



School of Medicine

Postgraduate Programme

***‘Advanced Cardiopulmonary Practice –
Cardiovascular Perfusion Science’***

STUDY GUIDE

Academic year 2023–24

The School of Medicine

School of Medicine, Aristotle University of Thessaloniki Campus, 54124
Thessaloniki

www.med.auth.gr

info@med.auth.gr

T2310-999900

F2310-999293

<https://www.facebook.com/MedicalSchoolAUTH/>

<https://twitter.com/AuthMedicine>

<https://www.linkedin.com/in/τμήμα-ιατρικής-απθ-160336107/>

The School of Medicine is one of the four schools of the Faculty of Health Sciences at Aristotle University of Thessaloniki.

It was established as the Medical School of the Aristotle University of Thessaloniki in 1942 by Government Gazette No. 28 of 18 February 1942, Series A, during the German Occupation of Greece. The reasons for the 17-year delay in its establishment, relative to the original founding of the University of Thessaloniki, are to be found, amongst other factors, in the resistance put up by the city's medical establishment at the time, for professional reasons. The number of students in its first academic year (1942–43) stood at 385, of whom 274 were men. Some of the pressing problems faced by the school, as detailed in the commemorative album '63 Years of the Medical School', included the inability of elected lecturers to take up their posts from Athens, the suspension and re-evaluation of professors following liberation, and shortcomings in infrastructure. The first professors to hold permanent chairs at the school were: N. Michalakeas, A. Kotsavitis, S. Samaras, N. Klisiounis, K. Iliakis, G. Pagkalos, G. Hatzivassiliou, G. Deligiannis, K. Alexandridis, M. Petzetakis, P. Fotinos and S. Veras.

The Medical School of the Aristotle University of Thessaloniki was renamed the School of Medicine of the Faculty of Health Sciences in accordance with Article

30(1) of Law 1268/1982 and Article 6(11) of Law 1351/1983. By Presidential Decree 247/2004 (Government Gazette 235/30 November 2004, Series A) the Faculty of Health Sciences of the Aristotle University of Thessaloniki was abolished and the School of Medicine, which had been attached to it, reverted to its former status as the Medical School. The date set for the renaming of the School of Medicine to Medical School was 11 July 2005 (Senate Resolutions 2770/29 June 2005 & 1205/27 July 2005, Rector's of the Aristotle University of Thessaloniki). By Presidential Decree 98/2013 (Government Gazette 134/5 June 2013, Series A), the Medical School was renamed the School of Medicine of the Faculty of Health Sciences.

The aim of the School of Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, is to educate its students and to produce high-calibre medical professionals for the country. Another objective is to produce significant research output, both independently and in collaboration with other research centres in Greece and abroad. Efforts are being made to ensure that students' engagement with the research process begins as early as their undergraduate studies, through their participation in various research programmes run by the Laboratories and Clinics, the results of which are presented, primarily, at the Scientific Conference of the School of Medicine (ESISAPTH), held every two years.

The School's **primary educational objective** is, first and foremost, to instil in students the ethical values that govern the practice of the medical profession, and to ensure they acquire the scientific knowledge that will enable them to diagnose and manage effectively the general medical problems they will need to address after graduating from the School. At the same time, the School's academic staff work in hospitals and other public health units, thereby making a significant contribution to society. The School of Medicine offers a six-year degree programme, and the undergraduate courses for the first five years are organised into semesters. During the first few years, students mainly study basic sciences, whilst from the third year onwards they begin their clinical training. Upon successful completion of their studies, students are awarded a Bachelor of Medicine (which complies with point 5.1.1 of Annex 5 to EU Directive

2005/36/EC) and which enables them to practise the medical profession in both the public and private sectors. The School offers fifty-four organised postgraduate programmes, 14 of which are inter-Schoolal or inter-institutional, with the School of Medicine at Aristotle University of Thessaloniki acting as the lead department.

The School's governing bodies

In accordance with the provisions of Law 4485/2017 (Government Gazette A' 114), the School's governing bodies

are:

- 1) **the Assembly,**
- 2) **the Governing Board,**
- 3) **the Chair of the School, and**
- 4) **the Deputy Chair.**

Postgraduate Programme
‘Advanced Cardiopulmonary Practice – Cardiovascular Perfusion
Science’

The School of Medicine of the School of Health Sciences organises and continues to run, during the 2025–26 academic year, a Postgraduate Programme (hereinafter referred to as the ‘Programme’) entitled **‘Advanced Cardiopulmonary Practice – Cardiovascular Perfusion Science’** (Master of Science in Advanced Cardiopulmonary Practice – Cardiovascular Perfusion Science).

The aim of the Postgraduate Programme is the study, research and the provision of postgraduate education in the applied physiology of the cardiovascular and respiratory systems, as well as in technologies related to extracorporeal circulation and the devices used during cardiac surgery. The curriculum does not replace the specialisation programme for healthcare professionals in the relevant field, but aims to provide all the relevant theoretical knowledge, ranging from the basic sciences to patient management guidelines and the specialisms providing complementary therapies.

The aim of the postgraduate programme is to educate postgraduate students in contemporary scientific developments and to provide a high standard of theoretical and practical knowledge in the field of advanced cardiopulmonary applications and extracorporeal circulation.

The main objectives of establishing the Postgraduate Programme are as follows:

- Postgraduate academic education and the training of high-calibre scientific personnel in the field of applied physiology of the cardiovascular and respiratory systems, as well as in the application of modern techniques for supporting the heart and lungs.
- At the same time, the Postgraduate Programme enables graduates to proceed to obtain the professional title of ‘Specialist in Extracorporeal Circulation’, in accordance with the relevant legislation (Government Gazette 4972/07.11.2018). The Postgraduate Programme is recognised by the relevant European body, the European Board of Cardiovascular Perfusion (, EBCP).

- The guiding philosophy of the Postgraduate Programme is, on the one hand, to provide postgraduate students with a solid foundation, up-to-date knowledge, methods and fundamental principles that will enable them to engage in continuous professional development, improve and foster a spirit of innovation through the application of modern technologies; and, on the other hand, to cultivate in them the critical and creative skills required for socially and ethically responsible professional practice. An integral part of the educational process is the work placement undertaken by postgraduate students.

- It is the duty of all those involved in the operation of the Postgraduate Programme to ensure the quality and continuous improvement of every aspect of the programme, the educational process and research, and to promote collaboration with related programmes and centres both in Greece and abroad.

- To train healthcare professionals with the necessary skills for successful careers in the private, public and academic sectors.

- To contribute to the staffing of health structures and services in the public and private sectors, both in Greece and abroad.

The learning outcomes and qualifications of those who successfully complete the Programme are as follows:

- Knowledge: They possess specialised knowledge, some of which is cutting-edge in a field of work or study and forms the basis for original thinking. They possess a critical awareness of knowledge issues within a field and its interconnection with other fields.

- Skills: They possess specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and processes and to integrate knowledge from different fields.

- Competences: They are able to manage and transform work or study environments that are complex, unpredictable and require new strategic approaches. They take responsibility for contributing to professional knowledge and practices for the evaluation of team performance strategy.

The structure, content and organisation of the modules and teaching methods are geared towards deepening knowledge and linking research with teaching. Specifically, upon completion of their postgraduate studies, students will be able to:

- Process biomedical data and draw reliable conclusions.
- To understand statistical studies.
- Define basic statistical concepts such as variables, statistical risk and errors.
- To design questionnaires correctly and draw the correct scientific conclusions.
- To make use of IT applications in healthcare.
- To appreciate the importance of biomedical technologies such as augmented reality, virtual reality, robotics, artificial intelligence, 3D printing, tissue engineering and chatbots, and, fundamentally, extracorporeal circulation engineering

All those involved in the operation of the Postgraduate Programme are obliged to ensure the quality and continuous improvement of every aspect of the programme, the educational process and research, and to promote collaboration with related programmes and centres both in Greece and abroad

The **broader** operational **objectives** of the Postgraduate Programme aim to:

- To establish a strengthened framework for collaboration with universities and research centres in Greece and abroad,
- In promoting students' research work at international and Greek conferences, at which students will be invited to present their research papers,
- In attracting prospective students from other universities, both in Greece and abroad.

Governing Bodies of the Postgraduate Programme

The bodies responsible for the administration and operation of the Postgraduate Programme are:

The **Senate** of the Aristotle University of Thessaloniki, which exercises the powers as defined by current legislation.

The **Postgraduate Studies Committee** of the Aristotle University of Thessaloniki, comprising the Vice-Chancellor, as Chair, who is responsible for academic matters, one (1) member of the academic staff (D.E.P.) from each School, and one member drawn from the categories of Special Educational Staff (E.E.P.), Laboratory Teaching Staff (E.D.I.P.) and Special Educational Staff (E.E.P.)

The **Curriculum Committee**, which exercises the powers set out in paragraph 2 of Article 82 of Law 4957/2022.

The **Coordinating Committee (S.E.)** consists of the Director of the Postgraduate Programme and four (4) members of the School's Teaching and Research Staff (D.E.P.) who specialise in a subject area relevant to the programme and undertake teaching duties within the Postgraduate Programme.

The **Director of the Postgraduate Programme** is appointed from amongst the academic staff of the School

Academic Calendar

The academic year begins on 1 September and ends on 31 August of the following year. The teaching programme for each academic year is divided into two semesters, the winter semester and the spring semester, each lasting 13 weeks. Each semester is followed by an examination period, with a resit period in September. Both last for two weeks.

The academic calendar for each year is determined by the School's General Assembly, which takes place in April or May of the preceding academic year. It is aligned with the Academic Calendar of the Aristotle University of Thessaloniki, which is approved each year by the Senate and published at https://www.auth.gr/academic_calendar/.

There are no classes on the following days:

- 26 and 28 October (public holiday).

- 17 November (anniversary of the Polytechnic uprising).
- From Christmas Eve until the day after Epiphany.
- 15 and 16 March: Clean Monday – Carnival holiday.
- 25 March (public holiday).
- From Holy Monday until Thomas Sunday.
- 1 May: May Day (Labour Day – strike).
- On the day of the student elections.
- Whit Monday.

At the start of each semester, course registration for the current semester takes place. Students are required to register for all courses for the current semester. The deadline for course registration is announced by the Postgraduate Programme Secretariat. Enrolment and attendance declarations for the courses selected by the student for each specific academic semester are recorded electronically and automatically by the Aristotle University of Thessaloniki's Electronic Secretariat Services (sis.auth.gr) in the student's personal record.

Winter Semester

Enrolment	Courses	Examination Period
1–15 October 2023	23 October 2023 – 2 February 2024	12 February 2024 – 23 February 2024

Spring Term

Enrolment	Courses	Examination Period
	4 March 2024 – 16 June 2024	24 June 2024 – 5 July 2024

Festivals / Public Holidays

Local Festivals	National Holidays	Religious Festivals
26 October 2023	28 October 2023	24 June 2024
	17 November 2023	
	25 March 2024	
	29 April – 10 May 2024	
	1 May 2024	

Holidays

Christmas	Easter	Summer
24 December 2024 –7 January 2024	29 April 2024 – 10 May 2024	July – August 2024

Postgraduate Diploma Awarded

The Postgraduate Programme awards a Postgraduate Diploma (PGD) entitled: 'Advanced Cardiopulmonary Applications – Extracorporeal Circulation Techniques'.

Successful completion of the programme leads to level seven (7) of the National and European Qualifications Framework in accordance with Article 47 of Law 4763/2020 (A' 254).

Categories of candidates for Postgraduate Study Programmes

Holders of first-cycle degrees from university departments in Greece and abroad are eligible for admission to the Postgraduate Programme (paragraph 1, Article 43, Law 4485/2017) and, in particular, graduates of Schools of Health Sciences and Polytechnic Schools, Schools of Biological and Physical Sciences, Nursing from university departments in Greece or equivalent recognised departments abroad, as well as graduates of Technical Educational Institutes (TEI) (Nursing, Medical Laboratories).

Final-year students from the above-mentioned Schools may also apply for the Postgraduate Programme by submitting a Certificate of Completion of Studies.

The recognition of foreign qualifications for admission to a postgraduate programme is carried out by the academic departments. Even if a qualification has been recognised as equivalent by DOATAP, applicants are not required to submit this certificate. If an equivalence certificate is provided, the procedure is again carried out by the School.

The Academic Departments are responsible solely for the academic recognition of qualifications and not for their equivalence. Responsibility for the equivalence of qualifications remains with DOATAP.

Applicants who have already applied or are currently enrolled on postgraduate programmes provided they submit an individual recognition certificate from DOATAP, are exempt from this requirement, and their application or continuation of studies is assessed on the basis of the criteria set out in the new law.

Method of verifying the general type of first-cycle degree (Bachelor of Arts, Master of Arts & Doctor of Philosophy):

1. Authentication is carried out:
 - 1.1. by means of a Hague Apostille,
 - 1.2. by the submission of the degree certificate and simultaneous notification of the foreign university by the applicant. This notification must be accompanied by an official email from the foreign university, enabling the Secretariat of the relevant academic department to verify the authenticity,
2. where the specialisation conferred by the degree is required, verification is carried out by checking the information stated on the degree certificate and the detailed transcript or the Diploma Supplement,
3. where we are interested in the grade, we use the correspondence table in accordance with the procedure published by DOATAP,
4. academic recognition applies solely to this specific procedure; it is formalised by a decision of the School Assembly and **is not issued to the applicant**. If the applicant wishes to obtain a relevant certificate, they must apply to DOATAP for equivalence.

The maximum number of students admitted per year is set at thirty (30) postgraduate students. The Postgraduate Programme cannot operate with fewer than seven (7) postgraduate students.

Following a decision by the School Assembly, the Postgraduate Programme announces places through an open application process. In particular, the call for applications sets out the admission requirements, the number of places available, categories of candidates, the admission procedure, selection criteria, etc., the deadlines for submitting applications, and the supporting documents required.

The call for applications for postgraduate students is published on the School's website. Applications, accompanied by the necessary supporting documents, must be submitted to the School's Secretariat, either in hard copy or electronically.

The supporting documents that applicants must submit include:

- I. Application form for the Postgraduate Programme
- II. A copy of a degree or degrees from a Greek university or technical college in a relevant subject area, and a certificate of equivalence from DOATAP, in the case of graduates from universities abroad.
- III. A transcript of academic records showing detailed marks for all undergraduate modules, including the degree classification.
- IV. A curriculum vitae detailing the candidate's academic background, teaching and/or professional experience, and academic and social activities.
- V. A certificate of proficiency in at least one language other than the language in which the Postgraduate Programme is taught. The following is required: (a) proof of language proficiency at level B2 (good knowledge) or higher, in accordance with the Council of Europe's framework, which is accepted by the ASEP, or TOEFL (English) with a score of at least 87 on the Internet-based test, or (c) A secondary school leaving certificate or a higher education degree from a university in Greece (recognised by DOATAP) or d) a degree in the relevant language and literature. For foreign nationals who do not hold a qualification from a Greek-language education system, an additional certificate of proficiency in the Greek language from a School of Modern Greek at a university, or a Greek secondary school leaving certificate, or a degree from a Greek-language university department is required. If the candidate is proficient in a second foreign language, the relevant certificate must also be submitted. If the candidate does not hold a foreign language qualification, they will be assessed orally by the Selection Committee on their ability to understand and write in a foreign language.

To demonstrate proficiency in Slavic languages, candidates must submit a certificate from the Institute of Modern Greek Language (IMXA) or a qualification from a recognised institution. Foreign nationals must submit a certificate of proficiency in the Greek language from a university School of Modern Greek. In the case of graduates from a Greek-language

university department, this degree also serves as a certificate of proficiency in the Greek language.

VI. Evidence of any research and writing activities, participation in student mobility programmes, as well as professional experience relevant to the field of the Postgraduate Programme.

VII. A photocopy of the applicant's identity card.

In addition to the above supporting documents, candidates may submit the following, if available:

- Letters of recommendation from academic staff, employers or research supervisors.
- A postgraduate degree or degrees from a Greek university or an equivalent institution abroad.
- A doctoral degree from a Greek university or an equivalent institution abroad.
- Certificates attesting to a good or very good knowledge of French, German, Italian, Spanish or Russian. If the candidate is a foreign national, they may also submit certificates attesting to their knowledge of the Greek language.
- Supporting documents relating to any research and writing activities, participation in student mobility programmes, and professional or relevant experience.

The above supporting documents must be submitted either as certified copies or as simple photocopies.

Foreign applicants must, as a prerequisite for admission to the Postgraduate Programme, provide a certificate of proficiency in Greek or a language proficiency certificate at level B2 or above.

The method of assessment (scoring) of the above criteria falls within the remit of the Selection Committee, subject to final approval by the School Assembly

The **selection process** for candidates, following a decision by the School Council, is carried out by a competent three-member Selection and Examination Committee comprising academic staff who are supervising postgraduate research.

The Committee draws up a complete list of all candidates and, following the relevant checks, it rejects those who do not meet the minimum criteria set by the

School and invites, where applicable, the shortlisted candidates who have met the prerequisites to an interview.

The scoring of candidates for admission to the Postgraduate Programme is calculated as follows:

Selection is based on the total number of points resulting from the combined assessment of the criteria, as follows:

- 1) Overall degree mark, multiplied by a factor of 1 (maximum 10 points).
- 2) Previous research activity or participation in educational programmes for additional vocational training, further training or specialisation in a relevant subject area is awarded a maximum of 5 marks.
- 3) Any professional experience or intention to work in the scientific field of extracorporeal circulation techniques and extracorporeal device technology is awarded 1–10 marks
- 4) Knowledge of a second foreign language at a minimum of B2 level (5 marks per language, up to a maximum of ten (10) marks).
- 5) Computer skills are awarded 1–10 marks.
- 6) The mark for the oral interview is multiplied by a factor of 3.5 (up to a maximum of 35 marks).

The selection of successful candidates is carried out by the Three-Member Selection and Examination Committee. The list of successful candidates is ratified by the School Assembly.

In the event of a tie, all candidates with the same score are admitted. The candidate selection process is completed by 31 October.

Appeals against the candidate selection process may be lodged within five (5) days of the announcement of the results

Personal interview

During the interview, candidates are assessed on the personality traits they demonstrate, as well as on the depth of their knowledge based on their professional and research experience (single criterion).

In the event that any places remain unfilled, these will be filled until the stipulated admission quota is exhausted (as specified in the call for applications), either by ranking successful candidates in descending order of

their total marks, provided these are at least, for example, thirty (30) marks, or by issuing a supplementary call for applications to fill the vacant places.

The final list of successful candidates and any reserve candidates, once approved by the School Assembly or the Curriculum Committee, is published on the School's website.

Should a candidate fail to enrol within the specified deadline, this shall be deemed a refusal to accept the place, and the place shall be filled by the next successful candidate in order of merit.

Duration

The duration of study on the Postgraduate Programme leading to the award of the Postgraduate Diploma (M.Sc.) is set at a minimum of, for example, three (3) semesters, which includes the time required for the preparation and assessment of the postgraduate dissertation.

The maximum permitted duration for completion of studies is set at five (5) semesters by decision of the School Assembly.

Postgraduate students are permitted ***to study on a part-time basis***, the duration of which may not exceed twice the duration of full-time study. Part-time study is available to those who can demonstrate that they work at least twenty (20) hours per week and to non-working postgraduate students who are unable to meet the minimum requirements of the 'full-time' study, and for specific, exceptionally serious cases¹, which are decided upon by the School Assembly and are included in the Postgraduate Studies Regulations.

Furthermore, postgraduate students who have not exceeded the standard duration of study may, upon submission of a relevant application, be granted ***a leave of absence***, which may not exceed two (2) consecutive semesters. During the suspension, the postgraduate student loses their student status. The period of suspension is not counted towards the maximum duration of standard study.

¹ For example: illness, heavy workload, serious family circumstances, military service, force majeure.

Upon resuming their studies, postgraduate students return to full-time student status with all the rights and obligations provided for by the Postgraduate Studies Programme.

Furthermore, upon submission of a reasoned application prior to the completion of the standard duration of study, a postgraduate student may apply for ***an extension of their studies***, for up to two (2) semesters, to enable them to complete their studies or write their postgraduate dissertation. Upon expiry of the extension, the postgraduate student is removed from the Postgraduate Programme by decision of the School assembly or the Programme Committee.

Applications by postgraduate students for **part-time study, suspension or extension of studies** must be submitted before the start of the academic semesters.

With regard to retaking outstanding modules, postgraduate students are entitled to retake a module up to three times.

In matters ***relating to the expulsion of a student***², the decision is taken by the School Assembly following a proposal from the Coordinating Committee, which determines the conditions for resits and the grounds for expulsion and incorporates these into the Postgraduate Studies Regulations.

Postgraduate students enrol in and participate in the Postgraduate Programme under the terms and conditions set out in the Postgraduate Studies Regulations. Postgraduate students are entitled to all the rights, benefits and facilities provided for undergraduate students, **with the exception of** the right to receive free course textbooks. The School provides support (*see relevant provisions*) to postgraduate students with disabilities or special educational needs³.

The Postgraduate Programme accepts up to five (5) individuals as ‘visiting participants’ (auditors) who pay tuition fees, meet the requirements of Article 3 and wish to attend up to four individual modules (subject to agreement with the lecturers) without having been admitted to the Postgraduate Programme.

² Indicative grounds for expulsion could include: a) insufficient progress by a postgraduate student (as evidenced by non-participation in the educational process: attendance, examinations), b) failure to fulfil other obligations set out in the Regulations, c) conduct that breaches academic ethics, such as plagiarism, and d) a request by the postgraduate student themselves.

³ These should be set out in detail by the Departments (e.g. examination procedures, access to premises, teaching laboratories, etc.).

‘Participating visitors’ do not receive a Postgraduate Diploma, but a certificate of attendance, provided they have fulfilled the obligations arising from the requirements of each module. Indicative tuition fees: 400 euros for each individual module

Tuition Fees

The Postgraduate Programme stipulates tuition fees set at three thousand euros (3,000) for each cycle of study. Payment is made by the student themselves (or by a third party, whether a natural or legal person, on the student’s behalf) into the ELKE account.

Tuition fees are paid into the Special Research Funds Account of the Aristotle University of Thessaloniki. Failure to meet financial obligations constitutes sufficient grounds for the non-award of the degree or even expulsion from the Postgraduate Programme. The resources of the Postgraduate Programme may be derived from:

- tuition fees,
- donations, grants and financial support of any kind,
- bequests,
- funds from research projects or programmes, in particular those of the European Union
- the Aristotle University of Thessaloniki’s own resources
- any other lawful source.

Tuition fees shall be paid in three (3) equal instalments: the first upon enrolment, the second before the start of the second semester, and the third before the start of the third semester, into a bank account held for this purpose in the Aristotle University of Thessaloniki Special Research Funds Account.

A postgraduate student’s application for a refund of one semester’s tuition fees is permitted only if they cite and provide sufficient evidence of an exceptionally serious reason for discontinuing their studies, and this application must be submitted to the Postgraduate Studies Programme no later than ten (10) days after the start of the semester’s lectures.

Postgraduate students who meet the criterion of academic excellence during their first cycle of study are eligible for free tuition on the basis of financial or

social criteria, which corresponds, as a minimum, to a mark of seven and a half out of ten (7.5/10) or higher. The specific terms and conditions governing the right to free tuition on postgraduate programmes are set out in the applicable legislation and in the decision of the Minister of Education and Religious Affairs. The number of students exempt from fees must not exceed thirty per cent (30 per cent) of the total number of students admitted to the postgraduate programme, and this applies to enrolment in a single postgraduate programme. If the number of eligible students exceeds the above percentage, they are selected in order of ranking, starting with those with the lowest income.

The application for exemption from tuition fees is submitted by the applicant to the School following the completion of the student selection process for the postgraduate programme. Exemption from the obligation to pay tuition fees is granted exclusively for enrolment in one (1) postgraduate programme organised by a higher education institution in Greece. The Postgraduate Studies Regulations set out the necessary procedures for the successful completion of studies and the granting of the right to tuition-free study.

Rights and Obligations of Students

Postgraduate students enrol in and participate in the Postgraduate Programme subject to the terms and conditions set out in the Postgraduate Studies Regulations. Postgraduate students are entitled to all the rights, benefits and facilities provided for undergraduate students, with the exception of the right to receive free course materials. The School is required to provide support to postgraduate students with disabilities or special educational needs.

Postgraduate students admitted to the Postgraduate Programme are required to:

1. Attend all courses of the Postgraduate Programme without fail. Attendance at lectures and seminars is compulsory. Exceptions are permitted only for serious, justified reasons. No more than three (e.g. 3) absences are permitted for each course.
2. Students must participate in all teaching and research activities.
3. They must submit their course registration forms on time each

semester.

4. They must submit the assignments required for each course within the specified deadlines.
5. To sit the examinations.
6. To submit to the Registrar's Office, together with their dissertation for assessment, a sworn statement confirming that it does not contain any plagiarised material.
7. Pay their tuition fees within the specified deadlines.
8. To have settled all their financial obligations, as well as any other obligations to the Institution, prior to the graduation ceremony. Otherwise, they will not be entitled to take the oath and/or receive their postgraduate degree.
9. If they have received a scholarship, they must undertake work in return, where this is required (tutoring, contributing to the library and research, and assisting with University services where necessary).
10. It is possible to enrol concurrently in an undergraduate programme and a postgraduate programme, or in two (2) programmes—either within the same or a different School, or at the same or a different higher education institution.
11. Students must respect and comply with the decisions of the postgraduate programme's governing bodies, as well as with academic ethics. Failure to comply with the above, without a substantiated reason, may result in failure of a module or expulsion from the programme.

Failure to comply with all of the above without a serious and substantiated reason constitutes grounds for the postgraduate student's expulsion from the programme.

Curriculum – Assessment

The Postgraduate Programme is structured over three (3) semesters.

In the first (A) semester, six (6) compulsory modules are taught, each worth four (4) ECTS credits, alongside Clinical Case Studies I, worth six (6) ECTS credits.

In the second (B) semester, six (6) compulsory modules are taught, each worth 4 ECTS, alongside clinical case studies II, worth six (6) ECTS.

In the third (C) semester, students undertake a postgraduate dissertation worth 30 ECTS and complete their clinical placements.

Clinical placements I and II are compulsory; they take place during the first and second semesters and are completed in the third semester.

Postgraduate students are required to choose one of the two clinical case observation programmes:

A) Clinical placement in advanced cardiopulmonary support, during which they are required to observe the operations of the Cardiothoracic Surgery Clinic at the AHEPA University Hospital of Thessaloniki 'ACHEPA', which collaborates with the Postgraduate Programme, for a minimum of eighty (80) hours [Decision No. 8366/27 March 2020 (B' 1459) decision], as well as to observe at least twenty (20) cardiac operations, which are recorded for each student in a special database (logbook),

B) Observation of clinical cases involving extracorporeal circulation techniques, which includes observing at least one hundred (100) surgical procedures using extracorporeal circulation at the Cardiothoracic Surgery Clinic of the P.G.N.Th. 'ACHEPA', which are recorded for each student in a dedicated database (logbook).

Attendance at lectures by postgraduate students is compulsory.

The Postgraduate Programme follows a blended learning approach, which combines face-to-face teaching with distance learning. Twenty-five per cent (25%) of the courses will be delivered through face-to-face attendance at , whilst seventy-five per cent (75%) will be delivered using modern distance learning methods. The official language of instruction for the programme is Greek. The thesis must be written in Greek.

Curriculum

First Semester [Total ECTS: thirty (30)] Six (6) compulsory modules and clinical placement I				
No.	Course title	Course (compulsory/optional)	Distance Distance	ECTS
1	Medical Physics	Y	75%	4
2	Medical Biochemistry	Y	75%	4
3	Applied Anatomy	Y	75%	4
4	Cardiac Surgery I	Y	75%	4
5	Extracorporeal Circulation Technology I (Perfusion Technology I)	Y	75%	4
6	Physiology and Pathophysiology	Y	75%	4
7	Practical Training I	Y	75%	6

Second Semester [Total ECTS: thirty (30)] Six (6) compulsory modules and observation of clinical cases II				
No.	Course title	Course (compulsory/optional)	Distance Distance	ECTS
1	Pulmonology	Y	75%	4
2	Medical Informatics – Biostatistics	Y	75%	4
3	Cardiology	Y	75%	4
4	Cardiac Surgery II	Y	75%	4
5	Perfusion Technology II	Y	75%	4
6	Clinical Pharmacology – Anaesthesiology	Y	75%	4
7	Practical Training II	Y	75%	6

Third Semester [Total ECTS: thirty (30)] Postgraduate Dissertation and completion of clinical case studies				
No.	Course title	Course (compulsory/optional)	Teaching hours	ECTS
1	Postgraduate Dissertation and completion of practical training	Y		30

Course content

FIRST SEMESTER

MEDICAL PHYSICS

Learning outcomes:

Upon successful completion of the course, students will know:

- how the knowledge and thought processes of a fundamental science, such as Physics, relate to a biological science, such as Medicine, in the endeavour to interpret biological phenomena.
- the physical principles on which many medical specialities are based.
- the basic principles governing the operation of medical instruments and medical imaging systems.

d) the use of basic instruments that are fundamental components of medical instrumentation.

Course content:

Fundamentals of Mechanics

Elements of Electricity

Gas Laws

Physics of Liquids – Laws

Applications of Physics in Electronics – Microcircuits

Lasers – Applications of Lasers in Medicine

Basic Principles of Radiation Protection

Principles of Ultrasound Operation

Principles of Computed Tomography and Magnetic Resonance Imaging

Lecturers:

Anastasios Siountas, Professor of Medical Physics, Aristotle University of Thessaloniki

Emmanouil Papanastasiou, Associate Professor of Medical Physics, Aristotle University of Thessaloniki

MEDICAL BIOCHEMISTRY

Learning outcomes:

To learn and understand:

chemical bonds and types of non-covalent interactions

of organic compounds and chemical groups of biological significance (structural and functional characteristics).

the importance of biochemistry in medicine.

the role of water, pH and buffer solutions in homeostasis;

the structure of biological macromolecules and their role in physiological and pathological conditions.

the structure and function of enzymes.

the structure and function of biological membranes and their relationship to transport and signalling.

basic laboratory skills, preparation of solutions, volumetric titration, pH measurement, application of protocols, photometric methods of qualitative and quantitative analysis, chromatography.

Course content:

- Chemical bonds and types of non-covalent interactions.
- Organically compounds of biological significance (structural and functional characteristics).
- The water molecule and its importance in biological structures and functions.
- pH and buffer solutions.
- Amino acids and proteins (structural levels, biological functions).
- Methods of protein analysis and study.
- The proteomics approach.
- Structure and role of nucleotides and nucleic acids (DNA, RNA).
- Methods for the analysis and study of nucleic acids and genomes.
- Recombinant DNA technology.
- Structure and functional characteristics of haemoglobins.
- Enzymes (basic principles and kinetics, principles of catalytic strategies, strategies for regulating enzymatic activity).
- Carbohydrates (structure and functional characteristics of monosaccharides, disaccharides and polysaccharides; glycoproteins and proteoglycans).
- Fatty acids and lipids (structure and functional characteristics).
- Structure and properties of biological membranes.
- Types of substance transport across membranes (simple and facilitated diffusion, active transport).
- Laboratory exercises to develop basic skills.

Lecturers:

[Stavros Iliadis, Professor of Biological Chemistry, Aristotle University of Thessaloniki](#)

APPLIED ANATOMY

Learning outcomes:

Upon successful completion of the course, students are expected to:

- are familiar with the basic anatomical structures of the heart and the thorax
- are able to identify the various anatomical structures of the heart, lungs and mediastinum in anatomical specimens
- are able to relate the anatomy of the heart and lungs to cardiac conditions requiring cardiac surgery
- relate anatomy to the basic surgical techniques used in cardiac and thoracic surgery

Course content:

The course content is summarised in the following areas:

- Anatomy of the heart
- Anatomy of the lungs
- Anatomy of the mediastinum
- Anatomy of the central and peripheral nervous systems
- Basic principles of endocrine gland anatomy
- Anatomy of the circulatory system (arterial and venous systems, lymphatic system)

Lecturers:

[Georgios Paraskevas, Professor of Anatomy, Aristotle University of Thessaloniki](#)

[Konstantinos Natsis, Professor of Anatomy, Aristotle University of Thessaloniki](#)

[Nikolaos Anastasopoulos, Professor of Anatomy, Aristotle University of Thessaloniki](#)

[Irin Asouhidou, Associate Professor of Anatomy, Aristotle University of Thessaloniki](#)

[Nikolaos Lazaridis, Associate Professor of Anatomy, Aristotle University of Thessaloniki](#)

[Tryfon Totlis, Associate Professor of Anatomy, Aristotle University of Thessaloniki](#)

CARDIAC SURGERY I

Learning outcomes:

Upon successful completion of the course, students are expected to:

- understand the basic physiological principles governing the function of the heart and the circulatory system
- relate the pathophysiology of heart disease to the clinical manifestations of cardiac conditions
- be able to evaluate the main findings of diagnostic tests relating to cardiology
- understand the main indications for surgical treatment of heart conditions
- become familiar with the basic techniques used in cardiac surgery to treat each condition

Course content:

The course content is summarised in the following areas:

Cardiac surgery in Greece – a historical overview

Pre-operative assessment – monitoring of the cardiac surgery patient,

Principles of cardiac anaesthesia, inotropic and vasoactive drugs,

Monitoring of cardiac surgery patients in the ICU,

Management of major post-operative complications,

Principles of surgical management of coronary artery disease,

Aortic-coronary bypass on a beating heart,

Principles of surgical management of aortic valve disease,

Principles of surgical management of mitral valve disease,

Principles of surgical management of tricuspid valve disorders,

Pericardial disorders

Lecturers:

Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki

Christos Foroulis, Professor of Thoracic Surgery, Aristotle University of Thessaloniki

Georgios Tagarakis, Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki

Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Christos Voucharas, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Eleni Argyriadou, Professor of Anaesthesiology, Aristotle University of Thessaloniki

EXTRACORPOREAL CIRCULATION TECHNOLOGY I

Learning outcomes:

Upon successful completion of the course, students are expected to:

- understand the basic physiological principles governing the function of extracorporeal circulation
- recognise the components of the extracorporeal circulation circuit
- be able to monitor the operation of an extracorporeal circulation circuit during open-heart surgery
- understand the principles and techniques of myocardial protection
- become familiar with the basic techniques of mechanical circulatory support (intra-aortic balloon pump, ECMO, VAD, etc.)

Course content:

The course content is summarised in the following areas:

- Introduction to extracorporeal circulation
- Fundamentals of acid-base balance (osmotic balance, electrolyte balance)
- Blood gas analysis (general knowledge, gas analysis during hypothermia, alpha-stat, pH-stat)

- Management of the coagulation system in extracorporeal circulation
- Principles of myocardial protection, types of cardioplegia
- Preparation of the extracorporeal circulation circuit
- Cannulation techniques in cardiac surgery
- Circuit tubing – venous reservoir
- Rotary and centrifugal pumps
- Filters, sensors
- Oxygenators: types and principles of operation
- Connection to and disconnection from the extracorporeal circulation –
Operation of the extracorporeal circulation circuit

Lecturers:

Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki

Christos Foroulis, Professor of Thoracic Surgery, Aristotle University of Thessaloniki

Georgios Tagarakis, Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki

Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Christos Voucharas, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Vasileios Grosomanidis, Professor of Anaesthesiology, Aristotle University of Thessaloniki

PHYSIOLOGY – PATHOPHYSIOLOGY

Learning outcomes:

Upon successful completion of the course, students should:

- understand the normal functioning of the heart
- understand the physiology of circulation

- be familiar with the physiology of the respiratory system
- be able to relate their knowledge of physiology to the clinical manifestations of disorders of the heart, circulation and respiratory system

Course content:

Cellular Physiology

Nervous System (special senses – motor system)

Nervous System (Autonomic Nervous System – Higher Brain Functions)

Exercise Physiology – Muscles (Skeletal and Smooth)

Cardiac muscle

Cardiovascular system (Overview of circulation – Blood – Haemostasis)

Electrical activity of the heart – Regulation

Arterial system – Peripheral circulation and regulation

Regulation of the circulatory system

Circulation in specific regions – Regulation (Coronary, brain)

Pathophysiology of the haematopoietic system

Pathophysiology of Connective Tissue Diseases

Acute kidney injury following cardiac surgery

Mechanical renal replacement therapy

Pathophysiology of the digestive system

Atherosclerotic disease

Pathophysiology of Tissue Damage

Lecturers:

[Dorothea Kapoukranidou, Associate Professor of Physiology, Aristotle University of Thessaloniki](#)

[Aristides Kritis, Professor of Physiology, Aristotle University of Thessaloniki](#)

[Kali Makedou, Professor of Biochemistry and Clinical Biochemistry, Aristotle University of Thessaloniki](#)

[Michalis Nikolaidis, Professor of Exercise Biology and Free Radicals, Aristotle University of Thessaloniki](#)

PRACTICAL TRAINING I

Learning outcomes:

Upon successful completion of the practical placement, students are expected to:

- recognise the components of the extracorporeal circulation circuit
- are able to monitor the operation of a cardiopulmonary bypass circuit during open-heart surgery
- prepare a cardioplegic solution
- are familiar with the basic techniques of mechanical circulatory support (intra-aortic balloon pump, ECMO, VAD, etc.)
- adjust the settings of a ventilator
- adjust the settings and monitor the operation of an intra-aortic balloon pump

Course content:

Completion of the compulsory practical placement, which takes place during the first, second and third semesters of the programme, worth 6 ECTS credits per semester. Postgraduate students are required to choose one of the following two programmes:

A) Practical placement in advanced cardiopulmonary support, during which they are required to observe the operations of the Cardiothoracic Surgery Clinic at the 'AHEPA' General Hospital of Thessaloniki (Aristotle University of Thessaloniki), which collaborates with the Postgraduate Programme, for at least eighty (80) hours, as well as to observe at least twenty (20) cardiac operations, which are recorded for each student in a special database (logbook),

B) practical training in extracorporeal circulation techniques, which involves observing at least one hundred (100) surgical procedures involving extracorporeal circulation at the Cardiothoracic Surgery Clinic of the 'AHEPA' General Hospital of Thessaloniki (Aristotle University of Thessaloniki), which are recorded for each student in a dedicated database (logbook).

Lecturers:

[Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

SECOND SEMESTER

PULMONOLOGY

Learning outcomes:

Upon successful completion of the course, students will be able to:

1. to recognise diseases of the respiratory system, particularly those most commonly encountered in everyday medical practice
2. to make a diagnosis based on new imaging techniques, immunological and molecular tests, and respiratory function tests
3. to propose detailed treatment strategies for the main respiratory diseases
4. to manage patients with respiratory diseases appropriately and apply basic skills and techniques to them

Course content:

- Elements of lung anatomy – Respiratory System
- Physiology of the lungs
- Pulmonary function tests
- Respiratory emergencies
- Physiology of breathing, COPD I
- Community-acquired pneumonia, respiratory symptoms
- COPD II
- Lung transplantation, Bronchial asthma - Sleep apnoea
- Respiratory Failure I
- Respiratory failure II

Lecturers:

Georgios Tagarakis, Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki

Christos Foroulis, Professor of Thoracic Surgery, Aristotle University of Thessaloniki

MEDICAL INFORMATICS – BIOSTATISTICS

Learning outcomes:

Knowledge

Participants will be able to:

- The appropriate descriptive measures for summarising variables depending on the type of data

(quantitative and qualitative data)

- The difference between a sample and the population from which it was drawn
- The characteristics of the normal distribution and how it differs from the skewed distribution
- The sampling distribution and the concept of the standard error of the mean
- The methodology of hypothesis testing and the concepts of the p-value, the significance level, confidence intervals, and Type I and Type II errors
- The basic parametric and non-parametric tests, illustrated with real-world examples from the health sciences
- To which data and in what way survival analysis can be applied

Skills

Participants will be able to:

- Understand and calculate the descriptive statistical measures featured in medical research articles
- To create and interpret graphs
- Calculate measures of association, such as mean differences, risk differences, relative risk, odds ratio and incidence rate
- Calculate the appropriate sample size for a study

Students will also be able to:

- to write a scientific article in accordance with the basic principles and using reference management software
- to present an oral or poster presentation

Course content:

- Biostatistics (SPSS exercises)
- Sample size calculation
- Literature search
- Publication ethics
- Oral and poster presentations
- Designing a research protocol
- How to write a research paper

Lecturers:

[Panagiotis Bamidis, Professor of Medical Physics and Informatics in Medical Education](#)

[Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

CARDIOLOGY**Learning outcomes:**

Upon completion of the course, students will be able to clinically assess patients with cardiovascular disease, as well as interpret basic diagnostic tests.

Course content:

- Basic knowledge of the structure and function of the heart and the circulatory system
- Development and abnormalities of the heart
- Basic principles of the electrocardiogram
- Arrhythmias
- Introduction to Interventional Cardiology
- Acute Myocardial Infarction (Management of Acute Coronary Syndromes)
- Heart failure
- Congenital Heart Diseases
- Basic pharmacology of the heart and circulatory system
- Cardiology Emergencies

- Pacing
- Implantable defibrillators
- Electrophysiology laboratory – Electrophysiological study
- Basic principles of echocardiography

Lecturers:

Matthaios Didangelos, Reader, School of Medicine, Aristotle University of Thessaloniki

Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki

EXTRACORPOREAL CIRCULATION TECHNOLOGY II

Learning outcomes:

Upon successful completion of the course, students are expected to:

- understand the basic physiological principles governing the function of extracorporeal circulation
- recognise the components of the extracorporeal circulation circuit
- be able to monitor the operation of an extracorporeal circulation circuit during open-heart surgery
- understand the principles and techniques of myocardial protection
- become familiar with the basic techniques of mechanical circulatory support (intra-aortic balloon pump, ECMO, VAD, etc.)

Course content:

The course content is summarised in the following areas:

1. Ventilators in extracorporeal circulation
2. Adverse effects of extracorporeal circulation on the body
3. Technical complications in extracorporeal circulation
4. Blood preservation – autotransfusion
5. End-organ protection
6. Circulatory arrest – cerebral perfusion
7. Intra-aortic balloon pump

8. Mechanical circulatory support devices
9. Basic principles of ECMO
10. Minimally invasive extracorporeal circulation (MiECC)
11. Principles of extracorporeal circulation in paediatric cardiac surgery
12. Clinical scenarios in extracorporeal circulation

Lecturers:

[Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Christos Foroulis, Professor of Thoracic Surgery, Aristotle University of Thessaloniki](#)

[Georgios Tagarakis, Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Christos Voucharas, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Vasileios Grosomanidis, Professor of Anaesthesiology, Aristotle University of Thessaloniki](#)

CARDIAC SURGERY II

Learning outcomes:

Upon successful completion of the course, students are expected to:

- understand the basic physiological principles governing the function of the heart and the circulatory system
- relate the pathophysiology of heart disease to the clinical manifestations of cardiac conditions
- be able to evaluate the main findings of diagnostic tests relating to cardiology
- understand the main indications for surgical treatment of heart conditions
- become familiar with the basic techniques used in cardiac surgery to treat each condition

Course content:

The course content is summarised in the following areas:

Surgical management of heart failure

Heart transplantation

Cardiac trauma

Mechanical complications of myocardial infarction

Congenital heart diseases

Thoracoabdominal aneurysms

Beating-heart surgery

Transcatheter implantation of heart valves

Surgery for arrhythmias

Heart tumours

Major studies in cardiac surgery

Lecturers:

[Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Christos Foroulis, Professor of Thoracic Surgery, Aristotle University of Thessaloniki](#)

[Georgios Tagarakis, Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Christos Voucharas, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Eleni Argyriadou, Professor of Anaesthesiology, Aristotle University of Thessaloniki](#)

CLINICAL PHARMACOLOGY – ANAESTHESIOLOGY**Learning outcomes:**

The intended learning outcomes are:

- an understanding of the action of drugs in clinical practice,
- the acquisition, consolidation and application of knowledge regarding the therapeutic utility, efficacy, dosage, adverse effects, interactions and contraindications of drugs, and, in particular
- the acquisition of skills for selecting appropriate medicines in clinical practice, and in particular for decision-making when managing clinical cases.

Upon completion of the course, students will be able to identify the therapeutic problem in specific clinical situations, and to make decisions regarding the selection or appropriate modification of pharmacological treatment, and the appropriate dosage of drugs already being administered or new drugs proposed.

Course content:

- Introduction to Pharmacology
- Research and development of new medicines
- Pre-clinical and clinical phase I, II and III trials
- Drugs for the respiratory system
- Management of bleeding in cardiac surgery – Monitoring of the coagulation system
- Intravenous and local anaesthetics
- Cardiovascular drugs (II)
- Medicines that affect the functioning of the central and peripheral nervous systems
- Drug interactions - Drug safety and patient safety - Pharmacovigilance

Lecturers:

[Eleni Argyriadou, Professor of Anaesthesiology, Aristotle University of Thessaloniki](#)

[Vasileios Grosomanidis, Professor of Anaesthesiology, Aristotle University of Thessaloniki](#)

PRACTICAL TRAINING II

Learning outcomes:

Upon successful completion of the clinical placement, students are expected to:

- recognise the components of the extracorporeal circulation circuit
- be able to observe the operation of an extracorporeal circulation circuit during open-heart surgery
- prepare a cardioplegic solution
- are familiar with the basic techniques of mechanical circulatory support (intra-aortic balloon pump, ECMO, VAD, etc.)
- adjust the settings of a ventilator
- adjust the settings and monitor the operation of an intra-aortic balloon pump

Course content:

Completion of the compulsory practical placement, which takes place during the first, second and third semesters of the programme, worth 6 ECTS credits per semester. Postgraduate students are required to choose one of the following two programmes:

A) Practical placement in advanced cardiopulmonary support, during which they are required to observe the operations of the Cardiothoracic Surgery Clinic at the 'AHEPA' General Hospital of Thessaloniki (Aristotle University of Thessaloniki), which collaborates with the Postgraduate Programme, for at least eighty (80) hours, as well as to observe at least twenty (20) cardiac operations, which are recorded for each student in a special database (logbook),

B) practical training in extracorporeal circulation techniques, which involves observing at least one hundred (100) surgical procedures involving extracorporeal circulation at the Cardiothoracic Surgery Clinic of the 'AHEPA' General Hospital of Thessaloniki (Aristotle University of Thessaloniki), which are recorded for each student in a dedicated database (logbook).

Lecturers:

[Kyriakos Anastasiadis, Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Polychronis Antonitsis, Associate Professor of Cardiac Surgery, Aristotle University of Thessaloniki](#)

[Georgios Karapanagiotidis, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

[Christos Voucharas, Associate Professor of Cardiothoracic Surgery, Aristotle University of Thessaloniki](#)

THIRD SEMESTER

POSTGRADUATE DISSERTATION

In the third (C) semester, the postgraduate dissertation is undertaken. To this end, the postgraduate student submits an application to undertake the postgraduate dissertation. The application must state the proposed title, the proposed supervisor and must be accompanied by an abstract of the proposed thesis. If the Coordinating Committee approves the application, it recommends to the School Assembly the formation of a three-member Examination Committee and the appointment of a supervising lecturer.

The postgraduate dissertation is defended before the three-member Examination Committee on a date and at a venue determined by the Coordinating Committee. In exceptional cases, where there is an objective impediment or a compelling reason, it is possible to replace the supervisor or a member of the three-member Examination Committee following a decision by the School Assembly. It is not possible to change the topic of a student's postgraduate dissertation, except upon the recommendation of the Coordinating Committee and a decision by the School Assembly, following a reasoned proposal from the supervising lecturer. A change of topic for a postgraduate dissertation shall under no circumstances constitute grounds for an extension of the prescribed deadlines.

Assessment of Knowledge – Student Evaluation

Assessment for individual modules takes place at the end of each semester through *written or oral examinations, or through the submission of assignments*.

The method of assessment is determined by the lecturer of each module at the start of the academic semester. The weighting given to participation in other educational activities (such as laboratory exercises, assignments and seminars, where applicable), as well as the student's participation during lectures, is determined in the final mark for each course individually, following a

recommendation by the lecturer of each module and subject to approval by the Postgraduate Programme Co-ordinating Committee.

The grading scale for assessing the performance of postgraduate students ranges from zero (0) to ten (10), as follows:

Distinction (8.5 to 10)

Very Good (6.5 to 8.5, excluding 8.5)

Good (6 to 6.5, excluding 6.5)

A pass mark is six (6) or above.

Attendance at lectures or any other educational activity is compulsory. A postgraduate student is deemed to have attended a course (and is therefore entitled to sit the examinations) only if they have attended at least 77 per cent of the theoretical hours of the course. Otherwise, the postgraduate student is required to retake the course in the following academic year.

Should a postgraduate student's absence rate exceed 50 per cent across all courses, the matter of their expulsion will be raised. This matter is examined by the Academic Committee, which submits its opinion to the School Assembly.

In cases of emergency or force majeure, examinations may be conducted using electronic means, provided that the integrity of the assessment process is ensured.

In cases of illness, it is recommended that the lecturer accommodate the student in whatever way they deem appropriate (e.g. an oral or distance examination).

If a postgraduate student fails the examination for a course or courses three times and is deemed not to have successfully completed the programme, they shall be examined, following their request, **by a three-member committee of academic staff from the School, who specialise in the same or a related subject area to the course under examination and are appointed by the School Assembly. The lecturer responsible for the examination is excluded from the committee.**

The mark for the Postgraduate Diploma (PGD) is derived from the weighted average of the modules in the Postgraduate Programme and the Postgraduate Dissertation (weighting is based on the credit units of the modules and the Master's Thesis) and is calculated, to two decimal places, as follows:

The mark for each course and the Master's Thesis (where applicable) is multiplied by the corresponding number of credit points (ECTS), and the sum of the products is divided by the minimum number of credit points required to obtain the Master's degree.

The mathematical formula is as follows:

Master's Degree Mark = (Mark for Course 1 × ECTS for Course 1 + Mark for Course 2 × ECTS for Course 2 + ... + Mark for Master's Thesis × ECTS for Master's Thesis) / Total number of ECTS.

MASTER'S THESIS

For the preparation of a Master's Thesis (M.Th.), the School Assembly, following an application by the candidate on specified dates, which must state the proposed title of the Master's Thesis, the proposed supervisor and a summary of the proposed thesis attached, appoints the supervisor and establishes a three-member Examination Committee for the approval of the thesis, one member of which is the supervisor.

The right to supervise dissertations is held by teaching staff in the categories described in Article 83(3) of Law 4957/2022.

- a. members of the Teaching and Research Staff (D.E.P.), Special Educational Staff (E.E.P.), Laboratory Teaching Staff (E.D.I.P.) and Specialised Technical Laboratory Staff (E.T.E.P.) of the School or other Schools of the same or another Higher Education Institution (HEI) in Greece or abroad, or a Higher Military Educational Institution (AS.E.I.), undertaking additional work beyond their statutory duties, provided that the Postgraduate Programme charges tuition fees,
- b. full professors or retired academic staff of the School or other Schools of the same or another higher education institution,
- c. affiliated lecturers,
- d. appointed lecturers,
- e. visiting lecturers or visiting researchers,

f. researchers and specialist scientific staff from research and technology organisations referred to in Article 13A of Law 4310/2014 (A' 258) or other research centres and institutes in Greece or abroad.

The members of the three-member Examination Committee must have the same or a related scientific specialism as the subject area of the Postgraduate Programme.

The preparation of the Master's Thesis is governed by the Aristotle University of Thessaloniki's Code of Academic Conduct. Every creator or co-creator of any intellectual work is entitled to be cited and recognised as such, and to enjoy both the economic and moral rights and powers arising from that work. By way of exception, if the original intellectual creation ('work') is the final output of a commissioned research project, which has been commissioned by a body outside the Aristotle University of Thessaloniki, the economic rights of the creator or co-creators may be restricted in accordance with the terms of the contract under which the research project in question is commissioned, whilst moral rights remain with the author(s), subject to the contractual restrictions necessary for the exploitation or commercialisation of the intellectual work produced.

For the presentation of the Master's Thesis (M.Th.), a favourable recommendation from the Three-Member Examination Committee is required. Where the defence of the M.Th. takes place in public, a specific date and venue are set by the Coordinating Committee of the Postgraduate Programme.

Following the defence of the Master's Thesis, minutes are drawn up stating the individual mark awarded by each member of the Three-Member Examination Committee, the average mark, and any comments or observations.

Following its approval by the Committee, it must be published on the Institution's website.

If the Thesis Defence Committee's assessment is negative, the postgraduate student may resubmit their thesis, incorporating the points raised for its improvement, within a timeframe set by the Three-Member Examination Committee. If the second assessment is also negative, the postgraduate student forfeits the right to be awarded the Postgraduate Diploma.

In exceptional cases, where there is an objective impediment or a compelling 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 Master's Thesis, following a decision by the Coordinating Committee.

The Master's Thesis may be theoretical, applied or experimental.

Postgraduate students may only present their Master's Thesis once they have successfully passed the examinations for all their modules.

For a Master's Thesis to be approved, it must meet the following requirements:

a) The topic and content of the thesis (theoretical or research-based) must be relevant to the subject area of the Postgraduate Programme.

b) The thesis (excluding the bibliography) must be at least twenty (20) single-sided typographic sheets in length, in Arial font, size 12, full justification, with one-and-a-half line spacing. The thesis must include (in addition to the main body of text) a detailed table of contents, a list of abbreviations (where necessary), an index of appendices, an abstract in Greek and English, and a bibliography.

(c) By decision of the Special InterSchool Committee, the deadline for the completion and submission of the Master's Thesis may be extended. The submitted thesis shall be assessed no later than three months after its submission.

(d) A candidate may change their topic only upon the recommendation of the Programme Committee of the Postgraduate Programme and a decision by the Special InterSchool Committee, following a reasoned recommendation from the supervising lecturer.

(e) Once the research has been completed and the thesis drafted, it shall be submitted in electronic form to the Secretariat of the Postgraduate Programme, with the supervising lecturer's approval that it meets the requirements for submission for assessment.

(f) The language in which the Master's Thesis is to be written is Greek (and/or English in justified cases).

(g) The Director of the Postgraduate Programme sends the thesis to the members of the three-member examination committee, which must decide whether to accept or reject it within thirty (30) days of the thesis being sent. If a member of the Examination Committee requests, with justification, an extension of up to thirty (30) days, once this deadline has also elapsed, and provided that the member fails to fulfil their obligations, they must be replaced. In this case, the procedure must be completed within one month of the expiry of the 30-day extension.

(h) For the final assessment and marking of the candidate's Master's Thesis, the Three-Member Examination Committee invites the candidate to a public examination on the subject of their thesis, which may last up to one hour. Once the examination is complete, the three-member Examination Committee marks the Master's Thesis on a scale from zero (0) to ten (10), and sends the minutes of the candidate's examination to the Secretariat of the School of Medicine. The invitation and notification regarding the candidates' examination are issued by the supervising Professor of the Thesis Committee, who is responsible for coordinating the process and who chairs the examination.

Students are provided with a guide to writing a dissertation (specifying the length, font, writing style, the number of copies of the postgraduate dissertation to be submitted, and any other details regarding its structure, as well as a timetable for revisions).

Scholarships

Subject to a decision by the Programme Committee, depending on the revenue of the Postgraduate Programme, scholarships may be awarded to postgraduate students. Scholarships are awarded on the basis of academic, objective criteria (such as, for example, academic performance based on the average mark from the previous semester) and must be included in the approved budget of the Postgraduate Programme. The conditions for awarding scholarships, as well as the obligations and rights of scholarship holders, are determined on the recommendation of the Special Committee and by decision of the Programme Committee

AUTH may award merit-based scholarships to postgraduate students on condition that they support the educational process and undertake auxiliary teaching duties. The Postgraduate Programme determines the maximum amount of the merit-based scholarship per student, the maximum number of hours of weekly work, and other details regarding the award of scholarships. Postgraduate students are informed following a relevant announcement by the Secretariat of the Postgraduate Programme.

Administrative Support – Logistical Infrastructure

Administrative and secretarial support for the Postgraduate Programme is provided by the Secretariat of the School of Medicine.

University-trained staff with previous experience in postgraduate programmes assist with secretarial duties and, amongst other tasks, will be responsible for student enrolments, maintaining grade records, conducting staff evaluations, keeping attendance registers, and issuing degrees, certificates and statements. Furthermore, the Secretariat handles day-to-day matters concerning teaching staff, postgraduate students, the programme, and liaising with various Schools and partner institutions, whilst also managing public relations and promoting the programme.

Plagiarism

When submitting any postgraduate dissertation, the postgraduate student is required to state whether they have used the work and views of others.

Plagiarism is considered a serious academic offence. Plagiarism is defined as copying another person's work, as well as using another person's work – whether published or unpublished – without proper attribution. The inclusion of any source material, even from the candidate's own studies, without appropriate citation, may lead to a decision by the School Assembly to expel the student.

In the above cases – and following a reasoned recommendation from the supervising lecturer – the student must rewrite the Master's thesis. and if the student fails to do so following a recommendation by their supervisor, the School Assembly may also decide to expel them.

Any misconduct or breach of academic ethics is referred to the Coordinating Committee of the Postgraduate Programme for assessment and a recommendation on how to address the issue to the School Assembly. Misconduct such as copying or plagiarism, and more generally any breach of copyright provisions by a postgraduate student whilst writing assignments as part of their courses or whilst preparing a postgraduate dissertation, is also considered a breach.

The Institution's Ethics Committee is responsible for dealing with breaches of the rules of ethics and academic standards

Type of Postgraduate Diploma Awarded (Postgraduate Diploma)

The Postgraduate Diploma is issued by the Secretariat of the School of Medicine. The Diploma states the School involved in organising the Postgraduate Programme, the date of completion of studies, the date of issue of the Postgraduate Diploma, the graduation reference number, the title of the Postgraduate Programme, the postgraduate student's details and the assessment grade: Good, Very Good or Excellent.

A graduate of the Postgraduate Programme may be issued, prior to the award ceremony, with a certificate confirming successful attendance and completion of the Programme.

In addition to the Postgraduate Diploma, a Diploma Supplement is awarded [Article 15 of Law 3374/2005 and Ministerial Decision Φ5/89656/BE/13-8-2007 (Government Gazette 1466, Series B)], which is an explanatory document providing information on the nature, the level, the broader educational context, the content and the status of the studies successfully completed; it does not replace the official degree certificate or the detailed course mark sheet issued by the institutions.

GENERAL INFORMATION FOR STUDENTS

Healthcare

In accordance with the provisions of the new Law 4452/15-02-2017 (A' 17), Article 31, paragraph 3 'undergraduate and postgraduate students, as well as PhD candidates, who do not have any other medical, pharmaceutical or hospital care, are entitled to full medical, pharmaceutical and hospital care within the National Health System (ESY), with the relevant costs covered by the National Organisation for the Provision of Health Services (EOPYY), in accordance with Article 33 of Law 4368/2016 (A' 83)', solely by using their AMKA number.

Students in need of medical care may visit the premises of the University Students' Club Health Service daily during working days and hours. The University Students' Club's clinics provide first aid, clinical examinations (without the option of prescribing medication), vaccinations and advice on health education. Furthermore, the University Students' Club's there is a Counselling and Psychological Support Centre (KESYPSY), staffed by psychologists, which all students, without exception, are entitled to attend free of charge. In addition, support from psychiatrists is available on specific days and at specific times (by appointment).

Student ID

All undergraduate, postgraduate and doctoral students at the country's universities are entitled to an academic ID card. The student ID card also serves as a Special Travel Pass (pass) for those who are eligible under the relevant legislation. Applications can be made via the website <http://academicid.minedu.gov.gr>, once the student has completed their enrolment with the School and has been issued with an institutional account by the Aristotle University of Thessaloniki's e-Governance Centre. The same pass is also issued to international students visiting the University as part of international exchange and cooperation programmes.

Use of University facilities and equipment

Students may use the University's facilities and equipment for the purpose of fulfilling the requirements of their degree programme, in consultation with the

teaching staff. The use of premises falling under the responsibility of a School is subject to the consent of the School from which the premises are requested.

Aristotle University of Thessaloniki Students' Union

At the Aristotle University of Thessaloniki, student welfare services are provided by the University Students' Club in a separate building located in the eastern part of the university campus. The University Students' Club is a self-governing body of the University, responsible for providing meals, accommodation and medical care for students, as well as organising cultural and sporting events, amongst other things. The Club's building houses restaurants, a health centre, a reading room, a canteen, a hairdresser's offering student rates, and more. For further information, tel.: 2310 992678.

Social Policy Committee (E.K.P.) of the Aristotle University of Thessaloniki

The Social Policy Committee of the Aristotle University of Thessaloniki, which has been in operation since 1997, was established by the Rector's Council with the aim of helping to resolve any problems that students and at our University, as well as to strengthen the University's internal life and its links with wider society. To achieve these objectives, the Social Policy Committee has developed the following initiatives:

- Support for students with special needs
- Helping international students adapt to their studies
- Supporting cultural life at Aristotle University of Thessaloniki through grants to cultural groups and the organisation of Student Week every spring.
- Information on health prevention and care issues relevant to modern society and life. Counselling on personal matters at the Counselling and Psychological Support Centre at the Aristotle University of Thessaloniki Students' Club
- Voluntary blood donation to meet the needs of students, academic staff and administrative staff at Aristotle University of Thessaloniki
- Voluntary activities.

• For further information, please contact the office of the Aristotle University of Thessaloniki Social Policy Committee. Telephone: 2310 995360, 2310 995386 and the Student Union office – Health Services Telephone: 2310 992443

Department of Studies

The Department of Academic Affairs is responsible for compiling all types of legislation, decisions and circulars relating to academic studies, as well as for coordinating their uniform implementation. It also handles all procedures provided for by current legislation relating to academic studies, matters concerning Special Postgraduate Scholarships (E.M.Y.) and matters relating to international students. In particular, the Department of Academic Affairs:

- compiles all relevant legislation, decisions and circulars concerning undergraduate and postgraduate studies and coordinates their uniform implementation across the departments of the Aristotle University of Thessaloniki, and handles all procedures required by current legislation concerning studies and matters relating to international students.
- It coordinates the Aristotle University of Thessaloniki's scholarship programme and handles the process for the recruitment of postgraduate students to assist academic staff.
- Maintains an information library containing announcements regarding scholarships, awards, competitions, seminars, conferences, student employment, postgraduate programmes, summer schools abroad, etc.
- It compiles statistics on: a) enrolled students of all categories per academic year, b) international students, c) postgraduate students and PhD candidates, (d) graduates of universities (A.E.I.), technical colleges (T.E.I.) and schools offering programmes lasting more than two years who have been admitted, and those who have transferred to Schools of the Aristotle University of Thessaloniki (AUTH), in accordance with the data in B3. Study Guide, School of Medicine, AUTH - 70 - and e) scholarship holders at the Aristotle University of Thessaloniki, in accordance with the data from the Department of Studies. This data is available to the services of the Aristotle University of Thessaloniki and to any interested party, upon request to the Department of Studies.
- It collects student accommodation offers from landlords of flats and student studios, lists them on the department's website, and distributes the relevant list free of charge, together with a register of estate agents in the prefecture of Thessaloniki, to first-year students. This service is available from 25 August until the end of October.
- It is responsible for drafting and printing all the leaflets distributed to first-year

students enrolling at the Aristotle University of Thessaloniki. • It represents Aristotle University of Thessaloniki at university fairs and presentations in Greece and abroad. • It maintains a record of all postgraduate programmes offered at Aristotle University of Thessaloniki and all relevant regulations. • It welcomes and provides information to pupils on academic matters at Aristotle University of Thessaloniki during organised visits as part of school career guidance. • Provides information on Aristotle University of Thessaloniki, its departments, services and degree programmes to Greek and international students, both undergraduate and postgraduate, via email. Enquiries: tel.: 2310 99 5132, 99 5142, 99 6743, 99 7283, 99 1372, -3, 99 6771, <http://dps.web.auth.gr>.

Department of European Educational Programmes

The Aristotle University of Thessaloniki, which participated actively and successfully in the first and second phases of the ERASMUS programme, continues its efforts to develop better and more meaningful partnerships with a view to its European orientation by participating in the new ‘Lifelong Learning Programme (LLP) 2007–2013’. The ERASMUS action under the LLP programme concerns European cooperation in the field of higher education and, in particular, includes: organised student exchanges for recognised periods of study, the European Credit Transfer and Accumulation System (ECTS), work placements, mobility and exchanges of teaching staff, language preparation for students, etc. In this context, the Department of European Educational Programmes advises students who are about to undertake a period of study at a university abroad, collects their applications and forwards them to the departmental representatives, who select the students in consultation with the academic supervisors, corresponds with the host universities regarding the acceptance of the selected students and ensures that their scholarships are awarded through the National Coordination Unit. It also provides guidance to international students, corresponds with them and sends information and promotional material, arranges their accommodation, enrolls them in their departments, and forwards their academic records to their home universities upon completion of their studies at Aristotle University of Thessaloniki. In general, it is responsible for

the proper implementation of the mobility programme. For further information, please call: 2310/99-5169, 99-5306, 99-1605, 99-5289, 99-5293, 99-5291.

University Camps

The University Camps have been operating in Poseidi, Chalkidiki, since 1960. The steadily increasing number of students and university staff visiting the site necessitated the creation and subsequent improvement of permanent facilities. The site has been upgraded in recent years through a number of significant projects. These have included the construction of a ring road, the creation of sports and leisure facilities, the expansion of sanitary facilities, the upgrading and expansion of the electrical installations, the construction of additional cabins, the renewal of kitchen equipment and the refurbishment of the restaurant and cabins all make the campers' stay more comfortable and enjoyable

Participation in University Bodies

Throughout their undergraduate and postgraduate studies, students have the right to participate in university bodies through their elected representatives, in accordance with the provisions of the Law. Students from all Departments are entitled to become members of their Department's student union, which must be established as a legal entity under private law. All students of the Department may be members of the student association, except those who have been lawfully expelled. The student associations of all Departments of the Aristotle University of Thessaloniki (AUTH) are affiliated to the Aristotle University of Thessaloniki Student Union (F.E.A.P.TH.). The F.E.A.P.Th. was founded in 1960 with the aim of coordinating the student associations of the departments of the Aristotle University of Thessaloniki.