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

Electrical and Computer Engineering

Institution: University of Western Macedonia
Date: 21 February 2023

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 Computer Engineering** of the **University of Western Macedonia** 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 of the **Electrical and Computer Engineering** of the **University of Western Macedonia** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. **Prof. Emeritus George Vachtsevanos (Chair)**
   Georgia Institute of Technology, Atlanta, Georgia, United States of America

2. **Assoc. Prof. Konstantinos Kopsidas**
   The University of Manchester, Manchester, United Kingdom

3. **Prof. Emeritus Nicholas Kyriakopoulos**
   The George Washington University, Washington, D.C., United States of America

4. **Mr Sotirios Michalopoulos**
   Technical Chamber of Greece, Patra, Greece

5. **Mr Michail Voskakis**
   Student of Electrical and Computer Engineering, Hellenic Mediterranean University, Heraklion, Greece

II. Review Procedure and Documentation

The External Evaluation and Accreditation Panel (EEAP) attended a series of videoconference meetings (zoom) with the Department of Electrical and Computer Engineering (ECE) of the University of Western Macedonia (UoWM), which is located in the city of Kozani. Videoconference meetings took place from Monday the 13th until Wednesday the 15th of February 2023 as a part of the External Evaluation & Accreditation Panel Review by Electronic Means. The EEAP has been warmly welcomed by the Head of the Department (HoD), Prof. Christoforidis George, and the Vice-Rector/President of Academic Affairs and President of QAU, Prof. Sariannidis Nikolaos. The HoD presented[1] an overview of the undergraduate (UG) Programme, its available infrastructure in the new ZEP Campus, the Unit's research activities, and the vision for the future. The presentation also provided some insights into the Department's structure, the four main working groups and their activities, the UGP Study Guide process used by the Department and how it feeds into the UoWM main assembly.

Following that introductory meeting, the Panel met with the Department's Internal Evaluation Group (IEG) and Quality Assurance Unit (QAU) of the UoWM representatives. Prof. Michalas Aggelos, Chair of the Department's IEG, delivered a presentation[2] during the second session of the review process on the 13th of Feb. 2023, summarising the procedures for the New UG Study Programme and the Department's UG Programme study transition from previous Engineering in Computer and Telecommunications (ECT) to the current Electrical and Computer Engineering (ECE). The presentation captured several aspects of the Department UGP development, regarding the different streams of the UGP, comparisons with other University Programmes, feasibility/viability of the UGP, Programme and Module Review processes, the working groups involved in such processes and the flow of information. The presentation included the Advisory Board Members (from industry), student support and advisory services, and Student Mobility and Erasmus+ offerings within the Department. Following that meeting, the Panel had a private session to provide a synopsis of the findings and exchange ideas about different aspects.

On the second day of the videoconference sessions, the Panel had the opportunity to discuss with academics and technical staff members from the Department. Following that, the Panel met with several students from the Department ranging from second-year students to finalists. The students were asked various questions about their academic life. They expressed their perspectives regarding the structure of the UG Programme, the challenges they are facing and, their experiences so far from the Department and the University in general, their opportunities for Mobility (ERASMUS+, Industrial Placements etc.). Then the Department delivered a presentation providing a virtual tour of their new ZEP facilities, infrastructure, and

[1] HoD Presentation, Document Name: Presentation 1_HoD ("Παρουσίαση1_Πρόεδρος.pdf")

[2] Proposal for academic accreditation of a new undergraduate study program, Presentation, Document Name: Presentation 2_IEG ("Παρουσίαση2_ΟΜΕΑ.pdf")

some spaces across the University (e.g., the Library, etc.). The next videoconference was with some graduate students selected by the Department. The main focus of the EEAP was identifying the graduate student's integration into the industry and their opportunities for further studies. The discussions extended to their mobility options (International studentships and Job opportunities) and the processes they feed information from their personal experiences to the Department concerning their learning experience, UG Programme Study and Modules that might need updating/reviewing. On the same day, an additional meeting followed with some of the Department's Advisory Board members and collaborators, including representatives from private and public companies. The Panel had an opportunity to explore the mechanisms and links/procedures in place that facilitate the different partner interactions with the Department, their view regarding the UG Programme of Studies, the quality of the students with respect to the new technological advancements they learn and the offered Programme Specialisation streams and industrial practice. The day was concluded with a private EEAP debriefing meeting to collate key findings and questions and review the evidence provided by the Department.

On the final day (15th Feb. 2023) of the videoconference reviewing plan, the EEAP met with a group of Department staff and representatives of IEG and other Working Groups. EEAP used this opportunity mainly to collect additional evidence and clarifications on the Department's implementation of presented procedures (e.g., minutes of Working Groups, specific actions allocated with timelines, etc.). Such evidence often indicates a well-established, well-documented, and systematic approach that allows the Department's continuous improvement and quality assurance in several aspects. For example, the effective implementation of a periodic UG Programme Study review, ensuring the inclusion of emerging topics and teaching material, the efficient use of facilities, and improving the processes that enable students and industrial partners' feedback.

The EEAP had a very busy two days with meeting different parties and stakeholders of the department. This was very exhausting for the Panel, mainly due to the timetable not having enough breaks.

The Department's preparation of the documentation was not very great. It would have been ideal to have collected their evidence in folders based on Principles 1-12. This way, the Department would have been better prepared and the Panel's investigation and reporting more effective. During the reviewing process, it seemed that the Department did not review the report structure the EEAP had to follow as directed by HAHE.

EEAP was overall happy with the Department's documentation and procedures to ensure quality assurance practices are in place. This is evidenced by the very good UG Programme Study they offer. The EEAP has focused its report on highlighting areas for even further improvements.

The report hereafter presents the collective findings of the Panel based on the three-day meetings, shared documentation provided by the Department, private discussions that followed during the videoconferences, and email communication with the Department's staff.

III. New Undergraduate Study Programme in operation Profile

The (UG) Programme offered by the ECE Department of the UoWM (ZEP campus) is a five (5) year degree comprising ten (10) semesters that correspond to 300 ECTS (European Credit Transfer System) credits. The UG programme awards its graduates a Masters of Engineering (MEng) degree. The program offers 92 modules, with the first six (6) semesters having 38 compulsory modules, followed by the three (3) semesters of elective 18 modules, options that are based on the specialisation the student undertakes; Energy, Computer and Electronics, and Telecommunications and Networks. There is a final semester in which the student undertakes their Final Year Individual Project Dissertation.

The Department offers an optional industrial placement for three months. To graduate, the student must complete 56 modules and their Final Year Individual Project Dissertation successfully. The study program can be considered flexible since, from the 6th semester and onwards, the students have elective modules that they can select depending on their preferences and the specialization they would like to follow.

The UG programme retains approximately 65 students each year, and the Department has 28 full-time faculty members, 7 teaching and lab assistants, 3 lab technicians and is supported by 3 professional administrators. The UG programme in ECE was reviewed in 2019 when the Programme Study changed from ECT to ECE. As a result, several students still follow the old ECT UG Programme Study; however, any new students are only registered for the new ECE UG Programme Study.

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

I. Findings

a. The academic profile and the mission of the Undergraduate Programme (UGP) are documented on the Department of Electrical and Computer Engineering (ECE) overview page. It reflects the Department's scientific field in the internationally established scientific fields of Higher Education in Computer Science, Software and Systems Technologies, Signals and Data Networks, Electronics and Electrical Engineering, and Energy. There is an inconsistency within the website (and provided pdf documentation) of the ECE department between the English and Greek pages. Some of the abbreviations are assumed obvious and not referred to in full and the mission statement is not well structured to highlight their impact on Education, Research and Social Responsibility.

b. The academic development strategy for the operation of the Department is discussed formally during their annual General Assembly Sessions and reported in the procedures by QAU[3] as provided during the evaluation. Within the provided report[1], some statements indicate an investigation of the factors that influence the programme study, teaching activities and scientific research field of the Department. Furthermore, the report captures parameters that influence departmental, economic and social aspects of ECE Department.

c. The documentation of the operation of the Department and the study programme of the UGP is also available in the provided documentation[4] and is evidently implemented during the transition of the Department's program of study from Computer and Communications Engineering (CCE) to ECE. The form effectively captures all the aspects of the feasibility of the Department's operations, the external evaluation panel recommendations, and QAU/IEG seem to collect some data based on a Yes/No assessment (i.e., an option between Urgent need for Review / Non-Urgent need for Review). From the students, graduates and industrial partners discussions during the evaluation[5] (videoconferences on 14th Feb.), it is understood that their contribution to UG Programme Study Review process through recommendations was not very systematic and it was done in an ad-hoc way via email communication, mainly with academics that they collaborate in research projects and other training activities.

d. ECE Department of UoWM sustainability of the infrastructure, human resources, funding perspective, provided services, and all other available resources is presented (during the videoconference on 13th Feb.). It is evident that there are mechanisms in place to record and manage effectively the educational and research facilities (amphitheatres, lab equipment and other infrastructure), staff and services related to student support, DASS (Disability Advisory and Support Service), and funding for Student Internships. Given that the ECE Department has just moved to the new campus (ZEP), there is no specific plan to manage and utilize the new recourses effectively.

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[3] B26.11 Στρατηγικό Σχέδιο ΤΗΜΜΥ 2022-26.pdf

[4] Review of Course Programme and Study Guide (Αναμόρφωση ΠΠΣ και Οδηγός Σπουδών; name of file: AnaPPSv2.pdf)

[5] Final Timetable of the External Evaluation & Accreditation Panel Review by Electronic Means Electrical and Computer Engineering Undergraduate Programme of the University of Western Macedonia (integrated master) 13 - 18 February 2023, Document name: Final Timetable_Electr & Comp Engineering_Uowm.pdf

e. The programme study of the ECE Department is very well established and reported. It is easy to find it on the Department's web pages. ECE provides a comprehensive organization of the UGP Study Guide (e.g. semesters, compulsory units and when the students can consider the industrial experience). The learning outcomes for every Module are detailed, ensuring a good level of a student-centred approach. The structure of the studies captures learning methods mainly based on traditional lecturing and laboratory approaches. During the Review process, no evidence was provided to indicate the existence of extensive use of team working projects and new software implementation platforms (e.g. IPSA or Power World, CAD and PCB design tools). Furthermore, the first six semesters of the UGP Study Guide do not allow for flexibility, providing only compulsory Modules.
f. The Department runs a UGP of 5 years (10 semesters) in Electrical and Computer Engineering. The successful completion of the Programme requires 56 modules, of which a student must enrol and deliver a diploma thesis equivalent to 300 European Credit Transfer System[6] (ECTS) credits. The UGP also offers optional industrial placements equivalent to 15 ECTS credits for a certain number of students and the ERASMUS+ opportunity. Currently, the UGP Study Guide is taking place in two different locations, at the newly developed campus ZPE and the old campus (Koila), where some labs have not yet moved to the new campus. The Department registers approximately 40-60 students each academic year based on the provided documentation for its UGP, which is designed to have three streams of specialization: (1) the Computers, Hardware & Software; (2) Telecommunications & Networks; and (3) Energy. In addition to UGP, the Department also offers five Master Degrees in Mechatronics, Business Administration & Management Information Systems, Renewable Energy Sources & Energy Management in Buildings, Advanced IT Technologies & Services, and Digital Health & Health Management. As per the provided documentation, approximately 500 UG students were registered from 2013 to 2022 at the Department.
g. The ECE department's research activity indicates research scientific field priorities and interdisciplinary work is reported on the Department's web pages and a summary of the Department's research activities (presented on the 13th Feb.). There is a healthy number of Postgraduate students[7] in teaching (Master Programmes – 302 students) and research (Doctorate Programmes – 85 students). However, no specific data are presented indicating the registration year. The Department's Strategic Development Plan[8] for 2022-2026 is provided with the Overview (Background, Vision and Mission of the Department) and the procedures used to develop the Department's strategic development. It further reports the goals of the Department on teaching and research & innovation activities, as well as the Social responsibility and local authority engagement. Finally, the SWOT analysis is also reported in the same documentation.

[6] Greece European Qualifications Framework (EQF) Referencing Report, [online], https://europa.eu/europass/system/files/2022-05/Greek_Referencing_Report%5B1%5D.pdf
[7] Presentation from the Department on the 13th Feb 2023, Document name: Παρουσίαση2_OMEA.pdf
[8] Στρατηγικό Σχέδιο Τμήματος Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών, Document: B26.11 Στρατηγικό Σχέδιο ΤΗΜΜΥ.pdf

II. Analysis

The meetings scheduled during the review process were helpful in providing insightful information on the Quality Assurance procedures. However, it is important to emphasize that ECE Department often seemed to provide documentation associated with the QAU of the University instead of documentation from IEG. The SWAT and long-term plan[5] had no measurable KPIs, specific deadlines, or tasks/activities allocated. From the data provided and discussions during the review procedure, it was evident that practices are in place to continuously improve the Strategic Planning, Feasibility and Sustainability of the Academic Unit. However, during the Review with the industrial partners, there seemed to be no formal procedure to systematically communicate their inputs/insights to the Department. Although several industrial partners were present during the Review, who highlighted their strong and effective interaction with the Department, those were not done systematically but via ad-hoc email interactions with academics as part of the industrial placement and other research activities.

The Department's student enrolment indicated that many students prefer to leave the Department and move to an equivalent department in another University in Greece. Although this is mentioned in SWOT analysis of the Department, no specific actions (like a questionnaire in the welcoming week) are considered in investigating the reasons, and neither IEG proposes any actions. During the review process, the EEAP focused on this essential matter (the reduced number of students registered and remained in the Department). Several factors are mentioned during the Review (e.g. "the move to a university that other family members study", the "city ECE Department is located being small and unattractive", etc.). However, these were insights rather than the outputs of a formal procedure reported from IEG or the Department towards developing a specific strategy for improving student retention and maintaining the Department's sustainability. A contemplated action is to reduce the base for admission to the ECE programme. Considering that the entry student number has been reduced from 160 (2019-20) to 55 (2022-23), it is imperative to undertake an in-depth analysis of the causes behind this student reduction. A strategic plan focusing on this matter should have been beneficial to the Department.

Looking into the Programme Study Guide[9] of the Department, it seems that it requires the successful completion of 56 modules with a total module number (for all three streams) of 92 modules and with total registered student number of 117 (excluding transfers). During the presentation[5] these numbers seemed not to agree. Furthermore, the website information and UGP Study Guide seem to have inconsistencies in the provided information and the different Modules do not provide consistent details (e.g. percentages of assessment are not detailed in all of them). Furthermore, in some Modules, the bibliography is not adequately provided.

III. Conclusions

The EEAP overall is satisfied with the synthesis and the quality of the offered modules that constitute the UGP in ECE. Academic staff members are research active and heavily engaged

[9] https://ece.uowm.gr/uploads/announcements/odhgos_spoydon_thmmy_2022_2023_english.pdf

in the Department's administrative and other managing activities as they strive to provide a high-quality programme at both UG and PG levels.

However, the EEAP did not see solid evidence regarding:

1) How the Student Module Evaluation Questionnaires (MEQ) feedback is processed and feeds into the Module development, and how the Modules' changes are decided/reviewed and reported/documented within the Departments IEG (and feed into University's QAU). In view of the limited number of student responses to MEQs the drawing of substantive conclusions could be problematic.
2) How the industrial placement experience is evaluated by the students and the industry.
3) How laboratory (software and hardware equipment) strategic plans are formed to focus on enhancing student experience.

The Department presented its strategic plan, but EEAP has found it challenging to identify solid evidence on systematic procedures for implementing the plan. In contrast to those for the research activities, performance indicators for comparative year-on-year analysis of Teaching KPIs were not found. Furthermore, it is unclear how often these are reviewed (i.e., when the next Review of the KPIs is scheduled) and how the effectiveness of any actions in Modules and UG Programme Review is measured. For example, one of the Department's actions is "to participate in international conferences"; however, without mentioning the number of participations in past years (at the Department and individual academic levels) and no future KPI targets (based on Department's strategic plan) considered to be satisfactory. The future planning and the activities for improvement are not specific or measurable and there is no timeline set; consequently, it is difficult to quantify the success/effectiveness of any actions.

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	
Substantially compliant	**X**
Partially compliant	
Non-compliant	
b. The strategy of the Institution/Department for its academic development	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	
c. The documentation of the feasibility of the operation of the Department and the study programme	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	
d. The documentation of the sustainability of the new Department	
Fully compliant	
Substantially compliant	**X**
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	
Substantially compliant	**X**
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	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

R1.1 The Department should review its current procedures detailing the Strategic Planning, Feasibility and Sustainability of the Academic Unit with SMART Objectives, including their IEG panel members. Measurable KPIs that can be used for reviewing their strategic planning should be included.

R1.2 A detailed terms of reference for IEG should be documented, indicating the responsibilities and frequency of the meetings, minuting of the meetings (etc.). Also Student MEQ should be modified, along with other KPIs should be used within a working group (IEG or other) that involves student panel participation in forming strategic actions for increasing student satisfaction and hence student numbers.

R1.3 A detailed procedure to ensure that aspects related to academic integrity, plagiarism and academic misconduct are included/reported within the Programme Study.

R1.4 Develop a procedure for amending/updating a module based on information gathered from multiple sources (student feedback, social partners, updates on the curriculum, etc.).

R1.5 Develop a procedure to review the Programme of Study information provided on the website of the ECE Department that aims to ensure consistency and accuracy in the reported Module Summaries and other information.

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

I. Findings

Based on the documentation that has been submitted/provided to the EEAP it is evident that there is a QAU formed for the UoWM that interacts with the Department's IEG. There is a monthly meeting of the QAU and the different IEGs within the UoWM and it is evident that annual quality assurance goals for the continuous development and improvement of the academic Department and the UPG Study Guide accompany the QAU within the UoWM. The very well-defined Modules also evidence this, and the learning outcomes and qualifications acquired by the students, which the EEAP agrees are in accordance with the European and National qualifications framework for higher education. In terms of resources, the available space (classrooms, labs and amphitheatre) is sufficient to offer a high-quality curriculum in the

area of Electrical & Computer Engineering. The ECE Department has just moved to the new ZEP campus.

During the Review, the EEAP asked for evidence of IEG operations, minutes and actions recorded from past meetings to ensure continuous development of their ECE academic Modules. The template of the form[10] from QAU used for the Revision of UGP Study Guide is provided. However, something similar for the Module reviews and implemented within the Department's IEG was not evidenced during the Review. There was a lack of understanding and evidence of how the IEG is functioning in a structural way, and it seems that no recorded actions for continuous improvement are reported within the Department. For example, several inconsistencies between the UGP Study Guide (pdf) and the Department's webpages were identified during the Review but IEG did not mention anything about a procedure in place to review in a timely manner its webpages and ensure the information is updated.

Feedback from students' MEQs responses is examined. However, it is unclear how the data are analysed and whether there is a mechanism to review the adequacy of the student percentage participation and the data analysis performed. The EEAP received the semester general assembly minutes[11] with the average values of the questions for all the Modules. However, no further evidence of the Student MEQs data analysis was performed on those. Year-on-year data analyses could have helped the Department establish a long-term (5-year) plan and further improve a Quality Assurance Policy for Module reviewing and development.

II. Analysis

One of the critical challenges in the current modus operandi of the Department and the envisioned growth is the PG student numbers. Often reduced student numbers are not associated only with one factor, and it is of significant importance in any Department to identify the reasons. ECE Department seems to speculate on reasons (i.e., not having an evidenced based conclusion) instead of forming a working group and engaging with the students at the very early stages (e.g., during their registration in the Department, welcoming presentation) as well as Department's webpages to collect some informative understanding on student reduction numbers. Even the total registered student numbers seem to be reduced significantly in the last couple of years.

All staff members are experienced academics and active researchers, and it seems to deliver high-quality lectures and labs based on the mean values of the 88 Modules provided by ECE Programme Study. The EEAP found that the Department and its IEG, do not analyse the Student MEQs data to the full extent. There is a lack of well-documented internal assessment procedures for the Modules that can facilitate a systematic Quality Assurance Policy and ensure its implementation. Such procedures should monitor decision-making, evidence/reasoning, implementation dates, and people's responsibilities, allowing the Department to review those as a quality assurance measure. The reviewing process identified that the Department's efforts to increase student numbers might be based on experience and

[10] Review of Course Programme and Study Guide (Αναμόρφωση ΠΠΣ και Οδηγός Σπουδών; name of file: AnaPPSv2.pdf)
[11] πρακτικά της συνεδρίασης αριθμ. 83/26-08-2022 της συνέλευσης του τμήματος Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών της Πολυτεχνικής σχολής του Πανεπιστημίου Δυτικής Μακεδονίας

not through a systematic review and evidence-based actions. No past practices are recorded and no potential risks (with mitigating actions) are identified.

The Department should identify practical and well-defined methods for linking teaching with research, the level of demand for graduates' qualifications in the labour market, the quality of support services, such as administration, libraries and student care, the implementation of an annual review and audit of the quality assurance system of the UGP through the cooperation of the IEG with the QAU of the Institution.

III. Conclusions

In broad terms, the EEAP is satisfied with the adopted quality assurance framework in the Institution. The Department seems well organized and managed and the key overarching mission to offer a high-quality UGP is largely fulfilled. However, the ECE Department's IEG does not effectively document measures and analyse data that facilitate systematic, evidenced-based quality assurance practices. The provided evidence and documentation do not indicate any year-to-year data comparison in Students' responses to MEQs and data analyses.

Panel Judgement

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

Panel Recommendations

R2.1 Creating a working group that processes/analyses the information collected from the student MEQs, and documents any key findings and conclusions on attendance, dropouts and recommendations to increase student engagement with quality assurance practices.

R2.2 Creating a task force to ensure the quality and accuracy of information provided on the website and to the students.

R2.3 The Department should periodically and systematically rationalize existing KPIs and form new ones as required to ensure they are SMART[12] defined and strategically prioritised.

R2.4 A well-documented procedure should be defined in reviewing/updating a Module. It should include the academic (involved with the Module delivery) recommendations/suggestions of specific changes, required (hardware and software) infrastructure, how these reflect on addressing Student MEQ key findings, and how these integrate new research areas; followed by a departmental discussion about proposed changes, available resources and feedback from Industrial partners and local industry on learning outcomes.

[12] SMART: Strategic, Measurable, Achievable, Realistic, Timely

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

I. Findings

The ECE Department's UPG has well-defined objectives and is well-structured and comprehensive while maintaining an appropriate program structure**.** The pedagogical process includes laboratory and programming assignments in several modules that provide valuable lessons for use in the workplace. Its Programme is not new, although the new UG Programme Study was revised and implemented in 2013-14 and restructured in 2019. The academic profile, the subject areas, the expected learning outcomes and the intended professional qualifications are within the European and National Qualifications Framework for Higher Education and described with reasonable detail, providing the anticipated student workload based on ECTS. The UGP certainly includes elements of the Institution and Departmental strategy and considers the employment prospects of their graduates. It also provides the option for working experience through student internships. The UG Programme Study outlines the learning objectives, expected outcomes, and sources of information. It is clearly structured, comprehensive, and informative.

However, the Programme lacks flexibility in the first 3 years and additional details on the programme's structure about acquiring specific digital and soft skills. Furthermore, the continuous development of the Modules and the material delivered seems not to change actively. It is not obvious how student MEQs data feeds into the revision/review of the Modules to ensure that UG Programme Study delivers the industry's appropriate skills. Although the Industrial partners are actively engaged with the Department's teaching activities via industrial placements (and other research and project collaborations), they do not have the means to provide feedback in a systematic way and report on the student employability skills, technical expertise, neither can offer recommendations to effectively facilitate the Department with inputs for reviewing their Modules and the Programme Study. The Panel understands that the undergraduate program does not receive any formal or informal advice from employers, local authorities and other external stakeholders on the quality of its graduates and learning outcomes.

II. Analysis

The Panel finds the design of the UGP in ECE is comparative to the other national and international/European universities. The UGP is also consistent with European standards thanks to the thorough application of the ECTS system. Although there is a well-established Erasmus+ program, the participation of incoming and transfer students still needs to be improved. The number of students taking advantage of Erasmus+ opportunities remains low, specifically those that visit the Department from other universities. Furthermore, there is a limited amount of information on how students of the UGP can use Erasmus+ to enhance their mobility opportunities. The incoming and outgoing Erasmus students are very good KPIs for quality of services and improving Mobility. It seems these are not recorded systematically, and no data are collected to understand the reasons for selecting the UoWM and ECE Department (as part of the Erasmus+ options). The institutional strategy articulated and applied in the Department's operations is clearly reflected in the Programme. Student and industrial partner interviews (during the assessment) indicated that there is no formal procedure for receiving feedback from graduates and social partners on the effectiveness and adequacy of skill

development of the Programme. This is an essential aspect of programme quality monitoring and continuous development.

III. Conclusions

The Department follows a defined written process involving information sources and the approval committees for the Programme. The procedures are in place to ensure the program adheres to the principles, recommendations, and regulations related to programme design, approval, and monitoring.

However, the Department should take steps to actively involve participants/stakeholders in the review and evaluation process (for example, by distributing questionnaires to them about changing market needs, key content, learning specific digital, technical and other "soft" skills, etc.). Discussions with representatives from non-academic, public and private businesses can be a valuable source for identifying areas of improvement in the UG Programme Study. EEAP believes that future curriculum revisions should include more formal and comprehensive consultation with stakeholders, outside (academic and Industrial) experts, students, and graduates. A well-defined advisory/consultation committee consisting of alumni and external stakeholders and acting formally with a well-structured process should be considered. Perhaps as a part of the career affairs days organized by the Department.

Panel Judgement

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

R3.1 Creating a task force to formulate a process (e.g., questionnaires, interviews, or other instruments) to periodically collect stakeholder recommendations and systematically review the instruments' effectiveness.

R3.2 Creating a working group that processes the recommendations produced by various stakeholders, information from Student MEQs responses, and Department research activities in a systematic approach that feed into the design and monitoring of the Programme quality.

R3.3 The Department is an active research environment; however, some strategically important KPIs should be better defined, and those already in existence should be rationalized in terms of how they have been defined (quantitatively and qualitatively).

Principle 4: Student-centred 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

I. Findings

The ECE Department is part of the Polytechnic School of the UoWM. The Department's scientific focus is on Electrical Engineering, Computer Engineering, Computer Science, Telecommunications and Energy.

Students are assigned Academic Advisors from the first semester throughout their entire Programme who provide support during their transition from secondary to higher education and the demands of their studies at the University and attend to the diversity of students and their needs. The Academic Advisor has a list of the email addresses of the students assigned to them and communicates with them on study matters or any other student issue.

Teaching is delivered through lectures, exercises and tutorial sessions, workshops, and study visits, enabling flexible learning paths and the possibility of synchronous face-to-face, remote and asynchronous teaching. The Integration of teaching technologies and tools, such as the University's Eclass[13] , Zoom, MS PowerPoint, Moodle, digital stylus and polls, enable flexibility and a variety of pedagogical methods used by the Department. There are provisions

[13] Eclass online tool: https://eclass.uowm.gr/

for oral examination for students with special learning difficulties and disabled students or professors.

The Department's existing partnerships with leading companies in the Information Technology and computer networking industry provide students with industrial placements, training programs and certification opportunities that are globally recognized, such as the Cisco Academy, the Amazon WEB Services and Huawei ICT Academy.

Student-centred learning is accommodated via projects tailored to students' interests and strengths and elective courses in the semesters towards the end (after the third Year) of the UG Programme when the students select different specialisation streams. Expected learning outcomes per Module and grading are announced by the instructor(s) at the first lecture of each Module and posted on the Department's official site. The module's description and the Program Study also state learning outcomes clearly.

A properly designed questionnaire (MEQ) collects students' feedback regarding the module's learning content, delivery modes and assessment method. All modules, at the end of each semester, are subject to an anonymous, written evaluation, which gives the Dean insight into the smooth running of the course(s). Instructors are then informed of students' evaluations and comments to improve the effectiveness of their teaching approaches. The MEQ allows students to provide comments spanning five different axes (student-centred teaching and learning, students and professors, subcontracted work, learning outcomes, evaluation and general comments or observations).

The Department offers 24 modules in English as part of the Erasmus program they offer to increase its extroversion, diversity and student mobility.

II. Analysis

The students have only compulsory courses in the first 6 semesters and available elective courses after the 6th semester of their studies. This is mainly achieved by allowing the students to select a scientific area among the three that UG Programme provides (Energy, Electronics & Computers, Telecommunications and Networks).

Within the three provided scientific areas, only Energy allows for flexibility in Module selections, while the other two do not offer additional Modules. This is an efficient way to deliver the UG Programme (i.e., fewer Modules to design and deliver) particularly when the number of registered students is low. However, it does not provide flexibility to the students.

The panel believes in adding elective courses earlier in the UG Programme Study and within the first 6 semesters to help students with their scientific specialisation transition more efficiently and effectively and improve UG Programme study flexibility.

The UG Programme Study requires the student to deliver project/coursework (theoretical and laboratory) reports without providing any training on academic writing, malpractice and research methods. An elective module in this respect can increase the Student learning experience.

The Department relocation to the new ZEP Campus, state of the art, buildings, laboratories and lecturing facilities are expected to support student learning experience and well-being at high standards. During the meeting with the students, they expressed their satisfaction with the curriculum, close collaboration, and mutual trust with the staff. The provision of an academic advisor per semester nurtures this environment.

Student participation in the UG Programme evaluation via MUQs is very low, and the Department needs to emphasise and incentivise students for greater participation. Specifically, in 2022/2021 924 student evaluations out of a total of 7859 student course registrations i.e., only 11.76 %. While this year 2022/2023 had a slight increase as 376 student evaluations out of 3083 student course registrations i.e., only 12.20 %.

III. Conclusions

The ECE UG Programme Study is designed to encourage students to actively create the learning process. This is mainly achieved via the MUQ and the provision of a regulation for dealing with students' complaints/appeals. However, it would have been nice to see student interactions with the UG Programme study associated with future recommendations/plans on teaching modes and assessment methods.

Panel Judgement

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

Panel Recommendations

R4.1 The Department must ensure that it regularly evaluates and adjusts the modes of delivery and application of pedagogical methods aimed at students' teamworking and self-learning activities.

R4.2 The Department should develop a scheme for providing opportunities for Continuing (or Career) Professional Development (CPD) training of their staff towards new learning and teaching in higher education practices and tutoring of Disability Accommodations and Support Services or Disability Advisor and Support Services/ (DASS) students.

R4.3 The Department should provide more details on handling the Appeals/complaints. The website does not provide timelines and when feedback will be provided to the student on this matter. It should also ensure that it allows for an online anonymous complaints form.

R4.4 The Department needs to effectively manage teaching loading since 28 full-time faculty members deliver 92 courses according to the curriculum and might be overloaded with teaching that limits their research quality.

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

I. Findings

Based on the information provided by the Department, a welcoming event for first-year students takes place each year on a date announced publicly by the Department Chair. Additionally, a reception protocol is in a permanent link on the department's website, giving basic information, student care information, study, housing, psychological counselling support, information on the e-class tool and, in general, every need of such a student. An academic

advisor is appointed to each student from early registration days, supporting first-year students in their transition from secondary to higher education, supporting their inclinations and skills and helping them find the theoretical direction in which they seem to be inclined. It is also positive the fact that UWM has special staff for acting as advisors to students with disabilities. The university has also managed to have a larger housing allowance, which is appropriately allocated to students, compared to other universities.

Student progress is recorded by the department's secretariat, in consultation with the Department's administration, using the central university information system from which they can extract indicators, data and statistical analysis results. Those results are open to the Department's staff and the IEG.

Student mobility is encouraged by the Erasmus Office of the UWM, through which all the exchange and mobility programmes are being managed. A dedicated web page also exists, giving a lot of information for every stage. Within the Department, students can be informed by a department responsible for the programme and from a meeting that takes place annually after a public announcement on the Departmental website. Students can, from the 2nd year of their studies at least and after they have passed concrete Module and language criteria, be informed and apply for their participation. At every stage, they can also be informed, by their academic advisor. The Department has established some bilateral agreements with cooperating universities abroad. During the meeting, professors and the university administration expressed particular interest in student mobility action.

The UGP Programme Study of the Department is based on the European system of transfer and accumulation of academic credits (ECTS), with 10 academic semesters for admission of the Diploma and 300 credits, according to ECTS. The diploma work is to be completed in the last (10th) semester and carries 30 ECTS.

Based on the information provided by Department, a Diploma Supplement is issued without request for all graduates in Greek and in English. This supplement contains detailed information about the qualification, the marks received, ECTS credits for the corresponding courses. An example of a diploma supplement was provided to the panel.

The Diploma work (thesis) is assigned 30 ECTS. The entire 10th semester of the program is dedicated to completing this thesis and the Thesis Regulations Handbook is available online at the Department's website. There is a special posting of available topics, with the possibility of a topic proposed by the interested student, on the department's website, while their presentation is made publicly at special seminars.

Practical training (Internships) has an additional value of 15 ECTS grades. The Department uses the official system ATLAS as a pool for companies asking for internships. The internship procedure is done with announcements on the website and in eclass, while the selection of students is made through the process of the largest evaluation in order to fill the available positions.

Internships are a valuable part of the program, in terms of developing job-specific or broader skills, according to the information provided both by students and employers. At the meeting with the companies and the alumni members having core positions in the industry, the panel ascertained the good relations that exist between the stakeholders and the department.

II. Analysis

On student progress recording, it is emphasized that the professors suggested to the Panel that they feel comfortable with this system as they can have any information that interests them and practically evaluate it themselves or propose some changes to the department assembly. This fact does not align with a valuable identification of the trends and actions that should help the department with its strategic plan.

It should be noted that in UGP, the first 38 courses of the first 6 semesters, are all compulsory without elective courses available.

On practical training (internships), there is a connection with the industry through personal acquaintances of some professors as well as graduates who have positions in large companies. At the same time, the university organizes career days in which students have the opportunity to get to know the companies up close. An advantage of this particular department is its presence in large PPC generation Units, where some students can do their internships. Unfortunately, it appears that records of the initial communication between members of the department staff and the industry as a potential host of internships are not recorded in a formal (structured) way.

On student mobility, the percentage of outgoing ERASMUS students in relation to the total number of active students is 1% for 2020-21 (COVID-related period) and 0,95 % for 2019-20, as stated in the related quality indicator reports. This figure is very low.

III. Conclusions

The student admission procedures and published regulations for the recognition and awarding of degrees are comprehensive and informative. As a general overview, the Panel considers the UG Programme Study complete and informative for the Department.

A documented procedure for monitoring student progression is lacking due to the absence of a mechanism for transforming data into useful information and quality indicators. There are no documented procedures for extracting indicators that can be used for targeted statistical analysis and data processing to facilitate the Department’s quality assurance practices.

Outgoing Student Erasmus+ participation is meagre. It would have been nice to see some initiatives from the Department to promote student mobility and perhaps identify the reason for this low participation.

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

R5.1 Establishing a formal (structured) periodic communication between the department and the companies that want to participate in the student internship and employment program.

R5.2 Department must take more initiatives to support student mobility more efficiently. Perhaps, by increasing publicity of related procedures, providing sponsorships, including a special section on the home page of the Department's website and regularly emailing information via newsletter to all students. Special attendance on academic units corresponding and the related ERASMUS and ECTS matching could be part of such an information campaign.

R5.3 A formal survey and an annual review of the mobility results could add value to the Department's strategic plans and quality assurance practices to promote student mobility.

R5.4 Establishing a structured and systematic analysis of the data collected for student progress and the data collected from student, faculty, and staff surveys to identify trends and take actions for improving the operation of the UGP.

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 specializations, 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 recognize the importance of teaching and research; offer opportunities and promote the professional development of the teaching staff; encourage scholarly activity to strengthen the link between education and research; encourage innovation in teaching methods and the use of new technologies; promote the increase of the volume and quality of the research output within the academic Unit; follow quality assurance processes for all staff members (with respect to attendance requirements, performance, self-assessment, training, etc.); develop policies to attract highly qualified academic staff.

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 recognized systems of scientific evaluation (e.g., Google Scholar, Scopus, etc.)*

Study Programme Compliance

I. Findings

The mechanism for the recruitment of the teaching staff is specified by the law and administered by the Department of Education upon the recommendations of the University. There is no evidence of the existence of a Department Master Plan used for the development of programs, courses, research directions and recruitment of personnel.

The professional qualifications of the teaching staff are commensurate with the subject matter covered by the degree programs offered by the Department.

The Department's research activities span the fields of electrical and computer engineering, with some faculty members very active and others less so. A number of research projects are collaborative with other institutions of higher learning within Greece and the EU under the Erasmus+ program. These projects involve several postgraduate researchers pursuing PhD degrees and very few undergraduates. The record of publications produced by the faculty members in conferences and refereed journals indicates moderate research engagement.

II. Analysis

The Department consists of 24 regular faculty (Assistant Professors, Associate Professors and Professors) and 4 Lecturers. From the data presented to the panel, the total student enrolment in the Department is 507, the number of incoming students for the current academic year is 55, a decrease from 160 for the Academic Years 2021-2022 and 2020-2021, respectively. The faculty-to-student ratio is small, considering the total number of Department members and the student numbers. It provides the opportunity to expand their research activities and outputs.

III. Conclusions

The academic staff is appropriately qualified to administer the undergraduate programs offered at the Department of Electrical and Computer Engineering.

Panel Judgement

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

Panel Recommendations

R6.1 Develop a Department Master Plan setting forth directions, goals (short, medium, and long-term) and strategies for achieving them. Particular emphasis needs to be placed on developing strategies for increasing the number of undergraduate student enrolment.

R6.2 Increase the engagement of the undergraduate student body in the research activities of the faculty.

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 organized 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

I. Findings

The ECE Department is part of the Faculty of Engineering of the UoWM and is located in the city of Kozani, where the administrative services of the UWM are also located.

The Department is housed in facilities at the eastern entrance of the city of Kozani and in the area of Koila. In the two buildings, there are the Secretariat of the Department, a main amphitheatre with 170 people capacity, 3 classrooms for 60 people, a 130 m^2 library with a reading room, faculty member offices, 2 computer laboratory rooms with 75 workstations and other fully equipped laboratories. The digital infrastructure is divided into two categories:

- The digital infrastructure is available to ECE members and the University.

– The digital infrastructure is available to members of the ECE, from other institutions, due to the interconnection and the existence of a single user directory (LDAP) certification academic identity.

ECE's digital infrastructure

- VPN (virtual private network) service, for obtaining the IP of the University (83.212.?) http://noc.uowm.gr/www/services/vpn/
- Service for sending very large files (up to 2 GB) http://share.uowm.gr/
- Service for sending encrypted messages http://cryptobin.noc.uowm.gr/
- Email account http://noc.uowm.gr/www/services/emailaccount/
- eClass Asynchronous Learning Platform http://noc.uowm.gr/www/services/eclass/
- Wireless access from the buildings of university buildings (eduroam & uowm-wifi) http://noc.uowm.gr/www/services/wifi/
- Access to a central UNIX server http://zafora.ece.uowm.gr
- Access to parallel computing array 96 processor cores with 200 GB of memory
- Personal area, with support for dynamic websites (mysql, php) and all basic protocols transport protocols (CIFS/HTTP/SCP/FTP) Instructions at http://zafora.ece.uowm.gr
- Network storage area system (Network Attached Storage), available from any computer from any computer in the Department or from a VPN Instructions at http://zafora.ece.uowm.gr
- Information System to support the official Departmental assessment https://modip.uowm.gr/
- Modern website of the Department with RSS support http://ece.uowm.gr
- Open Digital Courses (under development) for placement taped/recorded lectures http://opencourses.uowm.gr/
- Employment & Careers structure to connect students The Student Employment and Career Service (PES) is a service to connect students with the labour market http://dasta.uowm.gr/
- Electronic Grading (classweb) https://students.flo.uowm.gr/ & https://classweb.uowm.gr/

II. Analysis

The new modern teaching and learning facilities in the ECE department provide the appropriate equipment to promote and cultivate students' knowledge. The ECE Department's effective use of facilities supports student learning, facilitates project activities, and promotes continuous research.

The Department of Student Affairs of the UoWM provides administrative support to the ECE Programme Study (and the Department) and activities related to student welfare, legislation, the financial capacity provided by the state, and the management and operation decisions. The aim of the Department of Student Welfare (part of the UoWM and available to the ECE Department), through the Student Welfare Offices, is the coordination and implementation of the provision of quality services and proper information on issues related mainly to free food, housing, and social welfare issues such as the student housing allowance.

The ECE Department and UoWM provide their students with the opportunity to engage in a variety of sporting activities and events. The sports facilities include (but are not limited to) Indoor basketball and volleyball courts with modern parquet flooring, outdoor basketball courts, indoor ping-pong tables, and a gymnasium with fitness equipment.

At the time of the review, the Department's ECE UG Programme Study was delivered in two remote campus locations (Koila and ZEP). This temporary transitional situation of moving the University's facilities from Koila to the ZEP campus posed the burden of travel difficulties to the students. However, the Department has accommodated and arranged for the academic semester of the Energy major to attend all their required courses on specific days only at the Koila facility to avoid unnecessary two-way travel and conveniently minimise travelling times and burdens to the students.

III. Conclusions

The Department of Electrical and Computer Engineering (Integrated Master) of the University of Western Macedonia has adequate funding to meet the needs for the operation of the academic unit and the new study programme for the means to cover all their teaching and learning needs.

Panel Judgement

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

Panel Recommendations

R7.1 The “Energy” laboratories transfer should be completed promptly to support a student studying experience and increase their security.

R7.2 Department should ensure the efficient integration of the new infrastructure developments to UG Programme and provide continuing updates of their status to the students who can effectively utilise the new infrastructure and enhance their well-being and study experience.

R7.3 The provided services of the university (student halls, restaurant, sports/cultural facilities etc.) should be accessible to students from the official Department’s site.

Principle 8: Collection, Analysis and Use of Information for the Organisation 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 analyzing 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

I. Findings

There is no detailed description of the architecture and components of the information system used in collecting, processing, analysing, and evaluating the data necessary to manage the programs efficiently. There are no explicitly articulated and published procedures for collecting and analysing the data.

In the description of IEG, Chapter 16, the functions of IEG are described in detail. Nevertheless, no documented evidence (i.e., minutes with actions and decision-making) was presented to the EEAP, indicating the process is in place. Although the Department presented evidence that a process takes place and the Administration acts upon the results of the analysis.

No documentation was not presented to the EEAP concerning written procedures for the collection of data and analysis regarding the student body profile, teaching methods, student progression, employability, and career paths of graduates. Some of the functions, such as internships and employment opportunities, take place at the University level and are available to the students. In addition, the information provided in the accreditation report indicates that data evaluation takes place, and the Department continuously evaluates the need for resources and takes action to acquire them.

II. Analysis

The architecture and operation of the information management system are determined by a systematic analysis of a set of requirements, in this case, the requirements of the quality

assurance system. There is no evidence that, in this case, a systematic analysis of requirements preceded the realization of this particular information management system. A system based on ad-hoc approaches may satisfy the present needs but may not have the flexibility to respond to future requirements for changes.

III. Conclusions

Although an explicit description of the information management system supporting the programme could not be identified in the documentation, the quantity and quality of the information provided to the Panel leads to the conclusion that the information system utilised by the Department is adequate for efficiently managing the UGP programme. However, it lacks a year-to-year analysis of the student information regarding success and drop-out rates in the Module and Semester levels.

Panel Judgement

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

Panel Recommendations

R8.1 Develop a procedure that documents a set of performance requirements directly related to the management of the quality of the undergraduate program offered by the Department.

R8.2 Identify methods to increase the percentage of student response in MEQs.

R8.3 Formulate a Task Force to effectively utilize information from MEQs to meaningful KPIs that can assist the Department in understanding the progression, success and drop-out rates, student satisfaction with the UGP, availability of learning resources and student support.

R8.4 Establish a formal procedure for systematic engagement of stakeholders and forming an Advisory Board with its members comprising external industrial partners, local government authorities and alumni to ensure continuous programme innovation, effective use of the surrounding environment, and alignment with the market requirements.

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

I. Findings

The University website is available in both Greek and English. It is easily accessible and user-friendly.

The website contains all information relevant to the program, such as curriculum, courses, course outlines and schedule of classes. The policy for quality assurance is also available and easily accessible through the website. In addition, the website also provides information of practical importance, such as transportation and accommodations.

After the University of Western Macedonia merger with the Technological Institute of Western Macedonia, a new Teaching and Research Evaluation Information System was established. The website is inaccessible. There is a different website for information for the years preceding the merger.

The Greek version of the website has links to the quality policy and QAU under the heading "University". A similar link to QAU does not appear in the English version of the site. In addition, in the English version of the website, secondary links revert to the Greek version.

Regarding the Department's website efficiency, the Panel has observed that it contains all the necessary information one might need to know about the Institute. From accessibility information to even more specialized ones, e.g., the Module outlines and other practical ones a Student might need, e.g., the mode of attendance and the criteria for assessment the Module provides them. Furthermore, the existence of information about the Teaching Staff and the Institute's distinction in the academic and research sectors is worth mentioning.

II. Analysis

A website links the Department's activities to the outside world, whether that is potential students, graduates, or even potential new industrial partners. Therefore, it must include all the information needed to understand the Department's teaching capacity, research activities, and social engagement in an easily accessible and straightforward manner. The information on the website is provided in sufficient detail, making it useful to students and other interested visitors. However, the difference in the information between the English and Greek versions of the website is a recipe for potential confusion and misunderstanding among visitors, particularly those who do not speak Greek. Furthermore, some information is provided online in pdf documentation and on web pages text (like the UG Programme Study), resulting in confusing and seemingly inconsistent material.

III. Conclusion

The information available to the public pertaining to the program is mostly accurate and substantially complete. Nevertheless, EEAP identified some inconsistencies in the available online information of the ECE Department. No evidence of a formal Task Group that systematically reviews those is identified during the Assessment.

Panel Judgement

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

Panel Recommendations

R9.1 The Teaching and Research Evaluation Information System needs to become operational.

R9.2 Establishing a structured and formal process within the Department for monitoring the state of information provided within the Department's Webpages and ensuring the accuracy, completeness, resemblance, and consistency of the English and Greek versions.

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 analyzed 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

I. Findings

Based on the information provided by the department, the curriculum underwent a complete revision due to the 2014 external evaluation, with numbers and programmatic aspects not in agreement. The UoWM, after reviewing the UGP of corresponding University Departments in Greece and abroad, completely reformed the study program in 2009, as implemented today.

Two annual internal quality assessments of MODIP are published online on the Department's website concerning the periods of 2019 and 2021. Based on the information provided by the department to the EEAP, the results of the self-assessments are reviewed under an "email follow-up procedure" as well as person-to-person interactions.

Student feedback is obtained using an electronic MEQ, which is filled in by students anonymously. Students who met with the Panel expressed their satisfaction with the evaluation questionnaires, as they already have contributed to small and timely improvements. Professors and students also expressed their satisfaction with the present communication channels between students and academics and attributed it to the Department's small size, which favours interpersonal relationships.

II. Analysis

With respect to the 2019 reorganization of the UG Programme Study, no documentation was provided evidencing the decision-made process(es), neither mentioning the prior curriculum nor the board decision with the details and reasoning of this transformation. Concerning the internal quality assessment, there is no formal procedure for conducting this evaluation. The decisions are taken solely by the general assembly of the department.

There is a significantly small percentage (7%) of students participating in the evaluation process, as evidenced by the Quality Targeting Report of the Electrical and Computer Engineering UGP where the main objectives and their planning are presented.

III. Conclusions

Based on the information obtained during the online meetings of the panel with IEG, QAU and the academic staff, it is evident that a structured annual audit and internal review of the UGP of the department's new programmes is not documented. The teaching load, conducting research and activities related to the new facilities were implied as possible reasons for this deficiency. An explanation for such a deficiency was offered.

It is to be mentioned that complete IEG's meeting minutes, as a final part of the internal department UGP review, were not provided to the panel.

Panel Judgement

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

Panel Recommendations

R10.1 There is no information on any formal prerequisite structure in the study program. The panel strongly recommends that a formal prerequisite structure be established and enforced. This may have a positive effect on the average time of completion of the degree.

R10.2 Given the low completion rate of student MEQs, corrective measures need to be taken to increase participation. The department seems aware of the issue and is looking into ways to improve the completion rate.

R10.3 A more detailed questionnaire could offer a powerful instrument for the improvement of the quality of teaching. The Panel strongly recommends that suitable processes be put in place to use such questionnaires and to promote a culture of constantly improving the course materials (mostly the software within labs) and the delivery of classes. This will convey the message to the students that their opinion does matter, which will further improve the response rate of the questionnaires.

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 realized 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 utilization of the recommendations of the external Evaluation of the Institution and of the IQAS Accreditation Report.*

Study Programme Compliance

I. Findings

The UWM ECE program is in full compliance with the principle of regular external evaluations and is under the first official external evaluation by HAHE.

II. Analysis

The current program was founded in 2019 according to the information provided. The department also provided records of the Internal Quality Assurance System (IQAS) of the University of Western Macedonia report.

III. Conclusions

Any progress on the UGP should be evaluated in the next HAHE process. Any external evaluation based on an advisory board (external experts and stakeholders) appointed by the department should be considered an added value.

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

R11.1 The Panel had the opportunity to see evidence of a high-quality research environment, in terms of staff work and Ph.D. level, that could lead to international accreditation, apart from those dictated by the Greek educational system.

R11.2 It is recommended to multiply the courses offered in the English Language in order to attract international students.

R11.3 IEG to communicate regularly the importance of internal quality assurance practices to the Department's staff and the value of evidence supporting the continuous and systematic implementation of Quality Assurance and Accreditation (QAA) practices.

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

I. Findings

The EEAP was given access to all relevant documentation described above. The committee concurred that the UG Programme Study incorporates all necessary transitional provisions for students with TEI status, to facilitate their graduation according to Greek law while considering various educational restrictions. Specifically, students with TEI status admitted to the Department should be allowed to complete their graduation with the new university (AEI) status, provided that they complete all necessary coursework. The Department has in place a solid operational plan that provides (to the best of our understanding) support for TEI students in the new 5-year UG Programme. Also, the teaching faculty possess appropriate academic qualifications, adequately fulfilling the needs of the 5-year UGP; the Study Regulations are well documented.

The Department developed and implemented procedures for the transition from former TEIs to the Department to ensure compliance with the requirements of the Standards. The

Department ensured that the necessary learning resources are available, the adequacy of teaching staff, structured a curriculum and defined study regulations. Means are available for the collection and organization of data/information. The Department adequately planned the transition of TEI students into the new module.

II. Analysis

The Department meets the teaching requirements of the new 5-year program. With the provisions stated previously, the committee was satisfied with the department's transitional plan. The transition of students, Study programme, regulations, and procedures from the TEIs to the new UG Programme Study was implemented without significant difficulties. The Department's staff was able to foresee and propose/execute means for a smooth transition.

III. Conclusions

The embedding of the TEI programme study into the new ECE UPG is in progress, with substantial steps carried out both in the structure, human resources and transition/graduation process of students that were enrolled in the previous programs.

Panel Judgement

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

Panel Recommendations

R12.1 It is recommended that the Department continue to monitor the transition requirements/procedures to ensure that problems are addressed properly, the students complete their studies in the transition period, and the teaching staff make proper adjustments in the curriculum and relationship with the student body.

R12.2 The Department must utilize communication means available to inform the public and stakeholders of the transition proceedings.

PART C: CONCLUSIONS

I. Features of Good Practice

- The advisor/tutor scheme they offer and the close Student-Academic interactions.
- The use of information technology to deliver teaching, teaching support and student information, both in person and online.
- The Department's excellent infrastructure/facilities for supporting student teaching & learning activities and well-being.
- The level of Expertise and dedication of the Department's staff towards a student-centred learning Programme.
- The Department's received funding and high-quality research activities and outputs.
- The planning and delivery of career fair events to promote student employability.

II. Areas of Weakness

- Incomplete procedure for systematically processing Module Evaluation Questionnaires (MEQ) to meaningful qualitative and quantitative KPIs and recording Module Review actions and their effectiveness.
- Insufficient communication and dissemination of the MEQ results and actions to students.
- Insufficient and unsystematic process for recording industrial partner engagement/contributions/recommendations to Programme and Module Review.
- Lack of measurable Departmental KPIs on Strategic Planning and comparative analysis with competitive national and International Competitors.
- Lack of documented task force and activities to ensure Department's webpages and provided material is reviewed, it is updated and coherent between the Greek and English versions.

III. Recommendations for Follow-up Actions

- Review its current procedures detailing the Strategic Planning, Feasibility and Sustainability of the Academic Unit with SMART Objectives. Measurable KPIs should be used for reviewing their strategic planning.
- A detailed terms of reference for IEG should be documented, indicating the responsibilities and frequency of the meetings, minuting of the meetings (etc.).
- Develop a procedure for amending/updating a module based on information gathered from multiple sources (student feedback, industrial partners, updates on the curriculum, etc.). This should be well-documented and defined procedure. It should include the academic (involved with the Module delivery) recommendations/suggestions of specific

changes, required (hardware and software) infrastructure, how these reflect on addressing Student MEQ key findings, and how these integrate new research areas; followed by a departmental discussion about proposed changes, available resources and feedback from Industrial partners and local industry on learning outcomes.

- Develop a procedure to review the Programme of Study information provided on the website of the ECE Department that aims to ensure consistency and accuracy in the reported Module Summaries and accuracy of information provided on the website and to the students.
- Creating a working group that processes/analyses the information collected from the student MEQs, and documents any key findings and conclusions on attendance, dropouts and recommendations to increase student engagement with quality assurance practices.
- Creating a task force to formulate a process (e.g., questionnaires, interviews, or other instruments) to periodically collect stakeholder recommendations and systematically review their value and implementation effectiveness.
- Creating a working group that processes the recommendations produced by various stakeholders, information from Student MEQs responses, and Department research activities in a systematic approach that feed into the design and monitoring of the Programme quality.
- The Department must ensure that it regularly evaluates and adjusts the modes of delivery and application of pedagogical methods aimed at students' teamworking and self-learning activities.
- The Department should develop a scheme for providing opportunities for CPD training of their staff towards new learning and teaching in higher education practices and tutoring of DASS students.
- The Department should provide more details on handling the Appeals/complaints. The website does not provide timelines and when feedback will be provided to the student on this matter. It should also ensure that it allows for an online anonymous complaints form.
- Establishing a formal (structured) periodic communication between the department and the companies that want to participate in the student internship and employment program.
- Department must take more initiatives to support student mobility more efficiently. Perhaps, by increasing publicity of related procedures, providing sponsorships, including a special section on the home page of the Department's website and regularly emailing information via newsletter to all students. Special attendance on academic units corresponding and the related ERASMUS and ECTS matching could be part of such an information campaign.
- A formal survey and an annual review of the mobility results could add value to the Department's strategic plans and quality assurance practices to promote student mobility.

- Establishing a structured and systematic analysis of the data collected for student progress and the data collected from student, faculty, and staff surveys to identify trends and take actions for improving the operation of the UGP.
- Develop a Department Master Plan setting forth directions, goals (short, medium, and long-term) and strategies for achieving them. Particular emphasis needs to be placed on developing strategies for increasing the number of undergraduate student enrolment.
- Increase the engagement of the undergraduate student body in the research activities of the faculty.
- Develop a procedure that documents a set of performance requirements directly related to the management of the quality of the undergraduate program offered by the Department.
- Identify methods to increase the percentage of student response in MEQs.
- Establish a formal procedure for systematic engagement of stakeholders and forming an Advisory Board with its members comprising external industrial partners, local government authorities and alumni to ensure continuous programme innovation, effective use of the surrounding environment, and alignment with the market requirements.
- The Teaching and Research Evaluation Information System needs to become operational.
- Establishing a structured and formal process within the Department for monitoring the state of information provided within the Department's Webpages and ensuring the accuracy, completeness, resemblance, and consistency of the English and Greek versions.
- There is no information on any formal prerequisite structure in the study program. The panel strongly recommends that a formal prerequisite structure be established and enforced. This may have a positive effect on the average time of completion of the degree.
- Given the low completion rate of student MEQs, corrective measures need to be taken to increase participation. The department seems aware of the issue and is looking into ways to improve the completion rate.
- A more detailed questionnaire could offer a powerful instrument for the improvement of the quality of teaching. The Panel strongly recommends that suitable processes be put in place to use such questionnaires and to promote a culture of constantly improving the course materials (mostly the software within labs) and the delivery of classes. This will convey the message to the students that their opinion does matter, which will further improve the response rate of the questionnaires.
- The Panel had the opportunity to see evidence of a high-quality research environment, in terms of staff work and Ph.D. level, that could lead to international accreditation, apart from those dictated by the Greek educational system.
- It is recommended to multiply the courses offered in the English Language in order to attract international students.

- IEG to communicate regularly the importance of internal quality assurance practices to the Department's staff and the value of evidence supporting the continuous and systematic implementation of Quality Assurance and Accreditation (QAA) practices.
- It is recommended that the Department continue to monitor the transition requirements/procedures to ensure that problems are addressed properly, the students complete their studies in the transition period, and the teaching staff make proper adjustments in the curriculum and relationship with the student body.
- The Department must utilize communication means available to inform the public and stakeholders of the transition proceedings.

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **4, 5, 7, 11, and 12.**

The Principles where substantial compliance has been achieved are: **1, 2, 3, 6, 8, 9, and 10.**

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

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

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

The 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. Emeritus George Vachtsevanos (Chair)**
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