

# "MSc in Robotics and Industrial Control" https://ric.dind.uoa.gr/

## Call for Applications for Admission to the MSc Program

The MSc Program in "Robotics and Industrial Control" of the Department of Digital Industry Technologies at the National and Kapodistrian University of Athens will admit students for the Spring Semester of the 2024-2025 academic year. Candidates interested in attending the program, during the 2024-2025 academic year, are invited to send the applications, along with the required documents listed below. The MSc in Robotics and Industrial Control has been accredited by the Hellenic Authority for Higher Education. The code number of the publication of the establishment of the MSc to the Government Gazette is in code 8648.

The MSc in "Robotics and Industrial Control" has a duration of **3 academic semesters** in full-time attendance. For the academic year 2024-2025, **forty (40) students** will be admitted. Lectures will be take place **in person** at the Department's facilities or **remotely**, in accordance with the applicable legislation and the provisions of the program's main regulations and the Special Regulation for the Organization and Implementation of Distance Learning Methods, both available on the program's website: <a href="https://ric.dind.uoa.gr/">https://ric.dind.uoa.gr/</a>.

## Supplementary Application Submission Period: February 7, 2025 – February 24, 2025

The MSc in Robotics and Industrial Control is designed to offer postgraduate studies and foster research growth in the evolving domain of Robotics and Industrial Control, that has scientific, social, and economic significance. The specific objectives of this Postgraduate Program include:

- Establishing postgraduate studies and fostering research progress 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 background in science
  and technology, providing them 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 of robotics and automatic
  control, utilizing modern techniques and cutting-edge technologies, particularly emphasizing on
  industry and production units (manufacturing and processes). Additionally, fostering the progress of
  research and its practical applications in the aforementioned fields.
- Training personnel from the Greek industrial sector, as well as other sectors, 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 technological solutions within the Industry 4.0 framework.
- Gaining practical experience in integrating hardware and software to produce technological solutions in the broader field of robotics and automatic control systems.

The MSc program specifically aims to provide specialized scientific knowledge and serve as a foundation for initiating research endeavors in the following distinct areas:

- Research, design, and implementation of advanced Industrial Control systems using suitable digital platforms.
- Research, development, testing, and application of advanced robotic systems.
- Development, implementation, and application of Industrial Control and Robotics algorithms to address challenges encountered in industrial and other production units.
- Design and management of networked Industrial Control and Robotics systems, including Industrial Internet of Things (IIOT).
- Design and development of interfaces for industrial human-machine interaction, facilitating control, error diagnosis, and execution of robotic tasks.
- Utilization of Artificial Intelligence and Machine Learning in the realms of Robotics and Industrial Control.
- Control and mitigation of attacks on Industrial Cyberphysical Systems.
- Implementation of Robotic Vision Systems.

The MSc program "Robotics and Industrial Control" is supported by the Laboratory of Robotics, Automatic Control, and Cyber-Physical Systems (RCCL) of NKUA, <a href="https://rccl.dind.uoa.gr/">https://rccl.dind.uoa.gr/</a>.

## **Eligibility to Apply**

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

- a) Graduates from University Departments of Digital Industry Technologies, Informatics, Physics, Mathematics, Aerospace Science and Technology or other university departments closely associated with the aforementioned scientific subjects, either within domestic academic institutions or equivalent recognized foreign institutions.
- b) Graduates of University Departments in Mechanical Engineering, Electrical and Computer Engineering, Chemical Engineering, Computer Engineering, and Industrial Design and Production Engineering, or other university departments closely associated with the aforementioned scientific subjects, either within domestic academic institutions or equivalent recognized foreign institutions.
- c) Graduates from Technological Educational Institute Departments of Automation Engineering, Mechanical Engineering, Electrical Engineering, Aircraft Technology, Informatics, or other Technological Educational Institute Departments being relative to these subjects, either within domestic academic institutions or equivalent recognized foreign institutions.

Students in the final semester of their undergraduate studies, that are expected to graduate by the time of registration to the Master's Program (MSc), have also the right to apply.

In addition to the regular admissions, one (1) staff member from the categories of Special Educational Staff, Special Laboratory Teaching Staff and Special Technical Laboratory Staff, may be admitted annually, provided that their work at the University is relevant to the subject of the Postgraduate Program.

Scholarsip holders from the National Scholarships Foundation as well as foreign scholarship holders, whose scholarship is sponsored by the Greek Republic and concerns subjects that are same or relevant to the subject of the Postgraduate Program, are exempt from the admission evaluation process.

#### **Awarded Degree**

The MSc program awards a Master of Science (MSc) degree in *Robotics and Industrial Control*. Degrees are awarded by the Department of Digital Industry Technologies of the National and Kapodistrian University of Athens (NKUA).

#### Studies - Duration

The M.Sc. program leading to the award of a Master's Degree (M.Sc.) spans a duration of three (3) academic semesters for full-time students, which includes the time for the elaboration of a dissertation (should the student opt for this scholarly pursuit).

The Postgraduate Program consists of two semesters that include only coursework, and one semester designated either for the postgraduate thesis or for 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 or preparing a Master's thesis.

There is an option for part-time study upon an appropriate application justifying the request, and the approval of the Department's Assembly. The conditions and procedures for part-time study are outlined in the main regulations of the M.Sc. program. The duration of part-time study does not exceed twice the duration of full-time study.

The possibility of extending the study period, the maximum study duration, and the option for temporary interruption of studies are regulated by the main regulations of the M.Sc. program.

#### **Required Application Documents**

Candidates must submit their application, and the supporting documents, to the Department of Digital Industry Technologies.

The required supporting documents are:

- 1. Application form detailing reasons for choosing the Postgraduate Program.
- 2. Detailed curriculum vitae (CV).
- 3. Copy of the certificate for academic degree or certificate for completion of studies (alternatively, a formal declaration can be provided, including pending course grades).
- 4. Official transcript of undergraduate studies records.
- 5. Printed or electronic copy of the BSc thesis or diploma thesis (if applicable).
- 6. Copies of any additional degrees, master, and/or doctoral degrees from universities or equivalent foreign institutions.
- 7. Publications in scientific journals or conference proceedings, if available.
- 8. Certificates of scholarships and awards.
- 9. Up to two recommendation letters.
- 10. 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 Coordinating Committee of the Postgraduate Program).
- 11. Evidence of professional or research activity, if applicable.
- 12. Greek language proficiency certificate or adequate knowledge of the Greek language, certified by the Coordinating Committee of the Postgraduate Program. This is for foreign candidates intending to study the Postgraduate Program in Greek.
- 13. Additional information at the candidate's discretion, such as evidence of professional or research activity related to the subject of the Postgraduate Program.

- 14. Photocopy of both sides of the identity card.
- 15. Recent photograph.
- 16. Recognition of foreign academic qualifications.

The applications to the Department of Digital Industry Technologies are submitted electronically to the following address: <a href="https://eprotocol.uoa.gr">https://eprotocol.uoa.gr</a>. In the "Applications" section of the platform <a href="https://eprotocol.uoa.gr">https://eprotocol.uoa.gr</a>, applicants must select "New Application" and then choose: (05) "Application for Admission to a Master's Program." Candidates must complete the fields in the application form and upload the above 16 supporting documents in PDF format, using the corresponding submission fields in the electronic platform <a href="https://eprotocol.uoa.gr">https://eprotocol.uoa.gr</a>.

It is noted that in the submission of the application, the field "Department Secretariat" must be completed as "Department of Digital Industry Technologies," and the field "Master's Program", must be completed as "Robotics and Industrial Control". Any required supporting documents that cannot be uploaded through a field of the e-protocol application, should be compiled into a single PDF file and uploaded in the field "Other".

In the "Application Annex/Application" field, candidates must submit appropriately filled the application form, that is available on the Master's Program website (<a href="https://ric.dind.uoa.gr/">https://ric.dind.uoa.gr/</a>).

Applicants who experience difficulties accessing <a href="https://eprotocol.uoa.gr">https://eprotocol.uoa.gr</a>, may contact <a href="mailto:rccl@dind.uoa.gr">rccl@dind.uoa.gr</a> for guidelines.

## **Recognition of Foreign Academic Degrees**

For students hailing from foreign institutions without a DOATAP-recognized academic degree certificate, the following procedure will be followed:

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 a specific 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 in a public Higher Education Institution.

## **Selection Process**

The evaluation of candidacies 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 dissertation in subjects relevant to the MSc program courses: For each course or dissertation with subject relevant to the Postgraduate Program, where the candidate has achieved a grade at least equal to seven, two points are awarded. The maximum merit points for this category are twenty (20).
- 3. Relevance of University Degree and Candidate's Knowledge to the 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 year of certified professional experience or research work (participation in a research program or employment in a research centre) in a subject relevant 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 as 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 those 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 and the exam in English technical terminology 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.

The date of the interview and examination in English technical terminology (if required) as well other details, will be announced shortly.

Upon considering the overall criteria, the Coordinating Committee formulates an evaluation 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.

Selected candidates are required to register at the Secretariat of the Postgraduate Program, within thirty (30) days from the Department's Assembly decision. Selected students must have completed their undergraduate degree requirements before the registration period for the MSc. Otherwise, they lose their right to registration.

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.

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

#### **Student Obligations – Tuition Fees**

For the participation in the Postgraduate Program, postgraduate students pay tuition fees totalling 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 fees takes place at the beginning of each semester. The deadlines for the payment of the tuition fee will be determined by the Coordinating Committee.

#### **Exemption from Tuition Fees**

Postgraduate students of a Master's program may be exempt from tuition fees if they meet the financial and/or social criteria and the excellence requirements, being established in the 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 are not entitled to an exemption, nor are citizens of non-EU countries.

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 redundantly accepted, are exempt from paying tuition fees.

In cases where members of the same family (blood or not blood relatives up to the second degree) are simultaneously enrolled in the Master's program, there is the possibility of a 50% reduction in tuition fees.

The right to free education in an MSc program is regulated by the provisions of Article 86 of Law 4957/2022 (Government Gazette 141/2022, A'), as it stands.

The **national median equivalent income** for granting the right to free MSc education in higher education institutions for the academic year 2024-2025 is determined by Ministerial Decision 41714/Z1/19.04.2024.

Candidates, having already applied, will not need to resubmit within the framework of this announcement.

Interested parties are kindly requested to follow the announcements on the M.Sc. website (<a href="https://ric.dind.uoa.gr/">https://ric.dind.uoa.gr/</a>). For more information regarding the call for expressions of interest and the application and selection process, interested individuals can send an email to <a href="mailto:rccl@dind.uoa.gr">rccl@dind.uoa.gr</a>.

February 7, 2025