
Elective Courses (select one)	
Clustering Algorithms	6
Biostatistics	6
Natural language processing	6
Social Implications of Knowledge Technologies and 4th Industrial Revolution	6
Big Data analytics	6
Molecular Modeling of Biomolecules	6
Database Systems	6
Knowledge Technologies	6
Special topics in Bioinformatics	6
Total	30

2nd Semester

Compulsory Courses	ECTS
Algorithms in Structural Biology	6
Algorithms in Molecular Biology	6
Machine Learning in Computational Biology	6
Image processing and analysis	6
Elective Courses (select one)	
Geometric Data Analysis	6
Applications of Data Science and Information Technologies in Neurosciences	6
Applications of Data Science and Information Technologies in Medicine	6
Innovations in Data Science and Information Technologies	6
Deep Neural Networks	6
Big Data Management	6
Special Topics in Bioinformatics	6
Total	30
3rd Semester	
Compulsory Courses	ECTS
Master's Thesis	30
Total	30

ARTICLE 7

EXAMINATIONS AND EVALUATION OF POSTGRADUATE STUDENTS

The academic year is organized into two semesters of study, the winter and spring semesters, each one having at least 13 weeks of classes and three (3) weeks of examinations period. Winter and Spring semester courses are examined for a second time in the examination period of September.

Attendance of course lectures, laboratories, etc. is mandatory. If a class is cancelled due to a problem, it should be rescheduled by the Instructor. The new class date and time should be posted on the postgraduate program's website.

If a student's absences exceeds 50% of classes for all courses, the student may be deleted from the post graduate program. The case is first examined by the CC which makes a recommendation, and the final decision to is taken by the the SCC regarding deletion from the program.

The evaluation of graduate students' performance in the courses they take as part of their studies is taking place at the end of every semester using written or oral examinations, or during the semester using homework and project assignments. The method of students' evaluation is decided by the Instructor of the course. The grade-scale is from 1 to 10. The course grades should be submitted to the program's secretariat within thirty (30) days from the end of the examinations period. Course evaluation procedures (project presentations, exams) are not allowed beyond the examinations period of the corresponding semester.

To be awarded the Masters of Science degree, each student is required to attend and be examined successfully in all compulsory courses of the program, as well as in a sufficient number of elective courses, according to the program of studies, and in addition to conduct and be successfully examined in a postgraduate Diploma Thesis, completing overall work corresponding to ninety (90) ECTS.

A graduate student who has completed the postgraduate Diploma thesis and has failed at least twice in the examinations of a course, and therefore according to the provisions of the Postgraduate Studies Regulation he /she is considered for dismissal from the program, he /she has the right to petition to be examined in this course by a three-member committee of faculty members of the Department, or Researchers of the collaborating research centers, having expertise in the subject matter of the course and appointed by the SCC. The Instructor of the course is not participating in the examination committee (par.6, article 34, law 4485/2017).

A Master's thesis is conducted during the 3rd semester of studies. The CC committee, upon the candidate's petition, in which the proposed thesis title the abstract and thesis advisor are stated, approves the advisor who is a member of the three-member examination committee (par.4, article 34, law 4485/2017).

The Master's thesis advisor should be a faculty member or a researcher of any level from the Institutions participating in the postgraduate program.

The second member of the examination committee must be a faculty member or a researcher of participating in the program, while the third member can be a doctorate degree holder specialized in the topic of the thesis.

The topic of the postgraduate diploma thesis should be research oriented and original.

The language of the postgraduate diploma thesis is English.

The instructions for writing and submitting the postgraduate diploma thesis (cover logo, font type, minimum-maximum number of words, etc.) are specified on the website of the Department of Informatics and Telecommunications (UoA): <http://www.di.uoa.gr/department/thesis>.

For the thesis to be approved, the student has to defend his / her work before the examination committee in an presentation open to the public, which must be announced on the program's website at least one week before the presentation's date. The thesis grade (in the scale 0-10) is assigned by the thesis advisor after discussion and approval by the three-member examination committee.

Upon approval of the postgraduate Diploma Thesis by the examination committee, its abstract must be posted on the website of the postgraduate program and of the Department and Informatics and Telecommunications. An electronic upload of the postgraduate diploma thesis along with potentially any accompanying material related to the work and a special completion form is submitted to the digital repository "PERGAMOS": <https://pergamos.lib.uoa.gr/uoa/>, according to the Senate decisions of the National and Kapodistrian University of Athens.

ARTICLE 8

OBLIGATIONS AND RIGHTS OF POSTGRADUATE STUDENTS

1. Postgraduate students have all the rights and benefits that apply to undergraduate students, except from the right to be provided course textbooks for free. The University is required to provide students with disabilities and / or special needs with access to the proposed textbooks and teaching facilities (par. 3, No. 34, Law 4485/2017). The Accessibility Unit of NKUA ensures this access, as its mission is to provide in practice equal access to academic studies for students with different competences and requirements, through the provision of adaptations of the environment, Computer Assistive Technology and Access Services.

2. The graduate students are invited to participate and attend research group seminars, sessions discussing relevant literature, laboratory visits, conferences / workshops related to the graduate program, seminars of external visitors or other scientific events of the postgraduate program.

3. The SCC, upon the recommendation of the CC, can decide to delete graduate students from the program in the following circumstances:

- they exceed the limit of allowed absences from courses,
- they exceed the maximum duration of studies, as defined in this document,
- they have violated applicable provisions regarding the handling of disciplinary offenses by the competent disciplinary bodies,
- they have petitioned themselves to be deleted from the program,
- they violate intellectual property laws (L.2121 / 93) when writing reports as part of their class work,
- they do not pay the student fees.

4. To participate in the "Data Science and Information Technologies" postgraduate program, graduate students pay nine hundred euros (900 €) per semester, for three semesters. The student fee is paid at the start of each semester.

5. Scholarships and how they are awarded

(a) A Scholarship of Excellence will be awarded to one student per specialization who meets the following requirements: Has completed his / her obligations with all courses of the 1st and 2nd semesters until the end of the September examination period, and before the start of the 3rd semester. His / her grade point average is the highest, compared to all other students enrolled in the same year and specialization, and at least equal to 8.5 / 10. The scholarship entitles the recipient to an exemption from the student fees for the 3rd semester of studies.

(b) A Scholarship of Excellence will also be awarded per specialization in newly admitted students of exceptional academic record. This scholarship will entitle the recipient to an exemption from the fees for the first semester of study. The student who will be selected for this scholarship should have an undergraduate degree grade point average of at least eight out of ten (8/10) and have no personal income (from work). If the student maintains an excellent performance in the postgraduate program (average semester grade of at least 8.5 / 10), this scholarship will automatically be extended for the next academic semester (up to 3 semesters).

6. An "Excellence" highest distinction is awarded to the best student of each specialization who graduates from the program within four (4) semesters from the start of his / her studies and with a degree grade point average of at least 8.5 / 10.

7. Tuition fees are waived for EU students whose personal and family income does not exceed 100% and 70% of national median equivalent disposal income respectively, according to the latest data published by the Hellenic Statistical Authority (ElStat). The waiver is provided for one postgraduate program only. The number of students benefiting from the waiver cannot exceed 30% of all students admitted to the postgraduate program. If the number of those eligible exceeds that proportion, those admitted to the program are selected starting from those with the lowest income (art.35, para 2, Law 4485/2017).

8. The postgraduate program will offer a sum of up to € 300 per student, adjusted according to the program's finances, towards the cost of attending a Conference for an oral or a poster presentation if: the Publication or presentation is directly related to the student's postdoctoral diploma thesis, or with a project he / she has undertaken in the context of a course, and in addition the postgraduate program is acknowledged in the publication, the presentation is made by the student, and the conference meets certain qualitative criteria (it is an international conference with a peer review process based on full-text paper submission, organized by societies such as IEEE, ACM or equivalent).

9. At the end of each semester, every course and its instructor(s) are evaluated by the students using an anonymous questionnaire prepared by the program. The results of students' evaluation of the entire Master's Program as a whole and its activities will be posted on the program's website. The results of the evaluation of each individual instructor will be made available to him or her.

10. Taking the graduation oath shall take place during a ceremonial SCC Assembly meeting at the premises of the Department of Informatics and Telecommunications or the School of Sciences, in the presence of the Director of the program or his / her Deputy and, to the extent possible, of representatives of the Rector.

More specifically, within the framework of the Postgraduate Program "Data Science and Information Technologies", a Master's of Science in in Data Science and Information Technologies is awarded in the following specializations:

- 1) Big Data and Artificial Intelligence
- 2) Bioinformatics - Biomedical Data Science

11. Postgraduate Diploma is not awarded to a student whose first degree title is from a foreign institution and has not been recognized by the Hellenic National Academic Recognition and Information Center (Hellenic NARIC), in accordance with the Greek Law 3328/2005 (A' 80).

12. Postgraduate students may apply to receive a Diploma Supplement.

ARTICLE 9

PROGRAM INFRASTRUCTURES

1. For the proper operation of the program, teaching and seminar rooms, amphitheatres equipped with audiovisual equipment, and laboratories of the Department of Informatics and Telecommunications, as well as of the participating Research Institutions will be made available.

2. Administrative and secretarial support is provided by the Secretariat of the program, in collaboration with the Secretariat of the Department of Informatics and Telecommunications.

3. The funding of the program may come from:

- (a) donations, legacies and any kind of sponsorship of public sector bodies, to the extent specified in Article 14 (1) (a) of Law 4270/2014 (A 143), or of the private sector,
- (b) resources from research programs,
- (c) resources from programs of the European Union or other international organizations,
- (d) part of the proceeds of Special Accounts for Research Funds (E.A.K.E.),
- (e) any other legitimate source.

Since the operational costs of the program are not fully covered by the above funding sources, part of its operating costs are covered by student fees.

4. Upon expiration of the term of the CC, under the responsibility of the outgoing Director, a detailed account is drawn up regarding the research and educational work and other activities of the Postgraduate Program, which is submitted to the Department of Informatics and Telecommunications of the University of Athens (par. 2 , art.44, Law 4485 / 2017). This report, under the responsibility of the Dean's Office, is sent without delay to the members of the Special Educational Committee (para. 5, article 44, law 4485/2017).

5. The internal and external evaluation of the postgraduate program will be carried out in accordance with the provisions of article 44 of Law 4485/2017.

ARTICLE 10

ASSIGNMENT OF TEACHING PERSONNEL IN THE PROGRAM

The Instructors of the postgraduate program come at least by 80% from:

- Faculty members of the Department of Informatics and Telecommunications and the collaborating Research Institutions,
- members of SEP PALTS and STLP of the Department, holders of a doctorate degree
- Researchers of the ATHENA Research Center and the Biomedical Research Foundation of the Academy of Athens Athens, holders of a PhD degree,
- emeritus professors (Article 69, Law 4386/1920) and retired members of the faculty of the Department,
- Teaching staff appointed in accordance to 407/1980 (A 112),
- Academic scholars, holders of a doctoral degree or with exceptional technical experience, who may be employed by decision of the General Assembly of the Department and upon the act of the Department's Chair and participate in teaching and research project specified in a contract signed between the academic scholar and the Rector of the University of Athens (para. 7, article 29, law 4009/2011).

With an SCC decision teaching duties can be assigned to:

- faculty members of other Departments of the same or another university,
- Researchers from research centers mentioned in Art. 13A, Law. 4310/2014, and of the Academy of Athens,
- Visiting scientists from Greece or abroad holding a position or qualification of a professor or researcher in a research center, or recognized reputable scientists with specialized knowledge or relevant experience in the field of study of the postgraduate program
- postdoctoral researchers, Greek or foreign young scientists, holders of a doctorate degree (par.7, art. 16, law 4009/2011)

or new hires / contracts can be made in accordance with the above (paragraphs 1, 2, 5 & 6, No. 36, Law 4485/2017).

Allocation of instructors to teach courses, seminars and laboratories of the postgraduate program take place following a recommendation of the CC and approval by the SCC.

This decision is to be published in the Government Gazette.

The Rector

Meletios-Athanasios Dimopoulos