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Accreditation Report for the New Undergraduate Study Programme in operation (Integrated Master) of:

Electrical and Electronic Engineering

Institution: University of West Attica

Date: 29 October 2022

Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο

Επιχειρησιακό Πρόγραμμα
Ανάπτυξη Ανθρώπινου Δυναμικού,
Εκπαίδευση και Διά Βίου Μάθηση
Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης

ΕΣΠΑ 2014-2020

enqa.

Report of the Panel appointed by the HAHE to undertake the review of the New Undergraduate Study Programme in operation (Integrated Master) of **Electrical and Electronic Engineering** of the **University of West Attica** for the purposes of granting accreditation

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the new undergraduate study programme in operation (Integrated Master) of **Electrical and Electronic Engineering** of the **University of West Attica** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. **Prof. Kiki Ikossi (Chair)**
   George Mason University, Fairfax, Virginia, USA

2. **Prof. Christos Politis**
   Kingston University, London, UK

3. **Prof. Nicolas Tsapatsoulis**
   Cyprus University of Technology, Limassol, Cyprus

4. **Mr. Sotiris Michalopoulos**
   Technical Chamber of Greece, Patras, Greece

5. **Mr. Stylianos Mataras**
   Department of Computer Engineering and Informatics, University of Patras, Patras, Greece

II. Review Procedure and Documentation

The following documents were made available to the panel members:
HAHE documentation:

1. Acronyms
2. European Qualifications Framework
3. ODIGOS PISTOPOIISIS
4. P1B Standards New UGP in operation
5. P12a_Guidelines for the EEA Panel
6. P13B_MAPPING GRID & ASSESSMENT GUIDE
7. P14B_INTEG_Template for the New Undergraduate Study Program in operation Accreditation Report
8. Quality Indicators for the 2017-2018, 2018-2019, 2019-2020, 2020-2021 academic years for the Department of Electrical and Electronic Engineering Program and the new Undergraduate Program.

UGP Integrated Masters Electrical and Electronic Engineering (EEE) University of West Attica (UWA) documentation:

B0. Table of Contents
B1. Proposal
B2. Introductory report (MODIP-HHM)
B3. Strategic plan of the institution
B4. Purpose Study
B5. Corporate Plan
B6. Policy on the Quality of the UWA
B7. Policy on quality
B8. Goals of institutional quality
B9. Objectives
B10. Decision of the Faculty Assembly
B11. Student Guide
B12. Frameworks
B13. List of Courses
B14. Teaching Faculty Names.
B15. Results of the internal evaluation of the UGP
B16. Example of questionnaire
B17. Regulations for complains
B18. Regulations for the concept of Academic Advisors

B18_0_ Regulations
B18_1_Regulation of Academic Advisor
B18_2_ Regulation of Academic Advisor (FMEA)
B19. Internal regulations for operation of the new UGP
B20. Regulations for studies, practical training, mobility, research studies
B20_0 Various regulations
B20_1_Regulations for practical training (Internship) outside ESPA

B20_2_Regulations for practical training (Internship) within ESPA
B20_3_Regulations for mobility
B20_4_Regulations for graduation thesis
B20_5_ Regulations for Diploma Thesis
B20_6_Regulations for re-examination of Students
B20_7_Regulation for entrance exams
B20_8_Regulations for Studies
B21. Example of degree supplement in Greek and English language
B21_1_Example of Degree supplement for Electrical and Electronic Engineering in Greek
B21_2_ Example of Degree supplement for Electrical and Electronic Engineering in English
B22. President's Certification
B23. Performance report of the teaching stuff
B24. Report of OPESP on the Institutional level, department and new undergraduate program for all the previous years
B24_0_Table of Contents
B24_1_ΟΠΕΠΣ Institution 2019_20
B24_2_ΟΠΕΠΣ Department 2019_20
B24_3 ΟΠΕΠΣ UGP 2019-20
B24_4 ΟΠΕΠΣ Institution 2017_2018
B24_5_ΟΠΕΠΣ Department 2017_2018
B24_6_ ΟΠΕΠΣ Institution 2018_19
B24_7_ΟΠΕΠΣ Department 2018_19
B24_8_ΟΠΕΠΣ UGP 2018_19
B25. Progress report
B26. Rest of items for documentation
B26_0_List of Content
B26_1 Research laboratories human resources and equipment
B26_2 Report of Internal evaluation of the TEI Athens Electronics
B26_3 Report of Internal evaluation of the TEI Athens Power Technology
B26_4 Report of Internal evaluation of the TT Pereaus Electronic
B26_5 Report of Internal evaluation of the AEI Pereaus TT Electrical
B26_6 Equivalent Courses for the TEI Athens Electronics department
B26_7 Equivalent Courses for the TEI Athens Power Technology Department
B26_8 Equivalent Courses for the AEI Pereaus TT Electronics department
B26_9 Equivalent Courses for the AEI Pereaus TT Electrical department
B26_10 Opinion A.
B26_11 Opinion B
B26_12 Study guide for the 4 year program of EEE PE
B26_13 Contract for practical exercise EEE department outside ESPA with FYPA warranties
B26_14 Contract for practical exercise EEE department outside ESPA with UWA warranties
B26_15 Tables for 5th year of UGP

In addition, the following documents were made available to the panel.
Examples of how class evaluations and student performance is accounted:

- Fiititologio- Student records system
- Linear Algebra course data
- Winter semester course data
- Decision for joining PADA with ADA 5161708
- ΤΔΠ 5161708 ΠΑΔΑ 1 Announcement

Email Clarification on Practical Training.
Forwarded Email for Practical training announcement by the EEE department
Greek ministry appropriation of funds for founding a “teaching and learning center”
Teaching and learning center plans

Chat notes: Industry University MOUs

Mr. Narlis
https://www.esos.gr/arthra/77611/pada-synergazetai-me-tin-elliniki-aeroporiki-viomihania

Mr. Diadimos.
https://dialogoi.uniwa.gr/university/pada-protokollo-synergasias-metaxy-toy-ergastirioy-ilektronikon-diataxeon-kai-ylikon-eidyl-kai-toy-libre-space-foundation/

Recording of day 2 - due to schedule conflict of panel member Prof. C. Politis.

Part 1

https://uniwagr-my.sharepoint.com/:v:/g/personal/tchris_uniwa_gr/EWEWqIXKoCFMpSxSlBjcjDsB1c3TQrtRX7IMJRxjFEfcSw?e=iYZEa1

Part 2

https://uniwagr-my.sharepoint.com/:v:/g/personal/tchris_uniwa_gr/EVbPYFeJpXVOqp7NUSZLm5ABfeWvfAMhy2abzEjHew-5dQ?e=H9vhGe

Part 3
https://uniwagr-my.sharepoint.com/:v:/g/personal/tchris_uniwa_gr/EbfiQpcgRg9Dq_o0E3thDkQB-F2Wm28kl8E42sa_Rq-0Eg?e=fhecNV

On October 6, 2022, The External Evaluation and Accreditation Panel (EEAP) received electronic access the relevant accreditation proposal and support material from HAHE. On October 20, 2022, HAHE Dr. C. Besta, conducted virtually training over Zoom for the panel members.

On Monday, October 24, 2022, the EEAP members virtually met over Zoom. During that meeting the proposal report was discussed. In addition, the allocation of tasks for the panel members was made and questions for clarifications were discussed.

On Monday October 24, 2022, A teleconference with the Vice-Rector/President of MODIP & the Head of the Department EEAP, Vice-Rector & Head of the Department 1. Prof. Efstathia Papageorgiou, Vice Rector / President of MODIP 2. Prof. Efstathios Kyriakis – Bitzaros, Head of the EEE Department took place. During that meeting an overview of the Undergraduate Program (UP): History, academic profile, current status, strengths and possible areas of concern were presented.

A Teleconference with OMEA & MODIP representatives EEAP, OMEA & MODIP members, MODIP staff followed. Present were 1. Ioannis Famelis, Professor, President of OMEA 2. Dionisios Kandris, Professor, OMEA member 3. Konstantinos Moutzouris, Professor, OMEA member 4. Dimitrios Goustouridis, Associate Professor, OMEA member 5. Georgios Tsekouras, Assistant Professor, OMEA member 6. Efstathia Papageorgiou, Professor, Vice-Rector, President of MODIP 7. Konstantinos Voudouris, Professor, MODIP member 8. Marisa Sigala, Ph.D., Administrative Head of MODIP Department. During this meeting the degree of compliance of the UGP to the Quality Standards for Accreditation was presented. A review of student assignments, theses, exam papers & examination material was also discussed. The presentations were extremely well prepared but too long for the allotted time of this meeting. The OMEA and MODIP as well as the head of the department made their power point presentations available to the panel members for their review.

The day was concluded with a debriefing EEAP members in a private Zoom meeting. There the panel reflect on impressions; prepare for the second day of the on-line review

Based on the information received by the department it was judged that an onside visit by the panel would be of great value in a meaningful evaluation of the available facilities and laboratories of the department. Prof. Politis Christos and Prof. Nikolas Tsapatsoulis graciously volunteered to travel to West Attica and be present in person for the 2nd day of the review.

On Tuesday, October 25, 2022, the day started with a Teleconference with teaching staff members EEAP & teaching staff members. Prof. Tsapatsoulis was physically present in the conference room with the faculty while the rest of the panel were online. Professor Politis was in transit, so the panel proceedings were recorded for his view. The following Faculty were present: 1. Katerina Zachariadou, Professor 2. Maria Rangoussi, Professor 3. Evangelos Zervas, Professor 4. Antonios Moronis, Professor 5. Grigorios Kaltsas, Professor 6. Charalambos Patrikakis, Professor 7. Elias Zois, Associate Professor 8. Nikolaos Manousakis, Assistant Professor 9. Sotiria Galata, Assistant Professor 10. Panagiotis Kontaxis, Lecturer. During that meeting discussions on the 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 program; possible areas of weakness were discussed.

A Teleconference with students EEAP & students followed. The students expressed their satisfaction for their study experience and the Department facilities. The students offered valuable information on the quality assurance process and their evaluation of their student life and welfare. The students were enthusiastic about their studies and a large majority of them plans to continue their studies in graduate school.

On-line tour: classrooms, lecture halls, libraries, laboratories, and other facilities took place. Professor Tsapatsoulis was present while the online panel members were able to follow the tour that was live streamed. A discussion about the teaching facilities, learning resources, equipment, and lab facilities. The tour of the research and teaching laboratories confirmed the excellent condition of the equipment and facilities and the active state of the art research that is ongoing. These were judges as suitable for successful educational and research activities of the program.

The video produced for this purpose link is: https://drive.google.com/file/d/17rjeVUYQFxsF9rV4OFOB3eArPD71JIxs/view?usp=sharing

Based on the late time the EEAP administrative staff members & teaching staff members meeting was skipped.

A teleconference with employers/social partners EEAP & employers/social partners 1. Kimon Koulierakis, Hellenic Electricity Distribution Network Operator S.A. 2. Konstantinos Tsirekis, Independent Power Transmission Operator 3. Ilias Daradimos, Libre Space 4. Aethon Narlis, Hellenic Aerospace Industry S.A. 5. Ioannis Pratikakis, Siemens Healthcare 6. Athanasios Tzaferis, ADAPTIT GR 7. Machi Symeonidou, Agroapps 8. Nikolaos Papadakis, Space Hellas 9. Panagiotis Vouvounas, Vector Technologies 10. Nikolaos Chronopoulos, Strikos Techniki S.A.

During this meeting the relations of the Department with external stakeholders from the private and the public sector were discussed. The panel was impressed by the enthusiasm and confidence the external stakeholders have on the program. The Greek industry is a high-tech industry that depends on research collaborations and on hiring the EEE UWA graduates. They were grateful that the University was stepping in training their employees on high tech electrical and electronic systems that were installed throughout Greece. In addition, they expressed how valuable is the practical training for both the students and the industry. In summary there is a healthy and fruitful relationship between the EEE Department and the Greek Industry.

Following the meeting with the external stakeholders the EEAP members had a short private zoom meeting to discuss on the outcomes of the on-line reviews.

The final meeting was a teleconference with OMEA & MODIP representatives and EEAP, The following OMEA & MODIP members, and MODIP staff were scheduled to be present. 1. Ioannis Famelis, Professor, President of OMEA 2. Dionisios Kandris, Professor, OMEA member 3. Konstantinos Moutzouris, Professor, OMEA member 4. Dimitrios Goustouridis, Associate Professor, OMEA member 5. Georgios Tsekouras, Assistant Professor, OMEA member 6. Efstathia Papageorgiou Professor, Vice-Rector, President of MODIP 7. Konstantinos Voudouris, Professor, MODIP member 8. Marisa Sigala, PhD, Administrative Head of MODIP Department

Closure meeting with the Vice-Rector/President of MODIP, the Head of the Department, OMEA & MODIP and EEAP took place with the following scheduled to be present. 1. Efstathia Papageorgiou, Professor, Vice-Rector, President of MODIP 2. Efstathios Kyriakis – Bitzaros, Professor, Head of the EEE Department 3. Ioannis Famelis, Professor, President of OMEA 4. Dionisios Kandris, Professor, OMEA member 5. Konstantinos Moutzouris, Professor, OMEA member 6. Dimitrios Goustouridis, Associate Professor, OMEA member 7. Georgios Tsekouras, Assistant Professor, OMEA member 8. Konstantinos Voudouris, Professor, MODIP member 9. Marisa Sigala, PhD, Administrative Head of MODIP Department.

This was an informal presentation of the EEAP key findings. In general, the department is doing an excellent job. The submitted documentation were well prepared and the information exactly what is needed to evaluate the Department and write the report. The panel asked for some more documentation that they needed, thanked the department for their hospitality and congratulated them for the great work they are doing.

III. New Undergraduate Study Programme in operation Profile

The department of Electrical and Electronic Engineering (EEE) is one of eight Engineering Departments of the University of West Attica. It was founded on March of 2018 by the merging of two technological educational Institutions (TEI) of Athens and TEI of Piraeus.

The EEE department is housed in the ancient olive grove campus, in buildings names A, B and Z. The buildings are comfortable and closed to each other that offers a good environment for studies and research. The department is the most complete Engineering department in UWA and Greece overall. It has 59 Faculty members that teach and do research (DEP), 11 teaching laboratory staff (EDIP), 9 members of special technical laboratory staff (ETEP), and 8 administrative personnel.

The department has 6500 registered undergraduate students of which about 2900 are active students. There are also 150 graduate students and about 80 Ph.D. candidates.

The department is organized around 7 scientific areas: Electric Energy Systems, Industrial Electric networks, and automation, Electronic and materials, computational systems and control, digital and integrated systems, telecommunications, information, and signal processing, transmitted information processing and networks

The new 5-year program is divided into 10 semesters. There are around 190 courses some with labs available for the students. Each course is carrying a corresponding number of credits compatible with the European Credit Transfer System (ECTS). A minimum of 3000 ECTS are required for graduation. The basic cycle of studies runs from the 1st through the 6th semester. The basic cycle has 30 mandatory courses and 6 electives for a toral of 180 ECTS. After the basic Cycle there are 3 distinct specializations the students can select. Power, Communications and networks, and Electronics and computational systems. Each carrying 90 ECTS. The 10th semester is dedicated to the Diploma Thesis worth 30 ECTS. There is also the option of taking practical training with the industry (internship) that carries 5 ECTS.

Despite the fact the program has been operating for only 4 years, In 2020 the department had 11 graduates and 38 in 2021 and 38 in 2022. This was possible by allowing qualified TEI students enter the new program. This is quite impressive.

The University has all the necessary facilities for a positive learning experience for the students like housing, libraries, study halls, cafeteria, gyms, medical facilities, and support for students with disabilities.

PART B: COMPLIANCE WITH THE PRINCIPLES

Principle 1: Strategic Planning, Feasibility and Sustainability of the Academic Unit

Institutions must have developed an appropriate strategy for the establishment and operation of new academic units and the provision of new undergraduate study programmes. This strategy should be documented by specific feasibility and sustainability studies.

By decision of the institutional Senate, the Institutions should address in their strategy issues related to their academic structure in academic units and study programmes, which support the profile, the vision, the mission, and the strategic goal setting of the Institution, within a specific time frame. The strategy of the Institution should articulate the potential benefits, weaknesses, opportunities or risks from the operation of new academic units and study programmes, and plan all the necessary actions towards the achievement of their goals.

The strategy of their academic structure should be documented by specific feasibility and sustainability studies, especially for new academic units and new study programmes.

More specifically, the feasibility study of the new undergraduate study programmes should be accompanied by a four-year business plan to meet specific needs in infrastructure, services, human resources, procedures, financial resources, and management systems.

During the evaluation of the Institutions and their individual academic units in terms of meeting the criteria for the organisation of undergraduate study programmes, particular attention must be place upon:

a. The academic profile and the mission of the academic unit
The profile and mission of the department should be specified. The scientific field of the department should be included in the internationally established scientific fields of Higher Education, as they are designated by the international categorisation of scientific fields in education, by UNESCO (ISCED 2013).

b. The strategy of the Institution for its academic development
The academic development strategy for the operation of the department and the new study programme should be set out. This strategy should result from the investigation of the factors that influence the studies and the research in the scientific field, the investigation of the institutional, economic, developmental, and social parameters that apply in the external environment of the Institution, as well as the possibilities and capabilities that exist within the internal environment (as reflected in a SWOT Analysis: strengths, weaknesses, opportunities, and threats). This specific analysis should demonstrate the reason for selecting the scientific field of the new department.

c. The documentation of the feasibility of the operation of the department and the study programme
The feasibility of the operation of the new department should be justified based on:

- *the needs of the national and regional economy (economic sectors, employment, supply-demand, expected academic and professional qualifications)*
- *comparison with other national and international study programmes of the same scientific field*
- *the state-of-the-art developments*

- *the existing academic map; the differentiation of the proposed department from the already existing ones needs to be analysed, in addition to the implications of the current image of the academic map in the specific scientific field.*

d. The documentation of the sustainability of the new department

Mention must be made to the infrastructure, human resources, funding perspective, services, and all other available resources in terms of:

- *educational and research facilities (buildings, rooms, laboratories, equipment, etc.)*
- *staff (existing and new, by category, specialty, rank and laboratory). A distinct five-year plan is required, documenting the commitment of the School and of the Institution for filling in the necessary faculty positions to cover at least the entire pre-defined core curriculum*
- *funding (funding possibility from public or non-public sources)*
- *services (central, departmental / student support, digital, administrative, etc.)*

e. The structure of studies

The structure of the studies should be briefly presented, namely:

- ***The organisation of studies:*** *The courses and the categories to which they belong; the distribution of the courses into semesters; the alignment of the courses with the European Credit Transfer System (ECTS).*
- ***Learning process:*** *Documentation must be provided as to how the student-centered approach is ensured (modes of teaching and evaluation of students beyond the traditional methods).*
- ***Learning outcomes:*** *Knowledge, skills and competences acquired by graduates, as well as the professional rights awarded must be mentioned.*

f. The number of admitted students

- *The proposed number of admitted students over a five-year period should be specified.*
- *Any similar departments in other HEIs with the possibility of student transfers from / to the proposed department should be mentioned.*

g. Postgraduate studies and research

- *It is necessary to indicate research priorities in the scientific field, the opportunities for interdisciplinary research, the challenges towards new knowledge, possible research collaborations, etc.*
- *In addition, the postgraduate and doctoral programmes offered by the academic unit, the research projects performed, and the research performance of the faculty members should be mentioned.*

Relevant documentation

- *Introductory Report by the Quality Assurance Unit (QAU) addressing the above points with the necessary documentation*
- *Updated Strategic Plan of the Institution that will include its proposed academic reconstruction, in view of the planned operation of new department(s) (incl. updated SWOT analysis at institutional level)*
- *Feasibility and sustainability studies for the establishment and operation of the new academic unit and the new study programme*
- *Four-year business plan*

Study Programme Compliance

a. The academic profile and the mission of the academic unit

The new undergraduate department was formed in 2018 by merging the Athens and Piraeus TEI. The Electrical and Electronic Engineering fields of studies follow international standards of higher education and are clearly defined in the UNESCO ISCED2013 classifications.

The Electrical and Electronic Engineering (EEE) Department of the University of West Attica (UWA) has a clear mission to educate the next generation of EE Engineers in accordance with the international standards and the Greek government definitions.

In the purpose study B4 it states that: The Department of Electrical and Electronic Engineering (EEE) has as its mission the training of young engineers, who will be active in the design and construction of electrical and electronic systems for the reliable and efficient production, transfer distribution storage, processing, control, and use of energy and information.

The presentation of Principle 2 slide 6 defines the department's vision and mission as: to offer high quality education to the students and the promotion of knowledge and research in electrical and electronic engineering.

It is advisable that a clear mission beyond the one defined by law, unique to the department, that highlights its excellence, is formulated, and published consistently in its documents and in the web.

b. The strategy of the Institution for its academic development

The strategy for the department's academic development is described in the submitted documents. The strategic plan is a thorough plan, very well written with checks and balances to ensure high quality education, state of the art research and constant improvements in the new study program are present. An elaborate SWOT study with a thorough analysis identifying the strengths, weaknesses, opportunities, and threats has been conducted. The SWOT study demonstrates the new department has a strong scientific footing and suitable processes are enacted to ensure sustainable operation.

The strategic plan of the department aims to achieve excellence in education, promote research, implement the digital transformation, improve the academic environment. Have accountability and transparency in all processes, promote extroversion globalization and have a sustainable quality assurance framework. It is a good practice that the strategic plan contains specific goals, the respective actions to be completed and monitored for the success of the department. (Like measurable indicators and who is responsible for collecting and evaluating these data).

The rationale for selecting the scientific field of the department is justified with very reasonable arguments. The department founders and faculty have demonstrated impressive vision and knowledge of the technological developments in the Engineering field as it is evident by the emerging scientific fields that are active in the department (for example, nano and quantum electronics, Artificial Intelligence, Machine learning, bioengineering, sensors etc.).

c. The documentation of the feasibility of the operation of the department and the study programme

The documentation provided clearly describe the feasibility of the operation of the department and the study program. The national needs of Electrical Engineers have been well documented. Electric Power, communications and digital transformation are the 3 pillars of technology the department is focusing its efforts. These are wisely chosen as they are responsive to national and international needs.

The Greek state showed full support of the transformation of the TEI programs to a 5-year University level integrated masters programs. For this, suitable laws were passed and respective funding in support of the new programs became available. Funds for teaching and laboratory equipment were made available. In addition, the faculty and the research labs have a strong presence in receiving highly competitive research funds.

The enthusiastic support of the Greek industry for the department and their eagerness to hire the new graduates is evident by the numerus MOUs signed for collaboration. The panel meeting with the stakeholders verified that the stakeholders are actively engaged with research projects, education, and training of the students as well as continued training in new technologies of the employed engineers and technicians.

The department faculty pursue state of the art research in emerging areas. The department research has a sizable footprint in the international research landscape. The graduate program currently has 150 post-doctoral students working in the department's research laboratories and 80 Ph.D. candidates.

d. The documentation of the sustainability of the new department

The department provided ample documentation supporting the sustainability of the new department. There is strong and continuing funding by the state for teaching equipment upgrades and infrastructure support and significant external funding supporting innovative research in the department. There are sufficient faculty and staff to cover the program needs. Although it was noted that the existing number of technical support stuff is low compared to the number of laboratory courses offered. This fact was commended by the students

interviewed who expressed the desire to have teaching personnel for the laboratories appointed in a timely manner so that they are available for the labs i.e., at the beginning of the lab sessions. The panel recommends increasing the number of technical supports EDEP personnel so that sufficient support personnel is available for the laboratory sessions.

The tour of the facilities and laboratories as well as the information from the student and faculty meetings convinced the panel that there is sufficient and suitable infrastructure to support the department teaching and research activities. Some of the research laboratories have state of the art equipment. Some of the teaching labs the panel visited have unique and very specialized equipment that offer the students valuable engineering hands on experience.

The department has very well structure support system for the students with services ranging from housing, transportation, meals, medical and emotional care. The University also has taken care in making the teaching and research facilities accessible to people with disabilities. There is an active Erasmus program that facilitates student and faculty mobility. The Erasmus program is expected to pick up in participation following the recovery from the pandemic.

e. The structure of studies

The study program is designed to last for 5 years divided in 10 semesters. It is organized in 2 parts and 3 specializations. During the first 3 years most of the core courses are mandatory. The last 2 years have mainly elective courses the students can select to take for their specialization. The studies conclude with the 10^{th} semester solidly dedicated to the Diploma Thesis. A total of about 54 courses are required for graduation. The course credit allocation is in alignment with the European Credit Transfer System (ECTS). Each course carries allotted ECTS units that they need to add to a minimum of 300 ECTS. The Diploma Thesis carries 30 ECTS. There is the option to do practical training with the industry. The offered 3 areas of specialization are energy, telecommunications and networks, and electronics and computing systems.

The students have assigned advisors who help them navigate the University system. Teaching happens in classrooms and in laboratories. There is an e-class system where the students can find the assigned reading and homework for each class. The hands-on laboratory approach inherited by the preceding TEI gives the students an advantage in becoming useful engineers. The students fill a satisfaction questionnaire in for all classes with good participation numbers. The results of the questionnaires are processed by OMEA and MODIP. Indications are that appropriate actions are taking place to remedy identified issues. The student-centered learning approach needs re-evaluation.

The Department despite the fact they are in operation for only 4 years have already graduated 88 students. This fact is highly commendable. It was possible because TEI students were given the opportunity to transfer to the 5-year new university program and the entire 5-year new program was operational. The graduates of the EEE UWA are in high demand by the Greek

industry. EEE UWA graduates also work in research in educational institutions and continue their studies in graduate school.

The study program is well designed to gradually teach the student into becoming a knowledgeable electrical and electronic engineer.

f. The number of admitted students

The department reported that between 2018 to 2020 the annual number of admitted students were about 315 from the nationwide entrance exams and an additional 80 student from other means (like transfers and other Greek nationals' entrance exams.) With a new system of admissions during the 2021-2022 year the number of admitted students were 180 from the Greek National exams and 40 from other means. Students were transferred to the department from other TEI institutions.

It is noted that the number of admitted students is significantly higher than the number of students requested by the department. If this trend is not remedied it will strain the available resources and negatively affect the quality of the new program.

This is a large but manageable student body.

g. Postgraduate studies and research

The EEE department of the UWA has 11 established laboratories pursuing innovative research. The research laboratories are well equipped and staffed with notable researchers and scientists. According to the documentation received the research program at UWA It is the most extensive program in electrical and electronic engineering in Greece. The research labs currently at the UWA are in the following 11 scientific fields: Electronic Devices and Materials Lab – EDML, Building and Industrial Energy Systems Lab – BIESYL), Laboratory of Wireless – Optical Devices and Communication Networks, Smart Technologies R.E.S. and Quality Lab, Telecommunications, Signal Processing and Intelligent Systems Research Laboratory (TelSiP Lab), Electronics & Computer Technologies Lab (ECTLab), Computer Networks and Services Research Laboratory (CONSERT), Electrical Circuits and Power Measurements Laboratory, High Voltage and Energy Systems Laboratory, Research Laboratory of Energy Applications and Energy Saving System, and Micro Senses Research Laboratory. These are areas of great interest for EEE.

The department faculty, students, and staff publish in reputable refereed journals and conferences, as well as have patents issued. The department tracks the key quality indicators for the publications which are constantly improving indicating increased research activity. The faculty expressed the desire for specific publication funding to cover the publication cost of their research papers. The committee agrees that this would be a good investment that would promote the research work of the University.

The department has 5 interdepartmental graduate areas at the Master of Science level and two in collaboration with external programs. At the time of the panel's visit the post graduate program had 150 students and the doctoral program had 85 Ph.D. candidates. The department web page is well organized and has posted available research projects for the students.

The panel was pleased to learn that the Undergraduate program is an official collaborating institution for the of CERN's ATLAS experiments. The department is collaborating with the Purdue University Regional Visualization and Analytics Center (PURVAC), MOSAIC 5G, Oracle Academy, Open University of Catalonia (UOC), and the summer internships of Princeton University, to name a few.

In general, the panel is impressed with the state-of-the-art research that is ongoing and the great diversity of research areas the department is actively pursuing.

Panel Judgement

Principle 1: Strategic planning, feasibility, and sustainability of the academic unit	
a. The academic profile and the mission of the academic unit	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	
b. The strategy of the Institution for its academic development	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	
c. The documentation of the feasibility of the operation of the department and the study programme	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	
d. The documentation of the sustainability of the new department	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	
e. The structure of studies	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	
f. The number of admitted students	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

g. Postgraduate studies	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Principle 1: Strategic planning, feasibility and sustainability of the academic unit (overall)	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- It is recommended that a clear mission beyond the one defined by law, unique to the EEE department that highlights its excellence is formulated and published consistently in its documents and in the web.
- The panel recommends recruiting additional technical staff members (ΕΔΙΠ and ΕΤΕΠ) to support the teaching and laboratory activities.
- Number of students admitted in the new undergraduate program needs to be compatible to the availability of facilities and personnel.
- Funding University publication fees will be a good investment that would promote the research work of the University.

Principle 2: Quality Assurance Policy of the Institution and the Academic Unit

The Institution should have in place an accredited Internal Quality Assurance System, and should formulate and apply a Quality Assurance Policy, which is part of its strategy, specialises in the operation of the new academic units and the new study programmes, and is accompanied by annual quality assurance goals for the continuous development and improvement of the academic units and the study programmes.

The quality assurance policy of the Institution must be formulated in the form of a published statement, which is implemented by all stakeholders. It focuses on the achievement of special annual quality goals related to the quality assurance of the new study programme offered by the academic unit. In order to implement this policy, the Institution, among others, commits itself to put into practice quality procedures that will demonstrate: the adequacy and quality of the academic unit's resources; the suitability of the structure and organisation of the curriculum; the appropriateness of the qualifications of the teaching staff; the quality of support services of the academic unit and its staffing with appropriate administrative personnel. The Institution also commits itself to conduct an annual internal evaluation of the new undergraduate programme (UGP), realised by the Internal Evaluation Group (IEG) in collaboration with the Quality Assurance Unit (QAU) of the Institution.
The quality assurance policy of the academic unit includes its commitment to implement quality procedures that will demonstrate: a) the adequacy of the structure and organisation of the curriculum, b) the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education, c) the promotion of the quality and effectiveness of the teaching work, d) the adequacy of the qualifications of the teaching staff, e) the promotion of the quality and quantity of the research work of the members of the academic unit, f) the ways of linking teaching with research, g) the level of demand for graduates' qualifications in the labour market, h) the quality of support services, such as administration, libraries and student care, i) the implementation of an annual review and audit of the quality assurance system of the UGP through the cooperation of the Internal Evaluation Group (IEG) with the Quality Assurance Unit (QAU) of the Institution.

Relevant documentation

- *Revised Quality Assurance Policy of the Institution*
- *Quality Assurance Policy of the academic unit*
- *Quality target setting of the Institution and the academic unit (utilising the S.M.A.R.T. methodology)*

Study Programme Compliance

Following scrutiny of the study program and the extensive discussions with both students and staff, it is the judgment of the EEAP that the Department's curriculum is suitable in terms of its academic content and is comparable to national and international standards.

The Internal Evaluation Committee (OMEA) is responsible, in collaboration with the University's Quality Assurance Unit (MODIP), for overseeing the quality assurance processes of the Department and for evaluating the effectiveness of the entire academic provision. The Department's general assembly maintains overall responsibility for reviewing the study program and ensuring its adherence to the institutional Quality Assurance standards. Although this is a newly designed UG program, which has been running for 4 years and now on its 5th year, the annual review process undertaken by the general assembly, guarantees the thorough and continuous improvement of the academic provision, and supports, at least part of the

research output of the Department, to be directly driven by the students themselves. The Department has published a list of 11 Pillars / Key Performance Indicators (KPIs) which are used for the development of the quality assurance policy in line with HAHE's guidelines.

The program of study receives student scrutiny at the end of each semester in the form of student evaluation questionnaires for each course. During the meeting with the students, it became apparent that the Department actively promotes their involvement in the evaluation process of the teaching, and proactively discusses the feedback collected and the resultant actions.

Finally, staff are research active and seek to incorporate their research into their teaching, to the extent of publishing papers with students and involving them in running lab sessions. This is seen as further evidence of supporting the students in their pursuit to acquire as many relevant skills as possible which would enable them to secure good graduate employment positions. In this respect, the EEAP was presented with evidence which suggests that there is a strong demand for the Department's graduates, as observed during the meeting with the stakeholders.

Panel Judgement

Principle 2: Quality assurance policy of the Institution and the academic unit	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The Quality Assurance policy for the Department is available in Greek on the departmental website but not in English. It could be helpful for international audience with an interest in the department to upload the policy in English too.

Principle 3: Design, Approval and Monitoring of the Quality of the New

Undergraduate Programmes Institutions should design the new 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.

The Institutions develop their new undergraduate study programmes, following a well-defined procedure. The academic profile, the identity 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 European and National Qualifications Framework for Higher Education are described at this stage. An important new element in the structure of the programmes is the introduction of courses for the acquisition of digital skills. The above components should be taken into consideration and constitute the subject of the programme design, which, among other things, should include: elements of the Institution's strategy, labour market data and employment prospects of graduates, smooth progression of students throughout the stages of the programme, the anticipated student workload according to the European Credit Transfer and Accumulation System (ECTS), the option of providing work experience to the students, the linking of teaching and research, the international experience in study programmes of similar disciplines, the relevant regulatory framework, and the official procedure for the approval of the programme by the Institution.

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

Relevant documentation

- *Senate decision for the establishment of the UGP*
- *Curriculum structure: courses, course categories (including courses for the acquisition of digital skills), ECTS awarded, expected learning outcomes according to the EQF, internship, mobility opportunities.*
- *Labour market data regarding the employment of graduates, international experience in a related scientific field.*
- *Student Guide*
- *Course outlines*
- *Teaching staff (list of areas of specialisation, its relation to the courses taught, employment relationship)*
- *QAU minutes for the internal evaluation of the new study programme and its compliance with the Standards*

Study Programme Compliance

Introduction

In order to properly assess principle 3 (Design, Approval and Monitoring of the Quality of the New Undergraduate Programs) we have taken into account the discussions during the panel's visit and the available documentation listed in Part II.

Findings

After studying the submitted material and examining all sources of information given to the EEAP along with the conducted interviews with the academic staff, students and external stakeholders, and the in-situ visit to the teaching and research labs, the panel members found the following:

(1) The EEE UGP is well-designed, well-structured and follows the international practice of similar curricula. It is also effectively implemented by well-qualified and trained staff. The objectives, the expected learning outcomes, the intended professional qualifications and the ways to achieve them are set out clearly and in detail and they are properly justified. Those details, as well as information on the program's structure, are published in the Student Guide.

(2) The anticipated student workload according to the European Credit Transfer and Accumulation System (ECTS) is clearly indicated in the Study Guide. The ECTSs assigned per course seem well-justified and according to similar curricula in Greece and abroad.

(3) A series of courses support the acquisition of digital skills, including computer programming, for all the students (those courses are part of the Basic Cycle of the UGP).

(4) There is a clear linking between teaching and research, supported effectively by students' exposure to high-tech research labs and further facilitated by invited lectures of internationally known researchers.

(5) Several diploma theses are conducted in the framework of R&D projects allowing early familiarization of students with basic and applied research.

(6) In most courses software tools (such as Matlab and relevant Matlab toolboxes) are extensively used for simulation (and computation) purposes enhancing this way the learning experience.

(7) The fact that the current UGP substituted four relevant UGPs, run by different Departments before their unification, makes it difficult to assess whether the procedure provisioned in the IQAS (Internal Quality Assistance System) is appropriate or requires revision.

(8) The number of new UGP students suggested by the Department needs to be respected. It seems that there is a huge deviation between the number of students suggested by the Department (usually around 140) and those that eventually start their studies (over 300). The increased number of students negatively affects the quality of studies especially the practical skills acquired during the lab classes. For the same reason lab scheduling (across the whole program) becomes very difficult.

(9) There is a very small interest of students to do internships. This, along with internship's limited duration, has disappointed many of the external stakeholders.

(10) The utilization of the extended collaborators network, the Department has, for the benefit of UGP is poor. It seems that the collaboration with external stakeholders is (practically) limited to R&D programs.

(11) Information regarding the UGP in English in the Web page[1] is much more concise and heavily deviates from that found in Greek[2]

Analysis of judgment

As already stated in the *Findings* the UGP is clearly in accordance with the international standards in the fields of Electrical and Electronics Engineering. It is supported by well-qualified and trained personnel while the well-equipped labs and the infrastructure in general is a plus that makes the program very competitive in Greece and internationally. Some minor weaknesses reported below cannot affect the overall compliance of the program to high quality standards.

The EEAP members assess positively the imposed limitation to six courses per semester and they believe that this limit enhances the quality of taught material per each individual class and helps students to better absorb theoretical concepts and acquire practical skills at the same time.

The recommended textbooks in most courses are properly selected and they are the same with the ones used in similar classes internationally. This is also the case for the syllabi of most courses.

Conclusions

The UGP is well designed, following the structure and logic of similar well-established and long-lasting programs in Greece and abroad. The viability of the program is secured by the increased labour market demands in the field especially in the general area of Athens where the Department is located.

Strong Points:

(1) The design and structure of the UGP which follows well-established curriculums in Greece and abroad but at the same time deviates clearly form the corresponding program of the National Technical University of Athens
(2) The well-equipped labs, and infrastructure in general, which combined with the well-established tradition of the Academic Staff to combine theory with practice leads to confident and almost ready, for the labour market, graduates.
(3) Students' access to and involvement with the research labs of the Department
(4) The provision to consider graduates' (and external stakeholders') feedback for the assessment of the UGP as a whole

[1] https://eee.uniwa.gr/en/studies/undergraduate/curriculum

[2] https://eee.uniwa.gr/el/spoudes/pps/ps/programma-spoudon-ilektrologou-kai-ilektronikoy-mixanikoy-5etes/

(5) The provision to establish an Advisory Committee composed of external academics to secure that the UGP is always up to date and follows the international practice in the field
(6) The extended collaboration network with companies and associations that they are active in the field.
(7) Well-trained to practical skills academic staff

Weak Points:

(1) Poor interest by the students to do an internship (despite the excellent network of external stakeholders the Department has)
(2) Internship's duration and awarded ECTS
(3) Sub-optimal scheduling of the lab components of the courses can affect the attendance and smooth study path of students especially those that work at the same time
(4) Students need proper guidance to register for classes they have the required background to follow and successfully complete. Although the EEAP understands the rationale behind the absence of course chains, it is the case that some prerequisites (probably on courses of the Basic Cycle) for courses in the Specialization Cycles could be considered.

Panel Judgement

Principle 3: Design, approval and monitoring of the quality of the new undergraduate programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

The External Evaluation & Accreditation Panel agrees that this Programme leads to a Level 7 Qualification according to the National & European Qualifications Network (Integrated Master)	**YES**	**NO***
	X	

Panel Recommendations

- Try to extend the duration of the internship, at least to three months, in parallel with the increase in the number of awarded ECTS (minimum 10) to give further incentives to students to do an internship.
- Allow internship to be conducted earlier (at a minimum by the end of the 6th semester) to give the students the opportunity to do it during the summer period and avoid overlaps with their classes.
- Try to involve in a formal way graduates' feedback in the overall assessment of the UGP
- Please, consider (a few) prerequisites for (some) courses in the Specialization Cycles to support the vertical dimension of the UGP.

Principle 4: Student-centered Approach in Learning, Teaching and Assessment of Students

The academic unit should ensure that the new 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.

In the implementation of student-centered learning and teaching, the academic unit:

- ✓ *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 application of 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*

Relevant documentation

- *Questionnaires for assessment by the students*
- *Regulation for dealing with students' complaints and appeals*
- *Regulation for the function of the academic advisor*
- *Reference to the planned teaching modes and assessment methods*

Study Programme Compliance

In terms of the program of study, the students have the flexibility to choose from a variety of courses after their third year of study (semester 6). The combination of compulsory and elective courses forms the basis for the development's three specialization areas (cycles or "κύκλοι"); students are given the option to specialize in one of these cycles (A: Energy, B: Communications and Networks and C: Electronics and Computer Systems). The students have also to attend mandatory laboratories sessions related to certain courses. Staff and students felt that the laboratories and their equipment is one of the strong points of the department and a diversifying factor compared to other similar departments in Greece.

Depending on the nature of the course, assessments are administered in different ways and are presented in different formats, including written exams, take home assignments of a theoretical nature, and practical lab assignments. The (e-class) is the universal virtual learning environment endorsed by all students which provides access to all learning materials, including assessments. Additionally, it offers flexible communication channels between teaching staff and students by supporting messaging channels. Finally, the system supports general information dissemination such as the pushing out of announcements.

The department operates a detailed students' complaints management procedure including a relevant form to be completed by the affected party. The EEAP discovered that this procedure has been used successfully at least once.

Teaching staff receive student feedback via student questionnaires every six months. The student participation which appears to be 84% is deemed high by the EEAP, though efforts should be made it increase it even further. Furthermore, several studies have been undertaken and published in international conferences by faculty to support and finetune the processes for the evaluation of the UG program.

The meeting with the students confirmed to the EEAP that the students are generally happy with the program of study, as it meets their expectations well. Additionally, the students appeared to be well-informed about their rights and obligations. Further discussions with faculty reinforced the same message of close collaboration and mutual trust between students and staff.

The panel recommends that the student-centred learning principles need to be better understood and further implemented.

Panel Judgement

Principle 4: Student-centered approach in learning, teaching and assessment of students	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

- It is recommended that the Department further investigates ways to increase students' participation in teaching feedback questionnaires.
- It is also recommended that the Department reinforces the students' sense of autonomy throughout their academic career via appropriate guidance from the faculty.
- Student-centered learning principles need to be better understood and further implemented.

Principle 5: Student Admission, Progression, Recognition of Academic Qualifications and Award of Degrees and Certificates of Competence of the New Study Programmes

Academic units should develop and apply published regulations addressing all aspects and phases of studies of the programme (admission, progression, recognition and degree award).

All the issues from the beginning to the end of studies should be governed by the internal regulations of the academic units. Indicatively:

- ✓ *the registration procedure of the admitted students and the necessary documents - according to the law - and the support of the newly admitted students*
- ✓ *student rights and obligations, and monitoring of student progression*
- ✓ *internship issues, granting of scholarships*
- ✓ *the procedures and terms for writing the thesis (diploma or degree)*
- ✓ *the procedure of award and recognition of degrees, the duration of studies, the conditions for progression and assurance of the progress of students in their studies*

as well as

- ✓ *the terms and conditions for enhancing student mobility*

Appropriate recognition procedures rely on relevant academic practice for recognition of credits among various European academic departments and Institutions in line with the principles of the Lisbon Convention on the Recognition of Qualifications concerning Higher Education in the European Region. 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).

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

Relevant documentation

- *Internal regulation for the operation of the new study programme*
- *Regulation of studies, internship, mobility and student assignments*
- *Printed Diploma Supplement*

Certificate from the President of the academic unit that the diploma supplement is awarded to all graduates without exception together with the degree or the certificate of completion of studies

Study Programme Compliance

Based on the information provided by the Department, an introduction day within the department is taking place each year, giving brief information for the first-year students. Additional there are 3 Academic Advisors and 1 dedicated to persons with Disabilities, which is much important, that are designated to advise, guide and help the students. The procedure is easy as students informed the panel for an on-time advisor definition on each surname, at the beginning of each year. There is also a complete Student Care web page with all critical information (part of it only in Greek) as well as a complete Students guide (only in Greek)

Student progression is monitored by the "foititologio" an information system used by the Department not only for the registration of the grades, etc., but with the possibility of extracting numerical data for targeted statistical analysis and further processing by Internal Evaluation Committee (OMEA). It is important that, with appropriate technical support, more specialized search data can be extracted for a specific student, a specific course, etc.

Student mobility is encouraged by the participation in the Erasmus initiative and a strategic collaboration with CERN institute. On the website of the Department, all the related information is given through a special link for the Erasmus+ program. Professors and administrative staff expressed particular interest in participating in the skill enhancement mobility programs and collaborating with foreign universities.

The Undergraduate Studies Program of the department is based on the European system of transfer and accumulation of academic credits (ECTS), as well as on the corresponding Greek legislation. A minimum of 54 courses to be completed in 5 years. Each course carries a number of ECTS and the student needs to complete a total of 300 ECTS to graduate. The thesis is to be completed in the last semester and carries 30 ECTS.

Based on the information provided by Department, a Diploma Supplement will be issued without request for all graduates in Greek and in English. This supplement will contain detailed information for the qualification, the marks received, credits for the corresponding courses and the ECTS-based rating system. Although the new program has been in operation for only 3 years, an example of a diploma supplement was provided to the panel.

The diploma supplement could have been more meaningful if the statistics for the received grades were also provided. This would have been useful for evaluating the student performance within their class. Such information would help the students obtain positions for research , post-doctoral and graduate studies in other institutions.

The Diploma Thesis is assigned 30 ECTS. The entire 10th semester of the program is dedicated to the completion of this thesis. The Thesis Regulations are posted on the Department's website. A plagiarism check is carried out through the institutional version of the “Turnitin” application, while all Diploma theses are filed, registered, classified, and posted according to international standards in the newly established Institutional Repository of the University of Western Attica "Polynoi".

The information provided by the employers and social partners and the meeting of the panel with them, assured of the good relationship with the department and its academic staff. At least two of them informed the panel for the MoU process that has already been achieved with the department. Department informed the panel that prequalifies the practice carried out with certified companies through the "atlas" system, although students can get an internship also in companies of their choice. It seems that when practical training is in place, it will be a valuable part of the program, in terms of developing job-specific or broader skills.

The panel recommends preserving the technical training concept (Internships) for the students. Together with hands-on-lab experience, forms a valuable educational asset for

Engineering. It benefits the students, industry and community and distinguishes the UGP from other EEE programs.

The panel strongly recommends the Department in considering the development of awards for the student recognition. It would be possible by a community focused financial institution, NGO, or internal University values. An advisory awards council, including student representatives, should be put in place to recognize and honour students for their academic accomplishments, their leadership, and their commitment to inclusive excellence.

In summary, the department is doing a good job in the student processes area and their overall approach in key areas of the principle is to be commended. The department implement procedures to monitor student progression, like the foititologio, have given a good try for mobility that has already gave results (CERN etc.). The industry stakeholders are enthusiastic and confirmed was that there is a very good collaboration. In addition, they have a good track record regarding internships, which should work well combined with the panel recommendations.

Panel Judgement

Principle 5: Student admission, progression, recognition of academic qualifications, and award of degrees and certificates of competence of the new study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- The panel strongly recommends the Department in considering the development of awards for the student recognition.
- The diploma supplement could have been more meaningful if the statistics for the received grades were also provided.
- The panel recommends preserving the technical training concept (Internships) for the students. Together with hands-on-lab experience, forms a valuable educational asset for Engineering. It benefits the students, industry and community and distinguishes the UGP from other EEE programs.

- Consider Increasing the number of awarded ECTS (at least to 10 ECTS) to give further incentives to students to do an internship.
- Try to extend the duration of the internship. (For example, consider extending the internship duration to 3 months with suitable ECTS allocation.)
- Allow internships to be conducted earlier (at a minimum by the end of the 6th semester)
- Give the students the opportunity to do internships multiple times during the summer period to avoid overlaps with their classes.

Principle 6: Ensuring the Competence and High Quality of the Teaching Staff of the New Undergraduate Study Programmes

Institutions should assure themselves of the competence, the level of knowledge and skills of the teaching staff of the academic units, and apply fair and transparent processes for their recruitment, training and further development.

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

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

Relevant documentation

- *Procedures and criteria for teaching staff recruitment*
- *Regulations or employment contracts, and obligations of the teaching staff*
- *Policy for staff recruitment, support and development*
- *Performance of the teaching staff in scientific-research and teaching work, also based on internationally recognised systems of scientific evaluation (e.g., Google Scholar, Scopus, etc.)*

Study Programme Compliance

Introduction

In order to properly assess principle 6, (Ensuring the Competence and High Quality of the Teaching Staff of the New Undergraduate Study Programs) we have taken into account the discussions during the panel's meetings and the information listed in Part II.

Findings

After studying the relevant material in the application and examining all sources of information given to the EEAP along with the conducted interviews with the academic staff and students, and the in-situ visit to the teaching and research labs, the panel members found the following:

(1) The UGP is effectively run by well-qualified and trained staff. The Department is appropriately staffed both in absolute numbers but also in terms of specializations. That allows the UGP to run smoothly.

(2) The staff categories and the number of staff members in each category are suitable for the UGP. Researchers, recruited through Academic Scholarships, cover any lack of

personnel required for the smooth operation of teaching labs and for conducting lab classes.

(3) The staff to student ratio is somehow high but compared to similar UGPs in Greece is much better. Improvement of the staff to student ratio, if required, can be achieved by decreasing the number of students entering the program.
(4) The Department follows clear, transparent, and fair processes for the recruitment of properly qualified permanent teaching staff. Recruitment of teaching staff on a contractual basis is also supported via transparent procedures.
(5) The teaching staff tries (and manages) to link teaching and research through students' exposure to high-tech research labs and participation in R&D projects.
(6) The performance of Academic Staff, in terms of research achievements and securing research grants, is high. This is reflected mainly on the equipment of research labs and (indirectly) affects positively the UGP and the acquired skills by the students
(7) The Department follows quality assurance processes for all staff members as set out in the IQAS (Internal Quality Assurance System). These processes refer to research and teaching performance, self-assessment, training, etc, and positively affect the quality of learning in the UGP.
(8) Updating their teaching process to contemporary teaching methods and learning modes does not seem to be a priority for the Academic Staff.
(9) Mobility of teaching staff outside Greece (for teaching purposes) is limited

Analysis of judgment

The procedures for the recruitment and assessment for promotion of the Academic Staff, that the Department follows, are set out in the Greek law, and are applied horizontally in all Greek Academic Institutions. In that respect the flexibility of the Department is limited to their proper implementation which seems to be the case. The Institution has set out clear and transparent rules and regulations for recruiting teaching personnel and Academic Scholars on a contractual basis.

The EEAP members assess very positively the establishment, at institutional level, of a Centre for Teaching and Learning which aims to support the academic staff on acquiring skills of contemporary pedagogical methods and tools. On the contrary, EEAP members consider that setting out teaching awards will incentivize the teaching personnel to update their teaching processes and student learning tools.

Conclusions

The teaching staff that runs the UGP is well-qualified and trained. The recruitment procedures for teaching staff both for permanent positions as well as for limited duration contracts are transparent and according to the Greek law.

Strong Points:

(1) Teaching staff actively supports the linking of teaching and research through the involvement of students in research task in the research labs and in the framework of R&D projects.
(2) The department is well-staffed and the most complete EEE department in Greece.
(3) There is a very good Staff to Student ratio for the UGP
(4) The establishment, at institutional level, of a Centre for Teaching and Learning which aims to improve the teaching experience is a strong point.

Weak Points:

(1) Staff mobility is limited and, thus, Academic Staff should be encouraged and incentivized for mobility. Exposure of teaching staff to teaching methods and academic processes followed in other universities in Greece and (more importantly) abroad would have a positive effect on the implementation of the UGP. In addition to that, staff mobility would strengthen research collaborations and international visibility of the Academic Staff.
(2) No policies, other the ones applied at national level, to attract highly qualified academic staff have been set out. Start-up grants and part time employment could be such measures.

Panel Judgement

Principle 6: Ensuring the competence and high quality of the teaching staff of the new undergraduate study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

- The panel recommends giving incentives to the Academic Staff encouraging mobility beyond the Erasmus program. Participation in Staff Exchange Programs[3] could be a useful tool.

[3] see for instance: https://marie-sklodowska-curie-actions.ec.europa.eu/actions/staff-exchanges

- Visiting professorships is a valuable means to collaborate and exchange new research ideas. Some options to achieve these may be to use vacant academic positions for inviting visiting professors.
- (Re-) consider setting out teaching awards for incentivising the teaching staff to pay more attention on new teaching approaches and tools
- Consider developing policies for attracting highly qualified academic staff from abroad (i.e., start-up grants, part time employment, etc)

Principle 7: Learning Resources and Student Support of the New Undergraduate Programmes

Institutions should have adequate funding to meet the needs for the operation of the academic unit and the new study programme as well as the means to cover all their 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 resources, on a planned and long-term basis, to support learning and academic activity in general, in order to offer students the best possible level of studies. The above means include facilities such as, the necessary general and specific libraries and possibilities for access to electronic databases, study rooms, educational and scientific equipment, information and communication services, support and counselling services. When allocating the available resources, the needs of all students must be taken into consideration (e.g. whether they are full-time or part-time students, employed students, students with disabilities), in addition to 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. Students should be informed about all available services. In delivering support services, the role of support and administration staff is crucial and therefore this segment of staff needs to be qualified and have opportunities to develop its competences.

Relevant documentation

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

Study Programme Compliance

The Accreditation Proposal submitted by the EEE- University of West Attica jointly with the presentation of the department facilities has provided a detailed account of the EEE department's infrastructure and associated services. As part of UWA, the School enjoys the extended and attractive facilities as a part of the ancient olive grove campus of UWA in Egaleo, Athens.

For the most part, the facilities of the facilities have been proven adequate to facilitate the teaching process and although improvements certainly could be made, that is not always up to the department's sole control given its limitations in national funding. Exceptionally, during the first three years, before the students choose one of the three specialization cycles of study, there is a large concentration of students in the compulsory classes. During those first three years, time management and distribution issues are created. The department does it's best to handle to uphold the standard of education provided.

Certainly, the School has rationally distributed the existing facilities, although most of the facilities are jointly used by other schools. The use of shared facilities has scheduling difficulties.

Notably, the educational labs have been found to be adequately equipped to handle the necessary laboratory experiments that need to be performed by the students during their studies. The labs have been inherited by the consisting previous technological schools and have been improved upon. On the downside there was mention of delays in the planning and execution of lab exercises because of a lack of the necessary staff at the beginning of the lab sessions. To the department's merit high quality technical staff is eventually hired but the delays affect the student's learning process.

Student support services are widely available to students, usually through the University of West Attica services. For the purpose of informing students about services available to them, the department has issued an informative Study Guide which can be found on the department's website.

Generally, the department has demonstrated efforts to support students throughout their studies, while working with its quite limited public budget resources. Especially positive was the care taken in ensuring easy access in the department's facilities for students with disabilities. Information about services available to students has been given in an organized form and is readily accessible to anyone interested. Lastly, for the financial support of qualifying students, scholarships are provided by the University primarily based on merit and/or financial hardship.

Concluding, the department has made steps to support its students and, more importantly, make all services available and well-known.

Panel Judgement

Principle 7: Learning resources and student support of the new undergraduate programmes	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

- Student-centered learning principles need to be better understood and further implemented.
- Ensure that the necessary staff is available at the start of term to support the lab sessions.
- Consider offering interdisciplinary research areas and common physical spaces where students could study and work on group projects.
- Consider accessing large enough classrooms for the department to improve the teaching process and easing class scheduling.

Principle 8: Collection, Analysis and Use of Information for the Organization and Operation of New Undergraduate Programmes

The Institutions and their academic units 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.

Effective procedures for collecting and analysing information on the operation of Institutions, academic units and study programmes feed data into the internal quality assurance system. The following data is of interest: key performance indicators for the student body profile, student progression, success and drop-out rates, student satisfaction with the programme, availability of learning resources and student support. The completion of the fields of National Information System for Quality Assurance in Higher Education (NISQA) should be correct and complete with the exception of the fields that concern graduates in which a null value is registered.

Relevant documentation

- *Report from the National Information System for Quality Assurance in Higher Education (NISQA) at the level of the Institution, the department and the new UGP*
- *Operation of an information management system for the collection of administrative data for the implementation of the programme (Students' Record)*
- *Other tools and procedures designed to collect data on the academic and administrative functions of the academic unit and the study programme*

Study Programme Compliance

Introduction

In order to properly assess principle 8, (Collection, Analysis and Use of Information for the Organisation and Operation of New Undergraduate Programmes) we have taken into account the discussions during the panel meetings and the documentation listed in part II.

Findings

After studying the submitted material and examining all sources of information given to the EEAP along with the conducted interviews with the academic staff and students, the panel members found the following:

(1) Detailed information regarding the structure of the UGP as well as its implementation is available online.

(2) Electronic systems are in place to handle student registration to courses, to allow class scheduling and classroom allocation, to inform students about forthcoming exams and course grades, to provide information about student cafeterias and the food program, to promote student mobility etc.

(3) Learning material per course and asynchronous online learning activities are found / supported by eClass and Moodle. These platforms are also used to collect students' feedback regarding the quality of teaching.

(4) The Department collects data on the students' progress and conducts surveys on the students' satisfaction for all courses offered. These data are compiled, and appropriate

key indicators are extracted and analysed as described in the corresponding process of the IQAS. However, specific actions undertaken based on the finding were not reported.

(5) The Department provided examples of the electronic system that is used to monitor students' study progress ("fititologio").

(6) There are annual reports (up 2019-2020) submitted to and extracted from the National Information System for Quality Assurance in Higher Education (NISQA). Those data seem to be correct, but they are not useful for the assessment of the UGP (neither internally by the Department nor externally by the EEEP members).

Analysis of judgment

The panel considers that the efforts of the Department are in compliance with the expectations under principle 8 for the collection, analysis and use of Information for the organization and operation of new Undergraduate Programmes. The processes of the IQAS that refer to that principle is followed without significant deviation.

Conclusions

Data relevant to UGP are collected at various levels (courses' content, infrastructure, internships, theses, etc) and from different perspectives (students, faculty members, admin personnel), as described in the corresponding processes of the accredited IQAS. In addition, students' studies are supported by online tools by a variety of means (access to learning material and asynchronous learning activities, registration to classes, etc).

Panel Judgement

Principle 8: Collection, analysis and use of information for the organisation and operation of new undergraduate programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Clarifications are needed in reference to the way the collected data, relevant to the UGP, are used for its improvement.
- The panel recommends making the results of the internal evaluation and actions taken more transparent and easily available to the constituents.

Principle 9: Public Information Concerning the New Undergraduate Programmes

Institutions and academic units should publish information about their teaching and academic activities in a direct and readily accessible way. The relevant information should be up-to-date, clear and objective.

Information on the Institutions' activities is useful for prospective and current students, graduates, other stakeholders and the public. Therefore, Institutions and their academic units must provide information about their activities, including the new undergraduate programmes they offer, the intended learning outcomes, the degrees awarded, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students. Information is also provided, to the extent possible, on graduate employment perspectives.

Relevant documentation

- *Dedicated segment on the website of the department for the promotion of the new study programme*
- *Bilingual version of the website of the academic unit with complete, clear and objective information*
- *Provision for website maintenance and updating*

Study Programme Compliance

The departmental website provides the main channel of communication for both students and staff of the Department, as well as the outside world. The website is well structured and is offered both in Greek and English languages. The information presented is accurate and consistent in the Greek section. However, some of the information presented in the English section is not updated or fully completed and needs attention, e.g., in the curriculum section the description of courses is not equivalent to the Greek version.

The content of the website is broken down into several sections which cover educational, administrative, and social matters, with all key information being present. The navigation between the different parts of the site is easy; basic web usability principles are adhered to. The content appears to be updated regularly. It is understood during the interviews with the students that the teaching material is available on the signed-in part of UWA's website, which hosts the e-class and model virtual learning tools.

Panel Judgement

Principle 9: Public information concerning the new undergraduate programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The website could feature more pertinent, updated, and complete information for the English section.

Principle 10: Periodic Internal Review of the New Study Programmes

Institutions and academic units should have in place an internal quality assurance system, for the audit and annual internal review of their new 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 the new study programmes aim at maintaining the level of educational provision and creating 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.

Relevant documentation

- *Procedure for the re-evaluation, redefinition and updating of the curriculum*
- *Procedure for mitigating weaknesses and upgrading the structure of the UGP and the learning process*
- *Feedback processes on strategy implementation and quality targeting of the new UGP and relevant decision-making processes (students, external stakeholders)*
- *Results of the annual internal evaluation of the study programme by the QAU and the relevant minutes*

Study Programme Compliance

The curriculum (study program) of the Department has a duration of 5 years. The Department has recorded as an obligation the Annual Internal Report (Inventory) but up to now, only one Internal Evaluation Report of the department for the Academic year 2019-2020 prepared by Internal Evaluation Committee (OMEA) and adopted by MODIP on 24-11-21. This report is not posted on the department web site.

Based on the information provided by the department, there is an internal meeting twice per year by undergraduate curriculum committee (EPPS) plus extraordinary meetings in case of any remarkable issue. It collects the proposals of MODIP, as well as those of the faculty members, to modify the curriculum. Teaching staff members assured the panel for the receipt of the conclusions by email.

Additionally, an Advisory Board that is going to be placed in the next months will have a twice per year committee to support the Department and thus, contribute on the amendment procedure for the curriculum.

The panel could not confirm the processes used for the EEE department's internal evaluation and subsequent changes made. The submitted document B.15 labelled "Results of the internal evaluation UGP MODIP" is an evaluation of the department by MODIP and is very lightly related to the UGP under evaluation, which is a key aspect of the principle. During meeting with teaching staff members, the panel was informed that the results of this very first Internal Review by MODIP were discussed during Department committee, but they couldn't provide evidence for any change on the positive direction. The only information provided was that Departmental president inform each member of the teaching staff in person, for the results of the student evaluation concerning each separate course. Internal evaluation of the EEE Undergraduate Study Program needs to be conducted.

The department seems that have a good participation rate of the student class evaluation questionnaires and be aware of ways to improve this rate.

Panel Judgement

Principle 10: Periodic internal review of the new study programmes	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

- The panel strongly recommends that a formal structure for the optimization of the curriculum according to the findings of the annual internal report, should be established and enforced.
- An internal evaluation of the EEE UWA Undergraduate Study Program needs to be conducted.

Principle 11: Regular External Evaluation and Accreditation of the New Undergraduate Programmes

The new undergraduate study programmes should regularly undergo evaluation by panels of external experts set by HAHE, aiming at accreditation. The results of the external evaluation and accreditation are used for the continuous improvement of the Institutions, academic units and study programmes. 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 panel of independent experts. HAHE grants accreditation of programmes, based on the Reports submitted by the panels, 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 Standards, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees. Both academic units and institutions must consistently consider the conclusions and the recommendations submitted by the panels of experts for the continuous improvement of the programme.

Relevant documentation

- *Progress report on the results from the utilisation of the recommendations of the external evaluation of the Institution and of the IQAS Accreditation Report.*

Study Programme Compliance

The program was founded in 2018 and at this time is in full compliance with the principle of regular external evaluations.

The Panel had the opportunity to deal with the unlimited effort of the department leadership and many faculty members to assist with highly detailed presentations as well as prompt response to every issue raised to facilitate his work. The department also provided the records of the external evaluation of the pre-existing TEI department and the MODIP progress report.

Being proactive is good sign that the regular external evaluations will continue.

Panel Judgement

Principle 11: Regular external evaluation and accreditation of the new undergraduate programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

None

Principle 12: Monitoring the Transition from Previous Undergraduate Study Programmes to the New Ones

Institutions and academic units apply procedures for the transition from previously existing undergraduate study programmes to new ones, in order to ensure compliance with the requirements of the Standards.

Applies in cases where the department implements, in addition to the new UGPs, any pre-existing UGPs from departments of former Technological Educational Institutions (TEI) or from departments that were merged / renamed / abolished.

Institutions should implement procedures for the transition from former UGPs to new ones, in order to ensure their compliance with the requirements of the Standards. More specifically, the institution and the academic unit must have a) the necessary learning resources, b) appropriate teaching staff, c) structured curriculum (courses, ECTS, learning outcomes), d) study regulations, award of diploma and diploma supplement, and e) system of data collection and use, with particular reference to the data of the graduates of the pre-existing UGP. In this context, the Institutions and the academic units prepare a plan for the foreseen transition period of the existing UGP until its completion, the costs caused to the Institution by its operation as well as possible measures and proposals for its smooth delivery and termination. This planning includes data on the transition and subsequent progression of students in the respective new UGP of the academic unit, as well as the specific graduation forecast for students enrolled under the previous status.

Relevant documentation

- *The planning of the Institution for the foreseen transition period, the operating costs and the specific measures or proposals for the smooth implementation and completion of the programme*
- *The study regulations, template for the degree and the diploma supplement*
- *Name list of teaching staff, status, subject and the course they teach / examine*
- *Report of Quality Assurance Unit (QAU) on the progress of the transition and the degree of completion of the programme. In the case of UGP of a former Technological Educational Institution (TEI), the report must include a specific reference to how the internship was implemented*

Study Programme Compliance

The Accreditation Proposal submitted by the EEE department of the University of West Attica jointly with the presentation of the department facilities was found to have provided the necessary documentation for the transition period the department is currently going through.

Provision was made for students, that were enrolled in the pre-existing study program, to be able to continue their studies in the new study program. Also, students who wished to continue their studies to the new study program were given the opportunity to change revert their choice. On the downside however, that doesn't apply for students who were enrolled in the pre-existing study program and had at the start of the academic year 2018-2019 exceeded the necessary number of years to complete the technological undergraduate program by over 2 years.

The department's plan to facilitate the smooth conclusion of the first cycle of study for students completing the pre-existing study program is to do so by 4 matching tables issued by the department. More specifically the chairman has announced a table matching each class of the pre-existing study program with one from the new study program, for each one of the 4 constituting departments study programs, that can be consulted by the students to understand which classes from the new study program they need to complete. Concluding all students continuing their studies in the pre-existing study program will do so by completing the necessary classes remaining, for them to be eligible for their previous department's corresponding diploma, in the form of completing the corresponding class as dictated by the matching table announced by the chairman of the department.

An important thing to note is that the same matching tables are to be used by students who have decided to continue their studies in the new study program. Despite their decision to continue their studies in the new study program, students are not obliged to complement their study with any additional classes thus making it unclear how all the educational results of the new study program are going to be achieved. This is more concerning, considering the more demanding nature of the classes in the new study program in contrast with the corresponding ones from pre-existing study programs.

On the plus side, whilst not formally presented in the accreditation proposal documents, educational measures (study groups, seminars etc.) were implemented, to better accommodate students who decided to continue to the new study program and address their lack of necessary theoretical knowledge.

Special provision has been made for the conduct of the obligatory practical training of the students enrolled in the pre-existing study programs. More specifically practical training will be performed with the same regulations and duration that were used in pre-existing study programs by the students still enrolled in them. It should be noted that students previously enrolled in the pre-existing study programs, who decided to continue their studies in the new study program comply to the new regulation and duration for practical training.

The MODIP has filed a detailed report on the transition period from the previous existing undergraduate program, detailing the obligations the department had by law and how they are implemented.

Finally, it should be mentioned that little to no information was given about the efforts the department is going to or has made in order to help students still enrolled in pre-existing programs of study to be able to cope with the more demanding level of classes they have to now complete, in order to be able to get their diploma. The B1 accreditation proposal however does mention, in principle 12, that students enrolled in previous study programs are examined differently in respect to the length or the difficulty of the exam, which in turn makes the 1-1

equivalence of classes, as per announced the matching tables, less obvious as a practice for students that chose to continue their studies in the new study program.

The panel also noted that the provided statistics (PADA SE Arithmous # 7) show that the EEE department has 385 first year students and 1727 students in the active program. It also shows that 976 students are between v and v+4 semester and 4012 over v+4. This is the largest number of students that are in their 7 + year of studies (in the >v+4 category) in the University. It is estimated that about 4045 TEI students (Axonas 12 #5) will need to graduate by 2025 otherwise will be dropped from the student ranks. The panel also noted that some of the students interviewed were in the 15th or 16th semester. It is not clear if these students are in a work/study program but taking over 7 years to graduate is of concern. The panel recommends that the new program takes measures to ensure that full time student's timely completion of their studies in new study program.

Panel Judgement

Principle 12: Monitoring the transition from previous undergraduate study programmes to the new ones	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

The Department has made considerable headway already in its transition period. However, some additions could be considered even at this stage are:

- The panel recommends the creation of a university linked tutor system in order to better accommodate the transition that students need to make.
- The panel recommends that the new program takes measures to ensure the student's timely completion of the new study program.
- The panel is concerned that a large number of students of the terminating TEI program needs to graduate in a very short time.

PART C: CONCLUSIONS

I. Features of Good Practice

- The UGP is well designed, following the structure and logic of similar well-established and long-lasting programs in Greece and abroad.
- The department founders and faculty have demonstrated impressive vision and knowledge of the technological developments in the Engineering field as it is evident by the emerging scientific fields that are active in the department.
- It is quite impressive that despite the fact the program has been operating for only 4 years the department graduated 89 students.
- The strategic plan is a thorough plan, very well written with checks and balances to ensure high quality education, state of the art research and constant improvements in the new study program are present
- The department is proactive in undergoing external evaluations and have extremely well-prepared documents and presentations.
- There is a healthy relationship between the department the community and the Greek industry.
- The students receive an excellent education and there is a strong demand for the Department's graduates, as observed during the meeting with the stakeholders.
- The department faculty pursue state of the art research in emerging areas.
- The department research has a sizable footprint in the international research landscape.
- The faculty and the research labs have a strong presence in receiving highly competitive research funds.
- The Undergraduate Program is an official collaborating institution for CERN. This shows the high value of the education program is recognized throughout the world.
- Teaching staff actively supports linking research with teaching through the involvement of students in research task in the research labs and in the framework of R&D projects.
- The department is well-staffed and the most complete EEE department in Greece.
- The Staff to Student ratio for the UGP is very good.
- The establishment, at institutional level, of a Centre for Teaching and Learning which aims to improve the teaching experience, is a strong point.
- The design and structure of the UGP which follows well-established curriculums in Greece and abroad but at the same time deviates clearly form the corresponding program of the National Technical University of Athens
- The well-equipped labs, and infrastructure in general, which combined with the well-established tradition of the Academic Staff to combine theory with practice leads to confident and almost ready, for the labour market, graduates.
- The UGP is supported by well-qualified and trained personnel while the well-equipped labs and the infrastructure in general is a plus that makes the program very competitive in Greece and internationally.

- The students have a good access to and involvement with the research labs of the Department.
- There are provisions to consider graduates' (and external stakeholders') feedback for the assessment of the UGP as a whole
- The provision to establish an Advisory Committee composed of external academics to secure that the UGP is always up to date and follows the international practice in the field
- The extended collaboration network with companies and associations that they are active in the field.
- The academic staff has excellent skills and excels in experimental research.
- The Department follows clear, transparent, and fair processes for the recruitment of properly qualified permanent teaching staff. Recruitment of teaching staff on a contractual basis is also supported via transparent procedures.
- The EEAP members assess positively the imposed limitation to six courses per semester.

II. Areas of Weakness

- Student centred learning principles need to be better understood and further implemented.
- Student, faculty, and personnel mobility needs encouragement.
- Coherent departmental policies aiming to attract highly qualified academic staff need to be developed and implemented.
- There is a poor interest by the students to do an internship (despite the excellent network of external stakeholders the Department has)
- Internship's duration and awarded ECTS need to be re-evaluated.
- Sub-optimal scheduling of the lab components of the courses can affect the attendance and smooth study path of students especially those that work at the same time
- Students need proper guidance to register for classes they have the required background to follow and successfully complete. Although the EEAP understands the rationale behind the absence of course chains, it is the case that some prerequisites (probably on courses of the Basic Cycle) for courses in the Specialization Cycles could be considered.
- Little to no information was given about the efforts the department to help students still enrolled in the pre-existing TEI programs of study to cope with the more demanding level of classes they now have to complete, in order to graduate.

III. Recommendations for Follow-up Actions

Principle 1

- It is recommended that a clear mission beyond the one defined by law, unique to the EEE department that highlights its excellence is formulated and published consistently in its documents and in the web.
- The panel recommends recruiting additional technical staff members (ΕΔΙΠ and ΕΤΕΠ) to support the teaching and laboratory activities.
- Number of students admitted in the new undergraduate program needs to be compatible to the availability of facilities and personnel.
- Funding University publication fees will be a good investment that would promote the research work of the University.

Principle 2

- The Quality Assurance policy for the Department is available in Greek on the departmental website but not in English. It could be helpful for international audience with an interest in the department to upload the policy in English too.

Principle 3

- Try to extend the duration of the internship, at least to three months, in parallel with the increase in the number of awarded ECTS (minimum 10) to give further incentives to students to do an internship.
- Allow internship to be conducted earlier (at a minimum by the end of the 6th semester) to give the students the opportunity to do it during the summer period and avoid overlaps with their classes.
- Try to involve in a formal way graduates' feedback in the overall assessment of the UGP
- Please, consider (a few) prerequisites for (some) courses in the Specialization Cycles to support the vertical dimension of the UGP.

Principle 4

- It is recommended that the Department further investigates ways to increase students' participation in teaching feedback questionnaires.
- It is also recommended that the Department reinforces the students' sense of autonomy throughout their academic career via appropriate guidance from the faculty.
- Student-centred learning principles need to be better understood and further implemented.

Principle 5

- The panel strongly recommends the Department in considering the development of awards for the student recognition.
- The diploma supplement could have been more meaningful if the statistics for the received grades were also provided.
- The panel recommends preserving the technical training concept (Internships) for the students. Together with hands-on-lab experience, forms a valuable educational asset for Engineering. It benefits the students, industry and community and distinguishes the UGP from other EEE programs.
    - Consider Increasing the number of awarded ECTS (at least to 10 ECTS) to give further incentives to students to do an internship.
    - Try to extend the duration of the internship. (For example, consider extending the internship duration to 3 months with suitable ECTS allocation.)
    - Allow internships to be conducted earlier (at a minimum by the end of the 6th semester)
    - Give the students the opportunity to do internships multiple times during the summer period to avoid overlaps with their classes.

Principle 6

- The panel recommends giving incentives to the Academic Staff encouraging mobility beyond the Erasmus program. Participation in Staff Exchange Programs could be a useful tool.
- Visiting professorships is a valuable means to collaborate and exchange new research ideas. Some options to achieve these may be to use vacant academic positions for inviting visiting professors.
- (Re-) consider setting out teaching awards for incentivising the teaching staff to pay more attention on new teaching approaches and tools
- Consider developing policies for attracting highly qualified academic staff from abroad (i.e., start-up grants, part time employment, etc)

Principle 7

- Student-centered learning principles need to be better understood and further implemented.
- Ensure that the necessary staff is available at the start of term to support the lab sessions.
- Consider offering interdisciplinary research areas and common physical spaces where students could study and work on group projects.
- Consider accessing large enough classrooms for the department in order to improve the teaching process and easing class scheduling.

Principle 8

- The panel recommends making the results of the internal evaluation and actions taken more transparent and easily available to the constituents.
- Clarifications are needed in reference to the way the collected data, relevant to the UGP, are used for its improvement.
- The panel recommends making the results of the internal evaluation and actions taken more transparent and easily available to the constituents.

Principle 9

- The website could feature more pertinent, updated and complete information for the English section.

Principle 10

- The panel strongly recommends that a formal structure for the optimization of the curriculum according to the findings of the annual internal report, should be established and enforced.
- An internal evaluation of the EEE UWA undergraduate Study Program needs to be conducted.

Principle 11

None

Principle 12

- The panel recommends the creation of a university linked tutor system in order to better accommodate the transition that students need to make.
- The panel recommends that the new program takes measures to ensure the student's timely completion of the new study program.
- The panel is concerned that a large number of students of the terminating TEI program needs to graduate in a very short time.

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **1, 2, 3, 5, 6, 8, 9, and 11.**

The Principles where substantial compliance has been achieved are: **4, 7, 10, 12.**

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 External Evaluation & Accreditation Panel agrees that this Programme leads to a Level 7 Qualification according to the National & European Qualifications Network (Integrated Master)	**YES**	**NO**
	X	

The members of the External Evaluation & Accreditation Panel

Name and Surname **Signature**

1. **Prof. Kiki Ikossi (Chair)**
   George Mason University, Fairfax, Virginia, USA

2. **Prof. Christos Politis**
   Kingston University, London, UK

3. **Prof. Nicolas Tsapatsoulis**
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4. **Mr. Sotiris Michalopoulos**
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