



**ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ**  
HELLENIC REPUBLIC



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# **Accreditation Report** **for the Undergraduate Study Programme of:**

**Medicine**  
**Aristotle University of Thessaloniki**  
**Date: 12 December 2020**

Report of the Panel appointed by the HAHE to undertake the review of the Undergraduate Study Programme on **Medicine** of the **Aristotle University of Thessaloniki**, 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 Undergraduate Study Programme on **Medicine** of the **Aristotle University of Thessaloniki**, comprised the following four (4) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

- 1. Prof. Nikolaos Venizelos (Chair),**  
Örebro University, Örebro, Sweden
- 2. Prof. Peter Giannoudis,**  
University of Leeds, Leeds, United Kingdom
- 3. Prof. Aristidis Moustakas,**  
Uppsala University, Uppsala, Sweden
- 4. Dr. Nikolaos Nitsas,**  
Member of Panhellenic Medical Association, Greece

## II. Review Procedure and Documentation

The members of the **External Evaluation & Accreditation Panel (EEAP)** for the undergraduate programme of Medicine of the **Aristotle University of Thessaloniki (AUTH)** were selected from the **Hellenic Authority for Higher Education (HAHE)** Register in August 2020, in accordance with Laws 4009/2011 & 4653/2020. Official invitation letters were sent to EEAP members on October 29, 2020.

Due to the current Coronavirus (COVID-19) pandemic and in line with the procedures for the limitation of further spread of the virus worldwide, the original planned programme of evaluation was not possible. Consequently, the standards of the accreditation process were modified, and all external evaluation and accreditation reviews of the study programme of the School of Medicine (SM) of the AUTH, were implemented by using electronic means, i.e., teleconference via on-line Zoom platform. Accordingly, the accreditation procedure was scheduled to take place from 7<sup>th</sup> to 12<sup>th</sup> of December 2020, and the digital on-line site evaluations on the 8<sup>th</sup> and 9<sup>th</sup> of December.

After formal acceptance of the invitation, the EEAP members received the relevant documentation from HAHE, including the previous external evaluation report and guidelines regarding the purpose and standards for quality accreditation of undergraduate programmes. HAHE also forwarded to EEAP a comprehensive, excellent documentation provided by the School of Medicine related to the structure and organization of the AUTH and the School of Medicine. The provided documents included the study guide, a detailed description of the proposal of academic certification of the Undergraduate Programme, courses offered in each semester, departmental rules and regulations, strategic planning of the School, internal quality assurance policies, examples of questionnaires assessing quality of teaching and internal evaluation reports.

Dec 7, 2020, 17:00-19:00, Athens time: The EEAP initiated the accreditation mission by a Teleconference with HAHE. The General Director of HAHE, Dr. Christina Besta, briefed the EEAP members about the mission of HAHE, the standards and guidelines of quality assurance (QA), the accreditation process, national framework of HEIs, the mission procedures and principles. In the afternoon of the same day, the EEAP members had the first private digital Zoom meeting to schedule and discuss the proposal of report, allocation of tasks, and list of issues for the site visit that would be performed via online Zoom meetings.

Dec 8, 2020, 15:00 - 15:30, Athens time: The EEAP had the first Teleconference with the Vice-Rector/President of MODIP and the Head of the School of Medicine. The Vice-Rector, Professor Dimitrios Kovaïos, welcomed the EEAP and initiated the meeting by presenting a short overview of Internal Evaluation Criteria. Then, the Head of the School of Medicine, Professor Kyriakos Anastasiadis, presented an overview of the Undergraduate Programme School of Medicine (UPSM), which included history, academic profile, current status, strengths vision, and possible areas of concern. The Dean of the Faculty of Health Sciences, Professor Theodoros Dardavesis

was also present during this meeting and he as well gave his greetings and thanked the EEAP for having accepted to carry out this academic mission that is very important for the faculty.

Dec 8, 2020, 15:45 - 17:45, Athens time: The next EEAP Teleconference was with OMEA & MODIP representatives. Professor Antonis Goulas, Coordinator of OMEA, welcomed the EEAP and initiated the meeting by presenting a short overview concerning the degree of compliance of the UPSM to the Quality Standards for Accreditation, student assignments, theses, exam papers and examination material. At this meeting, the EEAP had a good opportunity to review and discuss the matters with the OMEA & MODIP representatives.

Members of OMEA in attendance were: Assoc. Professor Costas Haitoglou, Deputy Coordinator of OMEA, Professor Antonis Aletras, Assoc. Professor Ioannis Tsinopoulos, ECTS Coordinator, Assoc. Professor Michalis Aivaliotis, Assoc. Professor Katerina Haidopoulou, Course Coordinator for Pediatrics, and Assoc. Professor Aikaterini Papagianni.

Members of MODIP in attendance were: Professor Alkiviadis Bais, Head of the School of Physics, Professor Georgios Tagaras, Head of Sector of Industrial Management. MODIP staff Mrs. Alexandra Tzaneraki, MODIP Secretary, and Mr. Konstantinos Aivazidis, Quality Management Official.

Dec 8, 2020, 19:00 - 19:45, Athens time: Subsequently, the EEAP members had Teleconference with the teaching staff members. The EEAP reviewed and discussed, professional development opportunities, mobility, workload, student evaluations, competence and adequacy of the teaching staff to ensure learning outcomes, link between teaching and research, teaching staff's involvement in applied research, projects and research activities directly related to the programme and possible areas of weakness.

Teaching staff members in attendance were: Professor Stefanos Triaridis, 1st Department of Otorhinolaryngology, Deputy Head of the School of Medicine. Assoc. Professor Theodora Papamitsou, Laboratory of Histology and Embryology, Head of the Committee for Graduate Programmes. Professor Evangelia Spandou, Laboratory of Experimental Physiology, Head of Laboratory, ECTS Coordinator. Professor Panagiotis Bamidis, Laboratory of Medical Physics. Assoc. Professor Georgios Tsoulfas, 1st Department of Surgery. Assoc. Professor Polychronis Antonitsis, Department of Cardiothoracic Surgery. Assoc. Professor Georgios Papazisis, Laboratory of Clinical Pharmacology. Assist. Professor Maria Papaioannou, Laboratory of Biological Chemistry. Mrs. Sofia Kotsinou, Technical Staff, Laboratory of Microbiology, and Mr. Spyridon Lafis, Teaching Staff, Laboratory of Biological Chemistry.

Dec 8, 2020, 20:00 - 20:45, Athens time: The EEAP met via Teleconference with 10 medical students (2 from 2nd year of studies, 3 from 4th year, 2 from 5th, 2 from 6th and 1 graduating student). The EEAP members evaluated and discussed among other topics, the students' study experience, and facilities of the School/Institution etc. Furthermore, discussed the satisfaction of the students concerning their studies, the students' input in quality assurance, and priority issues concerning student life and welfare.

Dec 9, 2020, 15:00 - 16:00, Athens time: The EEAP via Teleconference met administrative and teaching staff members. The EEAP reviewed and discussed the facilities presented in the on-line tour video (that was produced for this purpose), concerning classrooms, lecture halls, libraries laboratories, and other facilities. The aim of the EEAP was to evaluate whether the facilities and learning resources, materials, equipment, were enough and adequate for a successful provision of the programme.

Teaching staff members in attendance were: Professor Vasileios Papadopoulos, Head of the Committee for International Ranking. Professor Vasileios Vassilikos, Member of the English Language Undergraduate Programme Executive Committee. Professor Prodromos Hytioglou, Member of the English Language Undergraduate Programme Executive Committee. Professor Georgios Tzimagiorgis, Head of Laboratory of Biological Chemistry, Assoc. Professor Nikolaos Foroglou, Member of the English Language Undergraduate Programme Executive Committee. Assoc. Professor Eleni Argyriadou, Member of the English Language Undergraduate Programme Executive Committee. Assist. Professor Emmanouil Smyrnakis, Laboratory of Primary Health Care, General Practice and Research in Health Services.

Administrative staff members in attendance were Mrs. Theodora Gazopoulou, Head Secretary, Mr. Asterios Hatziharistos, IT Official, Mr. Dimitrios Nerantzis, Contact and Organization Official.

Dec 9, 2020, 16:00 - 16:45, Athens time: The EEAP continued the Teleconference with 10 Programme graduates (residents and scholars) from Hippokration General Hospital, General Hospital Papageorgiou, University Medical Centre, Nashville, Tennessee, USA, Gartnavel General Hospital of Glasgow, UK, Theageneion Hospital, Ambroise Pare Hospital, Paris, France, and private practice in Thessaloniki. The EEAP discussed their scholarly experience of studying at the School of Medicine of AUTH as well as their career path after graduation.

Dec 9, 2020, 17:00 - 17:45, Athens time: The EEAP continued the Teleconference meeting with external stakeholders/social partners from the private and the public sector, discussing their relations with the School of Medicine.

External stakeholders/social partners in attendance were: Mr. Michail Karaviotis, Head Manager of Papageorgiou General Hospital, Mrs. Faye Kosmopoulou, Managing Director of the Panhellenic Union of Pharmaceutical Industries, Mr. Dimitris Nikas, Country Managing Director at Medtronic plc., Dr. Panagiotis Panteliadis, Head Manager of AHEPA University General Hospital, Dr. Apostolos Papalois, Director of Experimental and Research Centre, ELPEN AE, Mr. Apostolos Chatzivalasis, Marketing Director of ATG Labs-Access to Genome IKE, former Director of Medical Synergy, Euromedica Group SA, Mr. Nikolaos Antonakis, Head Manager, Hippokration General Hospital, Dr. Christina-Olga Goula, Plastic Surgeon, Regional Health Advisor, Regional Unit of Thessaloniki, Region of Central Macedonia.

Dec 9, 2020, 19:30 - 20:00, Athens time: The EEAP met the OMEA & MODIP representatives and discussed, findings from the visual visits and interviews via Teleconference, which needed further clarification.

Members of OMEA in attendance were: Professor Antonis Goulas, Coordinator of OMEA, Assoc. Professor Costas Haitoglou, Deputy Coordinator of OMEA, Professor Antonis Aletras, Assoc. Professor Ioannis Tsinopoulos, ECTS Coordinator, Assoc. Professor Michalis Aivaliotis, Assoc. Professor Katerina Haidopoulou, Course Coordinator for Pediatrics Assoc. Professor Aikaterini Papagianni.

Members of MODIP in attendance were: Professor Alkiviadis Bais, Head of the School of Physics, Professor Georgios Tagaras, Head of Sector of Industrial Management. MODIP staff Mrs. Alexandra Tzaneraki, MODIP Secretary, and Mr. Konstantinos Aivazidis, Quality Management Official.

Dec 9, 2020, 20:00 - 20:15, Athens time: The EEAP finalised the scheduled External Evaluation & Accreditation Panel reviews by an informal presentation of the initial impressions/key findings in a short closing meeting with the Vice-Rector/President of MODIP, the Head of the SM and the OMEA & MODIP representatives.

The EEAP wants to emphasise the warm kindness, wellness and response that were offered, as well as the professionalism, honesty, receptiveness, and an open-mindedness of the faculty members of the School of Medicine, students, and external stakeholders/social partners.

The members of the academic community were actively engaged in the accreditation process. The faculty and administrative staff were well prepared for the accreditation process and facilitated and supported, the not easy, digital via on-line visit work of the EEAP.

The EEAP expressed their gratitude to Professor Kyriakos Anastasiadis, Head of School of Medicine, the Vice-Rector/President of MODIP, and all other members of OMEA and MODIP, the Secretariat of the Faculty, for data presentations and for organizing a highly efficient digital via on-line site visit for the External Evaluation & Accreditation review process.

During the period 10<sup>th</sup> to 12<sup>th</sup> of December 2020, the EEAP members were working to put together and compile the Accreditation Report.



### III. Study Programme Profile

The Aristotle University of Thessaloniki (AUTH) was founded in 1925 and was named after the famous ancient philosopher Aristotle. It is one of the largest Universities of Greece, covering an area of about 34 hectares and located in the Centre of the city. It consists of 41 Faculties and Schools offering a diverse spectrum of studies. Overall, it has approximately 74.000 registered students (65.000 undergraduate and 9.000 postgraduate, 4.000 of which at Doctoral level), more than 2.500 permanent teaching staff and approximately 800 permanent administrative staff (<https://www.auth.gr/en>).

The School of Medicine (SM) was founded as Medical Faculty of the Aristotle University of Thessaloniki in 1942. Seventeen years after the foundation of Aristotle University, the SM became one of the four Schools of the Faculty of Health Sciences. The School of Medicine in the first academic year (1942-43) accepted 385 medical students, mainly males. The main goals of the School of Medicine of AUTH are to educate medical students as well as to provide Greek health professionals with the highest scientific standards, and to perform high quality research independently and in collaboration with other Greek and international research institutions.

The undergraduate curriculum of the School of Medicine spans six years, which are divided into semesters. It has a structure of 3 cycles of study. The 1<sup>st</sup> Cycle consists of 4 semesters with focus on preclinical courses; the 2<sup>nd</sup> Cycle consists of 6 semesters focusing on clinical courses; finally, the 3<sup>rd</sup> Cycle consists of 2 semesters and the focus here is on clinical exercises. During the first two years, the courses are mainly dedicated to basic sciences. The involvement of medical students to the clinical practice begins during the third year. Upon successful completion of the studies, the students receive the **Medical Degree** (Ptychion Iatrikis).

The SM is organized in nine Sectors: Anatomy and Pathology, Physiology and Pharmacology, Biological Sciences and Preventive Medicine, Radiology - Medical Physics and Informatics, Sensory Organs, Children's Health, Neurosciences, Surgery, and Internal Medicine. Additionally, the School of Medicine offers and hosts 19 Post-graduate Programmes, some of them are Interdepartmental or interinstitutional.

The main education of pre-clinical courses takes place in traditional Amphitheatres and Lecture halls at the School. The School of Medicine provides today education and research facilities with a capacity of 5 Amphitheatres of 70 - 500 seats, 12 Lecture/seminar rooms 30-60 seats, 11 Workshop rooms for student education of 30-60 seats, and additional teaching and education infrastructure in 7 university collaborative Hospitals (<https://classschedule.auth.gr/#/rooms?unit=68>). In addition, the SM provides, Research laboratories, a Laboratory of Anatomy and Surgery, Morgue, an HIV-Influenza-Covid-19 Reference Centre, an Electronic Microscope Room, and a Centre for Clinical Skills and Simulation with capacity of 60 places.

The clinical education in the majority takes place at the "AHEPA" University Hospital of Thessaloniki, located at the University Campus, and in several closely collaborating hospitals as "Hippokration"-General Hospital of Thessaloniki, "G. Gennimatas - Agios Dimitrios"- General Hospital of Thessaloniki, the Hospital of Venereal and Skin Diseases of Thessaloniki, "Papageorgiou"-General Hospital of Thessaloniki, "G. Papanikolaou"-General Hospital of Thessaloniki and the Psychiatric Hospital of Thessaloniki. The practical teaching of students occurs at 59 University affiliated Clinics, 28 laboratories and 5 museums in various hospitals.

The SM teaching staff during 2019, consisted of 338 Professors, Associate Professors and Assistant Professors, 250 special category teachers incl. academic fellows, etc., and 13 administrators of the undergraduate programme. The School of Medicine of the Aristotle University of Thessaloniki is one of the most important and well-established Medical Schools of Greece, both quantitatively and qualitatively, comprising the biggest Medical School in the country regarding its enrollment, having more than 4.000 registered students, 58 departments and 26 laboratories (<https://www.auth.gr/en/med>).

## PART B: COMPLIANCE WITH THE PRINCIPLES

### Principle 1: Academic Unit Policy for Quality Assurance

**INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY AS PART OF THEIR STRATEGIC MANAGEMENT. THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT ALL INSTITUTION'S AREAS OF ACTIVITY, AND PARTICULARLY AT THE FULFILMENT OF QUALITY REQUIREMENTS OF UNDERGRADUATE PROGRAMMES. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.**

*The quality assurance policy of the academic unit is in line with the Institutional policy on quality, and is included in a published statement that is implemented by all stakeholders. It focuses on the achievement of special objectives related to the quality assurance of study programmes offered by the academic unit.*

*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 programme, its purpose and field of study; it will realise the programme's strategic goals and it will determine the means and ways for attaining them; it will implement the appropriate quality procedures, aiming at the programme's continuous improvement.*

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

- a) the suitability of the structure and organization of the curriculum;*
- b) the pursuit of learning outcomes and qualifications in accordance with the European and the National Qualifications Framework for Higher Education;*
- c) the promotion of the quality and effectiveness of teaching;*
- d) the appropriateness of the qualifications of the teaching staff;*
- e) the enhancement of the quality and quantity of the research output among faculty members of the academic unit;*
- f) ways for linking teaching and research;*
- g) the level of demand for qualifications acquired by graduates, in the labour market;*
- h) the quality of support services such as the administrative services, the Library, and the student welfare office;*
- i) the conduct of an annual review and an internal audit of the quality assurance system of the undergraduate programme(s) offered, as well as the collaboration of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU).*

### Study Programme Compliance

The undergraduate programme in Medicine of the School of Medicine (SM) at the Aristotelian University of Thessaloniki (AUTH) presents a broad and of significant depth educational curriculum. The undergraduate programme aims at providing higher education in Medicine,

including the many and diverse areas of modern emerging fields of biosciences that actively support, in both terms of depth of understanding, and of technological innovations, the diagnosis and treatment of human disease. The programme shows strong initiatives and development of various special capabilities: a) basic biomedical sciences, aiming at translational and pharmacology-oriented training; b) applied clinical skills using modern approaches that exploit adequately emerging techniques from the informatics and imaging worlds. The SM programme is characterized by a strong objective that permeates all of its activities, which is the exposure of young students to biomedical and clinical research. While emphasizing a broad curriculum for undergraduates, the SM programme develops an active profile on graduate level education at the Master's and PhD levels. SM promotes the continuous development of its faculty and associated staff, once again, aiming at: a) excellence in teaching; b) transmission of modern medical knowledge and excellence in research; c) provision of medical services to society (hospitals, national health system units, private health units); d) generation of entrepreneurial activities in the broad world of biomedical and pharmacological industry.

The SM leadership has clear visions and sets important priorities, mirroring the forefront of internationally recognized medical and biomedical education. The SM leadership convincingly spreads a humane and collegial spirit of professionalism among its students, graduates and academic staff that honestly and impressively serves the ancient oath of Hippocrates that accompanies Medical training worldwide. The three pillars that define the vision of the SM are extroversion, continuous development and striving for excellence.

The SM adequately embeds its quality assurance policy into the strategy adopted by AUTH. The structure and organization of the curriculum is presented clearly in the Guide of Studies (Odigos Spoudon). The quality assurance mechanisms are in good coordination with the AUTH office of the Internal Quality Assurance System (ΕΣΔΠ) of MODIP. The EEAP discussed with the MODIP leadership and understood that SM has generated a modern undergraduate programme that prepares young medical students for a professional career in close association to the local community, the second largest city of Greece, Thessaloniki. More importantly, the SM programme offers to the students' competencies for professional performance nationally and internationally. The central academic units of SM coordinate clinical training with 3 central hospitals (University Hospital AHEPA, Ippokrateio and Papageorgiou) and 4 additional general and specialized (e.g., psychiatric) hospitals spread around the city. A strong vision of the SM that recently finds concrete plans for realization thanks to the financial support of the Stavros Niarchos Foundation, is to generate a new and modern University hospital outside the AUTH campus, which may provide concentration of all clinical training into one large building complex. A dedicated University Hospital Committee has been formed and it is charged with examining potential solutions, including the establishment of this Central University Hospital that will be exclusively governed by AUTH. This, however, depends on a decision by the Ministries of Health and Education. The 28 research laboratories and 57 clinical units that belong to SM and which make part of both daily student training, academic staff research and clinical practice, are being constantly used by students, academic teachers, and medical doctors, providing a complex and multi-site environment where the SM undergraduate programme is realised.

The EEAP had the opportunity to visit some of these facilities through videos. More specifically, education is monitored at various levels, including:

- Individual Laboratories/Clinical Departments, through respective course coordinators.
- Each Sector, through teaching assignments and textbook/bibliography selection.
- The Committee of Undergraduate Curriculum, which monitors the education process and proposes readjustments when needed (i.e., adaptations to COVID-19 pandemic).
- The Internal Evaluation Group, which monitors course and infrastructure evaluations by students and instructors.
- The School General Assembly, which takes final decisions.
- Furthermore, research activities are monitored by:
  - The Committee for Doctoral Theses, which scrutinises proposed research topics, decides on their quality and feasibility and suggests improvements.
  - The Bioethics Committee, which examines ethical issues and research/clinical protocols.
  - The Head of Laboratory/Clinical Department.
  - The Head of Sector who approves all research projects.

One aspect not clearly presented to the EEAP is the internal auditing procedures and the adaptation of SM operations based on the auditing results. The Annual Report by the University Research Committee presents allocation of funds, thereby assuring transparency. Part of those funds is allocated to University infrastructure accessible to the SM. A smaller part is directly allocated to the School, distributed to individual Sectors by the School General Assembly through a publicly available algorithm. Important for the quality assurance have been a number of parameters that are actively collected and maintained within SM during its annual internal quality review overseen by MODIP.

For example:

- a) The pool of starting students that enter the SM are among the best in the country that take top grades in the national entry examination and which select the SM almost universally as first choice (choice index 1.27, where index 1 means absolute first choice). Interestingly, the students of SM show an almost perfect 50-50 partition between women and men.
- b) The SM course evaluations by students (which show on average a 40% participation in course evaluations annually) provide a quality index of 70-80 during the last 10 years.
- c) Evaluations gathered by alumni and by job employers of the SM graduates also provide very high scores.
- d) During the past 9 years since the last evaluation of SM by an international panel in 2011, a major improvement in the curriculum has been the implementation of and compliance with the ECTS system and increase of workload by 2 hours per ECTS unit. The complete curriculum is divided in 3 circles, preclinical (year 1-2), clinical education (year 3-5), clinical practical training (year 6). Another novelty of the programme is the requirement of 2/3 of the ECTS of circle 1 of studies for admission to circle 2, and requirement of 100% of ECTS of circle 1 for admission to circle 3.
- e) Despite this organization into 3 circles that places clinical education in the 6<sup>th</sup> year, students today start receiving hands-on experience into clinical practice from year 1, as they take obligatory training courses on clinical dexterities, which are largely based on simulation environments, virtual reality environments and high-tech human anatomy models. The

newly implemented Academic Mentor of each student also provides a mechanism for proper orientation, check-up of curriculum attendance and performance.

- f) While mechanisms for the career evolution and promotion of faculty staff follow international standards for quality assurance, during the past 10 years, the national economic crisis has caused a steady loss of faculty that retire, and who are never replaced. The net result has been the reduction of faculty members of the SM from 530 in 2011 to 338 in 2020. This aspect mirrors a general problem in Greek University education, where the numbers of entering students are dictated by the Ministry of Education and cannot be controlled by the receiving institution. This generates an increasing problem of adequacy in covering the educational needs of the SM, as simultaneously, the number of students admitted to the SM increases annually. Thus, on the average, the SM has 1 faculty member per undergraduate student. This problem is effectively circumvented by employing scientists that recently got their PhD degrees as teaching assistants (specialized teachers) that perform a significant proportion of the increasing teaching load, especially in clinical and laboratory courses. In fact, the capacity of the SM has allowed the generation of a new parallel undergraduate programme of Medicine for international students, which will be implemented in 2021.
- g) The totality of infrastructure provided to the SM programme (teaching rooms, laboratories, clinical facilities, libraries, etc.) are adequate as evidenced by testimony of students and faculty. A continuous programme for renovation of old infrastructure is followed and the SM is characterized by a utilitarian attitude. In this respect, the IT and various electronic supportive means were presented as being adequate, functional, and sufficient, even for the odd year of 2020 when the pandemic has generated the need for on-line education and work from distance especially during the long periods of lock-down that Greece has implemented. In a similar manner, the secretarial support of the SM appeared as both student- and faculty-friendly, effective, and sufficient, despite the same as explained above problem of no recent recruitments. A centralized animal house has been recently established in the School of Veterinary Medicine, along with an imaging core facility, supporting research in the entire Faculty of Health Sciences.
- h) The extroversion of the SM is clearly expressed via many activities, most impressive being the annual congress of Medicine organized by the SM, in which all students are invited to participate and present project work. An organization of collaborations and exchanges with the Hellenic society of scientists that work in the diaspora enhances this vision of the SM. Part of such a vision is also the programme of honorary doctorates that are awarded to esteemed foreign and Greek scientists, all excelling in medical research outside Greece, and whose ambassadorship is sought as a vehicle for enhanced collaboration with and visibility internationally.

The above evidence generated confidence in suggesting that the structure and organization of the curriculum is suitable and provides a modular structure than can easily adapt to future changes according to the evolution of scientific progress. The same evidence generated confidence that the obtained learning outcomes and qualifications of the graduates from the SM have been in accordance with the European and the National Qualifications Framework for Higher Education. As detailed above, the evidence suggested high quality and effective teaching. However, the necessary engagement of young PhDs as teaching assistants can be

viewed both positively and negatively, the latter generating an extra quality check-up that must be continuously followed in order to assure high standard of qualifications of staff across the ranks of the faculty. Furthermore, the adequacy of research projects, acquired external funding and published work, clearly generates space for improvement by aiming at higher impact publications, even if the numbers of output may decrease. In addition, stronger participation in national and international competitive grant calls is strongly advised. The proven ability of the SM to engage young students into research training can always be optimized or maximized. Mechanisms to engage even less motivated and not so self-driven students will be an asset for sustainable development of the SM. The latter will augment the ability of graduates to enter more powerfully into the labour market. This is an area that, although well-developed with appropriate courses and connections with both the health system and industry stakeholders, can be continuously watched and improved in order to ensure that the majority of graduates (and not only a few talented top students) present themselves to the labour market with as up-to-date qualifications as possible.

### Panel Judgement

Principle 1: Institution Policy for Quality Assurance	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Mediate interventions at the level of the Ministry of Education to find mechanisms whereby the SM controls the number of entering students.
- Mediate interventions at the level of the Ministry of Education to enhance recruitment of young faculty members at the assistant professor level especially and avoid the gradual accumulation of full professors only.
- Ascertain that the internal quality assessment procedures are followed accurately and without interruptions.
- Enhance the programme of training faculty by increasing pedagogic and training skills.
- Consider the possibility of merging the existing Master's programme with the undergraduate programme to generate a thesis project in the obligatory curriculum.
- Implement mechanisms of more random (and by association equal) distribution of students among the various clinics so that students experience equally modern and old-fashioned clinical infrastructure.

## Principle 2: Design and Approval of Programmes

**INSTITUTIONS SHOULD DEVELOP THEIR UNDERGRADUATE PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE PROGRAMME. THE OBJECTIVES, THE EXPECTED LEARNING OUTCOMES, THE INTENDED PROFESSIONAL QUALIFICATIONS AND THE WAYS TO ACHIEVE THEM ARE SET OUT IN THE PROGRAMME DESIGN. THE ABOVE DETAILS AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.**

*Academic units develop their programmes following a well-defined procedure. The academic profile and orientation of the programme, the objectives, the subject areas, the structure and organisation, the expected learning outcomes and the intended professional qualifications according to the National Qualifications Framework for Higher Education are described at this stage. The approval or revision process for programmes includes a check of compliance with the basic requirements described in the Standards, on behalf of the Institution's Quality Assurance Unit (QAU).*

*Furthermore, the programme design should take into consideration the following:*

- *the Institutional strategy*
- *the active participation of students*
- *the experience of external stakeholders from the labour market*
- *the smooth progression of students throughout the stages of the programme*
- *the anticipated student workload according to the European Credit Transfer and Accumulation System*
- *the option to provide work experience to the students*
- *the linking of teaching and research*
- *the relevant regulatory framework and the official procedure for the approval of the programme by the Institution*

### Study Programme Compliance

The SM has demonstrated a clear and well-documented strategy for the renewal and evolution of the undergraduate programme in Medicine. Two general principles of this strategy are a) the continuous effort for adaptation of the programme to the rapid and new developments of the scientific field, and b) the simultaneous respect and preservation of traditions of SM. The core element of the tradition in SM is the firm belief in the humanistic principle of the Hippocratic oath. Of central concern to the SM and the programme is the ability to demonstrate internationally acclaimed competence, which is then reflected in high standards of recruitment of students from Greece but even from abroad, as clearly aimed at by the new international programme of Medicine organized by SM. A final aim of the strategy is the goal to graduate as many students as possible by the completion of the 6 years of the programme and minimise delays usually caused by failure in examinations. Thus, this strategic goal, which is met to a large extent (average years of study at the SM during the past 5 years has been 6-6.5 years), indirectly ascertains the positive and strong aptitude of the majority of students.



Student participation is promoted and implemented in different ways. Students evaluate all courses and provide documented feedback to the SM even after graduation. The evidence for all above was easily extracted from the interviews with 10 active students of years 2-6 and 10 alumni that graduated from the SM 11 years ago and up to this year, 2020. The new concept of the Academic Mentor for each student facilitates much more effectively student participation. Mentors do not only guide students during their career within the programme, but also serve as mediators for contacts between students and faculty members. Mentors receive feedback from the students that eventually reaches the leadership of the SM and its General Assembly and the programme organizing committee (OMEA). As example presented to the EEAP, the formulation of the new study programme has incorporated significant feedback from the actively studying students and from recent alumni. On the other hand, it should be noted that mentors have as primary role to secure the smooth transition of students from one circle of the programme to the next and all the way to graduation and future career orientation.

The new programme has been designed with direct input from important stakeholders of the national and private health system and from the medically associated industry. For example, the Hippokrateion hospital leadership together with the SM leadership plan the function and distribution of the clinical courses and training that take place at this hospital. The region of central Macedonia advisory office on health issues collaborates with the SM and together coordinate the interaction of the programme with the regional society in the form of tele-medical programmes for the elderly, research programmes, societal programmes such as i-prognosis, collaboration between the 3<sup>rd</sup> neurology clinic of SM and the state.

The student workload has been increased by 2 hours per ECTS relative to the old programme, generating 28 hours of workload per ECTS, and thus harmonizing better the student activity to the recommendations of the European Credit Transfer and Accumulation System. In the new and revised curriculum, work experience is integrated to the mandatory student activities. The new centre for clinical dexterities and simulation provides two courses during the first and second year and aims at introducing students early into the necessity of skills that will be acquired later and will be of direct relevance to professional practice. To this can be added the obligatory course of practical training at the national health system (ESY) units. The OSCE examination also certifies clinical competence that bridges the graduates to their next career step. The Office of Interconnection between studies and career offers the necessary guidance for professional accreditation and future training as medical residents in Greece or internationally (<https://career.auth.gr/services/job-positions/>; <https://career.auth.gr/services/job-positions/agrotika-eidikotites/>).

The educational activity of the SM programme is interwoven with the research activity of the faculty, to which even young undergraduate students may find opportunity for participation. The research output of the SM reflects a steady number of research projects funded primarily by private pharmaceutical enterprises but also competitive national and international grants that generate an ever-increasing income for the SM and a steady output of publications that correspond on the average to 3.5 publications per faculty member with an average h-index of 16 per faculty member. The SM also publishes its own journal, Aristotle Biomedical Journal.

The University Research Committee is very active in providing information concerning open calls, collaboration partners and technical assistance in grant submissions and training in

project management. There is no separate University budget available for start-up funds to support junior faculty, as is the case elsewhere in Europe and the USA.

The relatively young Special Unit for Biomedical Research and Education of the SM, collaborates with 3 major National Institutes that carry Biomedical Research and with the National Drug Industry Association, generating a complementary forum for mixing undergraduate education with graduate level training and research activity and entrepreneurial innovation. The Unit is composed of three sections: section for Clinical Research, section for Precision Medicine, and section for Basic and Translational Research (<https://www.subre.auth.gr/en/home/>) and involves the disciplines of Medicine, Biology, Genetics, Pharmacology and Bioinformatics. In addition, The Centre for Interdisciplinary Research and Innovation (CIRI-AUTH) was established in 2015. The SM participates in many groups, five of which are coordinated by members of the SM faculty: Functional Proteomics and Systems Biology (FunPATH), Genomics and Epigenomics Translational Research (GENeTres), Centre of Orthopaedic & Regenerative Medicine (CORE), iScreen, and Laboratory of Neurodegenerative Diseases (LND) (<http://kedek.auth.gr/>).

The process used to generate the currently proposed new programme has followed a clear and transparent line of work. Briefly, the SM programme committee reviewed all other Medical programmes of the Greek Universities and some international programmes. All SM sections participated in the work and students collaborated in order to generate a draft programme that was reviewed by SM's OMEA and considered the evaluation data provided by AUTH MODIP. During the site visit and after direct response of the SM head, it became obvious that the new programme has considered seriously and in fact has responded to all points raised after the 2011 external evaluation. Many new elements of the programme are direct responses to the 2011 evaluation. Once the programme matured and considered the opinions of all partners involved, it was approved by every section in SM, by the SM General Assembly and eventually by the AUTH Senate.

In summary, as explained above, the SM programme has incorporated appropriate standards, taking into account a modern curriculum, emphasis into acquired dexterities of direct impact to future professional establishment and the needs and recommendation of diverse societal stakeholders (health system, medical/pharmaceutical industry, national priorities). For the study of Medicine, the SM programme has incorporated all essential international standards and is presented in a rational, well-articulated manner, including the procedures for its annual update and/or revision, both in the printed booklet form and in its various abbreviated parts presented in the SM website (<https://www.med.auth.gr>).

### Panel Judgement

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

### **Panel Recommendations**

- Work closer with the Region of Central Macedonia to establish better possibilities for monitoring and integration of local societal needs.
- Work closer with the hospital and private sector stakeholders in order to upgrade future programmes according to the current needs of the labour market.

### Principle 3: Student- centred Learning, Teaching and Assessment

**INSTITUTIONS SHOULD ENSURE THAT THE UNDERGRADUATE PROGRAMMES ARE DELIVERED IN A WAY THAT ENCOURAGES STUDENTS TO TAKE AN ACTIVE ROLE IN CREATING THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.**

*Student-centred learning and teaching plays an important role in stimulating students' motivation, self-reflection and engagement in the learning process. The above entail continuous consideration of the programme's delivery and the assessment of the related outcomes.*

*The student-centred learning and teaching process*

- *respects and attends to the diversity of students and their needs, enabling flexible learning paths;*
- *considers and uses different modes of delivery, where appropriate;*
- *flexibly uses a variety of pedagogical methods;*
- *regularly evaluates and adjusts the modes of delivery and pedagogical methods aiming at improvement;*
- *regularly evaluates the quality and effectiveness of teaching, as documented especially through student surveys;*
- *reinforces the student's sense of autonomy, while ensuring adequate guidance and support from the teaching staff;*
- *promotes mutual respect in the student - teacher relationship;*
- *applies appropriate procedures for dealing with students' complaints.*

*In addition :*

- *the academic staff are familiar with the existing examination system and methods and are supported in developing their own skills in this field;*
- *the assessment criteria and methods are published in advance;*
- *the assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary is linked to advice on the learning process;*
- *student assessment is conducted by more than one examiner, where possible;*
- *the regulations for assessment take into account mitigating circumstances;*
- *assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures;*
- *a formal procedure for student appeals is in place.*

### Study Programme Compliance

The SM programme provides a student-centred approach. Courses are mixed, combining clinical skill training with theoretical teaching. The teaching means blend classic cathedral teaching with PBL, case-studies and on-site clinical training. Special emphasis was given during the site visit to the combination (and even dominance due to covid-19 problem in 2020) of the e-learning system of AUTH (<https://elearning.auth.gr>) that has generated a large pool of play-back lectures, widespread use of internet-based and electronic media, simulation and virtual reality applications that gradually start dominating in the media used in the programme.

Therefore, variability in the mode of teaching is evident in the study programme and was attested by the 10 interviewed current students. The SM also implements annual reviewing and evaluation of the method and progress of each course, gathers the evaluations of MODIP and adapts the course to the experience of the previous year. This was specifically attested by one of the 10 students that observed specific course improvements based on the evaluation of the previous year. The students attracted to the programme are relatively homogeneous, have obtained top grades during their entry exams and come primarily from the Thessaloniki area, generating a relatively more homogeneous student body in terms of social and ethnic background. Overall, the SM programme follows the general guidelines of the Greek higher education system that promotes student autonomy. The newly implemented function of the Academic Mentor provides the necessary guidance for support during the study years, course choice, and navigation based on examination results and even future career planning. The large number of students per year matches closely the number of faculty members of the SM, leading to a ratio of 4-6 students per faculty member, which is reasonable. The 10 student interviews generated a strong positive impression about their close, family-like, as one student said, relationship between students and faculty members and even with the SM leadership. All interviews performed with the EEAP emphasized that respect between all partners is a strong asset of the SM. On the other hand, although the EEAP attempted to identify complaints and serious issues within the SM, not much could be extracted in terms of specific procedures used at the SM. The newly introduced Academic Mentor serves the purpose of securing communication with the students in cases such as failure after an examination and securing that every student has met the learning goals of each course and of each circle of the programme. The students are organized, and their representatives have open and good contacts with the SM leadership so that they can mediate complaints and seek direct response from the programme. The Academic Mentors can also catalyze this process. The Committee for Student Problems registers all formal complaints and presents them for discussion and solution to the SM General Assembly (<http://www.med.auth.gr/content/05-epitropi-foititikon-zitimaton>). The process of student appeals is also guided and facilitated by the SM/AUTH website in two specific areas ("Student Care" and "Student Guide").

From the side of the faculty, the programme delivers a large number of competent teachers that generate examinations and means of student knowledge evaluation in pre-planned periods (3 week-long, always the same period of the year), with organized and public announcement of all events in the programme website, which secures a modern and functional system of student evaluation. Two faculty members participate as examiners for each course and each section oversees procedures and problems related to the courses administered by the section. Faculty career development and continuous training in teaching and research development has been described in P1. Knowledge assessment criteria are communicated to the students in every course from the start of every course and special needs by the students, including problems associated with disabilities or other health-related issues, are being dealt. The high proportion of students that complete the programme on time or with a delay of a few

months, and the periodic structure of the examination periods, ascertain that all students of the SM programme are fully assessed and according to pre-planned procedures.

### Panel Judgement

Principle 3: Student- centred Learning, Teaching and Assessment	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Maintain a high standard in the programme and keep up with the rapid technological and knowledge development within biomedicine.
- Present more clearly in the study guide of the SM the process for student appeals.
- Generate a registry (database) of appeals and the specific measures taken by the SM in response to each appeal.
- Provide to future assessment panels a database of student appeals for more direct and accurate evaluation of the appealing process.

## Principle 4: Student Admission, Progression, Recognition and Certification

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

*Institutions and academic units need to put in place both processes and tools to collect, manage and act on information regarding student progression.*

*Procedures concerning the award and recognition of higher education degrees, the duration of studies, rules ensuring students progression, terms and conditions for student mobility should be based on the institutional study regulations. Appropriate recognition procedures rely on institutional practice for recognition of credits among various European academic departments and Institutions, in line with the principles of the Lisbon Recognition Convention.*

*Graduation represents the culmination of the students' study period. Students need to receive documentation explaining the qualification gained, including achieved learning outcomes and the context, level, content and status of the studies that were pursued and successfully completed (Diploma Supplement).*

### Study Programme Compliance

The new SM programme presents very clearly all the relevant regulations for documentation and handling of all four steps in the programme: admission, progress, recognition and certification. The special “welcome” day that is organized at the onset of the academic year certifies an efficient and student-friendly initiation of the whole process. As already commented in earlier principles, the SM cannot control the number of incoming students every year but handles very efficiently the admission of students including those from minorities, those suffering from severe chronic diseases, elite athletes, and students from the Medical Military Academy. The electronic system of registration is fully operative (see Principle 7 and UniverSIS - <https://registrar.auth.gr>). Course assignments are also organized based on the on-line platform that follows every student through the 6 years of study via the electronic secretariat <https://students.auth.gr>. The electronic system used provides continuous information on the progress of the student, secures the application of the ECTS across all courses, and this information is updated regularly and becomes immediately available to the student after a simple log-in procedure, a fact attested by several of the interviewed students.

Student mobility is an integral element of the SM programme and incorporates the actions of the Erasmus<sup>+</sup> programme, internal AUTH fellowships, exchange programmes organized by the independent and non-profit organization HelMSIC (Hellenic Medical Students' International Committee), and continuously updated information at the SM website. The practical training that essentially involves all clinical courses is in good coordination with the respective hospitals and the overall needs of the health system and additional stakeholders (industry, local society). However, a broader network of socio-cultural associations did not become evident to the EEAP. Furthermore, upon completion of the SM study programme, the Diploma and associated Diploma Supplement provide a complete account of all courses, ECTS credits, grades, motilities,

special training activities, including statistical diagrams of the organization and placement of the AUTH programmes in the European scale of higher education systems.

### Panel Judgement

<b>Principle 4: Student Admission, Progression, Recognition and Certification</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Continue the established good regulatory practice and follow possible developments of the European system of higher education.
- Incorporate the detailed procedure of student appeals into the Study Guide.
- Generate an integrated network of socio-cultural associations linked to the clinical coursework.



## Principle 5: Teaching Staff

**INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE QUALIFICATIONS AND COMPETENCE OF THE TEACHING STAFF. THEY SHOULD APPLY FAIR AND TRANSPARENT PROCESSES FOR THE RECRUITMENT AND DEVELOPMENT OF THE TEACHING STAFF.**

*The Institutions and their academic units have a major responsibility as to the standard of their teaching staff providing them with a supportive environment that promotes the advancement of their scientific work. In particular, the academic unit should:*

- *set up and follow clear, transparent and fair processes for the recruitment of properly qualified staff and offer them conditions of employment that recognize 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 members (with respect to attendance requirements, performance, self-assessment, training etc.);*
- *develop policies to attract highly qualified academic staff.*

### Study Programme Compliance

The Panel examined the processes utilised for the transparent recruitment for all properly qualified academic staff.

In terms of the number of academic staff in all the different faculty rankings in 2017 there were 370 active positions, in 2018 the number fell to 350, and in 2019 the number dropped to 342.

The number of full professors throughout the years appears to have remained the same, whereas the number of associate professors has increased; in contrast the number of assistant professors has decreased to approximately 30%. As far as the overall sex distribution of the academic faculty is concerned, it appears that the ratio between male to female is 3/2.

The transition to a higher academic rank appears to be unchanged in the female population, however, in males there is a steady decline throughout the years.

For the appointment of a clinician to become a member of the academic faculty a number of criteria are in place to support a transparent process of appointments. Moreover, for a clinician to progress from a specific academic ranking to the next one, explicit criteria are also in place to ensure a transparent process.

These criteria include:

- Evaluation of clinical and research work.
- Evaluation of publication record.
- Adherence and maintenance to academic and scientific ethical standards.

- Evaluation of administrative duties.
- Evaluation of teaching: undergraduate, postgraduate, continued medical education, PhD supervision, visiting professorship.
- Evaluation according to established institutional academic criteria.

However, the EEAP did not have any data available to evaluate whether the opportunities of newly applied individuals to become academic staff members are equal to the staff members applying for promotion to the next rank position.

In regard to existing opportunities and the necessary available foundation to promote professional development, the University supports international collaboration with other institutions. This policy is one of a number of policies to enhance the professional development of its faculty members. Overall, all aspects of academic activities are encouraged including teaching, research and clinical work. Moreover, appropriate facilities are in place to support the development of the academic staff including well equipped laboratories, lecture theatres, small group teaching rooms and opportunities for virtual teaching and skilled training through virtual reality simulation procedures. A centralised animal house has been recently established in the School of Veterinary Medicine, along with an Imaging core facility, supporting research in the entire Faculty of Health Sciences. This facility offers to the academic staff collaboration opportunities for experimental studies. Additionally, the appropriate administrative infrastructure is provided to support the needs of all members of the faculty.

Of note there were no data available to evaluate the number of projects and by which disciplines the animal house has been utilized and whether it covers adequately the demand that might exist from all faculty members.

Development links between education and research are also in place. For instance, medical students are both encouraged and supported to engage early in research activities. They are trained to collect data and are exposed to research methodologies, statistical analysis, and manuscript preparation for publication in peer reviewed medical journals.

In terms of teaching, there are 5 lecture theatres accommodating anything from 70-500 students, 12 teaching rooms and 11 laboratory facilities. Faculty members have dedicated offices for all the ranks of the academic faculty. Virtual teaching and skilled training through virtual reality simulation procedures is available to everyone to utilise.

In the preclinical years, students are able to utilise the visual teaching and skilled training simulation programme to practice on.

In the clinical years, teaching techniques such as human simulation models are also being used. Overall, such innovative teaching methods are being applied as hybrid teaching, e-learning, open courses and virtual patients.

The University also supports and promotes high-quality research output. There is a steady research-related income, which in the last year 2019 reached €8.772.000. Sources of successful grant applications include the European Commission, the Greek funding body (ESPA) as well as grants from the commercial sector (representing the majority of funded projects).

In terms of publications, there is also a steady increase in the number of articles published in peer reviewed journals. For instance, in 2017 there were over 1.100 papers accepted in peer - reviewed journals and the number of papers increased in 2019 to 1.228 publications.

Of note, there is a wealth of international collaboration totalling over 50 research programmes in association with universities from 27 Nations.

Processes related to staff appraisal are divided into 4 main areas:

- Teaching: Annual Awards of Excellence, Quality Assurance Unit (students evaluating the staff in relation to the lectures and overall teaching attributes).
- Research: Quality Assurance Unit, Annual Awards of Excellence.
- Clinical and laboratory work: Annual Awards of Excellence.
- Administrative work: Quality Assurance Unit.

In terms of incentives to entice the best academic staff, the following points can be considered as an attraction:

- Excellent opportunities for clinical work in 7 hospitals.
- Appropriate teaching facilities.
- Existence of animal house for research activities.
- Good track record of international collaborations.
- Good conditions of living.

### Panel Judgement

Principle 5: Teaching Staff	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Safeguard the processes for the recruitment and development and promotion of the academic staff.
- Publicise data of academic appointments and academic promotions which demonstrate consistency in the processes used for evaluation and appointments.
- Continue to support and enhance the already existing research culture and consider in the curriculum as an elective subject for students: “Principles and ethics of clinical research”.
- Introduce in the annual evaluation process of the faculty staff the 360-degree peer to peer assessment.

## Principle 6: Learning Resources and Student Support

**INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER TEACHING AND LEARNING NEEDS. 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, BOARDING, CAREER AND SOCIAL POLICY SERVICES ETC.).**

*Institutions and their academic units must have sufficient funding and means to support learning and academic activity in general, so that they can offer to students the best possible level of studies. The above means could include facilities such as libraries, study rooms, educational and scientific equipment, information and communications services, support or 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 or international students, students with disabilities) and the shift towards student-centred 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 ensures that all resources are appropriate, adequate, and accessible, and that students are informed about the services available to them.*

*In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.*

### Study Programme Compliance

While assessing the availability of funding, it became clear that there is an annual flow of funds for the University from such sources as the Greek government via the Ministry of education, the European Commission, the Greek funding body (ESPA) as well as the private sector. Interestingly, although most PhD students are currently supported by research grants, still many of them have no salaries and have to pay out of pocket for consumables.

In terms of availability of appropriate facilities such as libraries, study rooms and scientific equipment, it appears that appropriate resources are available. However, those are not truly centralised and are still split between different hospitals. These facilities include teaching classrooms, research laboratories, core facilities and even an animal house. Based on the feedback received by the interviewed students, some of the laboratories lack up-to-date resources and students suggested that continuous upgrading of facilities and equipment is essential. The existing library is quite unique having adequate space to accommodate a large number of students and is equipped with all modern textbooks and teaching material for the students. Overall, appropriate resources appear to be adequate and accessible to all students.

The establishment of the “Academic Advisor/Mentor” has been a very useful and productive initiative. This position, guides and supports students in their curriculum, monitors students’ performance and empowers them with critical thinking necessary in their academic and future

professional life. However, if there is inability to solve problems via this route, the student affairs committee or the undergraduate programme committee or the head of the department are called upon to help after the student has consented to this procedure.

Part of the student curriculum includes presentation of interesting cases of patients, and the analysis and theoretical issues involved in them. In addition, journal clubs are encouraged. Written assignments are also given to students by the faculty members. The combination of the above ensures the optimal interaction between teachers and students.

The importance of international/educational/cultural exchange is also encouraged by the university. Students participate in exchange programmes via Erasmus<sup>+</sup> with the help of a University student organization called HelMSIC.

Moreover, students are encouraged by faculty to partake in research activities and there are adequate educational opportunities available including the scientific congress of the Aristotelian University of Thessaloniki and the Annual Greek Medical Students Association Scientific Congress. Moreover, there are several scholarships available to students in hardship.

In terms of student well-being, the counselling and psychological support centre of the University operates to support students with special educational needs. There is also psychological support of all the undergraduate and post-graduate students of the institution. In addition, the University covers catering and housing needs through a special department dedicated to that purpose.

Qualified and well-trained administrative staff are in place to support the above activities and have opportunities. The administration staff have opportunities to develop their competencies. Overall, there are 13 staff members supporting the undergraduate administration. This staff is highly specialized, has significant experience and undergoes continuous education provided by courses offered by the national centre of administrative support and governance of Greece, by the centre of digital governance as well as by the University's central library.

### Panel Judgement

Principle 6: Learning Resources and Student Support	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Support further the existing research culture to increase the amount of successful grant applications.

- Expand opportunities for students for international/educational/cultural exchange by securing appropriate funds and establishing exchange programmes with other institutions.
- Ensure ongoing evaluation and improvement of the “Academic Advisor/Mentor programme.

## Principle 7: Information Management

**INSTITUTIONS BEAR FULL RESPONSIBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF UNDERGRADUATE PROGRAMMES OF STUDY AND RELATED ACTIVITIES, IN AN INTEGRATED, EFFECTIVE AND EASILY ACCESSIBLE WAY.**

*Institutions are expected to establish and operate an information system for the management and monitoring of data concerning students, teaching staff, course structure and organisation, teaching and provision of services to students as well as to the academic community.*

*Reliable data is essential for accurate information and for decision making, as well as for identifying areas of smooth operation and areas for improvement. Effective procedures for collecting and analysing information on study programmes and other activities feed data into the internal system of quality assurance.*

*The information gathered depends, to some extent, on the type and mission of the Institution. The following are of interest:*

- *key performance indicators*
- *student population profile*
- *student progression, success and drop-out rates*
- *student satisfaction with their programme(s)*
- *availability of learning resources and student support*
- *career paths of graduates*

*A number of methods may be used for collecting information. It is important that students and staff are involved in providing and analyzing information and planning follow-up activities.*

### Study Programme Compliance

The information management of the SM programme is well developed and incorporates several essential elements. The AUTH MODIP (<https://qa.auth.gr>) collects all statistical data, issues the annual form of self-evaluation, the forms of evaluations by students and the forms of evaluation of the curriculum. The application Cardisoft is used to assemble all student-related data using SQL and is currently under replacement by the web-based application of the electronic secretariat of AUTH, UniverSIS (<https://registrar.auth.gr>). This database is then approached by the students via the student-friendly application (<https://students.auth.gr>) whereas the faculty members approach the same database via the platform (<https://faculty.auth.gr>) in order to, for example, enter the grades for each course. Surveys registering the evaluation of the curriculum by students are provided for each course and for the programme annually, yet registered student participation showed a positive increasing trend that recently has reached the 40% of the student body.

The Office of Interconnection between studies and career continues the information management after student graduation and offers the necessary guidance for professional accreditation and future training as medical residents in Greece or internationally (<https://career.auth.gr/services/job-positions/>; [https://career.auth.gr/services/job-](https://career.auth.gr/services/job-positions/)

[positions/agrotika-eidikotites/](#)). This office provides statistical analyses and publishes its results on the absorption of SM graduates by various work providers and generates the necessary information avenues for the application for so-called “agricultural” service, which represents a social service that young medical doctors offer to the Greek society and application for residencies of specialisation in Greece or abroad. The SM uses the statistical data, provides the results in graphical form and provides trend lines and matrices that are also used by the local and national press, thus serving not only the purposes of the SM and its programme, but also the information of the public and interested stakeholders.

### Panel Judgement

Principle 7: Information Management	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- The student participation in the evaluation of the programme must increase to provide reliable assessment of the curriculum.
- Invent techniques in order to attract student engagement and maximise student participation in course and SM curriculum evaluations.



## Principle 8: Public Information

**INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES WHICH IS CLEAR, ACCURATE, OBJECTIVE, UP-TO-DATE AND READILY ACCESSIBLE.**

*Information on Institution's activities is useful for prospective and current students, graduates, other stakeholders and the public.*

*Therefore, institutions and their academic units provide information about their activities, including the programmes they offer, the intended learning outcomes, the qualifications awarded, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students, as well as graduate employment information.*

### Study Programme Compliance

As outlined in Principle 8, the data for dissemination of useful information of the SM programme are generated by the various mechanisms presented. The SM website (<https://www.med.auth.gr>) provides all this information to the rest of the world. In brief, the website informs about: a) each of the sections and clinics of the programme. b) The individual profile of every faculty member, their summarized CV, publications, currently updated including 2020, and most importantly, the association of each faculty member with specific courses of the curriculum. c) The e-guide of the SM curriculum. d) All academic and scientific events, position openings, relevant information for students and faculty members and for the public. e) Links to the social media sites of the SM, including Facebook, Tweeter and LinkedIn. The website provides comprehensive description of the curriculum, all courses organised into the 3 study cycles, and the amount of information included is substantial and adequate. The website provides direct link to the quality assurance agency of AUTH, MODIP (<https://qa.auth.gr>), which collects all statistical data, issues the annual form of self-evaluation, the forms of evaluations by students and the forms of evaluation of the curriculum, as explained in principle 7. In general, the accessibility of all information on the website is smooth, and all information is up to date.

### Panel Judgement

Principle 8: Public Information	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Maintain the website related to the curriculum and the academic staff in terms of their academic and research activities up to date.

- In order to maximise public engagement, organise a special open day for public visit of the SM facilities with the academic staff present to deliver information on the academic and clinical activities of the SM.

## Principle 9: On-going Monitoring and Periodic Internal Review of Programmes

**INSTITUTIONS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR PROGRAMMES, SO AS TO ACHIEVE THE OBJECTIVES SET FOR THEM, THROUGH MONITORING AND AMENDMENTS, WITH A VIEW TO CONTINUOUS IMPROVEMENT. ANY ACTIONS TAKEN IN THE ABOVE CONTEXT SHOULD BE COMMUNICATED TO ALL PARTIES CONCERNED.**

*Regular monitoring, review and revision of study programmes aim to maintain the level of educational provision and to create a supportive and effective learning environment for students.*

*The above comprise the evaluation of:*

- *the content of the programme in the light of the latest research in the given discipline, thus ensuring that the programme is up to date;*
- *the changing needs of society;*
- *the students' workload, progression and completion;*
- *the effectiveness of the procedures for the assessment of students;*
- *the students' expectations, needs and satisfaction in relation to the programme;*
- *the learning environment, support services and their fitness for purpose for the programme*

*Programmes are reviewed and revised regularly involving students and other stakeholders. The information collected is analysed and the programme is adapted to ensure that it is up-to-date. Revised programme specifications are published.*

### Study Programme Compliance

The School of Medicine of AUTH has established ongoing monitoring and yearly internal review mechanisms to ensure compliance and excellence of the undergraduate programme (see also Principle 1 for more details).

Notably, in response to the external evaluation committee review performed in 2011, the School of Medicine of AUTH has introduced mechanisms for on-going monitoring of the education at various levels, including:

- The individual Laboratories/Clinical Departments, through the respective course coordinators.
- Each Sector, through teaching assignments and textbook/ bibliography selection.
- The Committee of Undergraduate Curriculum, which monitors the education process and proposes readjustments when needed (i.e., COVID19 pandemic).
- The Internal Evaluation Group, which monitors students' evaluations of courses, instructors, and infrastructure, and as a final point the School Assembly, which makes the final decisions.

The research activities are monitored by:

- a) The Committee for Doctoral Theses that suggests improvements.
- b) The Bioethics Committee, which examines issues of bioethics and research protocols.
- c) The Head of Laboratory/Clinical Department and the head of Sector who approves all research projects.

The SM has a timeless performance of improvement that is based on the study of certification of study programmes (ΠΠΣ) of the Medical Schools in Greece and abroad, on working groups by Sector, on the proposals submitted by students, the evaluation of questionnaires of MODIP/in cooperation with OMEAs. Furthermore, considers the developments and the modern needs, the recommendations of the External Evaluation of 2011, and Quality Policy and Strategy of the AUTH systems. This is one more mechanism of internal assessment to ensure the compliance and excellence of the undergraduate programme.

The School of Medicine of AUTH have established processes and committees to ensure internal evaluation of the undergraduate curriculum. The committee on the curriculum of the Undergraduate programme collaborates with the Committee of the Internal Evaluation, which, in turn, operates based on the guidelines of the Hellenic Quality Assurance and Accreditation Agency. These committees collaborate with the educators for determining and updating periodically the content of the compulsory and elective courses. Recommendations from the student evaluations are also considered. The committee on the curriculum of the Undergraduate curriculum sends its suggestions to the educators of the different departments requesting their feedback. Upon synthesis of the comments, this committee finalises the proposed revisions, which are submitted to the Assembly of the Medical School for final approval.

The School of Medicine of AUTH following the recommendations of the External Evaluation of 2011 has performed great progress in establishing internal reviewing mechanisms for ensuring quality via feedback-based assessment and subsequent corrective modifications.

The EEAP greatly appreciated the effort and the progress of the SM to ensure high level training quality at all sites involved in the education and training of the students. However, there are no mechanisms to quantitatively monitor effectiveness of added measures or implemented changes and ensure uniformity of standards. This is an important concern that can and should be urgently addressed.

We were impressed by the high enthusiasm, the intellect, and drive of the students we interviewed. The School of Medicine of Aristotle University of Thessaloniki attracts the best students in northern Greece but also in the country. Moreover, the School is now starting an excellent foreign language undergraduate programme in Medicine that is the first in Greece, and the goal is to attract the best students from abroad and the surrounding countries of the Balkan, so there is expected a more consistent training. Thus, the School of Medicine of AUTH has now an immense opportunity to further enhance their training via these corrective actions, to achieve its purpose.

## Panel Judgement

Principle 9: On-going Monitoring and Periodic Internal Review of Programmes	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

- An important concern that can and should be urgently addressed is to name mechanisms for quantitatively monitoring of effectiveness of added measures and to continue to implement necessary changes to ensure maintenance of standards.
- The School is starting a foreign language undergraduate programme in Medicine that is the first in the country; this generates the expectation for a more consistent training. Thus, now the School of Medicine of AUTH has a good opportunity to further enhance the training via these corrective actions.

## Principle 10: Regular External Evaluation of Undergraduate Programmes

**PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY COMMITTEES OF EXTERNAL EXPERTS SET BY HAHE, AIMING AT ACCREDITATION. THE TERM OF VALIDITY OF THE ACCREDITATION IS DETERMINED BY HAHE.**

*HAHE is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure, and implemented by a committee of independent experts. HAHE grants accreditation of programmes, with a specific term of validity, following to which revision is required. The accreditation of the quality of the programmes acts as a means of verification of the compliance of the programme with the template's requirements, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees.*

*Both academic units and institutions participate in the regular external quality assurance process, while respecting the requirements of the legislative framework in which they operate.*

*The quality assurance, in this case the accreditation, is an on-going process that does not end with the external feedback, or report or its follow-up process within the Institution. Therefore, Institutions and their academic units ensure that the progress made since the last external quality assurance activity is taken into consideration when preparing for the next one.*

### Study Programme Compliance

The School of Medicine of Aristotle University of Thessaloniki has already undergone an external evaluation in February 2011. The review was administered by the Hellenic Quality Assurance and Accreditation Agency (HQAAG).

The EEAP was impressed by the point-by-point response of the head of the School of Medicine Prof. Kyriakos Anastasiadis, who provided very fast clear answers to the EEAP, concerning the implementation of 11 proposed improvements for the future, given by the External Evaluation Report on February 2011.

The EEAP is pleased to report that the School of Medicine of AUTH has been very responsive to the previous external review, i.e. "The system of monitoring education/research activities" that is monitored at various levels (see under principle 9).

Another example of implementation of proposed improvements for the future, is the curriculum of the undergraduate studies of School of Medicine that was undergoing the latest reform in 2018-2019. The latest reform of the curriculum introduces innovative actions such as courses aiming at, as early as the first year, the development of clinical skills, as well as elements of interdisciplinary education and Problem-Based Learning (PBL). The condition of the registration of 2/3 of the ECTS of cycle 1 for the monitoring of the next cycle provides guarantees for the progressive and effective assimilation of the knowledge, provided additional clinical courses and clinical experience in earlier years, and avoids redundancies.

The importance of curriculum changes was pointed out during the teleconference meeting via Zoom platform by 10 students from different years/phases of studies. The EEAP was impressed by the students' positive consensus among others on the changes in the curriculum, particular on the emphasis on more clinical courses introduced and focused on the improvement of practical clinical skills.

Concerning the implementation, the EEAP based on the digital interview with the students and the point-by-point very clear responses that was provided from the School to EEAP, the EEAP recognized that the latest reform curriculum has been implemented by the school.

However, the students commented that there is a need for better coordination regarding practice at the different geographically spread clinics and more equal student groups that currently fluctuate in number between 8 and 15 in the different clinics.

### Panel Judgement

<b>Principle 10: Regular External Evaluation of Undergraduate Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- The School of Medicine of the AUTH is clearly on the right track in terms of changing the ethos and approach regarding the role of curriculum revision (teaching syllables) and the necessary updating. The SM should continue its efforts to ensure that this mentality is fully embedded across faculty and all sectors.
- The coordination of the students in the different Hospital clinics needs revision.
- Reduce the number of students in clinical groups, by making the student groups smaller and more similar; this will increase the efficacy of learning.

## **PART C: CONCLUSIONS**

### **I. Features of Good Practice**

- Both the undergraduate and postgraduate curricula fulfill the requirements that one expects to see in relation to the number of subjects, clinical training and hours allocated to ensure adequacy of learning experiences by students. The obtained learning outcomes and qualifications of the graduates from the SM have been in accordance with the European and the National Qualifications Framework for Higher Education.
- There is a well-established strategy taking into account the current needs of the University but also a foundation for its future evolution and planning.
- The facilities have been renovated and are sufficient to accommodate the teaching demands. The faculty is well supported by the administration of the medical school and provided with the necessary means for their personal needs in terms of research, innovation and self-development.
- Equally, the students are provided with an Academic Advisor/Mentor, who oversees their progress and advises them about career planning and their educational needs. There are opportunities for early engagement in research activities, as students are continuously being stimulated not only by their academic advisor/Mentor but also from the surrounding faculty they come in contact with.
- There is a wealth of international collaboration totaling over 50 research programmes in association with Universities from 27 Nations, including 5 continents.
- There is a specially developed, dedicated website in which all information related to the University activities is directly and readily accessible for both students and faculty.
- Well-developed e-learning programme is available to the students for their needs. Innovative teaching techniques such as virtual learning and simulation techniques are also available to support the needs of the students and to enhance their educational experience.
- There is a well-organised system to receive and respond to student complains based on the actions of the Committee for Student Problems, the SM General Assembly and specific functions provided by the SM/AUTH.
- The Diploma and associated Diploma Supplement provides a complete account of all courses, ECTS credits, grades, motilities, special training activities, including statistical diagrams of the organisation and placement of the AUTH programmes in the European scale of higher education systems.
- The research related income which is steadily rising was €8.772.000 for the year 2019.



- There are traditional, well-established criteria for evolution to a higher academic rank or the appointment of new academic faculty which support the presence of a transparent recruitment process.
- The study programme serves not only the purposes of the SM and its students but also the information for the public and all interested stakeholders.
- The accessibility of all information on the website is smooth, and all information is up to date.

## **II. Areas of Weakness**

### Major

- The number of students enrolled yearly is variable from year to year and it is outside of the control of the University Administration.
- All students must equally have hands-on experience, as this appears to be a problem, by the large number of students allocated per clinic.

### Minor

- The University's resources are dispersed among the 7 teaching hospitals where clinical training takes place, and there is a lack of centralisation and therefore of efficiency.
- Although there is a reasonable influx of funding, the budget is tight and there is definitely room for improvement regarding the need for effective management of unforeseen circumstances.
- Although considerable progress has been made regarding access to the University facilities for students with special needs, further improvements may be made.

## **III Recommendations for Follow-up Actions**

- Follow-up on the measures to be implemented to ensure that the number of students admitted is well regulated and within the capabilities of the institution. Mediate interventions at the level of the Ministry of Education.
- Mediate interventions at the level of the Ministry of Education to enhance recruitment of young faculty members at the assistant professor level especially and avoid the gradual accumulation of full professors only.
- Follow up on the time schedule/timetable for centralisation of resources in the University campus.
- Reduce the number of students currently participating in clinical groups, i.e., make the clinical groups smaller and thus more flexible and more effective for learning.
- Update the laboratory equipment to support the current needs of science.

- Consider the possibility of merging the existing Master's programme with the undergraduate programme to generate a thesis project in the obligatory curriculum.
- Present more clearly in the study guide of the SM the process for student appeals.
- Invent techniques in order to maximise student participation in course and SM curriculum evaluations.
- Laboratory equipment is lacking in some areas or is outdated.
- Encourage stronger participation of faculty in national and international competitive grant calls.
- Aim at higher impact publications even if the numbers of output may decrease.
- Work closer with the hospital and private sector stakeholders in order to upgrade future programmes according to the current needs of the labour market-societal needs.
- Implement yearly an "open-house" day for interaction between the SM and the public.
- Ascertain that the internal quality assessment procedures are followed accurately and without interruptions.

## VI Summary & Overall Assessment

Due to the travel restrictions related to the COVID19 pandemic, the Panel did not have the opportunity to visit the facilities and to meet with faculty members face-to-face. All the evaluation process thus, took place via the virtual rooms and this is considered as a limitation of the whole process. The Panel had the opportunity to engage in a dialogue and questioning the number of faculty members, students, administrative staff, stakeholders/social partners, the President, and vice Dean of the Medical School which was extremely helpful. However, the Panel members were not given the privilege to randomly choose University personnel members (faculty, students, post-graduate, and administrative staff) for their interactions.

The Principles where full compliance has been achieved are: **Principles 1, 2, 3, 4, 5, 6, 7, 8, 9, 10**

The Principles where substantial compliance has been achieved are: **None**

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

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

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

## **The members of the External Evaluation & Accreditation Panel**

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