



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
HELLENIC REPUBLIC



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Accreditation Report

for the New Postgraduate Study Programme of:

Cardiovascular Imaging

Department: School of Medicine

Institution: National and Kapodistrian University of Athens

Date: 2 December 2023

Report of the Panel appointed by the HAHE to undertake the review of the New Postgraduate Study Programme of **Cardiovascular Imaging** of the **National and Kapodistrian University of Athens (NKUA)** for the purposes of granting accreditation.

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the new postgraduate study programme of **Cardiovascular Imaging** of the **NKUA** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. Prof. Agapios Sachinidis (Chair)

University of Cologne, Cologne, Germany

2. Prof. Andreas Pavlakis

Philips University, Nicosia, Cyprus

3. Prof. Konstantinos Pantopoulos

McGill University, Montreal, Canada

4. Dr. Andreas-Antonios Roussakis

Imperial College London | Imperial College Healthcare NHS Trust, London, UK

5. Mr. Ioannis Kyriakidis (Postgraduate Student)

University of Crete, Heraklion, Greece

II. Review Procedure and Documentation

The panel reviewed all the documents supplied, which we all had read. We have been supplied with enough information to help with our deliberations. The meetings and discussions were conducted online over three days, from the 27th of November until the 2nd of December 2023. The list below shows all the documents we have received (with indicative translations to the actual name of the original file name in Greek):

- A1. Proposition of Accreditation from the National and Kapodistrian University of Athens (School of Medicine)
- A2. Decision of the Senate for establishment the PSP
- A3. Introductory Report of ΜΟΔΙΠ
- A4. Strategic Development Plan 2019-2028 of the NKUA
- A5. Feasibility Study
- A6. Quality Policy
- A7. Quality Target of PSP Academic Unit
- A8. Student Study Guide
- A9. Courses Outline
- A10. Teaching Staff list
- A11. Internal Rules of the PSP
- A12. Master's Degree Regulations Clinical Skills, Mobility, Dissertation
- A13. Complaints Management Guide
- A14. Academic Counsellor Rules
- A15. Deontology of Research Rules
- A16. Sample of Diploma and Diploma supplement in Greek and English
- A17. Performance Report of Academic Personnel in Scientific, Research and Teaching work
- A18. Definition of Distance Education Methods
- A19. Utilization of Tuition Fees

We also had (online):

Teleconference with the Director of the PSP and OMEA & MODIP representatives (EEAP, OMEA & MODIP members, MODIP staff) to discuss the degree of compliance of the postgraduate programme to the Quality Standards for Accreditation. Teleconference with teaching staff members to discuss professional development opportunities, mobility, workload, student evaluations; competence and adequacy of the teaching staff to ensure learning outcomes; a link between teaching and research; teaching staff's involvement in applied research, projects and research activities directly related to the programme; possible areas of weakness.

We had an online tour of lecture halls, laboratories, and other facilities /discussion about the facilities presented in the video produced for this purpose to evaluate facilities and learning

resources to ascertain that the learning materials, equipment, and facilities are adequate for a successful provision of the programme. Teleconference with social partners, to discuss relations of the PSP with external stakeholders from the private and the public sector.

The entire process was conducted in a spirit of collaboration. The staff have been helpful and honest about the issues of the programme, and they were very much willing to supplement information with whatever we had requested to assess. We thank everybody for the open and helpful discussions and arrangements.

As members of the EEC we feel obliged to point out that the three-day evaluation process was carried out in a spirit of cordial cooperation with the staff members of the involved bodies (OMEA and MODIP) of the National and Kapodistrian University of Athens as well as with all Programme's Teaching staff. The staff members in question showed admirable readiness and willingness to provide additional information so that we are fully informed of the PSP's activities in general.

Finally, we would like to thank everyone for the productive and helpful discussions and arrangements that made our work easier.

III. Postgraduate Study Programme Profile

The Programme is a new one and is expected to be offered this academic year. It is credited with 90 ECTS and has a duration of three semesters, including one semester for the preparation of a master-level dissertation.

The Programme is flexible and implements the European Credit Transfer System (ECTS), providing guarantees for international academic and professional recognition of the qualifications awarded by the NKUA. The qualification award is «Diploma Metaptichiakon Spoudon», equivalent to «**MSc in Cardiovascular Imaging**».

The level according to the Greek system of study is: the post-graduate level

- according to the Bologna Process structure: 2nd Cycle
 - according to the National Qualifications Framework: 7
 - according to UNESCO's International Standard Classification of Education ISCED 2013: 7
- Attendance of courses/workshops etc. is compulsory. The teaching of the courses in all academic semesters takes place in person and is conducted every week in the facilities of the NKUA. By the decision of the PSP committee, some courses may be offered using the distance methodology.

In addition to the books provided to students, educational material is posted on the platform which includes notes, lecturers' deliveries, videos, CDs, and many more.

The maximum allowed time of completion of studies is set at five (5) academic semesters under certain conditions such as health reasons, pregnancy or postpartum, professional reasons, and completion of experiments in research.

This particular PSP aspires to promote, mainly to medicine doctors, the knowledge and research in the diagnosis and treatment of diseases of the cardiovascular system. Therefore, specialization is sought in the broad and constantly developing field of the use of imaging techniques such as echocardiography, magnetic resonance imaging, computed tomography, and scintigraphy techniques (SPECT, PET).

PSP graduates are expected to:

- Recognize normal and abnormal cardiovascular structures during imaging using various imaging techniques.
- Evaluate the application and results of various cardiovascular imaging techniques in clinical practice.
- Contribute to the prevention, early diagnosis, and invasive treatment of cardiovascular diseases.

- To be employed in positions that require a high level of knowledge and skills in the subject.
- Acquire a theoretical background for conducting research projects in the field of cardiovascular imaging.
- To carry out clinical and basic research in the field of cardiovascular imaging.

In addition, however, the relevant regulations also allow holders of other professional qualifications, such as Departments of Sciences, Nursing, Biomedical Sciences and Polytechnics.

The committee wishes to stress that for the courses offered from long distance, the relevant methodology applied at the Hellenic Open University must be followed, i.e. each course must be accompanied by a Study Guide that is consistent with the methodology of distance education and the need for students to interact with the educational material, the teaching staff and their co-student. The Study Guide includes, inter alia, for each week of the course, the following:

- Clearly stated objectives and expected results of the programme, modules
- Presentation of the material, per week and,
- the activities and exercises with clear instructions for posting, discussion and feedback.

PART B: COMPLIANCE WITH THE PRINCIPLES

Principle 1: Strategy, Quality Assurance Policy and Quality Goal Setting for the New Postgraduate Study Programmes

INSTITUTIONS SHOULD INCLUDE IN THEIR STRATEGIC MANAGEMENT THE DEVELOPMENT, ORGANISATION, AND IMPLEMENTATION OF NEW POSTGRADUATE STUDY PROGRAMMES (PSP) IN SPECIFIC SCIENTIFIC FIELDS AFTER INVESTIGATING THEIR FEASIBILITY AND SUSTAINABILITY.

INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY FOR THE NEW POSTGRADUATE STUDY PROGRAMMES AS PART OF THEIR STRATEGIC MANAGEMENT.

THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT THE PSP OF THE INSTITUTION AND THE ACADEMIC UNIT. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL INTERESTED PARTIES.

By decision/s of the Institutional Senate, the Institutions should adapt their strategy to allow for the provision of postgraduate study programmes, in addition to attending to the profile, vision, mission and strategic objectives of the Institution. In this strategy, the Institutions should anticipate the potential benefits, difficulties or risks from the implementation of new postgraduate study programmes and plan all the necessary actions to achieve their goals. The Institution's strategic choices should be documented through specific feasibility and sustainability studies, especially for new postgraduate study programmes.

In the case of PSP delivered by distance methods, the Institution prepares and applies an e-learning strategy. The Institution's e-learning strategy is integrated into its overall strategy and identifies educational goals while keeping up to the rapid technological changes and to the developments in pedagogical models. The Institution should include in its strategy the justification and feasibility as to why e-learning has been selected as the appropriate learning strategy for the particular programmes of study where it is applied.

In the context of e-learning, innovation strategies, the possibility of programme revision, the linking between learning and research (requiring knowledge of the latest innovations in order to select the most appropriate means to achieve the learning outcomes) should be taken into account.

The quality assurance policy of the academic unit for postgraduate study programmes should be in line with the Institution's strategy and must be formulated in the form of a public statement, which is implemented by all stakeholders. It focuses on the achievement of special goals related to the quality assurance of the postgraduate study programmes offered by the academic unit. Indicatively, the quality policy statement of the academic unit includes its commitment to implement a quality policy that will promote the academic profile and orientation of the postgraduate study programme (PSP), its purpose and field of study; it will realise the programme's goals and it will determine the means and ways for attaining them; it will implement appropriate quality procedures, aiming at the programme's continuous improvement.

In particular, in order to implement this policy, the academic unit commits itself to put into practice quality procedures that will demonstrate:

- a. the suitability of the structure and organisation of postgraduate study programmes*
- b. the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education - level 7*
- c. the promotion of the quality and effectiveness of teaching at the PSP*

- d. *the appropriateness of the qualifications and the availability of the teaching staff for the PSP*
- e. *the drafting, implementation, and review of specific annual quality goals for the improvement of the PSP*
- f. *the level of demand for the graduates' qualifications in the labour market*
- g. *the quality of support services, such as administrative services, the libraries, and the student welfare office for the PSP*
- h. *the efficient utilisation of the financial resources of the PSP that may be drawn from tuition fees*
- i. *the conduct of an annual internal review and audit of the quality assurance system for the PSP through the cooperation of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU)*

Documentation

- *The Institutional strategy for postgraduate studies, which includes a special strategy for e-learning, as long as it is applied to the Institution's PSP*
- *Feasibility and sustainability studies for the new PSP*
- *Quality Policy of the academic unit for the development and improvement of PSP*
- *Quality Targeting of the academic unit for the PSP*

Study Programme Compliance

I. Findings

The overall strategic plan of the university's new PSPs focused on establishing highly competitive programmes according to international standards (ΦΕΚ 1726 τ.Β'/6-5-2020). PSPs should focus on enabling the students to do research and promote critical thinking to fulfil the national and international increased demands in science. The entire strategy goal is to improve public medical care by providing students with high-quality education in multiple aspects, including basic and clinical research and improving their professional development. The programme "Cardiovascular Imaging" was designed following the EQAEE principles according to the EU guidelines standards. The PSP was approved by the Senate (3-5-2023) within the overall strategic plan of the University (ΦΕΚ 1726 τ.Β'/6-5-2020).

The PSP was established in 2023 and is moving in the direction of implementing the overall strategy of the EKPA which must consider research activities, different specialised lectures and seminars, practical exercises, the student's mobility, and training as well as regular participation of postgraduate students in international conferences. Students should be linked to other national and international research groups and explore employment opportunities inside and outside of academia.

The Quality Assurance and sustainability of the PSP will be monitored by the internal Quality Assurance Unit of the University (MODIP) in collaboration with the OMEA (medical school)

and according to the evaluation of the students. In the case of deviations from the programme, MODIP and OMEA will take action for revision and improvement of the programme. Improvement of the quality of this Postgraduate Programme will be achieved through several follow-up procedures such as providing the necessary resources in terms of personnel, funding, infrastructure, and equipment to the University. Moreover, the annual achievements and objectives of the programme will be qualified by specific indicators to measure the efficiency of the internal functions (administrative, educational, research) of the PSP. The quality of the programme will also be assured by the efficient collection and analysis of information on this postgraduate programme (data on students, teaching staff, the structure and organisation of courses, teaching, and the provision of services to students). The data will be stored in information system ΟΠΕΣΠ belonging to ΕΘΑΑΕ as well as in internal information systems of the Department of Medicine of ΕΚΠΑ. Information will be easily accessible on the website of the programme (Greek/English). Finally, the programme will be periodically accredited/evaluated externally by a committee of independent experts according to guidelines of ΕΘΑΑΕ.

The main quality objectives will be 1) the activation of student counselling, 2) promoting the active participation of students in internal evaluation processes, 3) involving students in research projects, improving the quality of the produced research work by promoting publications in international journals, 4) enabling students to perform dissertations 5) linking the MSc students with the labour market and local society, 6) Attracting foreign students to the MSc as well as attracting teachers to the MSc from foreign institutions, 7) Development of Management Information Systems and Digital Governance Services, and 8) Improvement of the infrastructure and support services for the student community of the MSc.

One of the main objectives of the MSc "Cardiovascular Imaging" programme is to educate postgraduate studies in theory and clinical practice to apply various imaging techniques for the clinical management of patients suffering from cardiovascular diseases. The MSc will educate postgraduate students with optimised specific knowledge in the fields of cardiovascular imaging enabling the students to identify pathological characteristics of cardiovascular diseases. Students should be familiarised with basic and clinical research in the cardiovascular imaging field by using statistics/biostatistics methods. Students should be in the position to analyse, present data and scientifically interpret the data. Students should be able to write scientific manuscripts for publication in an international journal. After completion of the PSP courses, MSc students should be able to write a dissertation.

The representatives of the new PSP submitted all the required documents/proposals/studies according to the relevant instructions of the competent authority (HAHE). Based on these, the necessary academic bodies were created in the PSP to design and supervise the new programme. The programme is new and therefore students were not actively involved in its design. In general, the design of the programme is compatible with other European University

Programmes regarding the objectives and the number of ECTSs (90). The EEAP received during the evaluation procedure all the relevant documents from the PSP committee and HAHE. The EEAP has discussed this during the meetings with the MODIP members, teaching staff, and stakeholders from the pharma industry.

The Postgraduate Programme in Cardiovascular Imaging focuses on the application of imaging techniques such as echocardiography, MRI and CT for the diagnosis and treatment of diseases of the cardiovascular system. In addition, novel research imaging techniques and their clinical application will be of particular interest. In contrast to other European countries and the USA, in which imaging technologies in clinical practice are quite developed, according to the programme, the programme is unique in Greece to fill this gap in the country. The demand for qualified personnel in imaging is high. According to the PSP as a part of the School of Medicine of the University of Athens, graduates will be competent in various cardiovascular imaging techniques and will be capable of interpreting the results in clinical practice and making therapeutic decisions. Also, graduates will get the theoretical background to conduct research projects in the field of cardiovascular imaging.

About 32 faculty members from the National and Kapodistrian University of Athens and other Greek Universities (Aristotle University of Thessaloniki, University of Patras, Ioannina and Alexandroupolis) as well as from abroad (Heart Centre, Shaare-Zedek Medical Centre, University of Liège, CHU Sart Tilman, Liège Belgium). Several members of the teaching staff have published in international scientific journals. The programme will link teaching and research with the MSc thesis which allows the postgraduates to continue their postgraduate studies to get a PhD degree. The MSc will give also opportunities for postgraduates to write a manuscript for publication in international scientific journals.

According to the programme, each course and each instructor will be evaluated by the graduate students at the end of each semester. In addition, according to the PSP, it will be evaluated according to the internal and external evaluation procedures of the School of Medicine of ΕΚΠΑ, as well as by a six-member Scientific Advisory Committee (Ε.Σ.Ε) (paragraph 8 of article 32 and paragraph 6 of article 44 of Law 4485). The evaluation criteria include the selection process of students, the educational material, the laboratory equipment, the lecturers, and the probability of the programme for the acquisition of a doctoral degree. Improvement actions will be carried out, also according to the questionnaires of the students.

The Department of Medicine is located in the building of the School of Health Sciences of the University of Athens. The auditoriums/classrooms of the Department are well equipped with audiovisual equipment and computer laboratories for the teaching of laboratory courses.

In particular, for the requirements of the PSP modern audiovisual and computer equipment as well as a high-speed connection to the network with 65 seats are available in a room located in the 1st University Cardiology Clinic at the General Hospital of Athens "IPPOKRATEIO". Moreover, there are Ultrasound laboratories at the "IPPOKRATEIO". Here the practical part of education in the first and second semester in the echocardiography laboratories will take place. In the Department of Anatomy of the Medical School of the University of Athens, students will be taught the subject of the Anatomy of the Heart. The practical part of Radiology will take place at the Radiology Laboratory of the University Clinic located at the Aretaeio Hospital of Athens.

The Library of the Faculty of Health Sciences offers adequate sitting places (76 study places) with 20 stations for searching and retrieving information through the OPAC catalogue, through the databases and generally through internet access. The service department guides users in identifying reliable information sources and provides services for borrowing books and articles from other institutions in Greece and abroad. The Library contributes to the enrichment of the Digital Library System "Pergamos" with the control of theses and dissertations. The PSP established e-learning teaching tools.

The acquisition of an MSc in "Cardiovascular Imaging" is a prerequisite for the staffing of cardiology departments, haemodynamic laboratories, and infarction units. The need for state cardiology clinics is immense in Greece. Clinics are understaffed with qualified personnel (almost 1000 positions are required). The situation is similar in the private sector.

The maximum number of students who will be selected is around 30-40 and the budget for the PSP accordingly. If the financial requirements are higher than for the education of 30 to 40 students, alternative exceptional sources will be used, for instance, research grants from the teaching staff.

II. Analysis

The representatives of the new PSP MSc programme entitled "Cardiovascular imaging" submitted all the required documents/proposals/studies according to the relevant instructions of the competent authority (HAHE). Based on these, the necessary academic bodies were created in the PSP to design and supervise the new programme. The programme is well designed following the EQAEE principles according to the EU guidelines standards. The PSP is based on Greek legislation, which harmonized the European Directives 80/154 and 80/155/EEC.

Overall, the academic strategy of the PSP focuses on providing the necessary theoretical and practical training in Cardiovascular Imaging so that students become specialised medical doctors and/or other research scientists to cover the medical needs of the national health

system. According to the documents and the discussions with representatives of the PSP programme as well as with stakeholders, the EEAP agrees that the PSP design is well-organised and provides more than sufficient knowledge of basic and clinical education in this specialized field. The infrastructure of the programme is appropriate. The teaching staff are highly qualified in theoretical and practical aspects. The teaching staff of the PSP is willing to further develop the programme. The PSP established e-learning teaching tools. The PSP took several aspects for quality assurance. The stakeholders are very motivated to support the programme. All lectures and laboratories are well equipped and cover all the essential needs for a successful programme. The EEAP recognised that most of the essential courses for the PSP programme were taken into consideration. However, according to the EEAP, some improvements to the programme are needed.

The EEAP conclude that the courses regarding scientific writing skills critical thinking and interpretation of the research results as well as of the literature should be significantly enhanced (more teaching hours; PubMed, Endnote, journal clubs, statistical courses). In this context, students should be also exercised in presenting scientific projects and their results. In addition, the pathological aspects of cardiovascular diseases and the therapy should be emphasised as well. In other words; what will be the consequence of the pathological image? Moreover, more details on how the students will be involved in the practical courses are needed.

According to the experience of the EEAP also with other PSPs, the programmes do not have financial support for integrating more students in basic research Diploma research projects. Moreover, it has been noticed that the main representatives of the programme do not have competitive national and European research grants (only projects sponsored by pharmaceutical companies) activities. The main representatives publish in several PubMed-listed journals mainly as co-authors. The EEAP believes that the teaching staff must make stronger efforts to attract more international grants to integrate at least 25 to 50% of the participants into basic research activities of the teaching staff. This depends on the quality of the papers. There are also good possibilities for attracting ERASMUS scholarships for students to execute research work for the diploma thesis in foreign European laboratories. In this context, stakeholders which are representatives of companies such as Siemens with strong research portfolios are willing to make efforts to integrate some students in their research activities. The MODIP and other participants of the meeting (in particular the stakeholders) agreed that the research part of the programme should be strengthened, and more efforts are required to improve it, justifying the degree of Master of Science. Also, stakeholders from the pharma industry will put more effort into financially supporting the PSP.

According to the quality assurance objectives, foreign students to the MSc, as well as teachers to the MSc, will be attracted. However, the main official language of the teaching and writing of the thesis is mainly Greek. This is contradictory to the objectives of quality assurance and is not likely to happen. The EEAP suggest writing the thesis in English so that the students get a chance to publish in international journals. Moreover, as stated in the programme, most of

the lectures and practical courses will be given in Greek language. The EEAP pointed out that the current and other PSP in its present form is nationally oriented. The EEAP is also aware that the programme meets the national needs of the country to improve national health. To fully fulfil the expected learning outcomes as described by the European and National Qualifications Framework (EQF, NQF), and the Dublin Descriptors for level 7, the present programme should be modified accordingly to enable easier mobility of the students within the EU. The EEAP recommend that at least the Diploma thesis should be written in English. This will facilitate and improve the student's mobility.

III. Conclusions

The EEAP concluded that the programme is well designed taking into consideration all the basic and clinical aspects of cardiovascular imaging related to the treatment of vascular disorders. The quality assurance politic takes into consideration the appropriate action steps for sustainably running the programme. The structure of the programme is rational but needs some improvements regarding its scientific research and teaching part. The scientific/research part of the programme should be systematically developed and needs significant efforts to fulfil the criteria for a Master of Science Degree. The EEAP conclude that the PSP in its present form is more national-oriented. It is suitable for the professional specialization of medical doctors and imaging technicians to cover the country's medical care needs. More efforts are needed to improve the mobility of the participants in the European market.

Panel Judgement

Principle 1: Strategy, Quality Assurance Policy and Quality Goal Setting for the New Postgraduate Study Programmes	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

Panel Recommendations

- Increase the teaching activities in teaching pathophysiology and clinical pharmacology of the heart. Pathological aspects of cardiovascular diseases and the therapy should be more emphasised.
- the EEAP recommends more teaching hours for promoting scientific writing skills, critical thinking (including bioethics), the interpretation of research results, and the critical evaluation of the appropriate literature (PubMed, Endnote, journal clubs, statistical courses). Students should be trained in presenting scientific publications in the field and their results in regular journal clubs. Students should be exercised in writing clinical trials.
- Teachers should also be taught through regular visits to special courses offered by the University.
- Students must be actively involved in the design of the programme.
- Integrate more students in research diploma projects (basic and clinical research) via ERASMUS scholarships for students to execute research thesis work in foreign European laboratories.
- Involve stakeholders (employed by companies with strong research programmes) to integrate some students into their research activities. A meeting of the PSP representatives with the stakeholders before starting the programme is highly recommended.
- The EEAP recommend acquiring third-party financing grants by the teaching staff that will allow the integration of the students into more research projects, as in foreign laboratories.
- At least the Diploma thesis of the students should be written in English to increase the chances of publishing in international journals.

Principle 2: Design and Approval of New Postgraduate Study Programmes

INSTITUTIONS SHOULD DEVELOP THEIR POSTGRADUATE STUDY PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE NEW POSTGRADUATE STUDY PROGRAMMES. THE OBJECTIVES, THE SPECIFIC SCIENTIFIC SUBJECT AND THE STREAMS OR SPECIALISATIONS, THE EXPECTED LEARNING OUTCOMES AND THE EMPLOYMENT PROSPECTS ARE SET OUT IN THE PROGRAMME DESIGN. DURING THE IMPLEMENTATION OF THE NEW POSTGRADUATE STUDY PROGRAMMES, THE DEGREE OF ACHIEVEMENT OF THE LEARNING OUTCOMES SHOULD BE ASSESSED. THE ABOVE DETAILS, AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.

The academic units develop their postgraduate study programmes following a well-defined procedure. The academic profile and orientation of the programme, the research character, the scientific objectives, the specific subject areas, the specialisations, the expected learning outcomes, the structure, the courses, the teaching and assessment modes, the teaching staff and the necessary resources are described at this stage.

The structure, content and organisation of courses and teaching methods should be oriented towards deepening knowledge and acquiring the corresponding skills to apply the said knowledge (e.g. course on research methodology, participation in research projects, thesis with a research component).

The expected learning outcomes must be determined based on the European and National Qualifications Framework (EQF, NQF), and the Dublin Descriptors for level 7. During the implementation of the programme, the degree of achievement of the expected learning outcomes and the feedback of the learning process must be assessed with the appropriate tools. In particular, for each expected learning outcome that is designed and made public, it is necessary that its evaluation criteria are also designed and made public.

In addition, the design of PSP must consider:

- *the Institutional strategy*
- *the active involvement of students*
- *the experience of external stakeholders from the labour market*
- *the anticipated student workload according to the European Credit Transfer and Accumulation System (ECTS) for level 7*
- *the option of providing work experience to students*
- *the linking of teaching and research*
- *the relevant regulatory framework and the official procedure for the approval of the PSP by the Institution*

The procedure for the approval or revision of the programmes provides for the verification of compliance with the basic requirements of the Standards by the Institution's Quality Assurance Unit (QAU).

Documentation

- *Senate decision for the establishment of the PSP*
- *PSP curriculum structure: courses, course categories, ECTS awarded, expected learning outcomes according to the NQF, internship, mobility opportunities*

- *Labour market data regarding the employment of graduates, international experience in a relevant scientific field*
- *PSP Student Guide*
- *Course and thesis outlines*
- *Teaching staff: teaching assignments per subject area and per course*

Study Programme Compliance

I. Findings

The Panel reviewed the submitted documentation in line with HAHE guidance for EEAP/Panel reviews. The document set for the PSP review was complete and well-presented. The EEAP discussed in detail the design of the Programme with the course Director, the MODIP members, the NKUA Senior Management team, associate academics, and fellow teaching staff. Feedback was sought from external stakeholders. Follow-up questions were discussed with the course Director, MODIP and NKUA Senior Officers at the debrief meeting.

The Senate decided on the inauguration of the new PSP on 06-Jul-2023 taking into consideration the favourable opinion (05-Jul-2023) of the Postgraduate Studies Committee of NKUA, and the decision of the Assembly of the Athens Medical School (31-Mar-2023).

In its current form, the Programme design adheres to HAHE principles, the European standards for Quality Assurance in the EHEA, and the NKUA strategic development plan (2019-2028). The Programme is set up to introduce to students the principles of the current regulatory framework for the conduct of academic research.

The expected volume of work for students follows the standards of the EU ECTS system (level 7); the setup supports student mobility and promotes flexibility. The total number of ECTSs is 90. MSc students are required to attend a minimum of 50% of their classes in person. In-person attendance includes physical attendance at lectures and any other compulsory activities designated by the module Lead or the school. There is a discrepancy regarding the number of ECTS credits for asynchronous and distance learning requirements. In A.11 for instance, the “...it is possible (partially, not more than 10% of the total teaching) ...” point in article 6, is at variance with the “teaching can be delivered employing asynchronous learning methods, which should not exceed a 25% of the ECTS credits” point in article 7. The workload hours (totals) are not included in A9. In general, 1 ECTS credit is equal to 25-30 educational hours. It is also not clear how this criterion is met (number of hours per ECTS credit score).

In this PSP, an overall mark over 7/10 ($\geq 70\%$) is considered a pass. Getting over 70% is excellent; it demonstrates that students have achieved a deep knowledge of the subject. Yet, in article 15.3 in A.11, it is implied that the successful completion of studies is achieved with an overall mark over 5/10 ($\geq 50\%$).

The Programme is new. The design could not have included notes from alumni and/or active students. The course will be taught in the Greek language. The dissertation can be submitted in either Greek or English. Tuition fees amount to €1,000 per semester (per student).

Active involvement of students is incorporated. The Programme encourages students to gain work experience and acquire skills and knowledge which are transferrable to the current job

market. External stakeholders have shown interest in the Programme. This includes the possibility for third parties to support academically-led research, the possibility to offer travel grants to eligible students for attendance at congresses and meetings of special interest, and the possibility to offer job opportunities to future graduates. The course Director concurs to take measures to exclude potential conflict and to ask students to declare an interest, if applicable, acknowledging that the research projects in this MSc will have a clear academic orientation.

II. Analysis

The PSP aims to offer postgraduate studies to international standards for graduates who are interested in conducting clinical research while demonstrating continuous professional development.

The EEAP felt that a few adjustments are needed to assist students to better understand: (i). the difference between what is taught (academic teaching) and learnt (during the conduct of academic research), and (ii). the difference between standard-of-care and the use of standard procedures for clinical *research* purposes. The EEAP outlines the areas for change.

Regulatory framework

At the end of their studies, MSc students should have basic knowledge of the principles of ICH Good Clinical Practice (GCP), the Greek and EU law for human use of medicines and medical devices, the regulations of the Greek competent authority (ΕΟΦ), EMA relevant to clinical research, and the roles of ICH, WHO, FDA, and MHRA in drug development and global clinical research affairs. Combined with basic knowledge in regulations for research tissue banks and research databases, students are expected to know the basics for data protection and information governance including EU GDPR and relevant Greek law.

Research Project Module – Planning

To ensure the smooth conduct of research, the EEAP recommends the project allocation process be initiated at the early stages of the course. The EEAP recommends a process that is fair, inclusive, and transparent. In more detail, the EEAP recommends:

1. The course Director (or Deputy) to liaise with Supervisors at the home institution and partner research sites soon after the beginning of the course.
2. For each project, each Supervisor is to share a title and a summary (abstract) with the students including their contact details as an invite for an informal conversation.
3. For this MSc the EEAP recommends a pool of 50 topics grouped in the following areas:

Area of research	No. of projects (%)
[A]. Basic science, physics, nuclear medicine, pharmacology, and pathology studies	5 (10%)
[B]. Systematic reviews of the literature	10 (20%)
[C]. Epidemiological studies, and studies in the field of health economics	5 (10%)

[D]. Clinical observational studies, including but not limited to clinical research projects with ECHO, U/S, CT, PET, SPECT, and MR imaging modalities	20 (40%)
[E]. Clinical Trials of investigational medicinal products with imaging component	5 (10%)
[F]. Intervention, other (surgical, medical devices, heart transplantation etc)	5 (10%)
	Total: 50 (100%)

4. The expected duration of the Research Project module to include the set-up (i.e. access to laboratory premises, training on equipment and software, access to available datasets etc).

5. Each student is to have a project assigned to them (one per student) on a topic that is mutually agreed with the Supervisor. The course Director (or Deputy) to allocate the remaining research projects, if any, to individual students who did not manage to secure a placement by the end of the first semester.

Research Project Module – Measures to ensure smooth conduct

The EEAP recommends the following notes to be included in the Programme:

1. Research projects must be feasible, and with realistic timelines for an MSc course.
2. Clinical research projects with patient-facing procedures must have regulatory and ethics approvals before the student commences their project.
3. Data of published research may be used to form the basis of new projects, provided that the research question(s) and/or research methodology are new in this context.
4. Non-validated methods should not be considered for new research projects unless the project aims call for the development of new / enhancement of current methodology.

Comments, other:

The programme is new. Feedback questionnaires are to be given to students to ensure room for improvement in the years ahead. Anonymous data to be collected by students and tutors in the following three areas: (i) what are the unmet needs of the students/tutors and their expectations? (ii) are students able to complete tasks on time/tutors able to deal with extra pressure? and (iii) what changes would the students/tutors suggest in the design of the course? The EEAP recommends feedback questionnaires to be handed to students and tutors at the beginning, halfway through the course, and at the end of the second semester.

The Programme offers students access to available resources for individuals who need support with academic English; especially for students with difficulty in reading scientific articles, writing laboratory reports, presenting a poster, writing a literature review, writing a thesis, and many more. The EEAP recommends the Programme to refer students to the Department of English Language and Literature, NKUA (<https://en.enl.uoa.gr/websites/>).

III. Conclusions

Overall, the MSc Programme is well-designed and structured.

Panel Judgement

Principle 2: Design and Approval of New Postgraduate Study Programmes	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

Panel Recommendations

The Course Director and team communicated that they would welcome recommendations, demonstrating openness to change. The EEAP felt that the Programme would benefit from a minor amendment. The aim is to enhance the learning experience of the students and to support staff in delivering a high-quality PSP. In no particular order, the EEAP recommends changes in the following areas, to be implemented, before the first semester. Please see details in Section C, III.

Principle 3: Regulations for Student Admission, Progression, Recognition of Postgraduate Studies, and certification

INSTITUTIONS SHOULD DEVELOP AND APPLY PUBLISHED REGULATIONS COVERING ALL ASPECTS AND PHASES OF STUDIES (ADMISSION, PROGRESSION, THESIS DRAFTING, RECOGNITION AND CERTIFICATION).

The Institution should develop and publish the internal regulations prescribed by law which, among other things, should regulate all issues of postgraduate studies from the beginning to the end of the studies.

Indicatively:

- *The students' admission procedures and the required supporting documents*
- *Student rights and obligations, and monitoring of student progression*
- *Internship issues, if applicable, and granting of scholarships*
- *The procedures and terms for the drafting of assignments and the thesis*
- *The procedure of award and recognition of degrees, the duration of studies, the conditions for progression and for the assurance of the progress of students in their studies*
- *The terms and conditions for enhancing student mobility*

In case that the PSP is offered through distance learning methods, the Institution should have in place a regulation for e-learning, including in particular the following issues:

- *Services of the Institution to support e-learning*
- *Methodology for the development and implementation of courses*
- *Ways of providing teaching and variety of teaching and assessment modes*
- *General standard of course structure*
- *Student support system*
- *Support of faculty/teachers with mandatory e-learning training for new staff members*
- *Technological infrastructures made available by the Institution*
- *Student identity confirmation system (student identity check, assignment and exam writing process, security and certification issues).*
- ❖ *The Institution should establish rules for the provision of appropriate access and for the assurance of the participation of students affected by disability, illness, and other special circumstances.*
- ❖ *Ethical issues, such as those concerning data protection, intellectual property rights and rules for protection against fraud are governed by the e-learning regulation.*

All the above must be made public within the context of the Student Guide.

Documentation

- *Internal regulation for the operation of the postgraduate study programme*
- *Special regulation for the implementation of e-learning if the PSP is delivered through distance methods*
- *Research Ethics Regulation*

- *Regulation of studies, internship, mobility, and student assignments*
- *Degree certificate template and Diploma Supplement template*

Study Programme Compliance

I. Findings

The PSP will start its activities in 2024. Student selection will adhere to existing legislation, the University guidelines for postgraduate and doctoral studies, and the decisions made by the Senate. The required application documents are specified. The selection criteria include diploma grades, research experience, foreign language diplomas, recommendation letters and impressions provided in personal interviews. There will be an annual admissions announcement in October. The responsibility for the selection process will lie with the Selection Committee, entrusted by the Medical School Assembly. The PSP aims to admit up to 40 students per year.

The PSP students will have the same rights and benefits as undergraduate students. These include accessibility to textbooks teaching materials and counselling support. The PSP student obligations include attendance, exam success, and fee payment. The progress of PSP students will be monitored based on their performance in written examinations, participation in research projects, and general activities.

The PSP will award up to 2 excellence scholarships in the form of fee waivers to top-performing students. Up to 30% of the PSP students will also be eligible for tuition fee exemption, based on financial criteria. Reward Scholarships will be offered to students for teaching assistant services. The eligibility and application criteria for scholarships and information on the evaluation process are outlined.

Grades in courses will be calculated based on performance in a final exam and participation in laboratory exercises, assignments, and seminars. One semester has been assigned for preparation and writing a thesis.

To obtain an MSc degree, PSP students must successfully attend and be examined in all compulsory and required elective courses, accumulating a total of 90 ECTS credits. These include the preparation of a thesis, corresponding to 30 ECTS credits.

An electronic platform (e-class) is used for student communication and systematic collaboration. The teaching program also includes mandatory training on the use of ultrasound equipment by experienced technicians.

Teaching will be mostly offered in-person, with the possibility for up to 10% in distance learning. The instruction language will be Greek.

An academic advisor will guide and advise students on academic matters and support them until completion of their studies. Counselling support will be provided by the Career Services Office of the University.

There are provisions for students with disabilities and special circumstances.

II. Analysis

Student rights and obligation issues are clearly outlined in the accreditation proposal.

The procedures and methods for assessing students are clearly outlined in the program's Internal Operating Regulation. Students will receive information about the assessment procedures at the commencement of each course through study guides and the program's website. The procedures for degree awards are appropriately described.

The teaching methods involve collaborative learning, hands-on activities, and alternative teaching formats, such as patient case scenarios. Modern teaching tools are employed during lectures. The instruction language will be almost exclusively Greek, even though the use of English is not excluded. Likewise, students will be requested to write their thesis in Greek, even though they can opt for English.

Courses will be offered in intense blocks on Fridays and during weekends.

It appears there is no provision for student mobility within international exchange programs. The accreditation proposal does not provide terms and conditions for enhancing student mobility.

A student support system is in place.

The accreditation proposal does not describe any faculty development plan. During the remote interviews, the PSP organizers stated that faculty development courses are offered by the Department of Medicine. In addition, some PSP instructors attend faculty development conferences held in Greece.

The PSP requires the use of cutting-edge infrastructure, which is provided at the teaching hospitals.

The accreditation proposal does not cover ethical issues, such as those concerning data protection, intellectual property rights and rules for protection against fraud. Nevertheless, the PSP operates within the University teaching hospital, where these issues are adequately addressed.

III. Conclusions

According to the accreditation proposal, the PSP will adopt a student-centred learning approach, in line with the practices of the Medical School of the National and Kapodistrian University of Athens. There was some discussion on the part-time nature of the PSP and the limited time that students will devote to their research project and thesis. This is a general problem of PSPs in Greece, which may compromise their research orientation.

The regulations for student admission, progression, recognition of postgraduate studies, and certification are well-developed and substantially comply with Principle 3. The accreditation panel viewed very positively the commitment, enthusiasm, and collaborative spirit of the PSP organizers.

Panel Judgement

Principle 3: Regulations for Student Admission, Progression, Recognition of Postgraduate Studies, and certification	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

Panel Recommendations

- The accreditation panel encourages the PSP to diversify the teaching and evaluation methods by including more student assignments and critical presentations of research papers in journal clubs. During discussions in class, the students should be trained to identify important open questions and propose follow-up studies.
- The Accreditation Panel also feels that the students should be encouraged to participate more in research projects aiming to acquire experience in research methodologies and techniques, and eventually publish their results in peer-reviewed journals. The students should be acquainted with the research interests of the faculty and offered a choice of research projects at the beginning of their studies. The research orientation of the PSP should be further developed once the program becomes operational.

Principle 4: Teaching Staff of New Postgraduate Study Programmes

INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE LEVEL OF KNOWLEDGE AND SKILLS OF THEIR TEACHING STAFF, AND APPLY FAIR AND TRANSPARENT PROCESSES FOR THEIR RECRUITMENT, TRAINING, AND FURTHER DEVELOPMENT.

The Institution should attend to the adequacy and scientific competence of the teaching staff at the PSP, the appropriate staff-student ratio, the proper staff categories, the appropriate subject areas, the fair and objective recruitment process, the high research performance, the training, the staff development policy (including participation in mobility schemes, conferences, and educational leaves-as mandated by law).

More specifically, the academic unit should set up and follow clear, transparent, and fair processes for the recruitment of properly qualified staff for the PSP and offer them conditions of employment that recognise the importance of teaching and research; offer opportunities and promote the professional development of the teaching staff; encourage scholarly activity to strengthen the link between education and research; encourage innovation in teaching methods and the use of new technologies; promote the increase of the volume and quality of the research output within the academic unit; follow quality assurance processes for all staff (with respect to attendance requirements, performance, self-assessment, training, etc.); develop policies to attract highly qualified academic staff.

Documentation

- *Procedures and criteria for teaching staff recruitment, policy for attracting highly qualified staff, and PSP Obligation Regulation*
- *List of the intended for recruitment teaching staff including subject areas, employment relationship, Institution of origin, Department of origin and relevant individual achievements*

Study Programme Compliance

I. Findings

There are merit-based criteria and procedures applied for the selection of the teaching staff (Appendix A11). Highly prominent members of the School of Medicine of the National and Kapodistrian University of Athens, as well as members of the Cardiology Department belonging to the National Healthcare System (ESY/ΕΣΥ in Greek) in Hippocraton General Hospital of Athens, along with specialists and professors originating from centers in Europe (University of Liège, Klinikum Bremen-Mitte, King's College London, Linköping University, Sundsvall Regional Hospital, and University Hospital of Zürich), the USA (Mount Sinai Health System, Purdue University), and Israel (Shaare-Zedek Medical Centre) are chosen to teach. Appendix A17 provides the number of publications, h-index, and citations for each member of the teaching staff. One member of the teaching staff is a Researcher at The Biomedical Research Foundation (BRFAA) of the Academy of Athens.

The lecturers are selected based on the following criteria: reputation, research experience and contribution, international recognition, and relevance to the academic subject they are asked to teach. The School of Medicine implements a strategy regarding the

development of the members of the academic unit with an emphasis on training, scientific development, and promotion of the research work of its teaching staff members through the Special Account for Research Grants (SARG). Also, the School of Medicine encourages and finances through SARG the participation of faculty members in international conferences at home or abroad. However, there is not structured professional development, in terms of teaching competence and pedagogy, offered by the Department.

The evaluation of the teaching staff will be performed through the completion of relevant questionnaires by the PSP students. Subsequently, the Curriculum Committee will dedicate one meeting per year exclusively for evaluations, both of courses and teachers. According to the PSP quality targets (Appendix A7), two more distinguished professors from universities abroad are expected to join the teaching staff by the end of the year.

II. Analysis

Even though the members of the teaching staff have significant research productivity, nevertheless, their research projects are not always related to the PSP. The research activities within the PSP should be focused on Cardiovascular Imaging. Collaborations with more scientists in relevant fields should be pursued (Medical Physics, Imaging Informatics and Artificial Intelligence, Nuclear Medicine, Biotechnology, Biomedical Modelling and Engineering, etc).

III. Conclusions

The PSP is substantially compliant with the criteria of Principle 4.

Panel Judgement

Principle 4: Teaching Staff of New Postgraduate Study Programmes	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

Panel Recommendations

- It is recommended that the PSP adopts a formal Teaching Development procedure where members of staff improve and update their teaching and pedagogy skills. In that respect, staff mobility should be facilitated via Erasmus+ and other related programs.
- Provide more opportunities for the students to engage in experimental dissertations and thus improve the linking between teaching and research.

Principle 5: Learning Resources and Student Support

INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER THE TEACHING AND LEARNING NEEDS OF THE POSTGRADUATE STUDY PROGRAMMES. THEY SHOULD -ON THE ONE HAND- PROVIDE SATISFACTORY INFRASTRUCTURE AND SERVICES FOR LEARNING AND STUDENT SUPPORT, AND- ON THE OTHER HAND- FACILITATE DIRECT ACCESS TO THEM BY ESTABLISHING INTERNAL RULES TO THIS END (E.G. LECTURE ROOMS, LABORATORIES, LIBRARIES, NETWORKS, CAREER AND SOCIAL POLICY SERVICES ETC.).

Institutions and their academic units must have sufficient resources and means, on a planned and long-term basis, to support learning and academic activity in general, so as to offer PSP students the best possible level of studies. The above means include facilities such as the necessary general and more specialised libraries and possibilities for access to electronic databases, study rooms, educational and scientific equipment, IT and communication services, support, and counselling services.

When allocating the available resources, the needs of all students must be taken into consideration (e.g., whether they are full-time or part-time students, employed and foreign students, students with disabilities), in addition to the shift towards student-centered learning and the adoption of flexible modes of learning and teaching. Support activities and facilities may be organised in various ways, depending on the Institutional context. However, the internal quality assurance proves -on the one hand- the quantity and quality of the available facilities and services, and -on the other hand- that students are aware of all available services.

In delivering support services, the role of support and administration staff is crucial and therefore this segment of staff needs to be qualified and have opportunities to develop its competences.

Documentation

- *Detailed description of the infrastructure and services made available by the Institution to the academic unit for the PSP, to support learning and academic activity (human resources, infrastructure, services, etc.) and the corresponding firm commitment of the Institution to financially cover these infrastructure-services from state or other resources*
- *Administrative support staff of the PSP (job descriptions, qualifications, and responsibilities)*
- *Informative / promotional material given to students with reference to the available services*
- *Tuition utilisation plan (if applicable)*

Study Programme Compliance

I. Findings

A brief online tour of the facilities was conducted, and the EEAP had the chance to watch a video describing the teaching facilities. The PSP director reassured the EEAP of the accessibility options for people with disabilities. The EEAP found out that most of the students who are going to participate in the inaugural program are employed medical doctors before, during, or after their residency (principally in Cardiology). It is a part-time program that offers up to 10% online lectures to meet the needs of PSP students.

According to the submitted A7 document on quality targets, the EEAP must stress some issues: (i) There is mention of 3 seminars on the writing of scientific papers and theses,

but only 60% of students are expected to participate. All PSP students should be encouraged to participate in these seminars. (ii) The administrative support staff of the PSP should be adequate and competent, and this issue should be resolved before the beginning of the classes. The regulation of academic tutors is meticulous (Appendices A14), but there should be a regular feedback loop with students to achieve high rates of engagement. The regulation on the management of student complaints and objections (Appendix A13) is also detailed and unprejudiced.

The host institution provides access to library and electronic services, including wireless network (Wi-Fi), virtual private network (VPN), e-mail provision, eClass services, depository, personal website, and major electronic databases. Of note, PSP students do not have access to platforms with great contributions on the field, such as UpToDate. Administrative services are also easily accessible for other issues that involve meals and parking within the campus, housing, and gym. Psychosocial support and career development services are also available by the host institution. Nevertheless, there is no planning for alumni networking.

According to the Internal Quality Assurance System (Appendix A3), the administrative services have been deemed sufficient and readily available. The same report notes that the learning materials (both educational and scientific equipment) are of high quality, and the PSP students have the convenience of access to novel teaching practices and high academic performance. The feasibility and viability report (Appendix A5) confirms that the infrastructure is fit to conduct the PSP and that the administrative and other staff will support the implementation of the PSP Study Program.

The EAAP has found that the PSP “Cardiovascular Imaging” is mainly hosted in the Hippocraton General Hospital of Athens, where the 1st Cardiology Department of the School of Medicine is located (auditorium, clinic, ultrasound cardiographic laboratories). The first class is planned to take place in the Department of Anatomy of the National and Kapodistrian University of Athens (<https://adoa.gr/en/>). Training on imaging (other than ultrasound techniques) will take place at the 1st Department of Radiology in "Aretaieion" Hospital of National and Kapodistrian University of Athens. Teaching facilities are easily accessible with public transport. The postgraduate students can be informed about services and events through the School of Medicine and the National and Kapodistrian University of Athens websites. The PSP website is under construction, while information about the PSP is available only in Greek (<https://bit.ly/49ZL90L>).

II. Analysis

Teaching spaces

The PSP will operate to a large extent on the premises of Hippocraton General Hospital of Athens, which facilitates the PSP with a modern classroom of 65 seats equipped with audio-visual devices, computers, and high-speed internet. The Cardiology Department

of this hospital will also be utilized for the PSP needs. For the fulfilment of academic targets, the PSP students pay visits to the 1st Department of Radiology in "Aretaieion" Hospital of National and Kapodistrian University of Athens. PSP students are also visiting the Department of Anatomy of the National and Kapodistrian University of Athens for the corresponding class.

Library

The Library of the School of Health Sciences is also located in Athens (<http://www-en.lib.uoa.gr/libraries/health-sciences.html>) on an area of 2,500 sq.m., and includes a reading room of 76 seats (reduced due to COVID-19 pandemic prophylactic measures), 20 information search and retrieval stations via OPAC catalogues and the Hellenic Academic Libraries Link HEAL-LINK. The library staff offers the students guidance to locate reliable sources and borrow scientific books and aids in the inter-lending of books and articles from other institutions in Greece and abroad ("Ask a Librarian" policy). Students are eligible to order manuscripts from scientific journals in the library (through actions undertaken by the National Documentation Centre). The collection of the registered printed material is also digitalized. The library contributes to the enrichment of the "Pergamos" Digital Library System by repositing postgraduate theses and doctoral dissertations. Recent developments in the library's infrastructure are going to provide easy access to students with disabilities. There is also an amphitheatre with a capacity of 170 students. The suggested bibliographic resources are of good quality and easily accessible.

Electronic services

The PSP website is under construction and available only in Greek. The students can access useful documents at <https://bit.ly/49ZL90L>.

The electronic library services are mentioned above.

E-learning is a learning environment that uses information and communication technologies as a platform for teaching and learning activities. PSP students can participate in live presentations (webcasts) and electronic classes (eClass), and search and watch recorded sessions found either as open academic lectures or in Open Delos platform (provided by GU eLearning & Multimedia Support Centre). PSP students can also have remote access to their grades.

Other digital services provided by the National and Kapodistrian University of Athens to PSP students are electronic address, access to the University's network securely through a virtual connection (Virtual Private Network - VPN), wireless network and internet access within the National and Kapodistrian University of Athens premises, personal webpage space, secure file saving, transfer, and exchange via File Transfer Protocol (FTP), Web File Manager (WFM), WebDrive app to store deposited files from users.uoa.gr to personal computers, and alumni networking through the Career Office of the National and Kapodistrian University of Athens. Electronic administrative office services are also available (timetable, ECTS, teaching staff details, exam dates, documents referring to thesis, and

exchange of documents, applications, and certificates). The students are expected to conduct their assessments for the PSP online using the aforementioned service.

Academic tutor

Appendix A14 describes in detail the institution and responsibilities of academic tutors.

Student welfare

Every PSP student is eligible for the issue of an academic identity card (AcademicID), which provides reduced-cost tickets and lower fares for public transport (including bus and train routes, and specific ship lines). Counselling and Support Services include consultation services on career development, University Club (www.lesxi.uoa.gr), Student Meal Services, Health Service, University Gym and Athletics Centre, University of Athens Cultural Club, Accessibility Unit for Students with Disabilities, Student Ombudsman, Liaison Office, Centre of Continuing Education and Life Long Learning, Foreign Languages Teaching Centre, Psychological Intervention Unit, Counselling Centre for Students, psychological support hotline 10306, Mental Health Community Centre, and Student Support Fund. More specifically, PSP students are fully eligible for medical, pharmaceutical, and hospital healthcare, if they have not already chosen another Healthcare Insurance Plan. Healthcare Insurance includes healthcare services in Public Hospitals, University Hospitals, and Public Primary Healthcare Facilities which are part of the National Healthcare System (ESY/ΕΣΥ in Greek). In case of an emergency, students can also seek help from Municipal Medical Centers of the country, upon showing their Academic ID Card or AMKA number (Social Security Number). In addition, the University has its services, which are located at the centre of Athens (15 Ippokratous Street), and at the University Campus in Zographou (12 Olof Palme Street, Panepistimioupoli, Ilisia), which provide Healthcare Services for specific medical specializations upon showing the Academic ID card.

Mobility

The PSP students are eligible to participate in international exchange programs such as ERASMUS + or CIVIS, but they can cover up to 30 of the total ECTS credits, and only from the second semester and on. The ability of foreign students to participate in this PSP based on institutional agreements is mentioned, but there is no detailed planning and description.

Tuition fees

PSP students are expected to pay 3,000 euros each for each full course (1,000 euros for each semester). Notably, most students are medical doctors in their residency, with a monthly allowance of 1,259 euros (Official Government Gazette A' 225, 4999/2022). This means that students are expected to pay 13.2% of their annual income to this PSP. Beyond the latter fact, the tuition utilization plan appears effective. However, it does not include any provision for scholarship funding since residents are not eligible for standard scholarships. It

is particularly encouraging to offer further sources of financing, along with a flexible payment plan.

Other sources of funding, such as donations, sponsorships, legacy funds, and research grants, are precluded. The incoming resources are being handled by the Special Account for Research Grants (SARG) of the National and Kapodistrian University of Athens, which retains as high as 30% of the amount deposited by students. The EAAP strongly believes that both SARG and PSP contributors should be in search of further funding to invest in research. The amount of 8,000 euros for the first year and 6,000 euros annually for the payments of 2 teaching staff members are not explained well by the submitted documents (Appendices A19 and A10), and the EAAP considers this as an opportunity to recruit more world-renowned speakers.

III. Conclusions

Overall, the infrastructure and services offered by the PSP are considered adequate. The postgraduate students are mainly informed about the provided facilities via the School of Medicine and the National and Kapodistrian University of Athens websites. The teaching staff is considered adequate to conduct the educational process. The tuition utilization plan appears effective, but it should include provisions for extra and effective scholarships along with other sources of funding. There should be actions to ensure that PSP students who are not cardiologists or radiologists are receiving the same high-level education in terms of the completion of their training and logbook.

Panel Judgement

Principle 5: Learning Resources and Student Support	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

Panel Recommendations

- Build a bilingual website for the PSP and upload all relevant information.
- Attract non-medical students and involve them in basic research. Exploit the institution of academic tutors and communicate to the students the expected benefits.
- Search for alternative funding sources and scholarships should be pursued. External stakeholders should engage for this purpose.

Principle 6: Initial Internal and External Evaluation and Monitoring of New Postgraduate Study Programmes

INSTITUTIONS AND ACADEMIC UNITS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM, FOR THE AUDIT, INTERNAL AND EXTERNAL EVALUATION OF THE NEW POSTGRADUATE PROGRAMMES, THUS ENSURING COMPLIANCE WITH THE PRINCIPLES OF THE PRESENT STANDARDS. ANY ACTIONS TAKEN IN THE ABOVE CONTEXT SHOULD BE COMMUNICATED TO ALL PARTIES CONCERNED.

The internal evaluation of the new PSP includes the assessment of the accreditation proposal, as well as the documentation in accordance with the Principles of the present Standards and the quality procedures of the Institution's Internal Quality Assurance System (IQAS). The internal evaluation of new postgraduate study programmes also aims at maintaining the level of educational provision and creating a supportive and effective learning environment for students. The Institution, through its Quality Assurance Unit (QAU) and the corresponding academic units, organise and support the external evaluation procedures of the new PSP, according to the specific guidelines and directions provided by HAHE.

The above comprise the assessment of:

- *the objectives, content, and structure of the curriculum, the knowledge offered and the level of science and technology in the given discipline, thus ensuring that the PSP is up to date, according to the relevant documentation listed in the decisions of the pertinent bodies*
- *the entailed students' workload for the progression and completion of postgraduate studies*
- *the satisfaction of the students' expectations and needs in relation to the programme*
- *the learning environment, support services, and their fitness for purpose for the PSP in question*

Postgraduate study programmes are designed and established in accordance with the provisions of the Institution's internal regulations, involving students and other stakeholders.

Documentation

- *The Quality Assurance Unit (QAU) procedure for verifying whether the requirements of the Standards for Quality Accreditation of New PSP are met, as well as the procedure for organising and supporting their external evaluation procedures*
- *Assessment and feedback mechanisms of the PSP strategy and quality targeting, and relevant decision-making processes (students, external stakeholders)*

Study Programme Compliance

I. Findings

The Medical School of the National and Kapodistrian University of Athens applies quality assurance procedures, and its policy is fully in line with the Quality Policy of the University of Athens, making this Department fully dedicated and committed to providing high-quality higher education to the students who choose it, organizing and implementing PSPs.

The basic principles of PSP Quality Policy "Cardiovascular Imaging" serve:

- the compliance with the internal quality assurance system of the University
- the undertaking of the responsibilities of the leadership of the Institution, the Departments, other functional units, staff members and students, as well as their role in quality assurance.
- the safeguarding of academic principles and ethics, preventing discrimination
- the encouragement of the participation of external bodies in quality assurance
- the continuous improvement of learning and teaching, research, and innovation,
- the quality assurance of the Postgraduate Programmes and their compliance with HAHE standards,
- the effective organization of services and the maintenance and development of infrastructure,
- the allocation and effective management of the necessary resources for their operation, and the development and rational allocation of human resources.

All quality assurance procedures of PSP "Cardiovascular Imaging" are subject to control, review and to procedures carried out on an annual basis by the IQAS, in collaboration with the Quality Assurance Unit of the Foundation. The procedures applied for the monitoring and continuous improvement of the quality of the new Postgraduate Studies Program are based on the following axes:

- Implementation of specific policy regarding Quality Assurance
- Allocation and management of resources
- Establishment of Quality Assurance Objectives on an annual basis
- Periodic Internal Evaluation and Monitoring on an annual basis
- Collection of quality data: measurement, analysis, and improvement
- Disclosure of information
- External Evaluation

Based on the above, PSP is decisively committed to achieving the following:

- Smooth Graduation Rate of Postgraduate Students
- Provision Counselling Services
- Active Participation of Students and Alumni in Internal Evaluation Processes
- Quality in the research work produced by PSP Teachers
- Participation of MSc students in research processes
- Linking PSP to PhD Studies
- Implementation of actions to connect PSP with the labour market and the local community
- Utilization, Collaboration and Networking with the Alumni of the Department and of PSP
- Attracting foreign students to PSP
- Attracting Teachers to PSP from Foreign Institutions
- Development of Management Information Systems and Digital Services Governance

- Infrastructure and quality support services for the student community of PSP

II. Analysis

It is evident that a culture of quality prevails in general at the University and this culture of quality will inevitably prevail in this PSP. Quality procedures and bodies exist, perform, and are expected to continue the work undertaken [(Institution's Internal Quality Assurance System (IQAS) and Quality Assurance Unit (QAU)].

At the same time, the teaching and other staff, as well as the bodies of the University regarding the implementation of quality education provision, declare readiness and enthusiasm to implement the quality policy and specific objectives of quality education, as this has been formulated.

At the same time, PSP students are expected, among other things, to evaluate the educational process provided and potentially, be able to contribute significantly to taking corrective quality improvement measures.

III. Conclusions

The requirements for the quality provision of education are certainly present. It remains for this PSP to operate so that it can be proven in practice also, what has been optimistically reported.

Panel Judgement

Principle 6: Initial Internal and External Evaluation and Monitoring of New Postgraduate Study Programmes	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

In addition to the academic advisor, the PSP should provide mentors to students during clinical practice, given that there is a possibility of participation of specialities other than medicine.

PART C: CONCLUSIONS

I. Features of Good Practice

- The programme is rational and well-designed taking into consideration all the basic and clinical aspects of cardiovascular imaging.
- The teaching staff is adequate to conduct the educational process.
- The commitment, enthusiasm, and collaborative spirit of the PSP organizers are very positive. Motivated stakeholders
- The quality assurance politic takes into consideration the appropriate action steps for sustainably running the programme.
- The programme is needed to improve and cover the needs of the national medical health system.

II. Areas of Weakness

- The PSP in its present form is more national-oriented.
- The scientific/research part of the programme should be systematically organized and strengthened to integrate more students into research projects.
- The mobility of the PSP participants in the European market is limited.
- The scientific writing and presentation of research projects are underdeveloped.
- The Diploma thesis and the teaching courses are written and taught in the Greek language. The time for Diploma research thesis is limited (this is a general problem of PSPs in Greece, which may compromise their research orientation).

III. Recommendations for Follow-up Actions

- Increase the teaching activities in teaching pathophysiology and clinical pharmacology of the heart.
- Strengthen scientific writing and presenting skills as well as critical thinking (including bioethics, (PubMed, Endnote, journal clubs, and statistical courses). Students should be exercised in writing clinical trials (for instance include more student assignments and critical presentation of research papers in journal clubs. During discussions in class, the students should be trained to identify important open questions and propose follow-up studies).
- Consider incorporating the regulatory framework principles in your teaching, if they are not currently included, by adding 1-2 extra hours in the “Methodology of Research and Principles of Statistics” activity. Consider moving the entire methodology module at the beginning of the course (first semester).

- Clarify for students and PIs the expectation for a pool of research projects (suggestion for N=50/academic year grouped in the suggested areas). See details in Principle 2, II. Analysis.
- Consider taking measures to ensure the smooth conduct of research programmes.
- Please update the wording regarding asynchronous learning and distance education to increase clarity. The EEAP suggests the following wording to be used consistently: “The maximum number of teaching, held remotely, should not exceed 10% of the total teaching time”. In this PSP, the EEAP understands that in-person teaching time is equivalent to 60 ECTS credits [=90 (total) – 30 (research project including writing-up)]. The 10% of that is 6.
- Please specify that an overall mark of 7/10 ($\geq 70\%$, including 7/10) is considered a pass throughout the PSPS documentation.
- Please revisit the tables in A8, A9, and A11 documents to ensure that hours per module are correct consistently. Please include in your breakdown tables an approximation of hours for unsupervised study. The total workload figures should be justified by the individual figures; they should match with the corresponding ECTS credits.
- Consider incorporating a simple feedback mechanism to increase quality, to improve the design, and to address unmet educational needs.
- Teachers should also be taught through regular visits to special courses offered by the university.
- Students must be actively involved in to design of the programme.
- Integrate more students in research projects. The students should be acquainted with the research interests of the faculty. A collection of potential research projects should be presented to the students at the beginning of their studies. The research orientation of the PSP should be further developed once the program becomes operational. In particular a) Integrate more students in research diploma projects (basic and clinical research) via ERASMUS scholarships for students to execute research thesis work in foreign European laboratories; b) involve stakeholders (employed by companies with research programmes) with high research activities) to integrate some students into their research activities. A meeting of the PSP representatives with the stakeholders before starting the programme is highly recommended; c) acquiring third-party financing grants by the teaching staff that will allow the integration of the students into more research projects, as in foreign laboratories. At least the Diploma thesis of the students must be written in English to increase the chances of publishing in international journals.
- During the clinical practice courses, mentors should supervise the students (assuming that there is a possibility of participation in PSP of specialities other than medicine).

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **6**.

The Principles where substantial compliance has been achieved are: **1, 2, 3, 4, and 5**.

The Principles where partial compliance has been achieved are: **None**.

The Principles where failure of compliance was identified are: **None**.

Overall Judgement	
Fully compliant	
Substantially compliant	X
Partially compliant	
Non-compliant	

The members of the External Evaluation & Accreditation Panel

Name and Surname

Signature

- 1. Prof. Agapios Sachinidis (Chair)**
University of Cologne, Cologne, Germany
- 2. Prof. Andreas Pavlakis**
Philips University, Nicosia, Cyprus
- 3. Prof. Konstantinos Pantopoulos**
McGill University, Montreal, Canada
- 4. Dr. Andreas-Antonios Roussakis**
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- 5. Mr. Ioannis Kyriakidis (Postgraduate Student)**
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