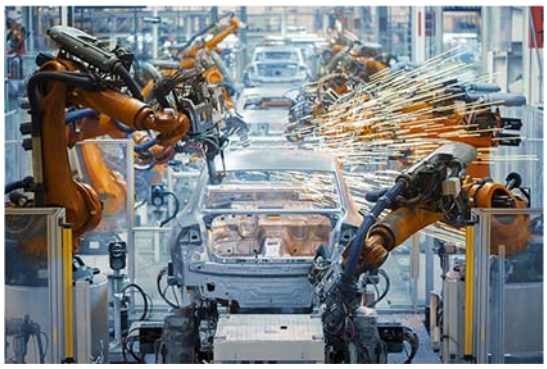
HELLENIC REPUBLIC
National and Kapodistrian
University of Athens
SCHOOL OF SCIENCE
DEPARTMENT OF DIGITAL INDUSTRY TECHNOLOGIES
MSc “Robotics and Industrial Control”



A8. POSTGRADUATE STUDIES PROGRAM GUIDE

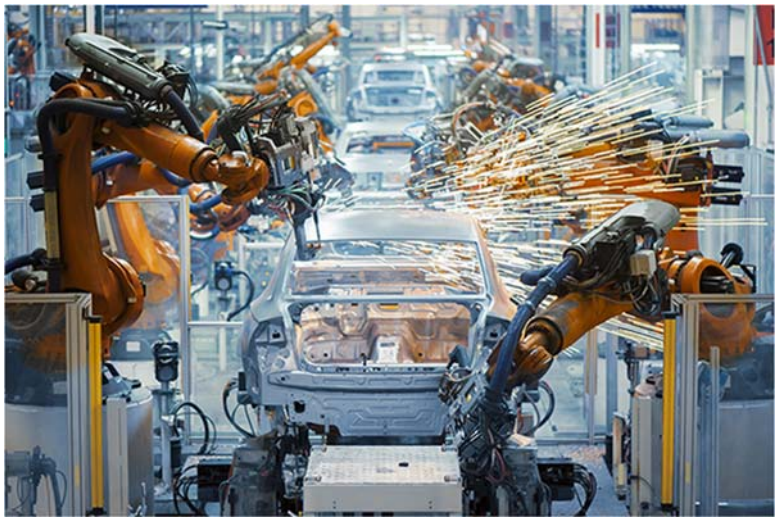
Department of Digital Industry Technologies

MSc “Robotics and Industrial Control”

March 2024

POSTGRADUATE STUDIES PROGRAM GUIDE

"Robotics and Industrial Control"



Department of Digital Industry Technologies

Faculty of Sciences

HELLENIC REPUBLIC
National and Kapodistrian University of Athens
EST. 1837

2024-2025

Version 1.0 (February 2024)

1.1 Name and address

National and Kapodistrian University of Athens

Postgraduate Program of Studies of the Department of Digital Industry Technologies, School of Sciences, NKUA, entitled "MSc in Robotics and Industrial Control"

Euripus Campus, Psachna Evias pc 34400

1.2 Dates of academic year / semesters

For students at undergraduate and postgraduate level, each academic year begins on **September 1st**, ends on **August 31st** and is structured into two semesters of study, winter and spring, each of which includes at least 13 full weeks of teaching and 3 weeks of examinations. By decision of the University Senate, the specific start and end dates of semesters are determined by decisions of the collegiate Bodies of the Faculties/Departments of the National and Kapodistrian University of Athens between the following time periods:

Winter semester: late September-mid-February (including exams).

Spring semester: mid-February-mid-June (including exams).

1.3 National and Kapodistrian University of Athens (NKUA)

1.3.1 RECTOR'S AUTHORITIES

Rector

Professor **Gerasimos Siasos**	
Telephone	**e-mail**
210 368 9770, 9771	rector@uoa.gr

Vice-Rector for Administrative Affairs and Student Welfare

Professor **Efstathios Efstathopoulos**	
Telephone	**e-mail**
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Vice-Rector for Academic Affairs, International Relations, and Extroversion

Professor **Sofia Papaioannou**	
Telephone	**e-mail**
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Vice-Rector for Finance and Development

Professor **Aristides Samitas**	
Telephone	**e-mail**
210 368 9664, 9712	vrec-fin@uoa.gr

Vice-Rector for Research, Innovation and Lifelong Learning

Associate Professor **Christos Karagiannis**	
Telephone	**e-mail**
210 368 9760	vrec-rd@uoa.gr

1.3.2 INFORMATION ABOUT NKUA

Information about the vision of NKUA, the mission and policy of the University, its Strategic Planning, its position in the International University Rankings, its Administrative and Academic Structure, its Historical Review, their Academic Units and Services, Public and International Relations as well as the Research conducted in it can be found:

in the Brochure of NKUA

on the website of the National and Kapodistrian University of Athens

1.3.3 HISTORICAL DATA

The University of Athens, inaugurated on May 3rd, 1837, was initially housed in a renovated Ottoman building on the northeast side of the Acropolis, which nowadays has been refurbished and operates as the University Museum. Initially named the "Othonian University" after the first king of Greece, Otto, it consisted of 4 academic departments with 52 students. As the first university of the newly established Greek state, as well as of the broader Balkan and Mediterranean region, it acquired a significant socio-historical role, which was decisive for the production of specific knowledge and culture within the country.

In 1841, the administrative services and academic departments were relocated to what is now widely known as the "central building" of the University of Athens. In 1932, the University was officially named the National and Kapodistrian University of Athens (NKUA), in honor of Ioannis Kapodistrias, the first Governor of Greece after the nation's liberation. Today, the central building houses the Rectorate, the Senate, the Grand Hall of Ceremonies, and other important central services. Its courtyard (the propylaea) has acquired socio-historical significance as a site of political gatherings, social protests, and demonstrations by students and other social groups participating in movements advocating for social rights.

Until 1925/26, the University of Athens stood as the sole institution of higher learning in Greece. It furnished the Greek society with graduates in medicine, natural and social sciences, law, economics, humanities, and theology. Throughout its many years of operation, it has served as a hub for intellectual production in the country, fostering the operation of intellectual circles both within and

outside its premises. In contemporary times, it continues to provide significant social services, as its academic and teaching staff frequently engage in national and international committees, conduct educational and other research projects, organize and participate in seminars for various social groups, often concurrently with their full-time employment at the University. One of its most notable contributions pertains to the field of healthcare, as students of health sciences, during their practical training, provide medical services to the public under the supervision of the teaching staff.

The National and Kapodistrian University of Athens (NKUA), perhaps the most prestigious university in the country, has established its own tradition in the fields of science and creative participation in social affairs.

Today, the University of Athens is facing numerous challenges, prompting it to gradually set new goals for providing equal opportunities in the education of its large number of students, enabling them to acquire the necessary knowledge and develop the skills that will make them creative scientists and capable professionals in today's rapidly evolving society, which is part of the wider European Community. Reacting to the commodification of university studies and the development of a highly competitive system found in the institutions of tertiary education in many Western countries today, it relinquishes its traditional role in producing an intellectual elite. Recognizing the importance of human resource development, the University of Athens aims to create stronger links between the worlds of knowledge production and consumption, thus contributing to the social, cultural, and economic development of the country.

1.3.4 STUDIES AT NKUA

The National and Kapodistrian University of Athens (NKUA) has as its primary objectives:

1. To produce and disseminate knowledge through research and teaching.

2. To contribute to the formation of responsible individuals with scientific, social, cultural, and political awareness.

3. To provide the necessary tools to ensure their comprehensive training for scientific and professional careers.

To achieve these objectives, NKUA has developed specialized, as well as interdisciplinary, high-level undergraduate and postgraduate programs that cover a wide range of scientific fields. The Departments of NKUA and their respective areas operate within 9 broader academic units, titled University Schools. NKUA, within the scope of its mission, also contributes to addressing the need for continuous education and ongoing training of citizens.

NKUA offers high-level undergraduate studies in a plethora of subjects. The University's Departments organize and operate Undergraduate Study Programs (USPs), most of which include specializations, providing students with the opportunity for specialization, if desired.

Detailed information about the offered USPs and their specializations is provided on the website https://www.uoa.gr/scholes_kai_tmimata/ of NKUA.

In most Departments, the **minimum duration of study** is **eight** semesters. The **method of admission** to these programs (aside from graduate rankings) is determined by the Ministry of Education, Religion, and Sports, in accordance with current legislation.

1.3.5 SCHOOL OF SCIENCE

The School of Sciences is one of the 9 Schools of the National and Kapodistrian University of Athens. It was founded in 1904 and represents the evolution of the School of Physical Sciences. In its current form, it includes the following Departments:

1. **DEPARTMENT OF BIOLOGY**
2. **DEPARTMENT OF HISTORY AND PHILOSOPHY OF SCIENCE**
3. **DEPARTMENT OF MATHEMATICS**
4. **DEPARTMENT OF GEOLOGY AND GEOENVIROMMENT**
5. **DEPARTMENT OF INFORMATICS AND TELECOMMUNICATIONS**
6. **DEPARTMENT OF PHYSICS**
7. **DEPARTMENT OF CHEMISTRY**
8. **DEPARTMENT OF AEROSPACE SCIENCE AND TECHNOLOGY**
9. **DEPARTMENT OF DIGITAL INDUSTRY TECHNOLOGIES**

The primary objectives of the School include providing high-quality education to students across all three cycles of studies, conducting cutting-edge research in the academic disciplines covered by its Departments, fostering outward orientation, and enhancing its societal role. The Departments of the School organize a wide range of postgraduate programs, either independently or in collaboration with Departments of other Schools within the National and Kapodistrian University of Athens or other universities and scientific institutions in Greece and Cyprus.

Dean

Professor **Ioannis P. Emmanouil**		
Telephone	**e-mail**	**Website**
210 727 6358	deansos@uoa.gr	http://densos.uo.gr

1.3.6 UNIVERSITY UNITS AND SERVICES OF NKUA

- ACCESSIBILITY UNIT FOR STUDENTS WITH DISABILITIES
- INTERNATIONAL STUDENTS SUPPORT UNIT
- COUNSELLING CENTRE FOR STUDENTS
- CENTRE OF CONTINUING EDUCATION AND LIFELONG LEARNING
- CONFERENCE VENUES
- COMPUTING CENTER
- ENERGY POLICY AND DEVELOPMENT CENTRE
- FORECAST AND PROGNOSTIC SERVICES
- FOREIGN LANGUAGE TEACHING CENTER
- GENDER AND EQUALITY OFFICE
- HISTORICAL ARCHIVE
- KAPNIKAREA
- "KOSTIS PALAMAS" BUILDING
- LIBRARY AND INFORMATION CENTER
- MODERN GREEK LANGUAGE TEACHING CENTRE
- MARASLEAN TEACHING CENTER
- QUALITY ASSURANCE UNIT
- STUDENT OMBUDSMAN

- UNIVERSITY CLUB
- CAREER OFFICE

1.3.7 NKUA FACILITIES & SERVICES FOR STUDENTS

- FACILITIES & ACTIVITIES
  - STUDENTS WITH DISABILITIES AND LEARNING DIFFICULTIES
  - ACADEMIC IDENTITY
  - JOB OPPORTUNITIES
  - UNIVERSITY GYM
  - STUDENTS' CULTURAL ASSOCIATION
  - STUDENT MEALS
  - HOUSING BENEFIT
  - STUDENT OMBUDSMAN
  - STUDENT ASSISTANCE FUND
  - STUDENT RESIDENCE
  - SCHOLARSHIPS - AWARDS
  - HEALTH SERVICE
- ELECTRONIC SERVICES
  - LIBRARY AND INFORMATION CENTRE
  - ELECTRONIC SECRETARIAT
  - ELECTRONIC DECLARATION OF TEXTBOOKS
  - ONLINE CLASSROOM
  - DIGITAL AMENITIES
  - UNIWAY MOBILE APP
- EDUCATIONAL ISSUES
  - STUDENT EXCHANGES - ERASMUS+
  - LIBRARIES AND READING ROOMS
  - FOREIGN LANGUAGE TEACHING
  - UNDERGRADUATE STUDIES
  - POSTGRADUATE STUDIES
  - TEXTBOOKS
- CONSULTING SERVICES
  - TRAINEESHIP OFFICE
  - OFFICE OF THE COUNSELING FACULTY OF THEOLOGY
  - COMMUNITY MENTAL HEALTH CENTER
  - MENTAL HEALTH CENTER VYRONAS-KESARIANI
  - PSYCHOSOCIAL INTERVENTION UNIT
  - COUNSELING CENTER FOR THE ELDERLY
  - COUNSELING CENTER DEPARTMENT OF PSYCHOLOGY
  - LIAISON OFFICE

2. The Department of Digital Industry Technologies

2.1 Preface

The Department of Digital Industry Technologies was founded in 2019 and aims to become a reference point in education, research, and development in the context of the 4th industrial revolution, internationally defined as Industry 4.0. The ambition of the Department is not only to produce graduates with employability in the modern Greek (and international) industry but also to educate future professionals who will be able to substantially intervene in it.

In this direction, the curriculum has focused on nine goals for developing knowledge and skills in students in view of the challenges that will arise within Industry 4.0:

- **Critical thinking, enabling the conception and development of innovative implementation methods for products, tasks, and projects, especially under constraints requiring best practices.**
- **Solid education in Digital Industry Technologies, providing the ability not only for efficient use but also for analyzing their capabilities and weaknesses. Further specialization in the individual subjects of Digital Industry Technologies, which the undergraduate program of the Department aims at, is analyticaly presented in the Department program guide.**
- **Excellent technical skills enabling work and activity in multiple and different systems and industrial sectors.**
- **Communication skills allowing collaboration with people of different abilities and the realization of creative ideas in a clear and persuasive manner.**
- **Solid interdisciplinary and multidisciplinary knowledge combining deep knowledge in one subject with knowledge in other scientific areas.**
- **Adaptation and continuous (lifelong) learning capabilities allowing adaptation to new technologies and acquiring new knowledge.**
- **Connection and correlations between different ideas, knowledge, and technologies allowing the creation of value and innovation.**
- **Experimentation capabilities in new technologies, allowing the solution of contemporary problems.**
- **Leadership skills allowing dynamic adaptation to maximize all goals (not necessarily those related to economic benefit).**

2.2 Identity – Vision

The Department of Digital Industry Technologies of the National and Kapodistrian University of Athens was established in 2019 by Law 4589 and belongs to the School of Physical Sciences.

The academic operation of the Department, namely the educational and research activities of its members, takes place at the facilities of the National and Kapodistrian University of Athens in Psachna, Evia. The Department operates educational laboratories that support the Study Program and laboratory units that promote research in the subject areas of the Department.

The vision of the Department aligns with the fundamental policies set in Europe for the renewal of productive structures and industry through the 4th industrial revolution. The ultimate goal is to increase productivity and production while simultaneously maintaining environmental sustainability. This goal can only be achieved through the diffusion of modern digital production formats and their optimization through information and communication technologies.

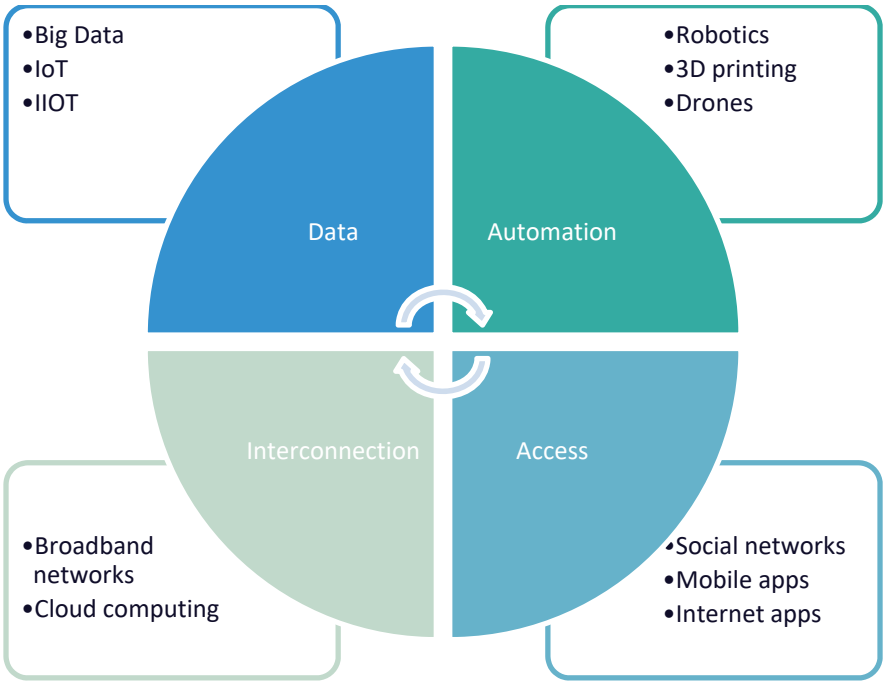

Figure 1: The industry's digital transformation framework

The digitalization of all media presents an opportunity for new knowledge that will lead to high-level training of human resources capable of supporting new intelligent forms of development and work. As digitalization is a global goal in all economies, old and new, Greek industry, businesses, and consumers are seeking digital technologies for more efficient production and development, as well as the creation of innovative products and services.

The technoscience that leads to digitalization also creates a significant opportunity for the construction of new productive forces and the consequent social and economic policies. These policies will allow for the creation and maintenance of new jobs while simultaneously offering a competitive advantage at the national, European, and international levels.

The Department of Digital Industry Technologies is positioned educationally, research-wise, and developmentally in this environment and contributes by establishing a curriculum that meets the modern technological, educational, developmental, and social needs of the new digital reality in industry and other productive sectors.

The Assembly of the Department of Digital Industry Technologies has decided to establish an Advisory Committee from the Industry (IAB) (Industrial Advisory Board), to be composed of industry executives or technical companies active in the subjects of Industry 4.0 Technologies. The mission of the IAB is to: a) transfer industrial experience from production to the University, b) transfer data, information, and elements from Industrial production to research and education, and c) support collaboration between the academic and industrial sectors. The composition of the committee and

other procedural issues of its operation will be determined by decisions of the Department Assembly.

2.3 Administrative structure

The Department is managed by the General Assembly of the Department. As of the drafting of this guide, the members of the General Assembly are:

Department Chair:

Konstantinos Papadopoulos, Professor

Vice-Chair of the Department:

Tzamtzi Maria, Professor

Members of the General Assembly:

Asimakis Nikolaos, Professor

Koumboulis Fotios, Professor

Manassis Christos, Professor

Maris Theodoros, Professor

Bithas Petros, Associate Professor

Koutsoumpis Ioannis, Associate Professor

Kouvakas Nikolaos, Associate Professor

Sarakis Lambros, Associate Professor

Skarpetis Michael, Associate Professor

Alexandridis Georgios, Assistant Professor

Fragkoulis Dimitrios, Assistant Professor

Gonis Panagiotis, Assistant Professor

Katsianis Dimitrios, Assistant Professor

Papadopoulou Panagiota, Assistant Professor

Papaioannou Athanasios, Assistant Professor

Panagiotakis Georgios, Assistant Professor

Paris Chrysos, Assistant Professor

Tsinos Christos, Assistant Professor

Xenakis Dionysios, Assistant Professor

2.4 Research Laboratories

In the Department of Digital Industry Technologies, the Laboratory of Robotics, Automation, and Cyber-Physical Systems (Government Gazette 966/23-2-2023 Vol. B) has been established, with Mr. Fotis N. Koumboulis, Professor, as its Director.

The purpose of the Laboratory is to serve the research, development, and educational needs (including the provision of expertise and studies, as well as the development of standards) of the Department in the fields of Robotics, Automation, and Cyber-Physical Systems, which belong to the academic subject of the Department of Digital Industry Technologies. The Laboratory serves the research needs of the Department of Digital Industry Technologies, conducting basic and applied research in the following knowledge areas:

- **Design of automatic control systems, including robust, supervisory, adaptive, hybrid, hierarchical, and distributed control, using algebraic, geometric, non-linear methods, optimization methods, and artificial intelligence methods.**
- **Study of systems including system modeling, parameter estimation, state estimation, fault diagnosis, and system reliability.**
- **Methodologies of automation and applications in discrete event systems, Petri nets, and state machines.**
- **Applications of the above with particular emphasis on control in industrial and other processes, networked system control, control of helicopters and wheeled vehicles, traffic systems, power systems, agricultural applications, pollution control and environmental protection systems, and natural resources.**
- **Applications of all the above with particular emphasis on control in industrial and other processes, control in networked systems, control in helicopters and wheeled vehicles and airplanes, traffic systems, economic systems, power systems, agricultural applications, pollution control and environmental protection systems, and natural resources extraction.**
- **Intelligent devices and measurements, human-machine communication and interaction systems, environment automation software, automatic knowledge management, computer-aided design, computer-assisted processes, industrial sensors, motion sensors, optical and other sensory systems, software sensors, integrated sensor systems, machine vision, mechatronics, controlled electromechanical, hydraulic, and pneumatic actuators.**
- **Analysis and design of interactions in cyber-physical industrial and urban systems, design of detection, identification, and tolerance systems for cyber-physical attacks.**
- **Kinematics, dynamics, control, trajectory design, and simulation of robots, intelligent machines, and systems, control design, robotic mechanism design, robot task programming, and computational issues in robotics and automation.**
- **Robot applications in assembly, load transportation, teleoperation, teleoperated robots, mobile robots, movement with robotic legs, micro-robots, modular and cooperative robots.**
- **Robotics and automation in processes and weakly structured environments, such as services, cultural heritage management, medical applications, constructions, underwater systems, intelligent vehicles, and intelligent traffic systems.**
- **Robotics issues related to computer architecture and software development, advanced programming languages, software environments, databases, virtual reality.**

- **Automated design and implementation of robot tools and devices, Three-Dimensional Printing and Scanning Systems, Additive Manufacturing Systems.**
- **Educational Robotics.**

The Laboratory also serves the educational needs of the DIND that fall within its fields of activity and in particular:

- **Supporting courses offered by the Department of Digital Industry Technologies (DINT) at both undergraduate and graduate levels.**
- **Supervising Educational Laboratories, where laboratory training for students at both undergraduate and graduate levels is conducted.**
- **Assisting in the supervision of undergraduate theses and graduate dissertations.**
- **Supporting the development of high-level doctoral theses.**
- **Assisting in the development of teaching programs at both undergraduate and graduate levels.**
- **Transferring knowledge from cutting-edge technologies during the production of educational material to support and promote teaching, and bridging high-level research with teaching.**
- **Organizing scientific lectures and educational seminars.**

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The Department of Digital Industry Technologies is also planning the establishment of the following research laboratories:

- **Embedded Systems**
- **Telecommunications and Networks**
- **High Performance Computing and Big Data**

2.5 Infrastructures

The Department of Digital Industry Technologies is located in the Euripus Campus of the National and Kapodistrian University of Athens (NKUA) in Psachna, Evia, near the historic city of Chalkida. The entire academic, teaching, research, administrative, and other activities of the Euripus Campus are housed there.

The amphitheaters and halls of the Euripus Campus are shared among the five new departments of NKUA located in the complex. Following centralized scheduling, these facilities are utilized by the departments for their educational needs according to their weekly schedules.

The computer labs of the Campus are also shared and distributed among the departments according to their usage needs.

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2.5.1 EDUCATIONAL LABORATORIES

Since its establishment and up to the present, the Department of Digital Industry Technologies has been implementing a program for the procurement of equipment and the setup of educational laboratories, according to the following plan:

Research Laboratory	Educational Laboratory	Laboratory Course (Semester)
Telecommunications and Networks	Computer Networks and Objects	• **Data – Computer Networks (4)** • **Internet Application Technologies (6)** • **Mobile Programming (7)**
	Telecommunications and Signal Processing	• **Signals and Systems (3)** • **MATLAB Seminar (3)** • **Communication Systems (4)** • **Digital Signal Processing (4)**
Robotics, Automatic Control and Cyber-Physical Systems	Automatic Control and Robotics	• **Automatic Control Systems (4)** • **Industrial Control and Sensors (5)** • **Robotics and Applications (6)** • **Systems Modeling - Simulation (7)** • **Robot Control and Programming (7)**
	Design and Industrial Manufacturing with Computers	• **Computer Aided Design/Production (CAD/CAM) (7)** • **3D printing and additive technologies (8)** • **Machine Vision (8)**
Embedded Systems	Computer Architecture and Digital Systems	• **Digital Design (1)** • **Computer Architecture (2)** • **Embedded Systems (7)** • **Labview Seminar (4)**
	Electronic	• **Electronics and Electrical Circuits (3)** • **Industrial Electronics (5)**
High Performance Computing and Big Data	Software	• **Operating Systems (4)** • **Systems and Network Management (6)** • **Software Systems Analysis/Design (6)**
	Data Management and Machine Learning	• **Machine Learning (6)** • **Data Analysis and Forecasting Techniques (6)** • **Cloud Computing (7)** • **Virtual and Augmented Reality Technologies (AR/VR TECHNOLOGIES) (7)**

2.5.2 LIBRARY, INFORMATION CENTRE AND READING ROOM

The building complex of Euripus at the University of Athens in Psachna, Evia houses a library that meets the needs and requirements of all departments of the complex, providing access to both print and electronic book titles as well as audiovisual content. The library features reading areas and group study spaces, and its collection is open to undergraduate and graduate students, as well as teaching and administrative staff.

Additionally, students can visit the central library of the University of Athens, located in Athens at 42-44 Aeolou & Kolokotroni Street on the 5th floor. The library collection spans two floors and includes a rich collection of printed books (55,000 volumes), 50 study seats, 6 computer workstations for accessing electronic journals and bibliographic databases, 1 specialized workstation for individuals with disabilities (PWD) specifically designed for students with blindness, visual impairment, and upper limb mobility impairments, 2 workstations for accessing the digital collection of theses and doctoral dissertations, and a wireless network (wi-fi).

The University of Athens provides access to a wide range of electronic sources such as scientific journals, books, bibliographic databases, digital collections, and thematic portals to facilitate research, information, and education for students, faculty members, researchers, and librarians. All electronic sources and related electronic services are included on the Library and Information Center's website, hosted and maintained by the Library Computer Center (LCC) of the University of Athens (http://www.lib.uoa.gr/).

Furthermore, students and staff of the Department can also use the Library of Physical Sciences located in the University Campus, between the buildings of the Departments of Physics and Mathematics, with alternative access from the corridor of the 3rd floor of the Department of Mathematics. For more information: 210 727 6599, 210 727 6525 E-mail: sci @ lib.uoa.gr

3. Information about the MSc "Robotics and Industrial Control"

3.1 General description

1. The MSc in Robotics and Industrial Control is designed to initiate postgraduate studies and foster research growth in the dynamic and significant scientific, social, and economic domain of Robotics and Industrial Control. The specific objectives of this proposed Postgraduate Program include:

- Establishing postgraduate studies and fostering research expansion in the rapidly evolving field of Robotics and Industrial Control, acknowledged for its scientific, economic, and social significance.

- In-depth exploration of Industry 4.0 technologies, integrating production methods with advanced technologies in Industrial Control and Robotics, including Cyber-Physical Systems.

- Providing high-level training and specialization for postgraduate students with backgrounds in natural and technological sciences, equipping them with practical and theoretical knowledge to address complex issues in Industrial Control and Robotics. This includes designing and implementing appropriate technological solutions and engaging in relevant research topics.

- Developing experts capable of effectively handling various applications in robotics and automatic control, utilizing contemporary techniques and cutting-edge technologies, particularly emphasizing industry and production units (procedures and processes). Additionally, fostering the progress of research and its practical applications in the aforementioned fields.

- Training personnel from the Greek industrial sector, and beyond, in two pivotal technologies essential for the digital modernization of industry, namely Robotics and Industrial Control.

- Developing skills related to problem analysis in the MSc subject area and evaluating technology and existing technical solutions within the Industry 4.0 framework.

- Gaining practical experience in integrating hardware and software to produce technical solutions in the broader field of robotics and automatic control systems.

The aforementioned goal of the MSc program satisfies the educational needs of graduates of departments of natural sciences and engineering of Greek universities. It also meets the research and developmental needs of the country, as the development of the Greek economy is significantly influenced by the modernization of production processes through the integration of cutting-edge technologies, where control systems and robotics technologies play a primary role.

A fundamental aim of the MSc program is to attract new scientists and offer them high-level scientific knowledge and research training commensurate with the requirements of modern research and contemporary society. Moreover, it aims to enhance and broaden the international visibility of the scientific and research work of the Department in the scientific subjects it addresses.

2. The subject of study of the MSc program:

- **Represents a modern field of study in a technological area that is pivotal for the development of the Greek economy, as well as the European economy.**

- **Represents a field that undergoes rapid and continuous evolution, constantly expanding into a wide range of applications, contributing to sustainable economic development by creating technologies, products, and services with high added value.**
- **Is directly linked to the axes of economic development of the country, as it presents significant potential for contribution to a plethora of productive sectors of the Greek economy, such as:**

    - Industrial and craft units
    - Building facilities
    - Electric, wind, and photovoltaic energy production, transmission, and distribution units
    - Land, sea, and air transportation (road networks, traffic control, various types of transportation means such as vehicles, ships, etc.)
    - Agriculture (precision agriculture and smart agriculture)
    - Biological purification and ecological management units
    - Medical units (medical automation)

- **Can greatly contribute to the country's strategy regarding Digital Convergence with other EU countries and in accordance with the findings of the European Union regarding the completion of the digital single market. This goal is a top priority axis for the country's development.**

3 The successful completion of the Postgraduate Program results in the conferment of a Postgraduate Diploma titled "MSc in Robotics and Industrial Control," in accordance with the prescribed curriculum.

4 These titles are granted by the Department of Digital Industry Technologies at the National and Kapodistrian University of Athens.

3.2 Structure and Bodies of the MSc

The authorized entities responsible for overseeing the implementation of the Postgraduate Program in accordance with law 4957/2022 are as follows:

At the institutional level, the competent bodies include the Committee on Postgraduate Studies and the Senate.

At the Department level, the competent bodies for the Postgraduate Program are:

- **Assembly of the Department of Digital Industry Technologies**
- **The Coordinating Committee (C.C.)**
- **The Director of the Postgraduate Program**

3.2.1 ASSEMBLY OF THE DEPARTMENT OF DIGITAL INDUSTRY TECHNOLOGIES

The Assembly of the Department of Digital Industry Technologies holds the following responsibilities:

a) recommends to the Senate, through the Committee on Postgraduate Studies, the necessity of establishing/modifying the Postgraduate Program, as well as extending the duration of the Postgraduate Program.

b) appoints the Director and members of the Coordinating Committee of the Postgraduate Program.

c) establishes Committees to evaluate applications from prospective postgraduate students, approving their enrollment in the Postgraduate Program.

d) assigns teaching responsibilities among the faculty members of the Postgraduate Program and may assign auxiliary teaching tasks to doctoral candidates of the Department, supervised by the instructor of the Postgraduate Program.

e) establishes examination committees for evaluating postgraduate students' dissertations and appoints a supervisor for each thesis.

f) certifies the successful completion of studies and awards the Postgraduate Diploma.

g) approves the report of the Postgraduate Program based on the Coordinating Committee's recommendation (C.C.).

h) assigns postgraduate students the responsibility of auxiliary teaching work in first-cycle study programs of the Department.

i) exercises any other lawful competence.

3.2.2 THE COORDINATING COMMITTEE (C.C.)

The Coordinating Committee (C.C.) comprises the Director of the Postgraduate Program and four (4) faculty members from the Department, including emeritus professors specializing in a field relevant to that of the Postgraduate Program, who actively engage in teaching within the program. The C.C. is tasked with overseeing and coordinating the program's activities, specifically:

a) prepares the initial annual budget of the Postgraduate Program and its amendments, if the Postgraduate Program has resources, and recommends its approval to the Research Committee of the Special Account for Research Funds,

b) prepares the report of the program and recommends its approval to the Assembly of the Department,

c) approves the execution of expenditures for the Postgraduate Program.

d) approves the granting of scholarships, contributory or not, in accordance with the provisions of the decision establishing the Postgraduate Program and the Regulation of postgraduate and doctoral studies,

e) recommends to the Assembly of the Department the distribution of teaching work, as well as the assignment of teaching work,

f) recommends to the Assembly of the Department the invitation of Visiting Professors to meet the teaching needs of the Postgraduate Program,

g) prepares a plan for the modification of the curriculum, which it submits to the Assembly of the Department,

h) recommends to the Assembly of the Department the redistribution of courses between academic semesters, as well as issues related to the qualitative upgrading of the curriculum.

3.2.3 THE DIRECTOR OF THE POSTGRADUATE PROGRAM

The Director of the Postgraduate Program is a faculty member, preferably holding the rank of professor or associate professor, appointed by the Assembly for a renewable two-year term without limitation.

The Director assumes the following responsibilities:

(a) chairs the Steering Committee, formulates its agenda, and convenes meetings.

(b) presents matters related to the organization and functioning of the Postgraduate Program to the Assembly.

(c) proposes issues concerning the effective operation of the Postgraduate Program to both the internal bodies of the program and the Higher Education Institution.

(d) serves as the Scientific Coordinator of the program and executes corresponding responsibilities.

(e) Monitors the implementation of decisions made by the bodies of the Postgraduate Program, adheres to the Internal Regulation of postgraduate and doctoral programs, and oversees the budget implementation of the Postgraduate Program.

(f) Signs all outgoing correspondence related to the Postgraduate Program on behalf of the Department of Digital Industry Technologies, acknowledges and categorizes incoming correspondence, and establishes committees for studying or processing specific program-related matters.

(g) signs, on behalf of the Department of Digital Industry Technologies, all outgoing correspondence concerning the Postgraduate Program, systematically records and categorizes all incoming correspondence pertaining to the Postgraduate Program. Supervises the smooth operation of the Secretariat of the Postgraduate Program. Establishes committees for the study or processing of specific issues of the Postgraduate Program.

h) executes, in accordance with a decision from the Assembly, all necessary procedures for initiating a call for expressions of interest in the admission of students to the Postgraduate Program. Determines and communicates the schedule for interviews. Additionally, offers guidance to the Coordinating Committee on budgetary formulation and the documentation of program revenues and expenses. Oversees budget execution and offers counsel to the Coordinating Committee on financial considerations concerning the MSc program.

(j) makes decisions and takes actions authorized by the Assembly of the Department or the Coordinating Committee that serve the needs of the Postgraduate Program.

(k) oversees the comprehensive functioning of postgraduate studies, including the preparation of the timetable and academic calendar of the Postgraduate Program.

(l) formulate documentation intended for use by students, faculty, and the Secretariat of the Postgraduate Program in various activities such as applications, certificates, and other related processes.

(m) issues instructions for the compilation of dissertations.

(n) decides on any student matters not under the jurisdiction of other bodies, in compliance with relevant provisions and regulations.

(o) exercises any other competence defined in the decision establishing the Postgraduate Program.

The Director of the Postgraduate Program, along with the members of the Postgraduate Program, are ineligible for remuneration or any form of compensation for the execution of their assigned responsibilities associated with the performance of their duties.

3.2.4 ADMINISTRATIVE SUPPORT FOR THE POSTGRADUATE PROGRAM

a) The Secretariat of the Department of Digital Industry Technologies at the National and Kapodistrian University of Athens assumes the responsibility for providing secretarial and administrative support for the Postgraduate Program.

b) The Secretary of the Department designates an employee or employees, depending on the number of Postgraduate Programs and workload, to oversee the responsibilities related to the Postgraduate Program.

c) If the Postgraduate Program possesses its own resources, it has the option, in accordance with existing legislation, to hire external collaborators for secretarial and administrative support. These external collaborators will be under the supervision of the Department's Secretariat.

3.3 Human Resources

The MSc "Robotics and Industrial Control" will be supported primarily by all faculty members of the Department with a subject that is directly related to that of the MSc and specifically by the members of the Laboratory of Robotics, Automatic Control and Cyberphysical Systems:

FACULTY MEMBERS OF ROBOTICS, AUTOMATIC CONTROL AND CYBERPHYSICAL SYSTEMS LABORATORY			
Name	**Rank**	**Field of study**	**e-mail**
Koumboulis Fotis	Professor	Robotics and Industrial Automation	fkoumboulis@dind.uoa.gr
Tzamtzi Maria	Professor	Automatic Control Systems	mtzamtzi@dind.uoa.gr
Kouvakas Nikolaos	Associate Professor	Automatic Control in Motion and Navigation Systems	nkouvak@dind.uoa.gr

FACULTY MEMBERS OF ROBOTICS, AUTOMATIC CONTROL AND CYBERPHYSICAL SYSTEMS LABORATORY			
Skarpetis Michael	Associate Professor	Automatic Control Systems – Hydraulic and Pneumatic Automatic Control Systems	miskarpetis@dind.uoa.gr
Fragkoulis Dimitrios	Assistant Professor	Modelling, Control and Fault Diagnosis in Production Processes	dfragkoulis@dind.uoa.gr
Panagiotakis Georgios	Assistant Professor	Automatic Control of Distributed Systems	gpanag@uoa.gr

In addition to the above, the following may participate in the teaching work of the MSc:

- **Other faculty members of the Department of Digital Industry Technologies**
- **Other faculty members of other departments of the University of Athens**
- **Instructors from other categories as provided for in the relevant provisions of Law 4957/2022**

At the Department of Digital Industry Technologies, two Technical Laboratory Staff members also serve, who have specialization and experience relevant to the subjects of the MSc program, and adequately support the laboratory needs of the program.

The administrative and secretarial support of the MSc program will be provided by the Secretariat of the MSc program. This Secretariat is staffed by personnel from the Secretariat of the Department of Digital Industry Technologies (3 faculty members), as well as personnel recruited from the resources of the MSc program to support its administrative functioning.

3.4 Infrastructure

The MSc program will utilize the building infrastructure, electronic computers, software, electronic systems, and all related equipment (e.g., computer peripherals, printers, servers, projectors/screens, teleconferencing equipment, etc.), as well as other laboratory equipment (such as robots, industrial controllers, industrial-scale facilities, automation software) available to the Department of Digital Industry Technologies, particularly the Laboratory of Robotics, Automatic Control, and Cyber-Physical Systems.

3.5 MSc Regulations

The following regulations apply to the operation of the MSc program:

1. Internal Regulations of the MSc Program
2. Study Regulations
3. Regulations for the Operation of the Academic Council Institution
4. Regulations for the Operation of the Student Complaints and Appeals Mechanism
5. Student Mobility Regulations

6. Distance Learning Regulations
7. Regulations for the Preparation of the Postgraduate Thesis

3.6 European ECTS credit system

ECTS (European Credit Transfer and Accumulation System) is a student-centric system for the accumulation and transfer of credits, based on the transparency of learning outcomes and learning processes. It aims to facilitate the planning, delivery, assessment, recognition and validation of qualifications and learning modules, as well as student mobility. ECTS is widely used in formal higher education and can be applied to other lifelong learning activities.

3.6.1 ECTS CREDITS

ECTS credits are based on the workload students need to achieve the expected learning outcomes. Learning outcomes describe what the learner is expected to know, understand and be able to do after successfully completing the learning process. They are linked to level descriptors in European and national qualifications frameworks.

Workload indicates the time it takes students to complete all learning activities (such as attending lectures, seminars, assignments, exercises, study, and exams) required to achieve the expected learning outcomes.

The 60 ECTS credits represent the workload of a full year of full-time formal learning (academic year) and the associated learning outcomes. In most cases, the workload ranges from 1,500 to 1,800 hours of an academic year, where one credit corresponds to 25 to 30 hours of work.

3.6.2 USE OF ECTS CREDITS

Credits are allocated to qualifications or study programmes, as well as their educational components (study modules, courses, essay writing, work placement and laboratory work). The number of credits assigned to each component is based on its weight in terms of the workload students need to achieve learning outcomes in a formal education context.

Credits are awarded to students (full-time or part-time) upon completion of the learning activities required by a formal curriculum or by a single educational component and successful assessment of the learning outcomes achieved. Credits may be accumulated for the purpose of obtaining qualifications, as decided by the awarding institution. If students have achieved learning outcomes in other learning contexts or in different time frames (formal, non-formal or informal learning), relevant credits may be awarded after successful assessment, validation or recognition of these learning outcomes.

Credits awarded under one program may be transferred to another program offered by the same or different institution. This transfer can only take place if the awarding institution recognises the credits and the learning outcomes associated with them. Partner institutions must agree in advance on the recognition of study periods abroad.

The transfer and accumulation of credits is facilitated by the use of the basic ECTS documents (course catalogue, student application form, learning agreement, transcript of records), as well as the Diploma Supplement.

3.7 ERASMUS+ Mobility Programme

Erasmus+ (European Action Scheme for the Mobility of University Students) is the European Union (EU) programme to support education, training, youth and sport in Europe. It replaced EU programmes covering all areas of education. It is a continuation of the well-known ERASMUS programme, 1987-1995, which has enabled millions of people to study so far, practice, participate in volunteering activities and gain professional experience abroad. The Programme is organised into "Key Actions". The Department of Digital Industry Technologies participates in "Key Action 1: Learning mobility of individuals".

The Department of Digital Industry Technologies has concluded an agreement within the framework of the Erasmus+ program with the University of Stavanger, Department of Electrical Engineering and Computer Science, Norway. The agreement provides for the possibility of exchanging first, second and third cycle students, as well as faculty members, starting from the academic year 2024-2025.

3.8 Diploma Supplement

The Diploma Supplement is an explanatory document, which provides additional information on the nature, level and content of students' studies as well as on the knowledge and skills acquired during their studies, facilitating the understanding of this information by Universities, employers and Organizations abroad.

The Diploma Supplement is issued together with the degree and is issued in Greek and English, free of charge.

The Diploma Supplement a) is not a substitute for the original MSc and b) does not automatically guarantee the recognition of the degree.

The implementation of the Diploma Supplement came into force for all countries of the European Union, following a resolution of the European Parliament (Decision No. 2241/2004 on the single Community framework for the transparency of qualifications and competences), so that the transparency of studies, professional qualifications and competences of higher education graduates of EU countries is defined in a uniform way. It was adopted by Greek legislation on the basis of Law 3374/2005, article 15 (Government Gazette A' 189/2-8-2015).

In the Postgraduate Program our Diploma Supplement is granted to all graduates either together with the MSc.

3.9 Admission requirements

3.9.1 CATEGORIES AND NUMBER OF ADMISSIONS

Admission to the Postgraduate Program is granted to the following categories:

a) graduates from Departments of Digital Industry Technologies, Informatics, Physics, Mathematics, Aerospace Science, and Technology within universities or university departments. These departments should be closely associated with the aforementioned scientific subjects, either within domestic academic institutions or equivalent recognized institutions abroad.

b) Graduates or degree holders in Mechanical Engineering, Electrical Engineers, and Computer Engineers, Chemical Engineers, Computer Engineers, and Industrial Design and Production

Engineers, who have completed their studies at the Departments of Polytechnic Schools or Schools of Engineering at Universities. They may also be graduates of relevant departments at recognized institutions either domestically or abroad.

c) Graduates from Technological Educational Institutes in Departments of Automation, Mechanical Engineering, Electrical Engineering, Aircraft Technology, Informatics, or Technological Educational Institutes Departments related to the aforementioned scientific subjects within national or equivalent recognized institutions abroad.

The maximum allowable number of students admitted to the Postgraduate Program is capped at forty (40). This ceiling is determined based on factors such as the number of Postgraduate Program faculty members, the student-faculty ratio, the material and technical infrastructure, classrooms, and the anticipated employability of graduates in the labor market.

In addition to the regular admissions, one (1) member each from the categories: Special Educational Staff, special Laboratory Teaching Staff and Special Technical Laboratory Staff, is admitted annually, contingent upon their work at the University being relevant to the subject matter of the Postgraduate Program.

Scholars from the State Scholarships Foundation and foreign scholars sponsored by the Greek state, specializing in the same or related subjects as the Postgraduate Program, are exempt from the admission evaluation process.

3.9.2 STUDENT SELECTION PROCEDURE

The process for selecting students adheres to existing legislation, the Regulations of Postgraduate and Doctoral Studies at NKUA, and the stipulations outlined in the Regulations of the Postgraduate Program.

In the timeframe of April to May, as determined by the Department's Assembly, an announcement regarding the admission of postgraduate students to the Postgraduate Program is disseminated and published on both the Department's website and the NKUA website. Prospective applicants are required to submit their relevant applications, including essential supporting documents, to the Secretariat of the Postgraduate Program within a specified deadline outlined in the announcement. The deadline may be subject to extension at the discretion of the Department's Assembly. Additionally, the Assembly holds the authority to issue the proclamation beyond the April-May period based on a well-founded decision.

The Department's Assembly delegates the responsibility for the admissions selection process to the Coordinating Committee.

3.9.2.1 Necessary supporting documents

The necessary supporting documents that must be submitted by prospective postgraduate students are:

- Application form detailing reasons for selection and intent to enroll in the Postgraduate Program.
- Detailed Curriculum Vitae (CV).
- Submission of a copy of the academic degree or certificate of completed studies is required (alternatively, a sworn declaration can be provided, including pending course grades).
- Official transcript of records from the undergraduate studies.

- Printed or electronic copy of the thesis or diploma thesis (if applicable).
- Copies of any additional degrees, master's, and doctoral degrees from universities or equivalent foreign institutions.
- Publications in scientific journals or conference proceedings, if available.
- Certificates of scholarships and awards.
- Up to two letters of recommendation.
- English language proficiency certificate of at least level B2, recognized as per current legislation and certified by the issuing authority or a legal professional (or adequate knowledge of the English language, certified by the Secretariat of the Postgraduate Program).
- Evidence of professional or research activity, if applicable.
- Greek language proficiency certificate or adequate knowledge of the Greek language, certified by the Secretariat of the Postgraduate Program, for foreign candidates intending to enroll in the Postgraduate Program in Greek.
- Additional information at the candidate's discretion, such as evidence of professional or research activity related to the subject of the Postgraduate Program.
- Photocopy of both sides of the identity card.
- Recent photograph.
- Recognition of foreign academic qualifications.

For students hailing from foreign institutions without a DOATAP-recognized academic degree certificate, the following protocol is observed:

The Department's Assembly directs the Coordinating Committee (C.C.) to ascertain the recognition status of a foreign institution or a specific type of title from a foreign institution.

The Coordinating Committee verifies whether the foreign institution or the type of title from a foreign institution is listed in the pertinent Register of foreign institutions, which is maintained and regularly updated by DOATAP.

If the foreign institution is part of the institutions listed in Article 307 of Law 4957/2022, the candidate is obligated to furnish a certificate of the place of study. This certificate is issued and sent by the foreign university. However, if the Greek territory is confirmed as the place of study or a portion thereof, the degree will not be recognized, unless the studies completed on the Greek territory are within a public Higher Education Institution.

3.9.2.2 The evaluation of candidates and the selection of admissions

The assessment of candidates and the subsequent admission selection process rely on the following criteria, utilizing a merit point (M.P.) scale ranging from 0 to 100:

1. Degree Grade: The candidate's degree grade, denoted as 'B', contributes merit points calculated as (B-5) x 2. The maximum attainable merit points for this criterion are ten (10). In the case of multiple degrees, the one most relevant to the subject of the Postgraduate Program is considered. If multiple degrees are equally relevant, the degree with the highest grade is taken into account.

2. Undergraduate Course Grades and Relevant Diploma/Dissertation: For each course or diploma/dissertation pertinent to the Postgraduate Program, where the candidate has achieved a grade of seven or higher, two points are awarded. The maximum merit points for this category are twenty (20).

3. Relevance of University Degree and Candidate's Knowledge to MSc Subject: Merit points, up to twenty (20), are assigned based on the relevance of the candidate's degree and presumed knowledge, as indicated in the application file.

4. Research or Professional Activity in a Related Discipline: Four (4) merit points are awarded per certified year of professional experience or research work (participation in a research program or employment in a research center) in a subject related to the Postgraduate Program. The maximum number of merit points for this criterion is twenty (20).

5. Publications in Subjects Related to MSc: Merit points are allocated as follows: 4 merit points for each publication in an international scientific journal, 3 merit points for each publication in an international scientific conference with full-text review, and 1 merit point for each publication in an international scientific conference with abstract review or in a Greek conference. The maximum merit points attainable are twenty (20).

6. Performance during the Interview: The Coordinating Committee assesses the candidate's interest in the Postgraduate Program, commitment to completing studies, and overall proficiency in the subject. The maximum merit points for this criterion are ten (10) merit points.

A prerequisite for eligibility in the selection process is proficiency in the English language, which can be demonstrated through one of the following qualifications:

i) Possession of one of the following degrees: (a) State Certificate of Language Proficiency for the English Language at a minimum level of B2, or any other English language certificate recognized by the Greek State as equivalent to at least a B2 level. Certificates accepted by ASEP (Supreme Council for Civil Personnel Selection) as B2 and above are also valid. Examples include the FIRST CERTIFICATE IN ENGLISH from the University of Cambridge and the EXAMINATION FOR THE CERTIFICATE OF COMPETENCY IN ENGLISH from the University of Michigan. (b) A degree from an English-speaking University or a degree in English Literature. ii) Successful completion of an English Technical Terminology course during undergraduate studies at a university, specifically in subjects related to the theme of the Postgraduate Program. iii) Successful participation in examinations organized by the Coordinating Committee in the area of English Technical Terminology relevant to the subjects covered in the M.Sc. program.

The interview process for candidates and the English technical terminology examination may be conducted remotely, as determined by the Coordinating Committee, utilizing appropriate technical means in accordance with the provisions outlined in the Special Regulation for the Organization and Implementation of Distance Education Methods for the Postgraduate Program.

Upon considering the overall criteria, the Coordinating Committee formulates an assessment table for candidate students, delineating their scores in individual criteria as well as their final scores. This table is organized in descending order of success and is presented to the Assembly of the Department for approval.

Successful candidates are required to register at the Secretariat of the Postgraduate Program within thirty (30) days from the Department's Assembly decision. In the event of a tie (rounded to the nearest whole unit on the 100 scale), tied candidates are admitted at a rate not exceeding 10% of the maximum admissions.

Should one or more students fail to register, the next candidates in the ranking, as per the approved evaluation table, will be invited to enroll in the Postgraduate Program.

In the circumstance where the Assembly delegates responsibilities to the Coordinating Committee (C.C.) for the evaluation of applications and the approval of enrollment decisions for candidate

postgraduate students, all the duties specified in this article for the Department's Assembly are assumed by the Coordinating Committee.

3.10 Duration of Study

The Postgraduate Program, leading to the attainment of a Postgraduate Diploma, spans a duration of three (3) academic semesters, encompassing the time dedicated to the preparation of a dissertation should the student opt for this scholarly pursuit.

The option for part-time enrollment is available, subject to a reasoned request submitted by the student and subsequent approval by the Department's Assembly. Eligibility for part-time study is extended to the following categories:

a) Students who can substantiate their engagement in employment for a minimum of twenty (20) hours per week.

b) Students with documented disabilities and specific educational needs.

c) Students engaged in athletic pursuits, affiliated with sports clubs recorded in the electronic register mandated by Article 142 of Law 4714/2020 (A' 148). This register is maintained at the General Secretariat of Sports, and admission is subject to the conditions outlined below:

(ca) For the years they achieve a ranking from 1st to 8th place in Panhellenic championships of individual sports with the participation of at least twelve (12) athletes and eight (8) clubs or compete in teams of two (2) higher categories in team sports, or participate as members of national teams in pan-European championships, world championships, or other international competitions under the Hellenic Olympic Committee, or

(cb) If they participate at least once, during their studies, in the study program for which they apply for part-time study, in the Olympic, Paralympic Games, and Olympic Games for the Deaf. Students in this sub-category may enroll as part-time students, following their application's approval by the Administrative Board of the School. The duration of part-time study does not exceed twice the duration of normal full-time study. The maximum duration of studies also applies in this case.

The duration of part-time study is limited to twice the duration of normal full-time study, with the maximum overall duration applicable to this category as well.

The possibility of extending the standard study duration is granted upon a reasoned request by the student, contingent upon approval by the Department's Assembly. Full-time students may apply for an extension of up to three (3) additional semesters, establishing a maximum allowable study duration of six (6) academic semesters. Similarly, part-time students may seek an extension, not exceeding four (4) semesters, thus setting the maximum period for completion of part-time studies at ten (10) academic semesters. In exceptional cases where force majeure prevents the completion of studies within these prescribed limits, the Assembly may approve an additional extension of two (2) semesters, applicable to both full-time and part-time students.

Students who have not surpassed the maximum attendance limit may, upon submission of a reasoned request to the Department's Assembly, temporarily interrupt their studies for a period not exceeding two (2) consecutive semesters. The suspension of studies is granted for compelling reasons, such as military service, illness, postpartum, or extended absence abroad.

The application for the suspension of studies must be accompanied by a well-reasoned explanation and all pertinent supporting documents issued by competent public authorities or organizations, substantiating the grounds for the requested interruption. During the period of study suspension, the student's status is temporarily halted, and engagement in any educational activities is prohibited. The semesters during which the student's status is suspended do not contribute to the overall maximum duration of regular studies.

At least two weeks before the conclusion of the suspension period, it is mandatory for the student to re-enroll in the program to resume studies, thereby reinstating the rights and responsibilities associated with active student status. Students have the option to terminate the suspension of studies and return to the program, provided they had applied for a suspension lasting two consecutive academic semesters. The request to terminate the suspension of studies must be submitted no later than two weeks before the commencement of the second semester of suspension.

The duration of suspension or any extension to the study period is individually assessed and approved by the Coordinating Committee, which subsequently recommends its decision to the Department's Assembly.

The commencement of the Postgraduate Program is scheduled for the winter semester of each academic year.

To earn a Postgraduate Program diploma, students are required to accumulate a total of ninety (90) credits (ECTS). Courses, conducted weekly, encompass various instructional formats, including theoretical lectures, tutorial exercises, laboratory sessions, seminars, assignments, and practical training.

The language of instruction and the language for composing the Master's Thesis are Greek, with English being used where applicable.

Throughout their studies, postgraduate students must actively participate in and successfully complete postgraduate courses, engage in research activities, produce scientific theses, and, optionally, undertake the preparation of a postgraduate dissertation.

The elaboration of the dissertation takes place in the third semester of studies and is credited with thirty (30) ECTS, provided that the student chooses to undertake a dissertation instead of attending courses in the third semester of studies.

The opportunity for practical training, aligned with relevant regulations, is provided to enable students to acquire essential practical experience. This training, conducted under the supervision or collaboration of a faculty member, spans eight (8) weeks, yields six (6) ECTS, and is optional, not contributing to the overall ECTS count of the program.

Courses are delivered either in person or remotely, adhering to applicable legislation and the regulations outlined in the Postgraduate Program's protocol and the Special Regulation for the Organization and Implementation of Distance Education Methods.

The Postgraduate Program consists of two semesters dedicated to coursework and one semester designated for the postgraduate thesis or the attendance of additional courses. Each semester corresponds to 30 ECTS. Compulsory courses are scheduled for the first two semesters, and all students are obliged to successfully complete them. In the third semester, students have the option to choose between attending additional courses and preparing a Master's thesis. However, the Coordinating Committee reserves the right to decide against offering elective courses in the third semester if the enrollment falls below five (5) students for that academic term.

4.1 Learning Outcomes of the MSc/Professional Prospects of Graduates

The Postgraduate Program seeks, in particular, to offer scientific expertise and to be the starting point of research initiatives in the following sub-fields:

- **Study, design, and implementation of advanced Industrial Control systems using appropriate digital platforms.**
- **Study, development, testing, and implementation of advanced robotic systems.**
- **Development, implementation, and application of Industrial Control and Robotics algorithms to solve problems encountered in industrial and other production units.**

- **Design and management of networked Industrial Control and Robotics systems, including the Industrial Internet of Things (IIoT).**
- **Design and development of industrial Human-Machine Interface for control, fault detection, and execution of robotic tasks.**
- **Applications of Artificial Intelligence and Machine Learning in Robotics and Industrial Control.**
- **Detection control and mitigation of Attacks on Industrial Cyber-Physical Systems.**
- **Robotic Vision Systems.**

The graduates of the MSc, based on the general and specialized scientific knowledge acquired during their studies, have a knowledge background in digital industry technologies, and in particular in the aforementioned areas of scientific specialization, which contribute to education, research and development of the 4th industrial revolution.

Furthermore, they can be involved, for example, in:

a) Providing services to industrial units, craft units, production units with technological background, IT units, technical services of public organizations, services and enterprises, transportation, shipping, consulting companies, and high-tech companies.

b) Teaching in tertiary and secondary education, as well as in technical and vocational training, both public and private, at theoretical, technological, and applied levels in the scientific fields mentioned above.

c) Research and development in public and private research centers in the scientific fields mentioned above.

4.2 Indicative course schedule

The indicative course program is outlined as follows:

First semester		
Compulsory Courses	Teaching hours	ECTS
Cooperative Robotic Systems	3	8
Artificial Intelligence in Industrial Control Systems	3	8
Analysis of Modern Industrial Problems for Safe and Efficient Operation using Discrete Event Systems	3	8
Advanced Robotic Vision	3	6
Total	15	30
Second semester		
Courses	Teaching hours	ECTS

Autonomous Robotic Vehicles	3	8
Development of Supervisory Controllers in Industrial Environments	3	8
Industrial Cyber-Physical Systems	3	8
Advanced Software Tools for Data Processing, Monitoring and Supervision in Industry	3	6
Total	15	30
Third semester		
Courses (choice between attending courses or preparing a postgraduate thesis)	Teaching hours	ECTS
Data Driven Industrial Control	3	8
Networked Control Systems for Robotics and Distributed Industrial Units	3	8
Interindustry Systems	3	7
Pollution Control Systems in Industry	3	7
or		
Postgraduate Thesis		30
Total		30
TOTAL		**90**

4.3 Course content/description

- **Cooperative Robotic Systems**

Kinematics, dynamics, and control of the individual participating robotic systems. Cooperative Robotic Systems (CRS) comprising heterogeneous robots. Networks of sensors and actuators. Types of graphs determining the access to the measurable data and their impact on the control actions and the system's efficient operation. Architecture of CRS: centralized systems and distributed systems. Matrix analysis of CRS graphs and Laplacian. Distributed controlled for CRS. Communications in CRS. Efficient information sharing in CRS. CRS in the framework of Industry 4.0. Cooperative multi-robot systems constraint analysis (connectivity, force constraints and position constraints). Applications to cooperative 3D printing systems. CRS towards load manipulation and machining. Robotic works and robotic tasks in CRS (Scheduling, Planning, Programming and Software tools). Control and Programming of CRS tasks in the Game Theory framework.

- **Artificial Intelligence in Industrial Control Systems**

Principles of Artificial Intelligence (AI). Aspects of Design and Software for AI systems. Directions in the application of AI to industrial control systems. Machine Learning applications for Real Time Control of industrial processes. Cognitive Approaches for Self-Optimizing Machines. Neural network

control software platforms. Fuzzy control software platforms. Stepwise Safe Switching. Simulating annealing and Metaheuristic Optimization Algorithms for controller regulation. Expert industrial control systems. AI based Industrial Decision support systems. Artificial intelligence and predictive maintenance. Fault Detection and Diagnostics. AI approaches for product and process quality control and inspection. Industrial applications in Chemical Processes and Manufacturing. Simulations for AI control systems and Software Platforms.

- **Analysis of Modern Industrial problems for Safe and Efficient Operation using Discrete Event Systems**

Finite Deterministic Automata: Modelling of Processes and Electromechanical Industrial Systems, Analysis, Properties. Requirements for Safe and Efficient Operation formulated in the form of Regular Languages and Automata: Regular Languages, Properties of Regular Languages, Realization of Regular Languages. Basic Control Principles of Discrete Event Systems: Controllability of Languages, Safe and Efficient Operation of Controlled Automata, Desired Regular Languages. Simulation and Implementation with Ladder Diagrams. Emulation via Ladder Diagrams for PLCs. Applications in metal manufacturing and pharmaceutical industries.

- **Advanced Robotic Vision**

Elements of visual perception. Image Sampling and Quantization. Tools for Image Processing and Analysis. Image Formation: Camera Models, Calibration, Single view geometry, Multiple view geometry, Epipolar geometry, Feature extraction. Position and Orientation: Feature based alignment, Pose estimation. Time varying pose and trajectories. Estimation of 3-D structures from 2-D images. Visual Odometry (VO): Semi-direct VO, direct sparse odometry. Localization and Mapping: Initialization, Tracking, Mapping, geometric Simultaneous Localisation and Mapping (SLAM) formulations. Sensor combinations for 3D object reconstruction (Inertial Measurement Unit - IMU, RGB-Depth). 3D scanning systems. Recognition and Interpretation: Object detection, Instance recognition, Category recognition, Context and Scene understanding. Robotic vision toward position, orientation, and velocity estimation. Vision guided robotic systems, trajectory planning for pick-and-place tasks. Robotic vision in Industrial Applications: cutting and shaping, inspection and sorting, palletization and primary packaging, etc. AI algorithms in robotic vision.

- **Autonomous Robotic Vehicles**

Types of Autonomous Robotic Vehicles (ARVs): Unmanned Aerial Vehicles (UAVs), Unmanned Ground Vehicles (UGVs), Unmanned Surface Vehicles (USVs) and Unmanned Underwater Vehicles (UUVs). Kinematics and dynamics of ARVs. Sensors and actuators of ARVs. Autonomous Navigation: position and course estimation, path planning techniques, Map representation. Control techniques for autonomous motion. AI and DES based methods for autonomous robotic vehicle navigation and Control. Autonomous robotic vehicle operation in unstructured environments. Robotic vehicle applications. Embedded and supervision software.

- **Development of Supervisory Controllers in Industrial Environments**

Design of Supervisory Controllers for processes described with Discrete Event Systems: General, Static, and Dynamic Supervisors. Generalized Requirements for Safe and Efficient Operation in Supervisor Design. Supervisory Control Architectures: Modular Control, Decentralized Control, Hierarchical Control, Distributed Control. Simulation and Implementation of Supervisors: Implementation of Supervisors with Ladder, Structured Text and Function Block Diagrams, Industrial SCADA Systems, Implementation of Supervisors in SCADA systems, Representative applications of development of Supervisor Controllers in Industrial Processes using advanced technologies.

- **Industrial Cyber-Physical Systems**

Integration of physical and cyber components. Distributed and Large-Scale Industrial Systems. Interconnection and interoperation of the Individual Subsystems. Data exchange among subsystems. Reconfigurable industrial processes. Flexible manufacturing processes. Modelling layers of cyber-physical systems. Layers of distributed and centralized control. Analysis of cyber-attacks in sensors, actuators, and interconnections. Attack detection and identification. Soft Sensors. Observers. Design and Development of Supervisors leading to resilient cyber-physical systems. Robustness and Reliability of industrial Cyber-Physical Systems. Interoperability and quality standards on Industrial Cyber-Physical Systems.

- **Advanced Software Tools for Data Processing, Monitoring and Supervision in Industry**

Introduction to Software Environments for Data Collection and Data Exchange between Industrial Subsystems. Interface with IIOT. Control Technologies in the Industry 4.0 Framework. Analysis and Supervision of Industrial Communications Protocols. Industrial Production Line Coordination Software. Fault Diagnosis and Predictive Maintenance Software. Development of Digital Twin for Industrial Systems. Analysis and Control using Digital Twins. Applications in Processes and Manufacturing.

- **Data Driven Industrial Control**

Model-based vs data-driven controller design. Data Collection: Sensors and IoT Devices, Big Data Infrastructure, Data storage and processing. Data Analysis and Machine learning algorithms. Data driven methods for Process Modelling. Mixed-logical models. Adaptive controller design. Data driven Intelligent controllers. Soft sensors. Iterative feedback controller tuning. Norm based controllers. Data driven switching controller and observer schemes. Data-driven modeling and control of large-scale systems. Application of data driven modeling and control schemes to robotic systems and processes. Data driven control simulation.

- **Networked Control Systems for Robotics and Distributed Industrial Units**

Networked control system (NCS) architectures in industrial environment and robotic configurations. Topology and functionality of distributed control systems, and multiagent control systems. Remote control through wired and wireless networks as well as Internet of Things (IoT). Exploitation of the features of cloud computing in networked control structures. Communication delay compensation and data synchronization in NCS. Stability analysis and performance of NCS in the presence of transmission delays, signal quantization, data loss, and noise. Real-time open communication protocol for acquisition and processing of real-time data. Remote system monitoring and process control. Integration and communication resource planning. SCADA in NCS. Security aspects of NCS.

- **Inter-Industry Systems**

Inter-industrial structures and production sectors. Product and Raw Material Supply Network Analysis for multi sector systems. Equilibrium/Balance Modeling and the impact of production development strategies. Leontief models and system analysis. Dynamic growth development models. Production Optimization. Growth rate control. Leontief models with environmental constraints. Leontief models with natural resources constraints. Optimal control with static and dynamic constraints. Centralized Control. Distributed Control and Competition. Nash approach in industrial cyber-physical systems. Identification of production factors and Estimation of production outputs through Observer Design. Multi-Sector and Multi-Region Inter-Industry Production Systems. Applications in single sector factories in different regions.

- **Pollution Control Systems in Industry**

Wastes from different production sectors. Industrial Symbiosis and Estate Planning. Effluent/emission trading. Pollution prevention and Waste minimization by reuse and recovery, life cycle impacts and management strategies. Industrial wastewater treatment processes: Wastewater characteristics and regulations. Physical/Chemical / Biological methods of industrial wastewater

treatment. Primary, secondary, and tertiary processing. Modelling of wastewater treatment processes. Advanced control techniques for effluent regulation. Robust and data driven control approaches. Supervisory control. Data acquisition systems and soft sensors. Industrial solid wastes: Classification, Economics, Recycling. Robotic applications in solid waste management. Robotic vision-based waste sorting. Combustion Control of Refuse-derived fuel (RDF) Modelling and Control of pyrolysis systems, incineration systems and gasification systems. Technologies and Decision Support Systems for solid waste management. Air pollution: Main atmospheric pollutants and transformations, Transport and Dispersion of air pollutants, Industrial Emission Reduction, Modelling and Control. Control equipment for particulate matter and gaseous pollutant. Hazardous waste cleaning robots.

4.4 Distance Learning

The academic discipline encompassed by the Master's Program titled "Robotics and Industrial Control," housed within the Department of Digital Industry Technologies at the National and Kapodistrian University of Athens, possesses inherent adaptability and appropriateness for implementation through individual instances of synchronous (and, in specified instances, asynchronous) remote learning methodologies, in alignment with extant legislative mandates. This adaptability is intrinsic to the program's structure, which effectively accommodates and facilitates the diverse dimensions integral to the pedagogical efficacy of these instructional approaches.

The reasons for the use of distance education are:

- The subjects of the study program, which fall within the realms of digital technologies, enable the organization of a portion of the educational work using distance methods, without affecting the offered academic standard.
- The facilitation of students from other regions of Greece, Cyprus and abroad.
- Social reasons, such as increased obligations of students, a consequence of the economic crisis affecting the country (e.g., increased working hours within the context of professional responsibilities), raise the likelihood of non-attendance in certain in-person teaching hours of the study program. The adoption of distance learning methodologies establishes conducive conditions for addressing this challenge.
- Facilitating the potential involvement of educators from abroad in the Postgraduate Program.
- Familiarizing participants in the M.Sc. program with distance learning methods.
- The National and Kapodistrian University of Athens (NKUA), equipped with a comprehensive tele-education system, possesses suitable digital platforms and, more broadly, has sufficient digital infrastructure for the effective organization, implementation, and support of the distance learning methods employed in the curriculum of the Postgraduate Program.

4.4.1 METHODS OF ORGANIZATION OF THE EDUCATIONAL PROCESS

The instructional framework of the Postgraduate Program in "Robotics and Industrial Control" unfolds through various teaching modalities, including lectures, workshops, etc., employing a blended education system that incorporates individual utilization of distance learning methods. It is emphasized that the application of distance learning methods will not pertain to the laboratory education of the students, which will be conducted in-person.

The determination of the instructional approach for each facet of the educational process (e.g., course, seminar) is at the discretion of the instructor, overseen by the Coordinating Committee of

the Postgraduate Program. This decision is contingent upon considerations such as the inherent nature, requisites, and overall pedagogical conditions of each process, aligning with the stipulations outlined in the relevant article of the Postgraduate Studies Regulation. In instances where asynchronous distance learning methods are deemed suitable for a segment of the educational process, it is mandated that this does not surpass 25% of the total credits allocated to the Postgraduate Program.

4.4.2 MATERIAL AND TECHNICAL INFRASTRUCTURE OF N.K.U.A. TO SUPPORT DISTANCE EDUCATION IN THE POSTGRADUATE PROGRAM

The comprehensive tele-education system of the National and Kapodistrian University of Athens (EKPA) possesses all the requisite modern digital and technical infrastructure and services for organizing M.Sc. programs through distance education methods. These resources are made available to ensure the seamless operation and continuous support of the M.Sc. program. Specifically:

a) Concerning synchronous distance education, the National and Kapodistrian University of Athens utilizes established and tested electronic platforms that facilitate interactive two-way communication and real-time participation. These platforms include Cisco Webex, Google Meet, MS Teams, Zoom, and e-Class, all of which are fully operational and detailed below. Students access these platforms using their institutional accounts. The platforms support visual and voice communication among users, as well as file-sharing capabilities through straightforward and user-friendly procedures, eliminating the need for complex settings and customizations. Widely recognized in the international academic community for their robust digital features, these platforms effectively support a large number of participants simultaneously and offer additional functionalities, such as the segregation and collaboration of students in modern teams. Notably, these platforms demonstrated significant efficacy in ensuring the uninterrupted operation of the Postgraduate Program during the two years of the COVID-19 pandemic. Within the educational framework of the Postgraduate Program, these platforms will be employed for conducting remote lectures, seminars, and other collaborative activities between teachers and students.

(b) Electronic Classroom (eclass.uoa.gr): The platform serves as an integrated e-Course Management System, operating in adherence to the principles of open-source software. It facilitates both synchronous (via a "telecollaboration" tool) and asynchronous e-learning services, without imposing restrictions or commitments. Access to the Electronic Classroom is straightforward, requiring only a standard web browser without the need for specialized technical expertise. Instructors can effortlessly create user-friendly and effective e-courses, incorporating diverse educational materials such as academic notes, presentations, videos, texts, and images. Upon establishing a digital account in the online classroom, students gain entry to the respective courses, content descriptions, digital materials, recommended bibliography, examination syllabi (both intermediate and final), as well as other pertinent services. The e-Classroom presents a myriad of features for disseminating information on teaching, facilitating interaction and communication among teachers and students, as well as peer-to-peer interaction among students. It supports the submission of assignments, questions, and other inquiries through a variety of tools including announcements, documents/supporting materials, assignments, exercises, user groups, discussions, interactive content, multimedia, concept maps, learning lines, chat functionalities, messages, calendar features, and more.

c) Electronic Mail: The Electronic Mail Service provides an email address specific to the National and Kapodistrian University of Athens for the Postgraduate Program. This service encompasses the infrastructure for sending messages to other internet users, storing messages on the university's

server using the IMAP protocol, accessing mail via webmail (webmail.noc.uoa.gr), and implementing measures to counter spam, among other functionalities.

Moreover, the MSc "Robotics and Industrial Control" will be equipped with its dedicated email system, where all queries and concerns submitted will receive prompt and comprehensive responses.

d) The Digital Office Collaborative Platform: This platform, powered by Office365 for Education and provided by NKUA, serves as a digital office equipped with collaborative digital tools for word processing, presentations, spreadsheets, and note-taking. It also offers personal and shared cloud storage to facilitate the needs of both teaching staff and students. Instructors have the ability to create interactive digital support materials, presentations, lectures, assignments, and utilize cloud storage for sharing supplementary materials, thereby fostering collaboration. Students, accessing the platform with their institutional accounts, can utilize these tools individually or collaboratively in groups for tasks such as writing papers, academic texts, diploma theses, and creating presentations.

e) Posting Personal Websites: The posting of personal websites offers users the capability to create and publish personal web pages, specifically static HTML pages. Additionally, the Postgraduate Program will establish its dedicated website, encompassing various categories of information, including scientific, operational, legislative, and informational content. It will also address frequently asked questions to provide comprehensive guidance and support.

f) Virtual Private Network (VPN): The Virtual Private Network (VPN) Service affords all members of the University community the capability to establish a secure connection to the local networks and infrastructures of the National and Kapodistrian University of Athens from any location outside the University, including international locations.

g) Open eClass Platform (https://docs.openeclass.org/el/3.13/detail_description): This integrated e-Course Management System is endorsed by the Academic Internet (GUnet) to support Asynchronous Distance Learning Services. Founded on the principles of open-source software, actively maintained by GUnet, and freely distributed, it facilitates ongoing interaction and communication between instructors and learners. The platform enables the electronic organization, storage, and presentation of educational materials, transcending the constraints of classical teaching in terms of space and time, thereby fostering a dynamic educational environment. Open eClass provides a user-friendly interface for creating functional e-courses and incorporating diverse educational materials, including presentations, videos, texts, and images. It supports Asynchronous Distance Learning services without imposing restrictions or commitments, allowing access through a standard web browser without the need for specialized technical expertise. Notably, the platform adheres to the WCAG 2.0 accessibility specifications at level AA, and its accessibility features have undergone thorough testing by the National and Kapodistrian University of Athens' accessibility unit (https://www.w3.org/WAI/standards-guidelines/wcag/).

(i) Additional Logistical Infrastructure: This encompasses electronic libraries accessible through the Hellenic Academic Libraries Link. Students, using their institutional accounts, have open access to an extensive array of scientific journals, textbooks, and supplementary study materials. Furthermore, this infrastructure provides the opportunity for individuals, including students, graduates, and academic staff, to publish papers in scientific journals.

4.4.3 DIGITAL EDUCATIONAL MATERIAL

The e-learning system of the National and Kapodistrian University of Athens facilitates the uploading of digital educational material derived from diverse scientific fields within the Postgraduate Program. This material is characterized by its interdisciplinary nature, contemporary relevance, and regular updates to enhance the effectiveness of students' studies in the Postgraduate Program. Furthermore, it serves to bolster the mixed education system implemented in the curriculum of the Postgraduate Program.

Digital supporting educational materials for courses, including lectures, workshops, etc., may manifest in various forms, such as texts, presentations, academic notes, educational scenarios, case studies, problems for solution, practical exercises, current scientific articles, relevant videos, films, electronic links, and more. All types of educational materials are exclusively provided for educational purposes to students and are safeguarded by copyright, as stipulated by Law 2121/1993 (A' 25), provided that the relevant conditions are met.

4.4.4 DIGITAL EVALUATION

The assessment of postgraduate students and their performance in the requisite courses within the framework of the Postgraduate Program occurs at the conclusion of each semester. This assessment may involve written or oral examinations, assignments distributed throughout the semester, or a combination of intermediate progress exams, written assignments, and laboratory exercises. The evaluation process can utilize either face-to-face assessment methods or digital assessment methods. Notably, the exceptional administration of a written remote examination necessitates a preceding decision by the Coordinating Committee of the Postgraduate Program. Such a decision should provide justification for the need to employ this assessment method.

Methods of digital assessment of students: To participate in the digital assessment, students should have the following: Computer, mobile phone or tablet, recent operating system Windows or MacOs or iOS or Android, internet connection, browser or the special application (where required) to access the video conferencing platform, camera, speakers and microphone, for communication with the instructor and institutional account.

The methods of digital assessment for students in the MSc program may encompass:

a) Remote Oral Examination via Videoconferencing Tools: The evaluation method entails conducting oral examinations remotely through videoconferencing tools. Student authentication is achieved through visual identification utilizing a camera, wherein students are required to exhibit their identity. This process mandates the utilization of designated platforms such as CiscoWebex, Google Meet, and MSTeams, or any alternative platform established in collaboration with NKUA. Students are expected to access these platforms using their institutional accounts for the purpose of examination.

b) Written Distance Examination (refer to section 5.1 above) utilizing the e-Class platform (Assignments tool) for topic distribution. Diverse topics may be allocated to student groups (distributed manually), and specific deadlines may be established for completion. Responses can be handwritten on paper, captured via mobile phone photography, and subsequently submitted through the online classroom. Access to the online classroom is granted to students through their institutional accounts.

c) Electronic Submission by Students of Projects, Individual and/or Group Collaborative Work: Students may electronically submit various assignments such as research projects, individual or

collaborative projects, weekly assignments, studies, calendars, evaluation sheets, and problem-solving reports. Written assignments can be submitted through the e-Class platform.

Regardless of the digital assessment method employed, conditions of transparency, objectivity, efficiency, and impeccable procedures are ensured.

Throughout the entire examination process, the National and Kapodistrian University of Athens (NKUA) does not, under any circumstances, process students' personal data in an automated manner, nor does it create profiles. For each examination and throughout its duration, where the cameras and microphones of students remain open to ensure the reliability of the examination, NKUA will not record or collect, for any reason, personal image and audio data.

Digital Evaluation Material: The digital evaluation material for the Postgraduate Program involves the completion and submission of structured electronic questionnaires by postgraduate students. These questionnaires are designed to be anonymous and aim to assess various aspects, including the comprehensiveness, quality, and effectiveness of the courses within the program. Additionally, students provide feedback on the material and technical infrastructure, identifying strengths and weaknesses. The questionnaires also solicit improvement proposals from students regarding the overall program of study and the educational services offered at the postgraduate level.

The support of the Master's thesis can be provided through the use of teleconferencing tools, analogous to the process of remote oral examination.

4.4.5 DIGITAL SKILLS OF TEACHING STAFF

The faculty engaged in the execution of the MSc program comprises esteemed scholars, primarily hailing from the Department of Digital Industry Technologies at the National and Kapodistrian University of Athens. Possessing extensive scientific and professional expertise in leveraging digital infrastructures, electronic platforms, and contemporary interactive tools across diverse scientific domains, the teaching staff demonstrates proficiency in various competencies. These competencies include delivering telelectures, whether accompanied by supporting presentation materials or not, orchestrating synchronous and/or asynchronous digital working groups, curating digital literature, engaging in digitally synchronous and/or asynchronous chats and forums, maintaining personal blogs or websites (e.g., LinkedIn), and participating in digital academic and professional networks.

The teaching staff utilizes these digital skills in conjunction with the digital infrastructure of the National and Kapodistrian University of Athens to foster the digital proficiency of students in the academic domains of the MSc program and enhance their professional networking capabilities.

The expertise of the teaching staff, spanning the diverse subjects covered in the program, coupled with their noteworthy experiences, collaborations, and collective research endeavors, significantly contribute to the elevated quality of digital services offered by the Postgraduate Program's curriculum. This is achieved through the incorporation of modern international best practices in delivering academic educational services.

4.4.6 PROTECTION OF PERSONAL DATA

The implementation of the General Data Protection Regulation (GDPR) (EU) 2016/679 serves to fortify the framework governing the safeguarding of individuals' personal data in the context of data processing, aligning with the directives of the European Union. The National and Kapodistrian University of Athens (NKUA), in adherence to the GDPR, exemplifies a commitment to upholding the privacy of personal data within the parameters and objectives of its institutional activities. NKUA

adopts the prescribed technical and organizational measures, as outlined in the GDPR and broader Greek legislation, to ensure the effective protection of personal data. The collection and processing of personal data by NKUA is judiciously confined to information deemed essential for each specific and well-defined purpose, in accordance with the pertinent legal foundation. Within this framework, data processing encompasses personal information provided to NKUA in real-time interactive contexts, including the utilization of official online platforms and services, or through alternative modes of interaction such as form submissions and registrations.

Personal data is collected in accordance with the General Data Protection Regulation (GDPR) and the applicable legislation, either upon the commencement of the relationship with the National and Kapodistrian University of Athens (NKUA) or subsequently. Such data is subject to processing, with the legal basis being individual consent when required, for purposes such as identification, communication, development, and improvement of provided services, as well as for the protection and security of information systems, among other functions. Access to personal data is granted to NKUA personnel in the execution of their duties assigned by the University, such as data processing responsibilities, under the condition of strict adherence to confidentiality, trust, and secrecy obligations. In such instances, personal data is retained for a duration specified by the prevailing legal and regulatory framework. Upon communication with NKUA, there is an opportunity to rectify any inaccurate or incomplete personal data.

Upon the decision of the Coordinating Committee of the Curriculum of the Postgraduate Program (the competent collective body), members of the Teaching and Research Staff, Special Educational Staff, special Laboratory Teaching Staff and Special Technical Laboratory Staff specializing in the relevant subjects will be appointed as Managers of Digital Systems Management and the Integrated Distance Learning System for the Postgraduate Program.

4.5 Examinations and Evaluation of Postgraduate Students

The academic year is divided into two semesters, namely winter and spring, each spanning a minimum of thirteen (13) weeks of instructional periods and three (3) weeks designated for examinations. Evaluation of courses from both semesters is conducted during the September period.

In instances where a course cannot be conducted, provisions are made for a replacement. The date and time for the replacement are communicated through the Postgraduate Program's website.

Mandatory attendance is required for courses, with a maximum allowance of 30% absenteeism per course. Exceeding this limit compels the postgraduate student to retake the course in the subsequent academic year, without incurring additional tuition fees.

Evaluation of postgraduate students and their performance in program-related courses occurs at the end of each semester. Assessment methods may include written or oral examinations, continuous assignments throughout the semester, or a combination of intermediate progress exams, written tasks, and laboratory exercises. The specific evaluation approach is determined by the respective course instructor. For assessments involving written or oral examinations, procedural integrity must be maintained. The scoring system ranges from 1 to 10. Examination results are publicly disclosed by the instructor and submitted to the Postgraduate Program's Secretariat within a maximum of four (4) weeks from the conclusion of the course examination. If this timeframe is consistently exceeded by an instructor, the Director of the Postgraduate Program notifies the Department Assembly accordingly.

The determination of the contribution percentage of laboratory exercises, assignments, and seminars to the final grade of each course is undertaken individually for each course by the respective instructor. This information is communicated to students at the commencement of the semester.

Contingent upon emergencies or circumstances categorized as force majeure, alternative assessment methodologies, such as electronically conducted written or oral examinations, may be implemented. It is imperative that the integrity of the evaluation process remains intact.

Alternative assessment approaches may be adopted for students with disabilities and special educational requirements, subject to the decision of the Board of Directors and the endorsement of the Department Head for Disabled Persons. Consideration is given to the pertinent guidelines provided by the Accessibility Unit for Students with Disabilities.

The assessment of students enrolled in second-cycle study programs facilitated through distance learning methods may be conducted via distance examinations, ensuring the preservation of the evaluation process's integrity.

In instances of illness or recuperation from a severe ailment, it is advisable for the instructor to facilitate the student in a manner deemed appropriate (e.g., remote oral examinations). During oral examinations, precautions are taken to ensure that the instructor is not in solitary presence with the examinee student.

Students who do not achieve a passing grade in a particular course are mandated to retake said course, exempt from additional tuition fees. Nevertheless, independently graded laboratory or exercise components, if deemed successful in attendance, are secured and need not be repeated.

Correction of a grade is allowed if a clear omission or cumulative error has occurred, following a written submission by the respective instructor and a decision by the Department's Assembly.

If a student fails in the same course more than three (3) times, the procedure specified by the current legislation is followed.

During the initial semester of study, the Coordinating Committee designates a Professor Advisor for each student. This committee collaborates with the student, providing guidance and support on academic matters, course selections, options, and future prospects, thereby advancing the student's academic aspirations. When a student initiates dissertation preparation, the Coordinating Committee is succeeded by the Supervising Professor of the three-member examination committee.

The written examinations are obligatory to be kept under the careful supervision of the course instructor for two (2) years. After this period, the written materials cease to be valid, and a relevant record is drafted under the responsibility of the Department's Assembly. Subsequently, they are destroyed, unless there is a pending criminal, disciplinary, or any other administrative procedure.

For the calculation of the degree grade, the weight of each course is taken into account, along with the dissertation in the study program, expressed in the number of ECTS credits. The number of ECTS credits for a course simultaneously represents the weighting factor for that course. To calculate the degree grade, each course grade is multiplied by the corresponding number of ECTS credits for that

course. The sum of these individual products is then divided by the total number of ECTS credits required to obtain the degree. This calculation is expressed by the following mathematical formula:

$$\text{degree} = \frac{\sum_{k=1}^{N} \text{ΒΜ}_k \cdot \text{ΠΜ}_k}{\Sigma\text{ΠΜ}}$$

where:

N = Number of courses required to obtain the corresponding qualification

ΒΜκ = Grade of the course or Master's Thesis

ΒΜκ = Credits of the course κ

ΣΠΜ = 90, the total credits for obtaining the corresponding qualification

To acquire an MSc, every postgraduate student is required to participate in and successfully complete all mandatory courses, along with the stipulated number of elective courses within the Postgraduate Program. Alternatively, the student may opt to undertake the preparation and assessment of a postgraduate dissertation, leading to the accumulation of a total of ninety (90) ECTS credits.

4.6 Elaboration of MSc Thesis

The assignment of the Master's Thesis (MSc) occurs once the student opts for it, following the successful examination of at least five out of the eight compulsory courses from the first and second semesters of the study program.

The Master's Thesis (MSc) must be individual, original, possess a research-oriented character, and be composed in accordance with the writing guidelines posted on the Postgraduate Program's website.

Upon submission of a request by the candidate, indicating the proposed title of the thesis along with a summary of the proposed work, the Department Assembly appoints the supervisor and forms a three-member examining committee for the approval of the thesis. One of the committee members is the supervisor. The language of writing for the Master's Thesis can be either English or Greek and is determined concurrently with the topic designation. The candidate's request is submitted before the end of the second semester.

The conclusive determination of the thesis title is contingent upon the student's request and the concurring opinion of the supervisor, submitted to the Coordinating Committee of the Postgraduate Program. The request must be accompanied by a succinct justification for the proposed alteration.

For the approval of the dissertation, the student must defend it before the three-member examination committee. The grading by the committee members is done on a scale of 1-10, and the final grade is the average of the evaluations of the three committee members. The supervisor is required to submit to the Secretariat the examination record of the dissertation, signed by the members of the three-member examination committee, along with their respective grades.

Postgraduate theses, upon committee approval, are obligatory for dissemination on the Institutional Repository and Digital Library "PERGAMOS" of the University of Athens. The initiation of the oath-taking ceremony for postgraduate students is intricately linked to this process and necessitates obligatory adherence for the submission of the oath application.

In instances where the postgraduate thesis fails to garner approval, the student is afforded the option of either undergoing re-examination or petitioning for a change in topic or examination committee, subject to the stipulation that the overall duration of enrollment is not exceeded.

The Supervisor and the members of the three-member examination committee for the postgraduate dissertation are appointed from the following categories that have undertaken teaching duties in the Postgraduate Program:

a) Academic Teaching and Research Staff, Special Teaching Staff, Laboratory Teaching Staff, and Special Technical Laboratory Staff of the Department of Digital Industry Technologies or other Departments of the University of Athens or other Higher Education Institutions or Higher Military Education Institutions, with supplementary commitments beyond their statutory obligations, should the Postgraduate Program involve tuition fees,

b) Honorary Professors or retired members of the Teaching and Research Staff of the Department or other Departments of the University of Athens or other Higher Education Institutions,

c) Collaborating professors,

d) Appointed instructors,

e) Visiting professors or visiting researchers,

f) Researchers and specialized scientific personnel of research and technological organizations mentioned in article 13A of Law 4310/2014 (A’ 258) or other research centers and institutes, domestically or abroad.

By decision of the Assembly, the supervision of theses it is possible to be assigned, to members of the Teaching and Research Staff, Special Educational Staff, Special Laboratory Teaching Staff and Special Technical Laboratory Staff of the Department of Digital Industry Technologies who have not assumed pedagogical responsibilities in the Postgraduate Program.

The Assembly determines the number of dissertations that can be assigned to each supervisor.

The opportunity for a change in topic or examination committee is permissible only once per student, subsequent to a request submitted to the Secretariat, for which the recommendation is presented by the Coordinating Committee to the Assembly.

Once postgraduate theses gain approval from the examination committee, they are mandated for dissemination on the Digital Repository "PERGAMOS," in accordance with the resolutions of the University Senate of the University of Athens.

If the Master's Thesis contains unpublished original results, upon request of the supervisor, co-signed by the postgraduate student, only the abstracts may be published on the website, and the full text will be published later.

If the Department Assembly, through its resolution, transfers to Coordinating Committee the authority to establish examination committees for the evaluation of postgraduate students' theses and to appoint the supervisor for each thesis, the prerogatives of the Department Assembly, as delineated in this article, are exercised by the Coordinating Committee.

4.7 Obligations and Rights of Postgraduate Students

Postgraduate students have all the rights and benefits provided for undergraduate students until the expiration of any granted extension of their studies, with the exception of the right to receive free textbooks.

The University of Athens ensures accessibility to recommended textbooks and teaching materials for students with disabilities and/or special educational need (https://access.uoa.gr/).

The University of Athens Career Office provides advisory support to students on matters related to studies and professional rehabilitation (https://www.career.uoa.gr/).

Postgraduate students are encouraged to participate in and attend seminars of research groups, discussions for bibliographic updates, laboratory visits, conferences/seminars with a cognitive subject relevant to the Postgraduate Program, lectures, or other scientific events of the Postgraduate Program, etc.

The Assembly, upon the proposal of the Coordinating Committee, may decide to expel postgraduate students if they:

- exceed the maximum limit of absences.

- fail in the examination of a course or courses and do not successfully complete the program, as specified in the regulations of the Postgraduate Program.

- exceed the maximum duration of enrollment in the Postgraduate Program, as defined in the regulations of the Postgraduate Program.

- violate the written provisions regarding the handling of disciplinary offenses by the competent disciplinary authorities.

- fail to pay the prescribed tuition fee.

- submit a request for deletion themselves.

In the event of the deletion of a postgraduate student from the Postgraduate Program, they may request a certificate for the courses in which they have been successfully examined.

Students may participate in international exchange programs, such as the ERASMUS+ or CIVIS programs, according to current legislation. In this case, the maximum number of ECTS they can recognize is thirty (30). This opportunity is provided after their first semester of studies.

The Postgraduate Program provides the opportunity for students to undertake internships in public or private entities. The internship carries six (6) ECTS that are not counted towards the ninety (90) ECTS of the regular study program. Internships can also be arranged through exchange programs, e.g., Erasmus+, in accordance with current legislation.

Postgraduate students of the University of Athens may enroll in Postgraduate Programs of the same or other Greek or foreign Universities within the framework of educational or research cooperation programs according to current legislation.

It is possible to simultaneously enroll in an undergraduate program of study and a postgraduate program of study or in two (2) Postgraduate Programs of Study of the same or different Department, of the same or different University.

At the end of each semester, an evaluation is conducted for each course and each instructor by the postgraduate students (see Article 17).

Postgraduate students may request the issuance of a diploma supplement in Greek and English.

For their participation in the Postgraduate Program, postgraduate students pay tuition fees totaling three thousand nine hundred (3,900) euros. The amount of 3,900 euros is evenly distributed over the three semesters of study for full-time students (i.e., 1,300 euros per semester) and over the six semesters of study for part-time students (i.e., 650 euros per semester). The payment of the fee is made at the beginning of each semester. The deadlines for the payment of the tuition fee will be determined by the Coordinating Committee.

4.8 Tuition Fees Exemption

Postgraduate students enrolled in a Master's program may be exempt from tuition fees if they meet the financial or social criteria and the excellence requirements established by current legislation during their undergraduate studies. This exemption applies to participation in a single Master's program. In any case, the exempted students do not exceed thirty percent (30%) of the total number of students admitted to the Master's program per academic year.

The application for exemption from tuition fees is submitted after the completion of the selection process for postgraduate students. The financial situation of a candidate is never a reason for non-selection in a Master's program.

Those who receive a scholarship from another source or citizens of non-EU countries are not eligible for exemption.

The examination of criteria for exemption from tuition fees is conducted by the Department Assembly, and a reasoned decision on the acceptance or rejection of the application is issued.

If current legislation establishes an age criterion, the date of birth of students is considered to be December 31 of the birth year for reasons of good administration and equal treatment.

Members of the categories Special Educational Staff, Special Laboratory Teaching Staff and Special Technical Laboratory Staff, who are admitted as supernumerary according to the provision 4.3 of this decision, are exempt from paying tuition fees.

In cases where members of the same family up to the second degree of blood or affinity are simultaneously enrolled in the Master's program, there is the possibility of a 50% reduction in tuition fees.11.2 The submission of applications seeking exemption from tuition fees is to occur subsequent to the completion of the selection process for M.Sc. candidates. It is imperative to underscore that the financial standing of a candidate does not, under any circumstance, serve as grounds for non-selection within an M.Sc. program.

4.9 Scholarships and Awards

Students can receive scholarships and awards to support their studies.

These scholarships are distinguished as follows:

a) Excellence scholarships, which are awarded to top-performing students of the M.Sc. based on their performance in the courses of the first semester. The scholarships exempt the recipients from tuition fees for the second semester courses.

Requirements

Postgraduate students who have completed the first semester of studies can apply for excellence scholarships. Candidates must not hold a paid position in the public or private sector, nor receive a scholarship from any other entity during the specified period.

Criteria

- Academic performance in courses (with an average grade equal to or greater than nine)

- Successful completion of all courses according to the study program

- Individual and family income

In case of a tie, the scholarship is awarded to the student with the lowest individual and family income. In case of a tie in income, a draw is conducted. If a student renounces the scholarship, it is provided to the next in line.

If the enrolled students of the corresponding academic year are up to 20, then one excellence scholarship is awarded. If the enrolled students are more than 20 and up to 30, then two excellence scholarships are awarded. If the enrolled students are more than 30, then three excellence scholarships are awarded.

Procedure

Students, following a relevant invitation from the M.Sc., submit an application accompanied by the following documents to the Department's Secretariat:

1) Detailed transcript

2) A sworn statement, signed through the gov.gr platform, with the following text: "I do not hold a paid position in the public or private sector, nor do I receive a scholarship from any other entity for the specified period."

3) Recent tax clearance certificate (individual and family)

The M.Sc. Committee evaluates the applications and recommends to the Department's Assembly, which makes decisions accordingly.

b) Repayable Scholarships. The Department Assembly has the authority to grant up to three (3) repayable scholarships for the performance of adjunct teaching work in first-cycle study programs to postgraduate students, depending on the number of admissions to the M.Sc. program and the financial capabilities of the M.Sc. The amount of the repayable scholarship may cover part or the entirety of the tuition fees and is calculated based on actual working hours. The hourly rate is determined at the beginning of each year by the Department Assembly. This decision is communicated to the postgraduate students of the M.Sc."

The cost of the repayable scholarships may be charged to the budget of projects/programs funded by private, international, and own resources of Article 230 of Law 4957/2022, as well as co-financed projects of the Partnership Agreement for the Development Framework (ESPA).

For the granting of repayable scholarships, the conditions, criteria, and procedures of paragraph 12.a for the award of excellence scholarships apply, with the exception that repayable scholarships can be awarded to students with an average grade equal to or greater than eight. Repayable scholarships are not granted to a student who has received an excellence scholarship.

As adjunct teaching work is defined the assistance provided by members of the Teaching and Research Staff during the exercise of their teaching duties, the supervision of first-cycle students, conducting tutorials, laboratory exercises, examination supervision, and the grading of assignments. The adjunct teaching work must be approved by the Assemblies of the respective departments to which the first-cycle study program is affiliated.

12.2 Excellence Awards. The M.Sc. may award excellence awards to the first student of each cohort who completes the courses of the first and second semesters, following a decision of the Coordinating Committee. The awards do not have financial benefits. The award is signed by the Director of the M.Sc. and the Department Chair.

Requirements

1. Average grade of courses in the first and second semesters greater than or equal to eight.

2. Completion and successful examination in the February (first semester) and June (second semester) exams in the normal study years (first and second semester of each cohort).

Procedure

After the submission of the June grades, the Coordinating Committee reviews the grades of the cohort's students. If the previous requirements are met, the committee ranks the students in descending order (according to their average grade) and decides on the awarding of prizes. The average grade is calculated using the formula:

$$\text{average grade} = \frac{\sum_{k=1}^{N} \text{ΒΜ}_k \cdot \text{ΠΜ}_k}{\Sigma\text{ΠΜ}}$$

where

N is the number of courses in the respective semester(s),

ΒΜκ is the grade of course κ,

ΠΜκ is the credit units of course κ,

ΣΠΜ is the total credit units of the semester(s) in question.

4.10 Awarding of Postgraduate Diploma

The student completes the studies for the acquisition of a Master's Degree (M.Sc.) by fulfilling the minimum number of courses and credit units required for obtaining the M.Sc., as well as successfully completing the master's thesis (if chosen). The Assembly verifies the completion of the studies to confer the Master's Degree.

Upon the completion of the aforementioned process, the postgraduate student is granted a certificate of completion of studies. At this point, they lose their student status and cease participation in the University's collective governing bodies.

The M.Sc. certifies the successful completion of studies and assigns a grade, with precision to two decimal places, according to the following scale: Distinction (8.5 to 10), Very Good (6.5 to 8.5 excluding), and Good (5 to 6.5 excluding)."

The format of the M.Sc. varies by type of M.Sc. program and is common across all Departments and Schools of the National and Kapodistrian University of Athens. It is outlined in the Regulations for Postgraduate and Doctoral Studies of the Institution.

Within the framework of the M.Sc., a Master's Degree is awarded in 'Robotics and Industrial Control'l»)

4.11 Graduation Ceremony

The graduation ceremony is not a mandatory component of the successful completion of studies, but it is a necessary requirement for the issuance of the diploma document. The swearing-in takes place during the Department Assembly of the Department of Digital Industry Technologies at NKUA and in a space within the Department, in the presence of the Director of the M.Sc., the Chair of the Department, the Dean of the School or their Deputy, and, if possible, a representative of the Rector.

Requests for a graduation ceremony for postgraduate students in the Great Ceremony Hall of the Central Building are considered on a case-by-case basis by the Rector, based on the Secretary's assessment of the possibilities and the number of participants.

Postgraduate students who have successfully completed the M.Sc. may, under exceptional circumstances (such as studies, residence, or work abroad, health reasons, etc.), request an exemption from the swearing-in obligation from the Department's Secretariat. The exemption is approved by the Department Chairperson and the Vice-Rector for Academic Affairs, International Relations, and Outreach."

5.1 Library, Information Centre and Reading Room

The campus of Euripus at the National and Kapodistrian University of Athens in Psachna, Evia, houses a library that meets the needs and requirements of all departments of the complex, providing access to print and electronic book titles as well as audiovisual content.

The library features a reading room and group study areas, and its collection is open access to students (undergraduate and graduate), teaching, and administrative staff.

Additionally, students can visit the central library of the National and Kapodistrian University of Athens, located in Athens at 42-44 Aeolou & Kolokotroni Street on the 5th floor. The collection spans two floors. The library boasts a rich collection of print books (55,000 volumes), 50 study seats, 6 workstations with computers for access to electronic journals and bibliographic databases, 1 special workstation for persons with disabilities (PWDs), specifically for students with blindness, visual impairment, and upper limb mobility impairments, 2 workstations for access to the digital collection of theses and dissertations, and wireless network (Wi-Fi).

The University of Athens provides access to a wide range of electronic sources such as scientific journals, books, bibliographic databases, digital collections, and thematic portals, aiming to facilitate research, information, and education of students, faculty members, researchers, and librarians. All electronic sources and related electronic services are included on the website of the Library and Information Center, hosted and maintained by the Library Computer Center (LCC) of the National and Kapodistrian University of Athens (http://www.lib.uoa.gr/).

Students and staff of the Department can also utilize the Library of the School of Science, located in the University Campus, between the buildings of the Departments of Physics and Mathematics, with alternative access from the corridor of the 3rd floor of the Department of Mathematics. Contact Information: 210 727 6599, 210 727 6525, Email: sci@lib.uoa.gr

5.2 Electronic Services

5.2.1 INSTITUTIONAL UNIVERSITY ACCOUNT – ELECTRONIC SECRETARIAT

Upon enrollment at the Department, and throughout their studies, students are required to use the online management system of the Department's Secretariat. A prerequisite for accessing these services is the acquisition of an Institutional University account (http://webadm.uoa.gr).

As a result of completing this process, students obtain two identifiers, the Username and the Password, which grant access to all electronic services of the MSc program, the University of Athens, and the Ministry of Education, Religion, and Sports for as long as the holder maintains their student status at the Department.

The My-uni electronic service (https://my-uni.uoa.gr) enables graduate students to view their grades, access information about all courses of the Study Program, declare the courses they are interested in attending in the next semester, and submit applications for the issuance of any available certificates determined by the Secretariat (e.g., detailed grades, military service, tax documents, etc.).

To register for the My-uni service, students must first visit the website http://webadm.uoa.gr and proceed with the relevant Application for the issuance of an Institutional University account.

5.2.2 ACADEMIC IDENTITY

The academic ID card has strong features of mechanical strength, and security against forgery. In addition, it is designed to be valid for as long as the student status lasts, and to cover multiple uses, in addition to the Student Ticket. The IDs will be delivered to the pick-up point chosen by each student when submitting his/her application, without any financial burden. The Electronic Service for the Acquisition of a Special Ticket Card is provided by the Ministry of Education, Religious Affairs and Sports. Service address: http://paso.minedu.gov.gr

In order to make the online application for an academic identity card, you are required to have issued an Institutional University account.

5.2.3 E–CLASS

The Electronic Classroom (https://eclass.uoa.gr/) is an integrated e-course management system and supports the asynchronous e-learning service at the National and Kapodistrian University of Athens (NKUA) without restrictions and commitments.

Access to the service is done using a simple web browser without requiring specialized technical knowledge. The integration of remedial e-learning methods in the learning process of NKUA supports and enhances teaching and access to knowledge, providing combinations of new methods to complement traditional teaching methods. In this way, participants in the educational process choose their own time frame for communication and access to the educational content. At the same time, it is possible to digitally organize and distribute the educational material of the courses, as well as a variety of means of communication between the instructor and the students, facilitating the smooth and uninterrupted conduct of the course. Where applicable, the course may be supported by staff, a website or other online learning environments.

5.2.4 MULTIMEDIA CONTENT HOSTING AND SEARCH SERVICE

The "Hosting and Search for Multimedia Content" (https://delos.uoa.gr/opendelos/) service is addressed both to the content creators themselves, i.e. to the teaching and research staff of the institution, providing the ability to post and manage multimedia educational content, and to any Internet user as its recipient, providing the ability to search and download the content.

This is content recorded either from the educational process or from events of the Department or the NKUA (conferences, workshops, seminars, etc.). There are also live broadcasts of courses and lectures from the teaching areas, as well as events of the Department or the National and Kapodistrian University of Athens. Users can access such educational content through the search feature or by navigating freely.

At the same time, the teaching and research staff of NKUA has an appropriate service in order to upload multimedia material, which can either be part of the Open Courses or be independent of them, with open, controlled or closed access, at the discretion of the author.

Please note that the service is **COMPLEMENTARY** to the educational process. Also, its support is based on the model of "Best effort" and not "Guaranteed Quality" due to limited human resources.

The service and equipment are managed by specialized personnel of the Network Operation and Management Center (KLEIDI).

5.2.5 OTHER NKUA ELECTRONIC SERVICES

The National and Kapodistrian University of Athens operates a new communication hub (https://hub.uoa.gr/) that aims to highlight the educational, research and wider social work of the University, as well as to inform citizens on various scientific issues.

The homepage of the HUB is a "communication center", where important news alternates regardless of topic, there is a central topic that is updated at regular intervals and then recent news is presented in columns.

An important addition to the HUB are the live broadcasts of NKUA events through its official YouTube channel — a fact that facilitates and increases views.

In the context of highlighting the important educational, research and social work carried out by the Professors, Members and Associates of the Faculties and Departments of the University dealing with Science and Technology, a special category referred to as "Science and Technology" was created.

The Computer Center of NKUA has also launched an **Academic Conference Management Application**, https://conferences.uoa.gr/, which enables university users to create and manage their own academic conference. The application is based on the open source software **Indico** of the research institute CERN (https://getindico.io/features/).

5.3 Other Services to Students

5.3.1 CATERING SERVICES

Students who wish to benefit from free meals and meet the eligibility criteria according to the decision number Φ.5/68535/Β3/18-6-2012 (Government Gazette Β' 1965/2012) and the relevant announcement of the Department of Catering (https://www.lesxi.uoa.gr/foititiki_merimna/tmima_sitisis_foititon/) regarding the determination of terms, conditions, and procedures for providing free meals to students of the University of Athens for the academic year 2023-2024, should submit an electronic application on the website sitisi.uoa.gr, attaching the required documents in digital format.

First-year students of all study cycles must first complete their registration at our Department in order to obtain a registration number and access the electronic services of the Department through an application on the website webadm.uoa.gr.

For students studying at the Departments of the Euripus Campus in Psachna, Evia, a student cafeteria operates within the facilities. The operating hours of the student cafeterias are as follows: weekdays from 12:00 to 16:00 and from 18:00 to 21:00. On weekends, the cafeterias will operate from 13:00 to 20:00.

For information regarding the provision of free meals and accommodation, students can contact the Student Welfare Directorate of the University of Athens (https://merimna.uoa.gr/) as well as the Student Welfare Office at the Euripus Campus at the following numbers: 2228021813 and 2228021814.

5.4 Communication

Address:

National and Kapodistrian University of Athens,

Department of Digital Industry Technologies,

Evripus Campus,

34400, Psachna Evia

Secretary Telephones: **22280-21870, 21871**

E-mail : **secr@dind.uoa.gr**

Website: **https://www.dind.uoa.gr**

5.5 Hours

Department Secretariat: 08:30-16:30 on working days

Department Secretariat-Student Reception: 10:00-12:00 Monday, Wednesday, Friday

Building: 09:00-21:00 on working days

Training Workshops: 09:00-20:00 on working days