



POSTGRADUATE STUDIES REGULATION OF  
OPERATION  
“Aerial Autonomous Systems”

The present Regulation of Operation is approved by the Assemblies of the participating Schools:

Electrical and Computer Engineering: Session 14/28-3-2024

Mechanical Engineering: Session 18/25-4-2024

Rural and Surveying Engineering: Session 17/23-4-2024

Approval by the Senate of Aristotle University of Thessaloniki: Session 3151/23-10-2024.

## **General Provisions**

This Graduate Studies Regulation, supplements the provisions of Chapter IX [Organization and Operation of Second and Third Cycle Study Programs] of Law 4957/2022 (FEK 141/Issue A'/21-7-2022): «New Horizons in Higher Education Institutions: Enhancing the quality, functionality, and connection of Higher Education Institutions with society and other provisions, as well as the Regulation of Operation of Postgraduate Studies Programs of A.U.Th.

The Interdepartmental Postgraduate Studies Program (D.P.M.S.) operates in accordance with the aforementioned applicable legislation (Law 4957/2022), the present Regulation, and the Special Cooperation Protocol between the collaborating Schools.

Issues related to the operation of the D.P.M.S. that are not covered by the existing legislation and the present regulation, or issues of interpretation of the present regulation, are resolved by the Program of Studies Committee.

### **Article 1**

#### **Subject-Purpose of the Postgraduate Studies Program**

The Schools of Electrical and Computer Engineering, Mechanical Engineering, and Rural and Surveying Engineering at the Faculty of Engineering of Aristotle University of Thessaloniki are organizing and operating from the academic year 2024-2025, the English-language Postgraduate Studies Program " AERIAL AUTONOMOUS SYSTEMS," in accordance with the provisions of this decision and the provisions of Law 4957/2022.

The Interdepartmental Postgraduate Studies Program aims at understanding the basic concepts, principles and technologies, but also at deepening the understanding of advanced methods of analysis, design, optimization and control of aerial autonomous systems (unmanned vehicles). The program combines various areas of Engineering sciences, with a particular emphasis on their application in innovative, wide-ranging applications. These include, among others, agricultural and topographical observations, monitoring of forested areas, prevention and assistance in natural disasters, civil protection, as well as goods transportation.

The **purpose** of the Interdepartmental Master's Program (D.P.M.S.) is to equip students with advanced interdisciplinary skills necessary for the design, performance, optimization, operational utilization, and evaluation of the technical and economic sustainability of unmanned vehicle systems.

Within this framework, students will acquire specialized knowledge governing contemporary autonomous systems, focusing on issues characterized by interdisciplinary complexity, thereby expanding the scope of the Postgraduate Studies Program.

The **expected learning outcomes** and qualifications of those who successfully complete the program are estimated to be:

- The promotion of knowledge and the development of research in the scientific and technological area of autonomous systems.
- Equipping graduates with the necessary knowledge to integrate into a demanding, rapidly changing environment with interdisciplinary characteristics, as required by the new global conditions prevailing worldwide.
- Covering knowledge for research and teaching needs in the broad field of design and construction, control, telecommunications, operations, innovative mapping and positioning methods with the combination of modern technologies.
- Preparation for doctoral studies.

## Article 2

### Awarded Degree of Postgraduate Studies

The D.P.M.S. awards a Diploma of Postgraduate Studies (D.M.S.) with the title: Degree of Postgraduate Studies in “Aerial Autonomous Systems”.

The D.P.M.S. has no specializations.

The successful completion of the Master's Program leads to Level 7 of the National and European Qualifications Frameworks, according article 47 of Law 4763/2020 (FEK A'254).

## Article 3

### Administrative Bodies of the MCs Program

Administrative bodies for organization and operation of the MSc programs are:

**I.** The Institution’s Senate, which is entrusted with the academic, administrative, and organizational matters of the Postgraduate Studies Programs, exercises all authorities regarding the Postgraduate Studies Programs that are not assigned by law to other bodies.

**II.** The Postgraduate Studies Committee, established by decision of the Senate, consists of the responsible Vice Rector as the President, as well as one (1) member of the Teaching and Research Staff (D.E.P.) from each School of the Aristotle University of Thessaloniki (AUTH) and one (1) member from the categories of Special Teaching Staff (E.E.P.), Laboratory Teaching Staff (E.DI.P.), and Special Technical Laboratory Staff (E.T.E.P.) of AUTH. The members of the Committee have experience in organizing and participating in second-cycle programs. The term of the Committee is two (2) academic years.

The **Program of Studies Committee**, which is appointed by the Senate of the Aristotle University of Thessaloniki (AUTH), based on the relevant recommendations of the Schools Assemblies, according to the Special Collaboration Protocol.

In detail, the Program of Studies Committee of the Interdepartmental Postgraduate Studies Program (D.P.M.S.) includes: Three (3) representatives with their substitutes from the School of Electrical and Computer Engineering, during the first two years and two (2) representatives with their substitutes from the cooperating Schools of Mechanical Engineering and Rural and Surveying Engineering. These members are appointed by the Assembly of each School, based on their teaching and research contributions and their expertise in matters of Interdepartmental Postgraduate Studies Programs.

During the second two-year period, in the Program of Studies Committee of the Interdepartmental Postgraduate Studies Program (D.P.M.S.), will participate the School of Mechanical Engineering with three (3) representatives with their substitutes, during the third two-year period the School of Rural and Surveying Engineering and the other cooperating Schools (excluding the above two), will participate with two (2) members. This cyclical process repeats accordingly, ensuring representation and participation from all relevant schools over time.

In total, in the Program of Studies Committee, participate seven (7) members of the Academic Research Staff. By decision of the Program of Studies Committee, a Coordinating Committee is established with a two-year term, in which the Director of the Interdepartmental Postgraduate Studies Program and four (4) members of the Program of Studies Committee, must participate.

**III.** The Program of Studies Committee has the following responsibilities:

- a. It forms Committees for the evaluation of applications from prospective postgraduate students and approves their enrolment in the Interdepartmental Postgraduate Studies Program.
- b. It assigns teaching duties to the instructors of the Interdepartmental Postgraduate Studies Program.
- c. It recommends to the Institution's Senate, the modification of the decision establishing the Interdepartmental Postgraduate Studies Program, as well as the extension of the duration of the Program.
- d. It forms examination committees for the evaluation of postgraduate students' theses and appoints a supervisor for each thesis.
- e. It certifies the successful completion of studies in order to award the degree of the Interdepartmental Postgraduate Studies Program.
- f. Approves the report of the Interdepartmental Postgraduate Studies Program, following the recommendation of the Coordinating Committee (C.C.).

By decision of the Program of Studies Committee, the responsibilities mentioned in points (a) and (d) may be transferred to the Coordinating Committee (C.C.) of the Interdepartmental Postgraduate Studies Program.

**IV.** The Coordinating Committee (C.C.) of the Interdepartmental Postgraduate Studies Program is established by decision of the Program of Studies Committee, with a two-year term. The participation of the Director of the D.P.M.S. and four (4) of the members of the Program of Studies Committee, in the Coordinating Committee, is mandatory.

The Coordinating Committee has the following responsibilities:

- a. Prepares the initial annual budget of the MSc Program and its amendments, if the MSc has resources according to article 84 of Law 4957/2022, and recommends its approval to the Special Account for Research Funds, excluding the quarterly revisions of the annual budgets of case b) of paragraph 3 of Article 239 of Law 4957/2022."
- b. Prepares the report of the Interdepartmental Postgraduate Studies Program (D.P.M.S.) and recommends its approval to the School's Assembly.
- c. Approves the expenses of the D.P.M.S. and may delegate this responsibility to the Director of the Interdepartmental Postgraduate Program (D.P.M.S.).
- d. Approves the awarding of scholarships, reciprocal or not, in accordance with the provisions of the MSc's establishing decision and the Regulation of the Postgraduate and Doctoral Programs of Studies.
- e. Recommends to the Program of Studies Committee the allocation of teaching duties and the assignment of teaching responsibilities to the categories of instructors as defined in Article 83 of Law 4957/2022.
- f. Recommends to the Program of Studies Committee the invitation of Visiting Professors to cover the teaching needs of the Interdepartmental Postgraduate Studies Program.
- g. Prepares a plan for the modification of the program of studies, which it submits to the Program of Studies Committee for approval.
- h. It proposes to the Program of Studies Committee, the redistribution of courses among academic semesters, as well as issues related to the quality enhancement of the program of studies.

In the Coordinating Committee, Emeritus Professors of the School or collaborating Schools may participate, if they are involved in teaching activities within the Interdepartmental Postgraduate Studies Program.

The **Director of the MSc** is appointed by the Program of Studies Committee, for a two-year term, as one of the regular representatives from the Schools on a rotating basis:

1) Electrical and Computer Engineering, 2) Mechanical Engineering and 3) Rural and Surveying Engineering, in the order listed above.

***The Director shall have the powers provided for in Article 82 par. 4 of Law 4957/2022 and any others specified in the MSc' establishing decision:***

- a. Presides over the Coordinating Committee as well as the Program of Studies Committee and prepares the agenda, convening their meetings.
- b. Recommends issues concerning the organization and operation of the program to the Program of Studies Committee.

- c. Recommends to the Coordinating Committee and other bodies of the Interdepartmental Postgraduate Studies Program (D.P.M.S.) and the Institution, issues related to the effective functioning of the Program.
- d. Is the Scientific Coordinator of the Interdepartmental Postgraduate Studies Program (D.P.M.S.) according to Article 234 of Law 4957/2022 and exercises the corresponding responsibilities.
- e. Monitors the implementation of the decisions of the administration bodies of the MSc and the Postgraduate Studies' Regulation, as well as the implementation of the MSc budget.

The Director of the D.P.M.S., as well as the members of the Coordinating Committee and the Program of Studies Committee, are not entitled to any reward or any compensation for the performance of the responsibilities assigned to them and related to the performance of their duties.

The administrative support for the program will be provided by the Secretariat of the host School in collaboration with the Secretariat of the Interdepartmental Postgraduate Studies Program. The Secretariat of the Interdepartmental Postgraduate Studies Program is responsible for maintaining records and grades of postgraduate students. Additionally, it informs postgraduate students on issues related to the organization and operation of the program. Finally, it prepares the issues agenda submitted to the Program of Studies Committee.

#### **Article 4**

#### **Categories of candidates**

The Interdepartmental Postgraduate Program (D.P.M.S.) accepts holders of degrees/diplomas from Higher Education Institutions (A.E.I.) in Greece, specifically from Schools/Departments of Engineering, Departments of Physics, Informatics, and Mathematics, as well as graduates from equivalent recognized institutions abroad and graduates from military academies of the Armed Forces. By exception, graduates of Higher Education Institutions from other Departments/Schools of Natural Sciences are accepted, provided they demonstrate extensive professional experience of an appropriate level in relevant fields.

The recognition of foreign degrees for admission to the postgraduate program, is carried out by the Academic Schools. If the first cycle of studies has been completed abroad, the candidate is not required to obtain equivalence of degrees from Hellenic National Academic Recognition and Information Center (DOATAP). Even if they provide an equivalence, the recognition is still carried out by the Academic Schools.

The Academic Schools are responsible only for the academic recognition of degrees and not for their equivalence. The responsibility for the equivalence of degrees remains with DOATAP.

Applicants who have already applied to, or are attending the D.P.M.S., under the condition of submitting an individual recognition act from DOATAP, are exempt from this obligation. Their application or continuation of their studies will be evaluated based on the criteria of the new law.

**Method of verifying** the general type of first cycle degree/diploma:

**1. The authenticity is certified by:**

- 1.1. With the Hague apostille
- 1.2. With the deposit of the degree/diploma and simultaneous notification of the Foreign University by the applicant. The notification is accompanied by an official email from the University of the Foreign Country giving the Secretariat of the respective Academic School the opportunity to check the authenticity,
2. If specialization indicated by the degree is required, the verification is conducted through its mention on the certificate and the detailed transcript of records or Diploma Supplement.
3. In case we are interested in the grade, we use the equivalency process notified by DOATAP.
4. The academic recognition only concerns the specific procedure, is granted by a decision of the School's Assembly and is not given to the person concerned. If the candidate wants a relevant certificate, he/she should apply to the DOATAP for Equivalence.

## **Article 5**

### **Number of Applicants, Criteria and Selection Process**

The number of students admitted per year is set at a minimum of 20 and a maximum of 35 postgraduate students. The D.P.M.S. cannot operate with fewer than 20 postgraduate students. Following the decision of the Program of Studies Committee, the D.P.M.S. announces positions by an open procedure. In particular, the notice shall specify the admission requirements, the number of admission, the categories of candidates, the mode of admission, the selection criteria, etc., the deadlines for submitting applications and the supporting documents required. The notice of admission of postgraduate students is published on the website of the D.P.M.S. and the participating Schools. Applications accompanied by the necessary supporting documents, are submitted to the Secretariat of the MSc in either paper or electronic form.

The supporting documents are the following:

- Application form available from the D.P.M.S.
- Identity card or passport.
- Curriculum Vitae.

- Undergraduate degrees.
- Detailed transcript of records for undergraduate and/or postgraduate studies or submission of the Diploma Supplement that accompanies each degree/diploma.
- Two (2) recommendation letters. (At least one from a faculty member, and one letter from an employer is acceptable).
- English language Certificate, at least Level B.
- In addition to the above documents, the candidate may submit, if available:
  - a) Diploma or Postgraduate Diplomas from a Greek Institution or an equivalent Institution abroad.
  - b) Doctoral degree from a Greek Institution or an equivalent Institution abroad.
  - c) Documentary evidence of any research and writing activity, participation in student mobility training programs and professional experience or related experience.
  - d) Certificates of previous experience.

The above documents are submitted either as an exact copy or as a simple photocopy.

The **selection criteria** for admission are:

- The overall grade of the undergraduate degree/diploma.
- The candidate's performance in a diploma or degree thesis.
- Any existing professional or research activity relevant to the scientific subjects of the MSc.
- Possession of other degrees or postgraduate qualifications relevant to the scientific subjects of the MSc.
- Publications in scientific journals and conference proceedings.
- Knowledge of the English language, as a prerequisite, at least level B2, according to the system of the Council of Europe, which is accepted by the Supreme Council for Civil Personnel Selection (A.S.E.P). Alternatively, a degree or postgraduate diploma of a Greek Institution or a similar Institution abroad, showing the successful completion of an English-speaking undergraduate or postgraduate program, may be submitted.

The selection process of the candidates, by decision of the Program of Studies Committee, is carried out by a three-member Selection and Examination Committee, consisting of Teaching and Research Staff of the faculty who have undertaken postgraduate work.

The Committee prepares a full list of all candidates and, after the relevant review, rejects those who do not complete the minimum established criteria and invites to an interview those candidates who complete the prerequisites.

For the quantitative evaluation of the criteria, a scoring system is applied to each criterion as follows:

**Degree points:** Calculated by the formula "Coefficient \* (grade of degree or diploma)". The coefficient is: a) 1.6 if the degree is from university schools with a duration of four years, b) 2.0 if the degree is from university schools with duration of five and six years.

**Thesis points:** The grade of the undergraduate/final thesis, provided that the thesis is deemed relevant to the subject of the postgraduate program. A maximum of 10 points can be awarded.

**Points related to postgraduate studies:** Possession of another postgraduate degree relevant to the subject area, receives 10 points.

**Points for relevant publications:** Publications related to the field of specialization can receive a maximum of 15 points, with up to 3 publications considered, at 5 points per publication.

**Points for relevant research and/or professional experience:** A maximum of 10 points. Specifically, 5 points are awarded per year of research or professional experience.

**Points for recommendation letters:** A maximum of 5 points (2.5 points per letter).

The Committee prepares a complete list of all candidates and, after the relevant review, rejects those who do not meet the minimum criteria set by the respective School. Then invites for an interview, where applicable, the shortlisted candidates who have met the prerequisites.

**Oral interview:** The oral interview is conducted by the Three-Member Selection and Examination Committee of the Postgraduate Program and aims to assess both the academic knowledge of the candidates required for attending the program and their abilities in areas such as reading and comprehension, analytical skills, the reasons for selecting this specific postgraduate program, the candidate's overall academic profile, and more. The interview is graded on a scale of 1-20, and the final grade is calculated as the average of the scores given by the three members of the Selection Committee.

In case of a tie in points, candidates are accepted up to the maximum limit defined for admissions. If the number of tied candidates exceeds this limit, those with higher degree scores are given priority. After that, follows the examination of previous research work - publications, and the knowledge level of a foreign language.

After the completion of the procedure, the final list of successful candidates approved by the Program of Studies Committee and posted on the notice board of the Secretariat of the host School and on the D.P.M.S. website.

Objections can be submitted within a deadline of five (5) calendar days from the publication of the results.

Enrollment of admitted postgraduate students begins after an announcement by the Secretariat of the MSc program, which specifies their duration and required documentation.

If a candidate does not enroll within the specified deadline, it is considered a refusal of acceptance of the position, and his/her position covered by the next successful candidate.

## **Article 6**

### **Duration and Terms of Attendance**

The duration for the award of the Diploma of Postgraduate Studies is set at three (3) semesters, of which the last semester will be available for the preparation and writing of the thesis. There is a possibility of a justified suspension of studies which may not exceed 2 consecutive semesters maximum and only once and does not count towards the maximum duration of normal studies. During the period of suspension, the postgraduate student shall lose his/her student status. Upon resumption of study, postgraduate students shall be reinstated to regular study status with all the rights and obligations provided for in the MSc.

In addition, upon reasoned application before the completion of the normal period of study, the postgraduate student may request ***an extension of 2 semesters***, which concerns the completion of studies or the preparation of the postgraduate thesis. At the end of the extension, the postgraduate student is removed from the Master's program by decision of the Program Committee.

In case of failure, the course may be retaken once more on dates to be determined by the Coordinating Committee within a period not exceeding one month from the announcement of the results.

Postgraduate students have the possibility of part-time study, the duration of which may not exceed twice the normal duration of studies. Part-time attendance is provided for those who have proven that they are working at least twenty (20) hours per week and for non-working postgraduate students who are unable to meet the minimum requirements of the "full-time" program and for special cases of exceptional seriousness (Indicatively: illness, workload, serious family reasons, military service, reasons of force majeure), which are defined by the Program of Studies Committee and are included in the Postgraduate Studies Regulation.

Applications from postgraduate students for part-time enrollment, suspension, or extension of studies are made before the start of the academic semesters.

#### **Indicative reasons for a student's removal from the program include:**

1. Student's application.
2. Unjustified exceeding of the absence limit, due to force majeure reasons beyond 20% of the maximum course hours.
3. Inadequate submission of requirements, such as failing to submit assignments or non-participation in exams, exceeding the time limit for thesis completion without adhering to the provisions outlined in Article 5 of this regulation.
4. Behaviors that violate academic integrity, such as plagiarism, cheating during exams.

For matters concerning re-examination of courses or deletion, the Program of Studies Committee decides upon recommendation from the Coordinating Committee, which defines the conditions for re-examination and deletion.

Postgraduate students enroll and participate in the MSc program under the terms and conditions specified in the Postgraduate Studies Regulation. Postgraduate students have all the rights, benefits, and facilities provided to undergraduate students, except for the right to receive free textbooks. The MSc program ensures facilities for postgraduate students with confirmed disabilities or special educational needs. The infrastructure of the Faculty of Engineering is used for access to the classrooms, appropriate teaching methods are selected, longer written examinations, oral examinations and extended submission of assignments are provided. Arrangements are made by decision of the program of Studies Committee and depending on the specific educational needs of the student concerned.

### **Tuition Fees**

Tuition fees are set at € 2.000,00 per full semester (€ 6.000,00 in total) for EU citizens and € 3.000,00 per full semester (€ 9.000,00 in total) for third country citizens. Payment of the full amount for each semester is deposited at the beginning of each semester, within two weeks from its inception. The payment is deposited into the Special Account for Research Funds (ELKE) of the Aristotle University of Thessaloniki. In the case of part-time enrollment, the amount of €6,000.00 or €9,000.00 is distributed proportionally.

Failure to pay the financial obligations constitutes sufficient reason for not awarding the Postgraduate Diploma or deleted from the D.P.M.S.

The right to receive free tuition due to financial or social criteria is granted to those postgraduate students who fulfil the excellence criterion in their first cycle of studies, which corresponds to a minimum grade of 7.5 out of 10 (7,5/10). The specific terms and conditions of the right to free tuition in postgraduate programs are described in the applicable legislation as well as in the decision of the Minister of Education, Religious Affairs and Sports. Exempt students should not exceed thirty percent (30%) of the total number of students admitted to the postgraduate program and this applies to participation in only one postgraduate program. If the number of eligible students exceeds this percentage, selection is based on a ranking order starting with those who have the lowest income.

The tuition fee exemption application is submitted by the interested party to the postgraduate program, after the student's selection process is completed. The possibility of exemption from the obligation to pay tuition fees is provided exclusively for enrollment in one (1) postgraduate program, organized by a domestic higher education institution.

A student of the MSc who fulfils the requirements is entitled to free tuition if the following criteria apply:

**a)** The average of the sum of the taxable incomes of the last two (2) financial years of all family members of the applicant for exemption from tuition fees, i.e. the applicant himself, his parents, regardless of whether they file a joint or separate tax statement, and his siblings up to twenty-six (26) years of age, if they are unmarried and have the same taxable income

within the meaning of article 7 of Law No. 4172/2013 (A' 167), does not exceed seventy percent (70%) of the national median disposable equivalent income, according to the most recently published data of the National Statistical Service of Greece (EL.STAT.), if the applicant has not reached the twenty-sixth (26th) year of age and is unmarried or has not entered into a cohabitation agreement,

**b)** The average of the applicant's personal taxable income of the last two (2) financial years does not exceed one hundred percent (100%) of the national median disposable income equivalent, according to the most recently published data of the National Statistical Service of Greece, if the applicant has reached the age of 26,

**c)** the average of the sum of the taxable income of the last two (2) financial years of the applicant for exemption from tuition fees and his or her spouse or partner, if married or in a civil partnership, regardless of whether they file a joint or separate tax statement, does not exceed one hundred percent (100%) of the national median disposable income equivalent, according to the most recently published data of National Statistical Service of Greece (EL.STAT.).

If the applicant for exemption has not reached the age of 26 and is a child of a family with three or more children or a child of an unmarried parent or an orphan of at least one (1) parent or a person with a disability or a member of a household with a person with a disability, he/she may apply for a half (50%) exemption from the obligation to pay tuition fees, if the average in case a) of par. 4 exceeds seventy percent (70%) and does not exceed one hundred percent (100%) of the national median disposable equivalent income.

In any case, if the number of those entitled to free tuition exceeds 30%, the selection is based on the lowest income. In case of a tie again, then the order of ranking is considered. Finally, if there is an absolute tie, a draw is conducted in the presence of the candidates. Absence of a candidate from the draw is not a reason for cancellation.

The evaluation of the criteria for exemption from tuition fees, is carried out by the Program of Studies Committee, which issues a reasoned decision regarding the acceptance or rejection of the application.

This does not apply to citizens of third countries.

An application for a refund of one semester's tuition fees is permitted only if the applicant claims and sufficiently proves the existence of an exceptionally serious reason for discontinuing his/her studies. The application must be submitted to the Program of Studies Committee, no later than twenty (20) days after the start of the semester's classes.

In cases of deletion, the tuition fees are not refundable.

## **Article 7**

### **Rights and Obligations of Attendance**

Postgraduate students admitted to the M.Sc. program are obligated to:

1. Attend all classes of the M.Sc. program continuously. Attendance is mandatory for all courses, lectures, seminars, workshops, and other activities. Absences are permitted up to 10% of the total hours for the semester and not exceeding 20% per course. In case of professional work or other inelastic reason invoked in writing by the person concerned, they can be doubled, after examination and approval of the request by the Program of Studies Committee. For the workshops, attendance is compulsory without

the possibility of absence. In case of absence due to force majeure, substitution is possible on another date within the consent of the instructor. In case the postgraduate student exceeds the allowed absence limit, he/she required to retake the course in the following academic year.

2. To submit course declarations by the deadline each semester.
3. Submit the assignments required for each course within the deadlines.
4. Attend exams.
5. Submit to the Secretariat, together with the thesis to be evaluated, a declaration that there is no evidence of plagiarism.
6. Pay the tuition fees within the dates specified.
7. Have settled all their financial obligations, as well as any other obligations to the Institution, before the swearing-in ceremony. Otherwise, they will not be entitled to take the oath and/or receive the postgraduate diploma.
8. If they have received a scholarship, to contribute reciprocally by providing academic support, such as tutoring sessions, contributing to the library and research, and wherever needed in university services.
9. It is possible to study simultaneously in an undergraduate program of studies and a postgraduate program of studies or in two (2) of the same or another School of the same or another Institution.
10. Respect and comply with the decisions of the postgraduate institutions and academic ethics. Failure to comply with the above, without documented justification, may result in failure of a course or exclusion from the program.

Failure to comply with all of the above, without a serious and documented justification, constitutes grounds for the removal of the postgraduate student from the program.

## **Article 8**

### **Program of Studies – Knowledge status**

#### **A. PROGRAMME STRUCTURE**

The MSc is structured in 3 semesters. In the A' semester six (6) courses are taught, all of them compulsory, while in the B' semester six (6) other courses are selected from the total number of courses offered.

In the third semester a postgraduate thesis is written.

#### **PROGRAMME OF STUDIES**

All courses of the Interdepartmental Postgraduate Program (D.P.M.S.) are taught in English. The same applies to assignments, progress reports, exams, and the postgraduate thesis, which will also be entirely in English. The textbooks, notes, and all other teaching materials provided to students will be in English.

The start and end of the courses, as well as the duration of the exam periods, are determined by the academic calendar or by a decision of the Program of Studies Committee.

A' Semester (Total ECTS 30) (All compulsory)				
a/a	Course Title	Course Type (comp./elect.)	Distance Learning	ECTS
1	Sensor systems for autonomous vehicles – UAVs	C	80%	5
2	Advanced Aerodynamics	C	80%	5
3	Intelligent Robotic Systems	C	100%	5
4	GNSS and Inertial positioning for Autonomous Systems	C	80%	5
5	Dynamics and Control I	C	80%	5
6	Lightweight materials (incl. composites), specifications and requirements for UAV applications	C	100%	5
B' Semester (Total ECTS 30) (All elective/ 6 (six) are selected)				
a/a	Course Title	Course Type (comp./elect.)	Distance Learning	ECTS
1	Big data Analysis	E	50%	5
2	Structural design - Hardware system design of UAV's (synthesis, static and quasistatic analyses)	E	100%	5
3	Manufacturing of lightweight systems focusing on UAV applications.	E	80%	5
4	Fixed wing UAV layout design and synthesis.	E	80%	5
5	Flight Mechanics and UAV Performance	E	80%	5
6	Unmanned Aerial Vehicles as Mapping Systems	E	100%	5
7	Advanced topics to Wireless Communications	E	100%	5
8	Dynamics and Control II	E	80%	5
9	Advanced RF aspects of UAVs	E	80%	5
10	Airworthiness	E	80%	5
C ' Semester (Total ECTS 30)				
a/a	Course Title	Course Type (comp./elect.)	Teaching Hours	ECTS
1	Master's Thesis	C		30

## **B. Brief Description of Courses**

### **Semester A**

#### **1. Sensor systems for autonomous vehicles – UAVs**

The purpose of the course is to introduce the students to the basic concepts of the field of sensors as well as the measurement and control systems of physical parameters for autonomous ground, flying and floating vehicles. Upon completion of the course, students are expected to know basic methods of displaying and recording measurement data as well as techniques for adjusting the signals provided by the sensors for their correct use and their interconnection with display and recording devices. They will also be able to understand the basic principles of operation of various integrated sensors for measuring common physical parameters, such as the accelerometer, magnetometer, gyroscope, thermometer, as well as systems such as LIDAR, SONAR, RADAR and GNSS (GPS, Galileo, etc.) as well as design and implementation issues of real-time systems (more specifically, theory, design and implementation of hardware in discrete and integrated circuits, software development, interconnection with the network through various protocols and applications of their use). Then the efficient and energy-optimal design and implementation of both the computing part and the sensor communication system will be considered. Energy harvesting techniques for powering autonomous vehicles will also be presented.

#### **2. Advanced aerodynamics**

Wall-bounded flows and boundary layer theory. 2D and 3D external aerodynamics with emphasis on transitional and turbulent flows on airfoils and wings. Normalized aerodynamic and stability coefficients, lift buildup and drag breakdown, drag polars. Numerical methods (rapid, low-fidelity and high-fidelity), source- and vortex-panel methods and CFD basic principles and applications. Special considerations on intakes, flow control techniques and high-lift devices.

#### **3. Intelligent Robotic Systems**

The course aims to introduce students to the basic concepts of intelligent and autonomous robotic systems, comprising theory about behaviors and architectures, information about sensors and actuators, methods for localization, mapping, path planning, navigation, exploration and coverage, as well as techniques for multi-robot and autonomous driving systems. The course participants upon completion will be able to understand how an autonomous robot operates, select sensors and actuators for an autonomous robot, based on task, environmental and financial requirements, select the appropriate techniques and algorithms for an autonomous robot, based on task and environmental requirements, and easily extend their knowledge to similar domains such as autonomous driving, Internet of Things or Cyber-Physical Systems.

#### **4. GNSS and Inertial positioning for Autonomous Systems**

GNSS systems, Satellite Constellations (GPS, GLONASS, Galileo, BeiDou, QZSS), Code and phase measurements, measurement errors and modelling, positioning algorithms, carrier phase processing, and attitude determination, Navigation solution. Relative Positioning techniques, International GNSS services data products, data exchange, Real Time Kinematic positioning, new techniques for the navigation guidance and communication for autonomous systems. Static and Kinematic positioning software's. Precise Point Positioning web-Platforms. Positional accuracy assessment. Inertial systems and Navigation Theory and Practice. Kalman filtering techniques, quality and performance, data fusion and integration with GNSS. Case study applications.

#### **5. Dynamics and Control I**

Kinematics and Kinetics of Systems of Particles - Euler's Laws. Rigid Body Dynamics and equations of motion for rigid UAV models, longitudinal and lateral/directional static and dynamic stability (emphasis on spatial and spherical motion). Bodies with Axisymmetric Inertia. Elements of Space Mechanics. Vibration of SDOF, MDOF and Continuous Systems (Integration of the equations of motion, free and forced response formulation of the equations of motion, determination of natural frequencies and mode shapes, modal and static analysis). Development of model-based optimal control systems for flight attitude and navigation. Intelligent flight path calculation.

#### **6. Lightweight materials (incl. composites), specifications and requirements for UAV applications**

This course explores the principles and methodologies of material selection specifically for lightweight Unmanned Aerial Vehicle (UAV) applications. Students will learn about the mechanical, thermal, and chemical properties of materials, and how these properties influence the structure, performance, durability, and efficiency of UAVs. The course will emphasize the importance of material selection in achieving lightweight, high-performance designs while considering factors such as cost and manufacturability.

### **Semester B**

#### **1. Big Data Analysis**

The course aims to introduce students to the basic concepts comprising big data analytics, i.e. characteristics of big data applications, contemporary big data architectures, exploration and visualization of big data, knowledge extraction from big data.

#### **2. Structural design - Hardware system design of UAV's (synthesis, static and quasistatic analyses)**

This course provides an in-depth exploration of the principles, methodologies, and best practices in structural design and hardware system design for Unmanned Aerial Vehicles

(UAVs). Students will gain comprehensive knowledge of UAV structural mechanics and the integration of hardware systems including avionics, sensors, and propulsion units. Emphasis will be placed on designing efficient, lightweight, and robust UAV structures that meet performance, safety, and regulatory requirements.

### **3. Manufacturing of lightweight systems focusing on UAV applications**

This course provides an in-depth understanding of the principles and practices involved in the manufacturing of lightweight structures, specifically in Unmanned Aerial Vehicles (UAVs). Students will explore manufacturing processes, material properties according to the manufacturing method and appropriate design considerations for each process to create lightweight structures. The course combines theoretical knowledge with a visit to a factory that builds composite structures.

### **4. Fixed-wing UAV layout design and synthesis**

Conceptual, preliminary and detail design principles. Propulsion and propulsor considerations. Weight estimation methods and estimation of critical design parameters. Configuration layout design and synthesis, flight envelope design. Design trade studies and shape optimization methods. Innovative configuration layouts, Vertical Takeoff and Landing vehicles and solar-powered / hybrid-electric systems, low-observability and low RCS design principles.

### **5. Flight Mechanics and UAV performance**

Pitch, roll and yaw motions. Thrust available, thrust required, maximum speed, power required, power available and rate of climb calculation. Service ceiling, time to climb, gliding distance. Accelerated flights, turning radius, pull-up and pull down, manoeuvring, takeoff and landing distance calculation. Aircraft and UAV stability equations, trim diagrams, longitudinal, directional and lateral stability. Flight equations (equations of motion), decoupling and linearization, flight modes, stability derivatives, state-space representation.

### **6. Unmanned Aerial Vehicles as Mapping Systems**

Unmanned Mobile Mapping Systems, Unmanned Aerial Mapping Systems, Unmanned Ground Vehicle Systems, Unmanned Marine Surface Vehicle Systems, Enabling factors and technologies, Navigation and Mapping sensors. Mission planning, Precise pose estimation and mapping, Sensor positioning and orientation, Structure from motion, SLAM-Simultaneous Localisation and Mapping, Dense image matching, 3D surface reconstruction. Comparison to other mapping methods, UAV methods, Sensing technologies (Multispectral, Hyperspectral sensors, Acoustic, Meteorological), Products and results, Accuracies. Archaeology & Heritage documentation, Agriculture & Forestry, Disaster management & Emergency response, Mapping & monitoring, Transportation, Environment – Energy. Advantages, Limitations, Gaps, Sensing technologies & Intelligent Sensing, LiDAR laser scanning, Photogrammetry, Hyperspectral imaging, Magnetic scanning, multi-sensor

solutions. Societal challenges, Technological challenges, Regulatory challenges, market evolution and trends, Economic impact.

### **7. Advanced topics to Wireless Communications**

This course addresses the fundamentals of wireless communications and provides an overview of existing and emerging wireless communications networks. It covers radio propagation and fading models, fundamentals of cellular communications, multiple access technologies. Also, the fundamentals of 4G and 5G will be presented.

### **8. Dynamics and Control II**

Analytical Dynamics (Lagrangian / Hamiltonian Mechanics) and Multibody Dynamic Modeling. Computational dynamics and Co-simulation of rigid and deformable UAV models: Dynamic response and Fluid-Structure interaction analysis using appropriate software. Development of robust control systems, optimal online state and parameter estimation for flight attitude and navigation.

### **9. Advanced RF Aspects of UAVs**

The course provides a deep understanding of RF communication in UAV systems. Essential concepts like electromagnetic wave propagation, frequency bands allocation, and international regulations governing UAV communications are explored. Antenna design principles are explored, encompassing metasurface-based structures and miniaturized antennas to address challenges specific to UAV size, weight, and power constraints. Radar technology, including radar cross-section reduction, beamforming and direction-of-arrival estimation, is a subsequent focus, providing insights into critical aspects of UAV functionality. The latter part of the course delves into advanced topics of direction-of-arrival estimation and beamforming methods, incorporating cutting-edge approaches, such as vector space analysis and neural networks.

### **10. Airworthiness**

Airworthiness regulations and UAV legislation. Design and testing based on FAR23 and STANAG4671 codes. Preparation of airworthiness checklists and documentation.

### **C. Knowledge Status - Student Assessment**

The assessment in individual courses or other educational activities (e.g., practical/clinical training) is conducted at the end of each semester through written or oral exams, completion of assignments, or a combination of the above.

The method of assessment is determined by the instructor of each course at the beginning of the academic semester. The percentage of participation in other educational activities (such as laboratory exercises, assignments, and seminars where applicable) in the final grade of each course, is determined individually for each course. This is done following

the recommendation of the instructor of each course and is approved by the Coordinating Committee of the Postgraduate Program.

The grading scale for evaluating the performance of postgraduate students is defined from zero (0) to ten (10) as follows:

Excellent (8.5 to 10)

Very Good (6.5 to 8.49)

Good (6 to 6.49)

The passing grade is six (6) and above.

A postgraduate student who fails the exams of a course is graded with an "R" (Repeat). A student who receives a grade of "R" in one or two courses of a semester is re-examined only once in these courses within three months from the date of the results. In case of a new failure, the postgraduate student is examined, at his/her request, by a three-member committee of members of the Teaching and Research Staff of the D.P.M.S., who have the same or a related scientific subject with the examined course and are appointed by the Program of Studies Committee. The three-member committee shall not include the lecturer who marked the course. If a student receives a grade of "R" in more than two courses in a semester and fails after the re-examination, he/she is deleted from the MSc, by decision of the Program of Studies Committee.

Attendance of courses and educational activities is compulsory. A postgraduate student is considered to have attended a course (and is therefore entitled to participate in the examinations) only if he/she has attended at least 80% of the theoretical hours of the course and 100% of the laboratory training in any course provided. In case of absence from a laboratory course due to force majeure, the course can be made up on another date with the consent of the instructor. In the case of professional work or another inflexible reason that the interested party cites in writing through a request, the allowed absences may be doubled, after examination and approval of the request by the Program of Studies Committee (E.P.S.). If the postgraduate student exceeds the allowed absence limit, they are required to retake the course in the following academic year.

The examinations are conducted in person at the facilities of the Faculty of Engineering. In cases of emergency or force majeure, exams may be conducted by electronic means, provided that the integrity of the evaluation process is guaranteed. In cases of illness, the lecturer should help the student in any way he/she deems appropriate (e.g. oral or remote examination).

A grade of "ELL" (incomplete) is given by the instructor in special cases at his/her discretion, such as the inability of the postgraduate student to take part in the examinations or to deliver a paper for professional or health reasons. In this case, a new deadline is set and if the student fulfils all his/her obligations within this deadline, the grade "ELL" (incomplete) can be replaced with a normal grade.

The grade of the Diploma of Postgraduate Studies (D.P.S.) is the weighted average of the courses of the MSc and the Postgraduate Thesis (the weighting is based on the credits of the courses and the M.Sc.) and shall be calculated, to the second decimal place, in the following manner: The grade of each course and the Postgraduate Thesis (where applicable) is multiplied by the corresponding number of credits (ECTS) and the sum of the products is divided by the minimum number of credits required for the award of the Master's degree. The mathematical formula is the following:

Grade of D.M.S. = (Course grade 1 x ECTS of course 1 +

Course grade 2 X ECTS course grade 2 + ...+

Grade of postgraduate thesis X ECTS of postgraduate thesis/ Total number of ECTS.

#### **D. POSTGRADUATE THESIS**

If the postgraduate student has successfully passed all the courses of the a' and b' semester of the MSc, he/she can join the process of writing the postgraduate thesis at the beginning of the c' semester. For the preparation of a Postgraduate Diploma Thesis (M.D.E.), the Program of Studies Committee, following an application by the candidate on specified dates, in which the proposed title of the postgraduate thesis, the proposed supervisor and an abstract of the proposed thesis are indicated, appoints the supervisor and sets up a three-member Examination Committee for the approval of the thesis, one member of which is the supervisor.

The right to supervise MSc thesis, is granted to lecturers of the categories described in article 83 of Law No. 4957/2022:

- a.** Teaching Staff (DEP), Special Teaching Staff (E.E.P.), Laboratory Teaching Staff (E.DI.P) and Special Technical Laboratory Staff (E.T.E.P.) of the School or other Schools of the same or another Higher Educational Institution (A.E.I.) or Higher Military Educational Institution (A.S.E.I.), with additional employment beyond their legal obligations.
- b.** Emeritus Professors or retired members of the participating Schools or other Schools of the same or another Institution.
- c.** Cooperating instructors
- d.** Appointed lecturers
- e.** Visiting professors or visiting researchers
- f.** Researchers and special operational scientists of research and technological institutions of Article 13A of Law No. 4310/2014 (A' 258) or other research centers and institutes in Greece or abroad.

The three members of the Examination Committee must have the same or related scientific specialization with the cognitive scientific subject of the D.P.M.S.

The preparation of the MSc's Thesis is governed by the Code of Academic Ethics of the Aristotle University of Thessaloniki. Every author or co-creator of any intellectual work/project is entitled to be referred to and recognized as such, enjoying the property and moral rights/authorities arising from the work/project. By exception, if the original intellectual creation (work/project) is the final output of a paid research project, which has been commissioned by an institution outside the A.U.T.H, the property rights of the author or co-creators may be limited under the terms of the contract under which the research work/project in question is commissioned, while the moral rights remain with the author or authors, subject to the contractual limitations necessary for the exploitation/economic exploitation of the resulting intellectual creation. For the presentation of the Postgraduate Thesis, the positive recommendation of the Three-member Examination Committee is foreseen. In case the presentation of the Postgraduate Thesis is carried out in public, a specific date and place is set by the Coordinating Committee of the D.P.M.S.

After the presentation of the Postgraduate Thesis, a protocol is drawn up in which the individual grade of each member of the three-member Examination Committee, the average grade and any comments or remarks are indicated. After its approval by the Committee, it is posted on the School's website. If the evaluation of the Postgraduate Thesis

is negative, the postgraduate student may submit his/her thesis incorporating the remarks for its improvement within a period of time determined by the Three-member Examination Committee. If the second evaluation is also negative, the postgraduate student loses the right to be awarded the MSc.

In exceptional cases, if there is an objective impossibility or an important reason, it is possible to replace the supervisor or a member of the Three-member Examination Committee, as well as to change the topic of the Postgraduate Thesis, after the decision of the Program of Studies Committee.

The total duration of the examination is a minimum of thirty (30) and a maximum of forty-five (45) minutes. The time allowed for questions from the examiners, may not be less than ten (10) minutes. The evaluation considers the scientific quality, the integrity of the text and the oral presentation, as well as the knowledge of the subject as evidenced by the candidate's answers to the examiners' questions. After its approval by the Committee and the incorporation by the student of possible corrections and comments, the text is obligatory posted on the website of the Central Library of the Aristotle University of Thessaloniki and recorded in the thesis archive of the MSc.

The language of writing and examination of the theses is English. The title and the abstract should be translated into Greek as well. The thesis does not typically exceed 100 pages and includes: cover page with the thesis details, abstract, title and abstract in Greek, table of contents, chapters of the main part of the thesis, bibliographical references and appendices. The page size is A4. The elements "Summary" and "Content", are not numbered and the relevant pages may be numbered in Roman numerals. The chapters and any subchapters of the main part of the thesis are numbered (e.g. Chapter 2, Section 2.1, Subsection 2.1.1, etc., up to four-digit numbering). The titles of Chapters are written in bold capital letters, while the titles of Sections are written in bold small letters. The first page of the first chapter of the main part, is also the page from which the page numbering starts (and is referred to in the table of contents). Tables and figures are captioned and numbered by chapter, e.g. Table 2.1, Figure 3.2 and so on). Fonts can be Times New Roman or Arial and 11 or 12 point size. The equations are also numbered by chapter, which is placed in parentheses on the right-hand side of the page, in the order of the relevant equation. Appendices should also be numbered and titled (e.g. Appendix A1, Appendix A2, etc.).

## **Article 9 Scholarships**

The Aristotle University of Thessaloniki may grant reciprocal scholarships to postgraduate students, with the obligation to support the educational process and provide auxiliary teaching work.

The Postgraduate Program awards excellence scholarships. The terms, rights, and obligations for granting the scholarship are outlined in the relevant announcement following a decision by the Program Committee.

## **Article 10**

### **Teaching Staff**

The teaching work of the Interdepartmental Postgraduate Program (D.P.M.S.) is assigned by the competent authority to the following categories of instructors:

- a)** Teaching and Research Staff (D.E.P), Special Teaching Staff (E.E.P.), Laboratory Teaching Staff (E.DI.P) and Special Technical Laboratory Staff (E.T.E.P.) of the School or other Schools of the same or another Higher Educational Institution (A.E.I.) or Higher Military Educational Institution (A.S.E.I.), with additional employment beyond their legal obligations, if the MSc has tuition fees,
- b)** Emeritus Professors or retired members of the participating Schools or other Schools of the same or another Institution.
- c)** Cooperating instructors
- d)** Appointed lecturers
- e)** Visiting professors or visiting researchers
- f)** Researchers and special operational scientists of research and technological institutions of Article 13A of Law No. 4310/2014 (A' 258) or other research centers and institutes in Greece or abroad.
- g)** Scientists of recognized prestige, who have specialized knowledge and relevant experience in the scientific area of the MSc.

At the beginning of the program, a permanent member of the Teaching and Research Staff of the program is appointed for each postgraduate student as an academic advisor. The role of the Academic Advisor is to monitor the progress of students' studies, to be informed by the instructors about any continuous absences of students under their responsibility, and to ensure that students are informed (via the Secretariat) that such absences may result in failure in the course. Additionally, the Academic Advisor provides assistance with the selection of the postgraduate thesis, taking into account the research interests of the postgraduate student. Postgraduate students are required to contact their Academic Advisor for any issue that may affect the smooth progression of their studies.

The academic advisor provides necessary guidance to the postgraduate student in order to cope with the requirements of the Master's Program.

The academic advisor gets in touch with each student which he/she is responsible for, at least twice each semester.

The duties of the academic advisor among others, include:

- Identifying the needs and research interests of postgraduate students, supporting their inclinations and skills and encouraging them to pursue scientific fields that match with their interests.
- Informing and facilitating contact between postgraduate students and the administration bodies of the Master's Program, as well as administrative services.
- Providing assistance in drafting their individual semester study plan and select the topic of their Master's Thesis.

The academic staff, the administrative personnel, and the relevant services of the institution, collaborate and support academic advisors in their work. They take into consideration information, observations, suggestions, and requests from advisors,

regarding any deficiencies or dysfunctions that create issues for students, as well as proposals for addressing them.

Upon the recommendation of the Coordinating Committee, doctoral candidates are assigned teaching work under the supervision of an instructor of the MSc. Such work is defined as assisting the Teaching Research Staff (D.R.P.) in their teaching work, the training of students, the conduct of laboratories, laboratory exercises and the supervision during exams.

Instructors, during the period they are on sabbatical or suspension, may provide teaching work for the MSc, if they consider that their program allows it, provided of course that under the circumstances this is practically feasible, a matter to be decided by the competent authorities on a case-by-case basis.

## Article 11

### Program Revenue – Financial Management Procedure

The MSc is funded by postgraduate students' tuition fees. Any other potential sources of funding (e.g. the budget of the Aristotle University of Thessaloniki, Donations, Endowments, Bequests, Public Sector's Sponsorships, European Union's Research Programs or other International Organizations, if the categories of expenditure are eligible, Special Account for Research Funds AUTH, any other legitimate reason), will be used to upgrade the education and training offered to postgraduate students and potentially to reduce the tuition fees.

The payment of the tuition fees, amounting to 6000,00 € per study cycle for EU citizens and 9000,00 € for third country citizens, is carried out in parts by the student himself or by a third party, either a natural or legal person, on behalf of the student, within the months of September for the 1st and 3rd semester and February for the 2nd semester, in equal instalments of 2000,00 € and 3000,00 € respectively. Specifically, following the announcement of selection results for admission to the 1st semester of studies, a prepayment of €500.00 must be made within 1 month. This prepayment is deducted from the 1st installment. Failure to meet this deadline results in the registration being considered invalid, and the next eligible candidate will be invited to enroll.

The management of the resources of the MSc program is handled by the Special Account of Research Funds (E.L.K.E.) of the Aristotle University of Thessaloniki.

The resources of the MSc programs are distributed as follows:

- a)** Thirty percent (30%) of the total income from tuition fees, is withheld by the E.L.K.E. This amount includes the percentage withheld for the E.L.K.E.'s financial management of the MSc programs.
- b)** The remaining amount of the total income of the MSc, is available to cover the operating costs of the MSc.

The distribution of the 30% income, as determined by a decision of the AUTH's Administrative Council, is defined as follows:

Ten percent (10%) is withheld by the Special Account Research Funds, as management expenses.

The 10% that will be returned to the participating Schools of the MSc program, will be distributed among the Schools based on the percentage of course coverage time. For example, for 10 hours: If School 1 has 6 hours, School 2 has 3 hours, and School 3 has 1 hour, then School 1 will receive 60% of the distributed amount, School 2 will receive 30%, and School 3 will receive 10%.

In case of termination of operations for any reason, the surplus will be distributed among the Schools according to the same algorithm.

The 2% will be allocated to cover operational expenses of the institution, specifically for the needs of the Graduate Studies Support Service.

The 8% will be allocated to the Faculty of Engineering.

The above allocation may be modified by decision modified by decision of AUTH's Administrative Council.

The D.P.M.S. prepares an analytical budget for the five (5) years of operation in accordance with the legislation in force, which includes all the resources of the program and its operating costs.

#### **Article 12**

##### **Administrative Support – Material/Technical Infrastructure**

For the operation of the MSc program, the entire existing material/technical infrastructure of the participating Schools will be utilized. Additionally, classrooms of the participating Schools will be allocated for teaching purposes. In addition, after agreement and if it is financially feasible, specialized scientific instruments, equipment and devices belonging to the Aristotle University of Thessaloniki in general or to Institutions and Institutions of the public or private sector may be used. The cost of the use of such instruments and devices will be taken over by the D.P.M.S.

The administrative and secretarial support of the MSc program will be provided by the Secretariat of the leading School in collaboration with the Secretariat of the MSc program.

#### **Article 13**

##### **Graduation Ceremony**

The Program of Studies Committee confirms the successful completion of the studies and decides to award the Postgraduate Diploma to the graduates.

#### **Article 14**

##### **Type of Awarded Postgraduate Diploma**

The title of the Postgraduate Diploma is a public document and is awarded from the D.P.M.S. «Aerial Autonomous Systems».

The Postgraduate Diploma is issued by the Secretariat of the Interdepartmental Postgraduate Program (D.P.M.S.). The diploma includes the Schools involved in the D.P.M.S., the emblem of the institution, the date of completion of the studies, the date of issuance of the Postgraduate Diploma, the graduation protocol number, the title of the D.P.M.S., the details of the postgraduate student, and the evaluation grade: Good, Very Good, Excellent.

Before the awarding of the Postgraduate Diploma and after the successful completion of the Interdepartmental Postgraduate Program, a certificate of successful attendance and completion of the program may be issued to the graduate.

In addition to the Postgraduate Diploma, a Diploma Supplement is issued [Article 15 of Law 3374/2005 and Ministerial Decision F5/89656/BE/13-8-2007 (FEK 1466, Part B)], which is an explanatory document that provides information about the nature, level, education framework, content, and status of the studies successfully completed. It does not replace the official Postgraduate Diploma or the detailed transcript of grades issued by the Institutions.

#### **Article 15 Plagiarism**

When any postgraduate work submitted, the postgraduate student is required to indicate if he/her has used the work and opinions of others.

Copying is considered a serious academic offense. Plagiarism includes copying someone else's work as well as using someone else's work—published or unpublished—without proper citation. Presenting any supporting material, even from the postgraduate student's own studies, without appropriate citation can lead to the School's Assembly decision for deletion.

In the above cases—and following a recommendation from the supervising professor—the School's Assembly may decide to expel the postgraduate student.

Any academic misconduct or violation of academic ethics is referred to the Coordinating Committee of the Interdepartmental Postgraduate Program for assessment and recommendation on how to address the issue to the Program of Studies Committee. The offences of copying or plagiarism and in general any violation of the provisions on intellectual property by a postgraduate student during the writing of coursework or the preparation of a postgraduate thesis are also considered as infringements.

For violations of ethical rules and quality of studies, responsible is the Ethics Committee of the Institution.

## Article 16

### Certification – Evaluation of Postgraduate Programs

After the decision to establish an Interdepartmental Postgraduate Program and before the start of its operation, certification from the Hellenic Authority for Higher Education (H.A.H.E.) is required according to paragraph c) of article 8, paragraph 1 of Law 4653/2020 (FEK A' 12). Following their establishment, Postgraduate Programs are periodically certified, according to subparagraph bb) case b) of paragraph 1 of article 8 of Law 4653/2020, within the framework of the evaluation of the academic School to which they belong.

In case the decision to establish the Interdepartmental Postgraduate Program is modified, a new certification by the Hellenic Authority for Higher Education (H.A.H.E.) is required, if the modification concerns elements such as the scientific subject, the purpose of the program, the learning outcomes, the qualifications obtained upon successful completion, and the specializations that award different diplomas.

The Postgraduate Programs of each School, including interdisciplinary, interinstitutional, and joint Postgraduate Programs, where the School provides administrative support, are evaluated as part of the periodic evaluation/certification of the academic unit by the Hellenic Authority for Higher Education (H.A.H.E.). In this framework, the general evaluation of the work carried out by each D.P.M.S, the level of fulfilment of the objectives set at the time of its establishment, its sustainability, the absorption of graduates in the job market, the level of its contribution to research, its internal evaluation by postgraduate students, the feasibility of extending its operation, as well as other elements relating to the quality of the work produced and its contribution to the national strategy for higher education.

If, at the stage of its evaluation, a MSc is deemed not to fulfill the conditions for its continued operation, its operation is completed with the graduation of the already enrolled students in accordance with the founding decision and the regulations for postgraduate and doctoral programs of study.

#### **Internal Evaluation MODIP**

In order to ensure and improve the quality of the D.P.M.S., the Quality Assurance Unit of the Aristotle University of Thessaloniki (MO.DI.P.) carries out a periodic internal evaluation of the D.P.M.S. within the framework of the Internal Quality Assurance System of the Institution and in accordance with the instructions and guidelines of the H.A.H.E.

The obligations of the Administrative Bodies and the lecturers of the D.P.M.S., include all the procedures provided for, based on the instructions and guidelines of the MO.DI.P.-A.U.TH. for the internal and external evaluation and certification of the Programs of Studies and academic units.

#### **Evaluation of Teaching Staff and Courses by the students**

With the sole purpose of improving the level of studies of the D.P.M.S. and with absolute assurance of anonymity, students are invited to evaluate the courses and the lecturers of each semester.

In order to ensure the uniform maintenance of the statistical data and the extraction of usable conclusions for the educational work of the Schools and the Institution as a whole, the evaluation questionnaires are prepared by MO.DI.P. and may be partially differentiated, based on the particular characteristics and needs of each academic unit and/or each course. They are completed electronically.

The evaluation is conducted under the responsibility of each School's Internal Evaluation Team, in collaboration with MO.DI.P. of AUTH, and is carried out through MO.DI.P.'s Quality Management Information System. The Schools' administration and Internal Evaluation Teams, are required to take systematic actions to ensure student's participation in the evaluation, following the guidelines of MO.DI.P. and relevant decisions of the Senate.

The Internal Evaluation Team (OMEA) of each School monitors, through the Quality Management Information System of MO.DI.P. (Quality Assurance Unit) at Aristotle University of Thessaloniki, the percentage of student's participation in the evaluation process. Analyzes the related results and informs the Administrative Bodies of the Postgraduate Program and the corresponding academic unit accordingly. The evaluation questionnaires are specific to each taught course and each instructor individually.

The Administrative bodies of the D.P.M.S. and the academic unit, in cooperation with the School's Internal Evaluation Team, are required to study the evaluation results, announce their findings, decide on the publication of the summary results of the evaluation, when deemed necessary and in any case after the announcement of the grades of the semester's courses, in accordance with the current legislation for the protection of personal data. They are also responsible for taking actions to address any identified issues.

## **Article 17**

### **Studies Guide**

The MSc publishes a Study Guide in order to inform postgraduate students about its operation. The Studies Guide may include:

- 1.** General Information as well as useful electronic information about the Institution and the School, especially about administrative services or collective bodies that the postgraduate student can contact for the successful completion of his/her studies.
- 2.** The purpose, the subject of the D.P.M.S. and the qualifications acquired after the award of the Diploma of Postgraduate Studies.
- 3.** The academic calendar, which includes the start and end dates of academic semesters, examination periods, holidays, periods for the presentation of postgraduate theses and any other obligations such as internships, seminars, conferences, etc.
- 4.** The course program, the credit units, the teaching staff, the rights and obligations of postgraduate students.
- 5.** The official language of teaching and preparation of the postgraduate thesis.
- 6.** The administration of the D.P.M.S.
- 7.** Databases.
- 8.** Library's use.
- 9.** Services to postgraduate students.

**Article 18**  
**Transitional Arrangements**

Any issue that arises in the future, that is not covered by the relevant legislation or the for Postgraduate Studies Regulation of AUTH, and the present Regulation of Operation of the Interdepartmental Postgraduate Program (D.P.M.S.), will be addressed with decisions of the competent collective bodies and amendments to the relevant Regulation."