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HELLENIC REPUBLIC

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Accreditation Report
for the Postgraduate Study Programme of:

Electrochemical Systems Science and Technology

Department: Chemistry

Institution: Aristotle University of Thessaloniki

Date: 15/06/2026

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης
ΕΣΠΑ 2021-2027
Πρόγραμμα
Ανθρώπινο Δυναμικό και Κοινωνική Συνοχή
enqa.

Report of the Panel appointed by the HAHE to undertake the review of the Postgraduate Study Programme of **Electrochemical Systems Science and Technology** of the **Aristotle University of Thessaloniki** for the purposes of granting accreditation

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the postgraduate study programme of Electrochemical Systems Science and Technology of the **Aristotle University of Thessaloniki** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Law 4653/2020:

1. KANTZAS APOSTOLOS (Chair)
   (Title, Name, Surname)
   University of Calgary
   (Institution of origin)

2. ARGYROPOULOS DIMITRIOS
   (Title, Name, Surname)
   North Carolina State University (NCSU)
   (Institution of origin)

3. MELETIES PANAYIOTIS
   (Title, Name, Surname)
   The City University of New York (CUNY)
   (Institution of origin)

4. VAROTSIS CONSTANTINOS
   (Title, Name, Surname)
   Cyprus University of Technology
   (Institution of origin)

5. Νούρη Βενετία Δέσποινα
   (Title, Name, Surname)
   Democritus University of Thrace
   (Institution of origin)

II. Review Procedure and Documentation

Brief reference to the Panel preparation for the postgraduate study programme review, as well as to the documentation provided and considered by the Panel. Dates of the review, review, meetings held, and any additional information regarding the procedure, as appropriate.

The External Evaluation and Accreditation Panel (EEAP) conducted the accreditation review of the Postgraduate Study Programme (PSP) "Science and Technology of Electrochemical Systems" of the Aristotle University of Thessaloniki in accordance with the HAHE accreditation procedures and standards for quality assurance in higher education. The review process took place remotely between 25/05/2026 and 30/05/2026 through online meetings and examination of the supporting documentation submitted by the Institution.

The EEAP members were appointed by HAHE on 19/05/2026 for the accreditation review. Subsequently, on 22/05/2026, Mr. Velonas from HAHE provided the Panel members with all necessary information and documentation concerning the accreditation process at AUTH, including the private link for the EEAP debriefing meetings.

Prior to the online meetings, the EEAP reviewed the accreditation proposal and the supporting documentation uploaded by the Institution on the HAHE platform. The documentation reviewed by the EEAP included the following material:

M0. Table of Contents
M1. Proposal for Academic Accreditation of the Master's Program
M1.1. Quality Policy of the Master's Program
M1.2. Quality Objectives
M2.1. Senate Decision
M2.2. Internal Regulation for the Operation of the M.Sc. Program
M2.3. Study Guide
M2.4. Course Outline
M2.5. List of Academic Staff
M3.1. Student Evaluation
M3.2. Complaints Procedure
M3.3. Academic Advisory Board Regulations
M3.4. Teaching and Assessment Methods
M4.1. Research Ethics Regulations
M4.2. Study Regulation
M4.3. E-Learning Regulation
M4.4. Diploma and Supplement Templates
M5.1. Research Performance Report
M5.2. Selection of Academic Staff

M5.3. Teaching Staff Committee
M5.4. Staff Policy
M6.1. Staff and Services
M6.2. Teaching Quality Assessment
M6.3. Sustainability Studies
M6.4. Resource Adequacy Assessment
M6.5. Administrative Staff Directory
M6.6. Student Information Materials
M7.1. Organized National Quality Information System (ΟΠΕΣΠ) Data Reports
M7.2. Information System
M7.3. Data Collection Tools
M7.4. Information Analysis Reports
M8.1. Website Maintenance
M8.2. Website (link)
M9.1. Internal Evaluation Results

On Monday, 25/05/2026, from 16:00–17:00, the EEAP held a private preparatory meeting in order to discuss the accreditation proposal, allocate responsibilities among panel members, and identify key issues to be addressed during the online review meetings.

Subsequently, from 17:30–18:30, the EEAP met with the Director of the PSP, the Head of the School of Chemistry, representatives of MODIP and OMEA, and members of the Steering Committee. The meeting focused on the presentation of the PSP, including its history, academic profile, current status, strengths, and possible areas requiring further development. Discussions also addressed the degree of compliance of the Programme with the HAHE quality standards, as well as issues related to student assignments, Master's theses, examination procedures, and educational material. The School of Chemistry was represented by Mr. Theodoros Karapantsios, Professor and Head of the School of Chemistry, while the PSP was represented by Mr. Dimitrios Tsiplakides, Professor and Director of the PSP. OMEA was represented by Ms. Fani Mantzouridou, Professor and Chair of OMEA, by Mr. Nikolaos Maghioros, Professor and President of the QAU, who was represented by Prof. Papazachos, and Mrs. Alexandra Tzaneraki, MODIP Committee Secretary.

From 18:00–18:30, the EEAP participated in an online tour of the facilities related to the PSP, the school and AUTH (Links: PSP https://youtu.be/2-b1FMjLy0A School of Chemistry: https://chem.auth.gr/schoolvideo-gr/ AUTh: https://qa.auth.gr/media/auth.mp4)including classrooms, lecture halls, laboratories, libraries, and research infrastructure supporting the Programme. The virtual presentation was accompanied by discussions regarding the adequacy of the available learning resources and facilities for the successful implementation of the PSP.

On Tuesday, 26/05/2026, from 16:00–16:45, the EEAP met with members of the academic staff of the PSP in order to discuss issues related to professional development opportunities, mobility, competence and adequacy of the teaching staff, workload, student evaluation procedures, links between teaching and research, participation in applied research projects

and scientific activities directly related to the Programme, as well as possible areas for further improvement. The meeting was attended by Mr. Andronikos Balaskas, Assistant Professor, School of Chemistry, AUTh; Mrs. Stella Balomenou, Research Director, CERTH; Mr. Vasileios Binas, Assistant Professor, School of Chemistry, AUTh; Mr. Ioannis Kartsonakis, Professor; Mr. Spyros Kassavetis, Assistant Professor, School of Physics, AUTh; Mr. Panagiotis Patsalas, Professor, School of Physics, AUTh; Mr. Ioannis Poulios, Emeritus Professor, School of Chemistry, AUTh; Mr. Sotirios Sotiropoulos, Professor, School of Chemistry, AUTh; and Mr. Panagiotis Trogadas, Assistant Professor, School of Chemistry, AUTh, Mrs. Dimitra Sazou, Emeritus Professor, School of
Chemistry, AUTh.

From 17:00–17:45, the EEAP met with students of the PSP from different semesters (2 and 4 semester) of study. Discussions focused on student satisfaction with the Programme, learning experience, accessibility of facilities and institutional services, participation in quality assurance procedures, communication with academic staff, and issues related to student welfare and progression.

From 18:30–19:15, the EEAP met with graduates of the PSP in order to discuss their postgraduate study experience, research activities, employability, and their career path. The meeting was attended by Mrs. Chrysanthi Gkili, MSCA PhD student, University of Montpellier; Mr. Orestis Grammenos, PhD graduate, TU Berlin; Mr. Dimitrios Karatzas, PhD student, Forschungszentrum Jülich; Mrs. Anastasia Kassaraki, Analytical Chemist and Food Safety Coordinator, Domaine Costa Lazaridi; Mr. Stelios Kioulafas, Research Scientist, CERTH; Mrs. Eirini Maroussiadou, PhD student, University of Groningen; Mr. Georgios Papadimitriou, Quality Assurance Engineer, Hellenic Cables; Mrs. Dimitra Papamichail, MSCA PhD student, KU Leuven; Mr. Dimitrios Tsakiridis, Engineer, HELLENiQ Petroleum; and Mrs. Elpida Zeza, EU Proposal Writer and Project Manager, iED.

From 19:30–20:15, the EEAP met with employers and social partners associated with the PSP in order to discuss the relationship of the Programme with external stakeholders from the public and private sectors, labour market demands, employability prospects, and the relevance of the Programme to current scientific and technological developments in the field of Electrochemistry and energy technologies. The meeting was attended by Mr. Dimitris Argyropoulos, Senior Engineer, Sunlight Group; Mr. Thomas Chalkides, CTO, Metacon Group; Mrs. Nora Gourdoupi, Senior Vice President, Advent Technologies; Mr. Dimitrios Polydoros, Industrial Inspector, Swiss Approval TB; Mr. George Polymeros, Senior Project Manager, Innovation Projects, Eunice Energy Group; Mr. Antonios Vavouliotis, CEO of Adamant Composites and President and CEO of Pleione Energy SA; and Mr. Iakovos Yakoumis, Founder and CEO, Monolithos Catalysts and Recycling Ltd.

The EEAP held a private debriefing session in order to discuss the outcomes of the review process and prepare its preliminary observations. Subsequently, from 21:00–21:30, a closure meeting was held with the Director of the PSP, the Head of the School of Chemistry, representatives of MODIP, OMEA, and the Steering Committee. The meeting was attended by Mr. Theodoros Karapantsios, Professor and Head of the School of Chemistry; Mr. Dimitrios

Tsiplakides, Professor and Director of the PSP; Ms. Fani Mantzouridou, Professor and Chair of OMEA; Mr. Nikolaos Maghioros, Professor and President of the QAU was represented by Prof. C. Papazachos; and Mrs. Alexandra Tzaneraki, MODIP Committee Secretary. During the meeting, the EEAP discussed points requiring further clarification and provided an informal presentation of its main observations and preliminary findings regarding the accreditation review process.

Following the completion of the meetings, the EEAP held internal debriefing sessions and a closure meeting with the Director of the PSP, representatives of the School, MODIP, OMEA, and the Steering Committee, during which preliminary observations and points requiring further clarification were discussed. The remaining days of the review process were devoted to the drafting, revision, and finalization of the Accreditation Report, which was subsequently submitted to HAHE.

III. Postgraduate Study Programme Profile

Brief overview of the postgraduate study programme with reference to the following: history, academic remit, duration of studies, qualification awarded, employment opportunities, orientation challenges or any other key background information. Short description of the home Department and Institution, with reference to student population, campus or any other related facts.

The Postgraduate Study Programme (PSP) "Science and Technology of Electrochemical Systems" is offered by the Department of Chemistry of the School of Sciences at the Aristotle University of Thessaloniki (AUTh). The Programme was established in 2018 and first operated during the academic year 2018–2019. It operates in accordance with the national legislative framework governing postgraduate studies in Greece and aims to promote advanced knowledge, research, and technological development in the field of Electrochemistry.

The PSP offers high-quality postgraduate education in Electrochemistry and its technological applications, aiming to provide students with strong theoretical and practical training and to introduce them to scientific research through a broad range of disciplines related to the research interests and scientific activities of the academic staff participating in the Programme. The Programme builds upon the long-standing teaching and research tradition of the Department of Chemistry in the field of Electrochemistry and constitutes the only postgraduate programme in Greece dedicated specifically to this scientific area.

The aim of the Programme is to prepare highly skilled scientific personnel capable of contributing both to scientific research in electrochemical systems and to professional sectors of strategic importance for economic and technological development. The scientific field of Electrochemistry, which concerns the interconversion between chemical and electrical energy, is associated with numerous applications including chemical production, materials processing, environmental protection technologies, chemical analysis, and especially energy conversion and energy storage systems. Electrochemical techniques and processes are, in many cases, environmentally friendly ("green") and more efficient compared to conventional technological approaches.

The duration of studies for full-time attendance is three consecutive semesters corresponding to a total of 90 ECTS credits. During the first two semesters, students attend compulsory courses corresponding to 60 ECTS, while the third semester is devoted to the preparation of the Master's Thesis, corresponding to 30 ECTS. Upon successful completion of the Programme, graduates are awarded a Postgraduate Diploma (Master's Degree) in "Science and Technology of Electrochemical Systems".

The PSP admits graduates from Higher Education Institutions in Greece and abroad with relevant academic backgrounds, including Chemistry, Physics, Chemical Engineering, Materials Science, Environmental Engineering, and related scientific fields. The Programme maintains a relatively limited number of admitted students per year, supporting a student-centred educational environment and close interaction between students and academic

staff. The Programme is offered without tuition fees.

The PSP is organised in collaboration with the Chemical Process and Energy Resources Institute (CPERI/IDEP) of the Centre for Research and Technology Hellas (CERTH/EKETA) and the National Centre for Scientific Research “Demokritos” (NCSR “Demokritos”). The educational and research orientation of the Programme is strongly linked with laboratory-based research and modern technological applications in the field of Electrochemistry. The Programme is primarily supported by the Physical Chemistry Laboratory of the Department of Chemistry and is further strengthened through access to the research infrastructure, scientific expertise, and research activities of the collaborating institutions. Research activities conducted within the PSP are reflected in postgraduate theses and scientific publications in areas related to advanced electrochemical materials, renewable energy technologies, environmental electrochemistry, catalysis, and energy storage systems.

Graduates of the Programme may pursue careers in scientific research, higher education, chemical and energy industries, renewable energy technologies, battery and materials industries, environmental protection agencies, analytical laboratories, public administration, research institutes, public organisations, and specialised state chemical laboratories. A key challenge and opportunity for the Programme is to further enhance its visibility and attractiveness to graduates from related scientific and engineering disciplines, given the interdisciplinary and rapidly developing nature of Electrochemistry.

PART B: COMPLIANCE WITH THE PRINCIPLES

PRINCIPLE 1: QUALITY ASSURANCE POLICY AND QUALITY GOAL SETTING FOR THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT

INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY AS PART OF THEIR STRATEGIC MANAGEMENT. THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.

The quality assurance policy of the academic unit should be in line with the quality assurance policy of the Institution and must be formulated in the form of a public statement, which is implemented by all stakeholders. It focuses on the achievement of special goals related to the quality assurance of the study programmes offered by the academic unit.

Indicatively, the quality policy statement of the academic unit includes its commitment to implement a quality policy that will promote the academic profile and orientation of the postgraduate study programme (PSP), its purpose and field of study; it will realise the programme's goals and it will determine the means and ways for attaining them; it will implement appropriate quality procedures, aiming at the programme's improvement.

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

a) the suitability of the structure and organisation of postgraduate study programmes
b) the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education - level 7
c) the promotion of the quality and effectiveness of teaching at the PSP
d) the appropriateness of the qualifications of the teaching staff for the PSP
e) the drafting, implementation, and review of specific annual quality goals for the improvement of the PSP
f) the level of demand for the graduates' qualifications in the labour market
g) the quality of support services, such as the administrative services, the libraries and the student welfare office for the PSP
h) the efficient utilisation of the financial resources of the PSP that may be drawn from tuition fees
i) the conduct of an annual review and audit of the quality assurance system of the PSP through the cooperation of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU)

Documentation

- *Quality Assurance Policy of the PSP*
- *Quality goal setting of the PSP*

Study Programme Compliance

I. Findings

The Department of Chemistry at AUTH has established a formal Quality Policy for the Postgraduate Study Programme (PSP), harmonized with the university-wide quality policy approved by the University's Senate. The policy is appropriate for the PSP as it covers all critical areas of postgraduate education, including curriculum suitability, learning outcomes, teaching effectiveness, staff qualifications, support services, and resource management. It includes a clear commitment to implementation, stating that the Department and the PSP are dedicated to enhancing the academic profile and orientation of the programme. The policy also commits to continuous improvement and implementing a comprehensive set of quality procedures, as its ultimate goal, as well as to the efficient use of financial resources (including potential tuition fees, though this PSP does not charge any.

Continuous improvement is promoted through several documented mechanisms. First, the policy requires an annual internal evaluation; MODIP conducted such an evaluation on 29 December 2023, identifying strengths, weaknesses, and proposing corrective actions. Second, the PSP has established SMART quality goals that are actively monitored and updated. Third, the PSP collects student feedback through course and instructor evaluations, with results intended to inform curriculum and teaching improvements. Fourth, the PSP tracks key performance indicators (KPIs) such as graduation rates, student GPA, and publication outputs to measure progress toward its quality targets.

The policy is communicated to academic and administrative staff, students, and other stakeholders, and is published on the PSP's website. However, the 2023 internal evaluation report notes low student participation in evaluations, for example, only 3 out of 14 students participated in 2022–2023. This suggests that the full benefits of the quality system and the importance of stakeholder participation may not yet be fully understood or embraced by all parties involved.

The PSP has a dedicated "Quality Goal Setting" document in which the academic unit has set SMART goals addressing key areas including teaching methods, student satisfaction, learning outcomes, and research output. These goals are paired with suitable KPIs. They are monitored through the annual internal evaluation process conducted by MODIP, and the results are communicated back to the PSP for feedback and action, as evidenced by email correspondence between MODIP and the PSP Director. The goals are also published as part of the PSP's quality documentation and are intended to be updated as needed.

The learning outcomes of the PSP are appropriate for Level 7 according to the European and National Qualifications Framework for Higher Education. The PSP's Student Guide and Course Outlines explicitly state that the learning outcomes are designed according to Level 7. The expected outcomes include: in-depth understanding of fundamental principles of theoretical and applied electrochemistry (knowledge); familiarity with classical and modern electrochemical techniques (skills); ability to conduct independent research and write academic work (competence); and ability to produce new research ideas (competence). These outcomes align with the Dublin Descriptors for a Master's degree (Level 7), which require advanced knowledge, specialized skills, and the

ability to formulate and solve complex problems.

II. Analysis

The PSP under evaluation at AUTH has established a comprehensive, well-documented, and legally compliant Quality Assurance Policy and Quality Goal Setting framework, via the Department of Chemistry. The analysis below addresses each of the key questions posed by HAHE, in turn.

The PSP has clearly met the requirements. The Quality Policy is appropriate for the PSP, includes a commitment to implementation, a commitment to continuous improvement, and a commitment to the efficient use of financial resources (including potential tuition fees). The policy is aligned with the institutional quality policy of AUTH and is published as a public statement.

Continuous improvement is ensured through multiple integrated mechanisms. The annual internal evaluation by MODIP provides a formal, systematic review of the PSP's performance, identifying strengths and areas of weakness. The SMART quality goals coupled with Key Performance Indicators (KPIs) provide measurable targets for improvement. Student feedback, although currently with low participation rates, is intended to feed into curriculum and teaching revisions. The combination of these mechanisms creates a functional quality loop, though its effectiveness is partially limited by low student engagement in evaluations.

The PSP demonstrates an exemplary approach to quality goal setting. Each goal is paired with a suitable KPI. The monitoring process is documented through the annual internal evaluation, and the results are communicated back to the PSP, as evidenced by the email correspondence included in the documentation provided to the committee.

The PSP's learning outcomes are fully appropriate for Level 7. They go beyond undergraduate-level knowledge to require advanced understanding, specialized skills, and the ability to conduct independent research. The explicit alignment with the European and National Qualifications Framework in the Student Guide and Course Outlines demonstrates the PSP's commitment to international standards.

III. Conclusions

The PSP is Fully Compliant with the requirements of Principle 1. Overall, the PSP meets all the core requirements of Principle 1. The policy is in place, the goals are set, the mechanisms for monitoring and communication exist, and the learning outcomes are well aligned. The main area for improvement is not the existence of the framework but the full operationalization of one of its key components: achieving representative student participation in the evaluation feedback loop.

Panel Judgement

Principle 1: Quality assurance policy and quality goal setting for the postgraduate study programmes of the institution

and the academic unit	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

Based on the findings and analysis, the following recommendations are made:

R.1.1 Improve Student Participation in Evaluations: Implement targeted strategies to increase student participation in course and instructor evaluations from the current baseline of 10% to the target of 50% by 31 December 2025. Recommended strategies include:

o Enhance communication of benefits: Clearly explain to students how their feedback leads to tangible improvements in teaching, curriculum, and learning resources. Publish anonymized summaries of "actions taken" as a result of previous evaluations. Summarize how the policy benefits their educational experience and how they can contribute to its implementation. Link this summary prominently on the PSP's main webpage and the e-learning platform.

o Address anonymity concerns: Reassure students that the evaluation system is anonymous and that data is processed by the central MODIP unit, not directly by instructors. Consider using in-class data collection or sending evaluation links immediately before exams to improve response rates.

R.1.2 Strengthen the Role of the Academic Advisor: The quality goals include enhancing academic advising (increasing student consultation from 25% to 50%). Ensure that all students are assigned an Academic Advisor and that the role and availability of the Advisor are clearly communicated. Consider developing a formal procedure for students to assess their Academic Advisor, as recommended in the 2021 undergraduate accreditation report.

R.1.3 Continue the Annual Internal Evaluation Cycle: Maintain the annual rigorous internal evaluation process conducted by MODIP.

PRINCIPLE 2: DESIGN AND APPROVAL OF POSTGRADUATE STUDY PROGRAMMES

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

The academic units develop their postgraduate study programmes following a well-defined procedure. The academic profile and orientation of the programme, the research character, the scientific objectives, the specific subject areas, and specialisations are described at this stage.

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

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

In addition, the design of PSP must consider:

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

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

Documentation

- *Senate decision for the establishment of the PSP*
- *PSP curriculum structure: courses, course categories, ECTS awarded, expected learning outcomes according to the EQF, internship, mobility opportunities*
- *Labour market data regarding the employment of graduates, international experience in a relevant scientific field*
- *PSP Student Guide*
- *Course and thesis outlines*

- *Teaching staff (name list including of areas of specialisation, its relation to the courses taught, employment relationship, and teaching assignment in hours as well as other teaching commitments in hours)*

Study Programme Compliance

I. Findings

The PSP "Science and Technology of Electrochemical Systems" was established following a well-defined, documented, and legally compliant procedures.

The procedure involved the relevant approval committees (Department Assembly, Postgraduate Studies Committee, Senate). The Quality Assurance Unit (MODIP) of the Institution, in collaboration with the Department's Internal Evaluation Group (OMEA) and the PSP Director, is responsible for submitting the accreditation file to HAHE.

The PSP was designed taking into account several factors as enumerated below:

The PSP follows the Institution's strategy for competitiveness, extroversion, and internationalization of its postgraduate programmes. The design considered observations from students who participated in relevant undergraduate courses ("Electrochemical Reactions and Applications," "Electrochemical Energy Systems and Environmental Protection") and their desire for specialization in modern applications of electrochemistry in energy and the environment. The PSP was established to address the resurgence of technological interest in electrochemistry, particularly due to applications in alternative automotive (electric vehicles) and photovoltaic systems. The PSP is positioned as the only one of its kind in Greece.

The programme design explicitly incorporates a strong link between teaching and research, primarily through the Master's thesis (30 ECTS) and collaboration with research centres (EKETA, "Demokritos").

The establishment followed Law 4485/2017 (and is being adapted to Law 4957/2022).

The curriculum is based on international standards to offer both theoretical and practical knowledge. The programme builds upon the long teaching and research tradition of AUTH in electrochemistry (since the 1970s). The structure (60 ECTS of taught courses + 30 ECTS thesis) with a total of 90 ECTS is consistent with international norms for Master's programmes. The PSP has collaborations with research centres and active research programmes in cutting-edge areas (e.g., Solid Oxide Electrolysis Cells, CO2 hydrogenation, photocatalytic decontamination), aligning the curriculum with current international research trends.

The programme does not have specializations; all six taught courses are compulsory. The majority of the programme is rational, well-designed, and articulated.

There is a procedure for periodic revisions of the programme curriculum. The

curriculum is evaluated and revised periodically according to the recommendations of the Internal Evaluation Group (OMEA).
The curriculum revision procedure involves some stakeholder consultation, but there are limitations. The PSP receives feedback from students through course evaluations.
However, the 2021 undergraduate accreditation report noted that "beyond that, however, there is no formal input from other stakeholders, namely the social/community partners, industry or graduates." The report recommended that "interactions with alumni and other stakeholders could be exploited as a potential means of informing the decision-making process with regards to future educational directions." For the PSP specifically, the design phase did consider student observations, but a formal, ongoing mechanism for stakeholder consultation in curriculum revisions is not fully documented.
The PSP Student Guide is quite comprehensive, and it includes the learning objectives for each individual course and the competencies to be acquired by students on a per-course basis.
The PSP is designed to address the growing demand for specialized scientists in electrochemistry and related technologies, particularly in energy conversion and storage (batteries, fuel cells, supercapacitors), environmental protection (electrochemical wastewater treatment, photocatalysis), and chemical analysis (sensors). The PSP provides specialization in a rapidly developing field. The Study Programme Compliance section for Principle 2 in the undergraduate accreditation report noted that external stakeholders "indicated that the quality of the students is high, and they are easy to train and work with." Graduates have found employment in Greek industry, academia/research (doctoral studies), international industry, and international organizations.
The PSP does not have a compulsory internship. However, the Regulation allows for practical training in the context of relevant programmes in which AUTH participates, subject to the approval of the thesis supervisor and the Department Assembly.
The PSP “Electrochemical Systems Science and Technology" provides high scientific training in specific areas and enjoys high development and recognition regarding the specific academic profile and orientation of the program, the research character, the scientific objectives and the specific subject areas and specializations as described in detail in relevant documents provided for the accreditation.
The PSP staff members interact efficiently with well-selected and committed students. The program includes three semesters of teaching, experimental laboratory work, and Thesis work. On average, it takes two years to complete the degree. The PSP's success and relevant data were presented and discussed during the accreditation process, with input from current students, graduates, teaching staff, and stakeholders. This allowed for an assessment of the program's quality and identified areas that require further attention and improvement in terms of organization and operation of teaching and training facilities. There is no evidence that students, graduates, and external stakeholders suggest in curriculum changes

and improvements.

The curriculum, course syllabi, and contents have been developed according to the institution's relevant policies and agree with the ECTS guidelines. All the above are included in the Study Guide and in the Course Outlines. The program aims to continually enhance educational and research activities and uphold high-quality services in accordance with the HAHE guidelines

II. Analysis

The Department of Chemistry has followed a well-defined, documented, and legally compliant procedure for the design and approval of the PSP, fulfilling the core requirements of Principle 2.

The PSP was established following a clear, step-by-step process involving all necessary approval committees. The involvement of the Quality Assurance Unit (MODIP) in the accreditation process ensures verification of compliance with the Standards. The design appropriately took into account the institutional strategy, student observations, labour market needs, and the need to link teaching with research.

The curriculum is rational, clearly articulated, and structured as a compulsory 90 ECTS programme over three semesters. The fully compulsory structure ensures that all graduates receive a comprehensive education across all key areas of electrochemistry. The inclusion of electives and prerequisites was discussed during the deliberations of the panel as possible additions in order to enrich, diversify and offer flexibility to the curriculum.

A procedure for periodic revision exists through the work of the OMEA and the Coordinating Committee. While student feedback is collected through course evaluations, there is no formal, ongoing mechanism to include stakeholders in the curriculum revision process. This represents an area for improvement to ensure the curriculum remains aligned with evolving labour market needs.

The Student Guide is comprehensive, containing all required information about the programme structure, courses, regulations, and administrative procedures. It is an appropriate and useful document for students. However, it could be improved by making it more concise and easier to navigate, and by ensuring that individual course learning objectives are clearly stated within the Guide itself.

The learning outcomes are appropriately set at Level 7 of the EQF/NQF and are aligned with the Dublin Descriptors. The PSP addresses a clear labour market need in the rapidly growing field of electrochemistry, and early evidence suggests that graduates are finding employment in relevant sectors.

The anticipated student workload of 90 ECTS over three semesters (30 ECTS per semester) is appropriate for Level 7. The PSP has not received serious complaints about the workload from faculty or students.

The PSP resembles comparable programs in the EU. Its design is based on the needs of the national and international markets in the relevant fields and conforms to the prescriptions of Level 7 of the European and National Qualifications Framework for Higher Education. This potential involvement could have served as an asset for the PSP.

The PSP program of studies consists of several courses in each field of specialization, with no electives aimed at training students for research. A research-based Thesis on a specialized subject concludes the program. The program's success is evident from the number of graduates who are accepted as Ph.D. candidates in related fields.

The learning outcome is clearly presented but without exploring new directions in the field of “Electrochemical Systems Science and Technology". Some improvement should be included in the third semester (such as courses on research methodology and lab techniques).

III. Conclusions

The program complies with accepted standards and practices at other institutions in this area of study. The thematic areas offered by the program are adequate to prepare the students for the market. The stakeholders were very enthusiastic about the program's graduates and offered to participate in a feedback mechanism for its continuous improvement.

The PSP is Fully Compliant with the requirements of Principle 2. The Department of Chemistry has followed a well-defined, documented, and legally compliant procedure for the design and approval of the PSP. The curriculum is rational, clearly articulated, and appropriately structured as a 90 ECTS programme over three semesters. The expected learning outcomes are correctly aligned with Level 7 of the European and National Qualifications Framework. The Student Guide is comprehensive and contains all necessary information for prospective and current students.

The areas where the PSP meets the requirements are clear. However, the following points are noted for ongoing improvement:

1. Formal Stakeholder Input: While the initial design considered student input, a more formal and ongoing mechanism for involving alumni, industry partners, and other external stakeholders in curriculum revisions should be developed.
2. Student Guide Navigation: The Student Guide could be made more concise and easier to navigate.
3. Prerequisite Structure: Although the PSP's compulsory structure is clear, the Department should be mindful of the need for clear prerequisites in course sequencing, a point raised in the undergraduate review.

Panel Judgement

Principle 2: Design and approval of postgraduate study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	

Non-compliant	

Panel Recommendations

Based on the findings and analysis, the following recommendations are made:

R.2.1 Establish a formal mechanism for stakeholder consultation in curriculum revisions. The PSP should create a structured process to regularly seek input from alumni, industry partners, and other external stakeholders. In addition, it is recommended that the Greek industry is better represented within the composition of the newly created advisory board. Overall, such actions will ensure the curriculum remains responsive to evolving labour market needs.

R.2.2 Enhance the Student Guide for clarity and navigation. While the Guide is comprehensive, it is lengthy. Consider creating a shorter, more user-friendly version for quick reference, with clear links to more detailed sections. Ensure that individual course learning objectives are prominently featured within the Guide itself, not only in separate Course Outline documents.

R.2.3 Consider extending the practical internship opportunity. The 2021 undergraduate accreditation report noted that external stakeholders expressed a desire to extend the two-month practical internship to four months for a more meaningful experience. While the PSP does not have a compulsory internship, the Department should explore options to encourage students to undertake practical training and to facilitate longer placements, potentially with financial support from external stakeholders.

R.2.4 Organize career days and industry events. The 2021 undergraduate accreditation report recommended organizing additional one-day events (career days) to allow students to familiarize themselves with actual job opportunities (academics, industrial, secondary education, biotechnology, etc.). This would strengthen the link between the PSP and the labour market and help students understand their employment prospects.

R.2.5 The PSP should consider establishing a feedback mechanism involving students, graduates, and stakeholders to continuously improve the material taught in the PSP.

R.2.6 The 2021 undergraduate report mentioned that stakeholders wanted to extend the 2-month internship to 4 months for a better experience. The PSP doesn't have a compulsory internship, but the Department could encourage students to do practical training and help arrange longer placements (possibly with external industry funding).

R.2.7 Organize career days or industry events. Same 2021 report suggested one-day events to help students learn about real job opportunities (academic, industrial, biotech, education, etc.). This would strengthen the link between the PSP and the job market.

R.2.8 The curriculum should be aligned with labour market needs. Greek Industry needs to participate in internships.

PRINCIPLE 3: STUDENT-CENTRED LEARNING, TEACHING, AND ASSESSMENT

INSTITUTIONS SHOULD ENSURE THAT POSTGRADUATE STUDY PROGRAMMES PROVIDE THE NECESSARY CONDITIONS TO ENCOURAGE STUDENTS TO TAKE AN ACTIVE ROLE IN THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.

Student-centred learning and teaching plays an important role in enhancing students' motivation, their self-evaluation, and their active participation in the learning process. The above entail continuous consideration of the programme's delivery and the assessment of the related outcomes.

The student-centred learning and teaching process

- *respects and attends to the diversity of students and their needs by adopting flexible learning paths*
- *considers and uses different modes of delivery, where appropriate*
- *flexibly uses a variety of pedagogical methods*
- *regularly evaluates and adjusts the modes of delivery and pedagogical methods aiming at improvement*
- *regularly evaluates the quality and effectiveness of teaching, as documented especially through student surveys*
- *strengthens 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 the students' complaints*
- *provides counselling and guidance for the preparation of the thesis*

In addition

- *The academic staff are familiar with the existing examination system and methods and are supported in developing their own skills in this field.*
- *The assessment criteria and methods are published in advance. The assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary is linked to advice on the learning process.*
- *Student assessment is conducted by more than one examiner, where possible.*
- *Assessment is consistent, fairly applied to all students and conducted in accordance with the stated procedures.*
- *A formal procedure for student appeals is in place.*
- *The function of the academic advisor runs smoothly.*

Documentation

- *Sample of a fully completed questionnaire for the evaluation of the PSP by the students*
- *Regulations for dealing with students' complaints and appeals*
- *Regulation for the function of academic advisor*
- *Reference to the teaching modes and assessment methods*

Study Programme Compliance

I. Findings

The graduate (PSP MS) program in electrochemistry is an integrated program with student centered courses and hands on activities combining traditional courses enriched with seminars and online activities as needed with a capstone research experience. Through these courses students gain exposure to cutting edge theories and experimental methods and techniques guided by a dedicated and committed group of highly educated and qualified faculty and staff.

In support of student learning and to further the student experience and opportunities faculty and staff of the program (the department and the university) have developed and maintained active collaborations and partnerships with regional and international research centers and industrial entities as indicated by the successful placement of program graduates in PhD programs and industrial positions of employment.

It is evident that the intensive research exposure of final (third) term of the program is a tremendous advantage in preparing students for their professional and academic careers after graduation. Stakeholders expressed clearly their preference for the program graduates commending their excellent theorical background but also their hands on skills in understanding processes and procedures and operating instruments.

Students in the graduate program are required and have participated in scientific conferences (local, regional, international) to present their work. They also participate in the programming, organization and hosting of these conferences gaining valuable professional scientific experience beyond the formal classroom and laboratory work.
Graduate students in the program are assigned an advisor and research mentor. They joined a research group and work on their own research projects. By the time they complete the program they develop theoretical and experimental knowledge and skills to be able to conduct independent research and provide solutions to scientific problems. Graduate students and program graduates were very excited and commended favorably on their research experience, participation and faculty efforts to provide them with the opportunities.

The graduate program following department and university mandates and procedures instituted the anonymous faculty and instructional student evaluation (online). Unfortunately, student response is fluctuating and generally is very low. There are several explanations that were provided including the small number of students in the program and their formal and informal extensive contact with the program faculty and staff that in many cases negates the need for the formal feedback of student evaluation. However, the student evaluation indicates a high level of satisfaction (over 98%) for the courses and the teaching faculty.

Program students become aware through orientation (upon admission to the program) of their rights and procedures to exercise them. For example, the

manual describing the procedure and the form to launch a complaint are available in the student handbook and the program's web site. In the manual each step and the role of each individual participating in the process (faculty, department chair, student advisor, student advocate) is described clearly.

Each student upon admitted to the program is assigned to an academic advisor to have ongoing support and advice. The academic advisor schedules meetings and meets with students regularly (at last twice per term). The advisement sessions extend beyond the academic performance to the student's interests and professional and career aspirations.

As mandated by university policies student academic performance is evaluated by a faculty committee and by all participating course instructors ensuring fair assessment.

From the students and graduates participating in this committee meetings there was fairly equal representation of male and female students. That is a commendable achievement of the program and should be highlighted in the student profile.

The program website provides substantial information for students and faculty including the partnering organizations and student opportunities after program completion.

II. Analysis

The committee recognizes the commitment and dedication of the instructional faculty to provide a student centered diverse instructional modalities including formal classroom, online and hybrid methods. Department and program faculty and guest/visiting instructors from other departments and partnering organizations complement the faculty expertise in providing students with up to date knowledge and skills.

The mandatory research program component is student centered and provides the opportunity to each student to participate in a research group. Research mentors from program faculty and associate faculty guide the students in designing and conducting experiments and mastering techniques, data analysis and interpretation and operating instruments.

Students grow to become independent researchers. They become aware upon admission to the program through the student handbook and orientation session, of the program requirements, grading system, and evaluation procedures. They have an assigned academic advisor who supports and guide them through the program, in addition to the research mentor. The small ratio of program students and faculty enhances formal and informal communication and interaction among

them. There are also the formal communication avenues such as the student teaching and course evaluation and the student complaint procedure. The student teaching and course evaluations are administered by MODIP. The student complaint form and procedures are on the program's website.

During the discussions with faculty, current students and recent program graduates the mutual respect of student-teacher/mentor was clear. Student and recent graduates spoke with respect and admiration describing the faculty efforts to support and promote their education and after program placement. Faculty described above and beyond efforts to institute and support the program, and promote opportunities for their students through partnerships and collaborations. Despite having collaborations and participation with region, national and international research centers they are also actively focusing on the development of industrial partnerships to expand student opportunities.

III. Conclusions

The EEAP finds that PSP fully complies with Principle 3. All the program courses and activities aim to promote student learning, research and experimental/instrumentation skills. Faculty and other department and program officers are committed to constant improvement of the student education, experience and professional opportunities by actively establishing, maintaining and pursuing partnerships ad collaborations that promote their student interests.

The EEAP also encourages program faculty, the department and the university to continue integrating research and hands on activities, provide supplemental elective courses that can be useful to graduates in seeking employment or academic opportunities, and to pursue student industrial internships and research opportunities. The department and the program should also seek out opportunities, resources and partnerships to ensure the sustainability and financial survival of the program to honor the commitment to its students and support their academic progress and graduation.

Panel Judgement

Principle 3: Student-centred learning, teaching, and assessment	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R.3.1 Post on the website the student and each class profile. A description of each admitted class every year would help and support recruitment and applications.
R.3.2 Highlight on the website (and other areas) student and faculty accomplishments, awards earned, professional placements, conferences attended and others. That would also enhance student recruiting but would provide a pathway to current and future students towards professional careers and strengthen alumni relations.
R.3.3 Expand student opportunities beyond the formal program instructions. Find out from alumni and industry and academic placements of expected changing skills and requirements to improve student advisement and create an elective course recommendations and skills that would be helpful to students after graduation to start their professional careers.
R.3.4 Explore the possibility and potential of instituting a paid industrial internship (with industry partners) and joint research programs.
R.3.5 Ensure that the cost of research supplies and other program activities do not impact the progress and graduation of students.
R.3.6 Create an active advisory board with student representation that will provide substantial program and student support and alumni networking opportunities
R.3.7 Create and organize annual program events and conference highlighting students and faculty research achievements
R.3.8 Institute scholarships and awards for students and faculty to recognize their work and success

PRINCIPLE 4: STUDENT ADMISSION, PROGRESSION, RECOGNITION OF POSTGRADUATE STUDIES, AND CERTIFICATION.

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

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

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

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

Documentation

- *Internal regulation for the operation of the Postgraduate Study Programme*
- *Research Ethics Regulation*
- *Regulation of studies, internship, mobility, and student assignments*
- *Degree certificate template*

Study Programme Compliance

I. Findings

The PSP has established and publicly available regulations governing all phases of studies, including admission procedures, progression requirements, thesis preparation, recognition of studies, and certification. These procedures are clearly described in the Internal Regulation of the Programme and the Student Guide.

The admission process is based on transparent academic and qualitative criteria, including prior academic performance, relevance of undergraduate studies, research activity, language proficiency, and interview performance. The procedures and selection criteria are explicitly defined and publicly communicated.

During the meetings with students, the EEAP confirmed that students are well informed about study procedures and progression requirements. Students stated that the Student Guide and all relevant regulations are accessible through the PSP website and are used as reference tools throughout their studies.

The students expressed a strong sense of academic support and highlighted the direct communication and close interaction with faculty members, facilitated by

the relatively small cohort size. Students appeared to be adequately informed about thesis preparation procedures and requirements. They also reported that a dedicated seminar is organised after the second semester, providing guidance regarding thesis preparation and related procedures.

The Programme provides opportunities for student mobility, and students were aware of their availability. However, most students indicated that due to professional obligations and employment commitments they were not particularly interested in participating in mobility activities, although they felt they would receive institutional support if they chose to do so.

The Code of Research Ethics is formally in place through the institutional regulation of the Aristotle University of Thessaloniki. Nevertheless, during the interviews, students appeared less confident regarding where this document could be accessed and how it is practically integrated into their studies.

The Diploma Supplement is issued automatically in both Greek and English, in accordance with the applicable Greek legislation.

Practical training/internship is currently not included in the PSP curriculum. However, discussions with students, graduates, and social partners indicated that internship opportunities within the relevant industrial sector could further strengthen the professional orientation and employability dimension of the Programme.

II. Analysis

The EEAP concludes that the PSP has developed and implemented an adequate regulatory framework covering all major aspects of postgraduate studies, in accordance with the requirements of Principle 4. The procedures concerning admission, progression, thesis preparation, and certification are clearly documented and publicly available through the Programme regulations and Student Guide.

The Programme demonstrates a student-centred culture, reflected in the close communication between students and academic staff and the supportive learning environment reported during the interviews. The small number of enrolled students appears to facilitate personalised academic guidance and effective monitoring of student progression.

The information provided regarding thesis preparation and study procedures is generally sufficient and effectively communicated through seminars, regulations, and online documentation. The automatic issuance of the Diploma Supplement in Greek and English also reflects good administrative practice and compliance with national requirements.

At the same time, the EEAP identified certain areas where further enhancement would be beneficial. Although a formal Code of Research Ethics exists at institutional level, student awareness regarding its accessibility and practical application could be strengthened. In addition, while mobility opportunities are available, participation remains limited, mainly due to the professional profile of the students.

The ECTS system is applied across the PSP curriculum, with each course assigned

10 ECTS and with the corresponding total student workload indicated in the programme documentation. However, the EEAP noted some inconsistencies between the Student Guide and the course outlines. In particular, while the Student Guide refers to 3 teaching hours per week for several courses, the course outlines indicate 4 teaching hours per week, whereas the ECTS allocation and the total student workload remain unchanged at 10 ECTS and 250 student workload hours per course. Further alignment among the Programme documents would be beneficial in order to ensure full consistency regarding ECTS allocation and student workload distribution.

Finally, although practical training is not a mandatory component of the PSP, the EEAP considers that the development of structured internship opportunities with relevant industrial and professional stakeholders could further enrich the Programme and enhance the employability and practical exposure of students.

III. Conclusions

The PSP substantially complies with Principle 4. The Programme has established transparent and comprehensive regulations covering admission, progression, thesis preparation, recognition, and certification procedures. Students appear adequately informed and supported throughout their studies, while the Programme benefits from a positive and student-friendly academic environment.

The EEAP nevertheless encourages the PSP to further strengthen the visibility and communication of research ethics procedures and to explore the introduction of optional internship opportunities that would enhance the professional and applied dimension of the Programme.

Panel Judgement

Principle 4: Student admission, progression, recognition of postgraduate studies and certification	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

R.4.1 Strengthen the visibility and accessibility of the Code of Research Ethics and ensure that students are systematically informed about its content and practical application throughout their studies.

R.4.2 Continue supporting student mobility opportunities through Erasmus+ and explore additional ways to facilitate participation, taking into consideration the professional profile and employment obligations of many students.

R.4.3 Further align the Programme documentation, including the Student Guide and course outlines, in order to ensure full consistency regarding teaching hours, ECTS allocation, and student workload distribution.
R.4.4 Consider the development of optional internship or practical training opportunities in collaboration with relevant industrial and professional stakeholders, in order to further strengthen the applied and professional dimension of the PSP.

PRINCIPLE 5: TEACHING STAFF OF POSTGRADUATE STUDY PROGRAMMES

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

The Institution should attend to the adequacy of the teaching staff of the academic unit teaching at the PSP, the appropriate staff-student ratio, the appropriate staff categories, the appropriate subject areas, 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 for the PSP and offer them conditions of employment that recognise the importance of teaching and research; offer opportunities and promote the professional development of the teaching staff; encourage scholarly activity to strengthen the link between education and research; encourage innovation in teaching methods and the use of new technologies; promote the increase of the volume and quality of the research output within the academic unit; follow quality assurance processes for all staff (with respect to attendance requirements, performance, self-assessment, training, etc.); develop policies to attract highly qualified academic staff.

Documentation

- *Procedures and criteria for teaching staff recruitment*
- *Employment regulations or contracts, and obligations of the teaching staff*
- *Policy for staff support and development*
- *Individual performance of the teaching staff in scientific-research and teaching work, based on internationally recognised systems of scientific evaluation (e.g. Google Scholar, Scopus, etc.)*
- *List of teaching staff including subject areas, employment relationship, Institution of origin, Department of origin*

Study Programme Compliance

I. Findings

The PSP via the Department has established documented "Procedures and Criteria for the Selection of Teaching Staff". A set of merit-based criteria and procedures is in place, governed by national legislation (Law 4957/2022). The process is clear, transparent, and meritocratic, requiring evaluation of a candidate's total academic work, including teaching, research, and academic ethics. For new faculty, the recruitment process includes a public scientific lecture on a topic related to the position, held before the Electoral Body and the academic community, including students. The Department maintains a "Member Register" on the APELLA website as required by law. For the PSP specifically, teaching assignments are decided by the Department Assembly upon the recommendation of the PSP's Coordinating Committee (Article 8 of the PSP Regulation, ΦΕΚ 404/τ.

Β'/4-2-2021). Teaching staff can include faculty members (DEP), EDIP (Laboratory Teaching Staff), ETEP (Technical Staff), Emeritus Professors, and visiting scientists from Greece or abroad.
The Department has a published "Policy for Staff Support and Development". Professional development opportunities are available to teaching staff through various legally mandated mechanisms. Faculty members are entitled to different types of leave, including sabbatical leave (one year for every six years of continuous service) for scientific research in Greece or abroad, leave for employment in Chairs of Hellenic Studies at foreign universities (up to three academic years), and parallel employment at a foreign university (up to one academic semester per year). The Department also collaborates with the Centre for Teaching and Learning Support (KEDIMA) of AUTH, which organizes training cycles, seminars, and develops educational material to support faculty in new teaching methodologies, particularly through the use of new technologies and support for students with disabilities. Administrative and support staff have opportunities to attend training events and seminars organized by AUTH or external parties.
Teaching staff mobility is encouraged through the Department's support for participation in Erasmus+ staff training and teaching exchanges. The Department's "Policy for Staff Support and Development" explicitly mentions that the Institution's participation in international networks (EPICUR, Erasmus+, Utrecht Network, European University Foundation, and approximately 60 other international organizations) gives faculty the opportunity to travel abroad for research, teaching, and training, keeping them informed of international developments.
However, overall actualized mobility of both students and faculty was not adequately documented despite the various well-intended statements in the provided documentation. While mobility policies and targets exist, the relevant data shows actual participation is minimal—only one outgoing student in 2021 and no other student or faculty mobility documented between 2020 and 2024.
The list of teaching staff for the PSP shows the teaching hours assigned to each instructor in the PSP per semester, alongside their other teaching obligations. In general, the workload is reasonable although the number of students is very high. The overall workload is deemed appropriate for allowing engagement in research activities, though the high student numbers (over 250 first-year students in the undergraduate programme, (as noted in the 2021 accreditation report) present a persistent challenge. Such challenges are likely to affect the relevant issues for the PSP under accreditation.

The PSP demonstrates a link between teaching and research. The "Study Guide" and "Course Outlines" emphasize this connection, and the Master's thesis (30 ECTS) is a compulsory, research-oriented component. The PSP has strong collaborations with research centres, including the Institute of Chemical Processes and Energy Resources (IDEP) of EKETA and the National Centre for Scientific Research "Demokritos" (ΕΚΕΦΕ «Δ»). Between 2018-2023, ten (10) master's

theses were conducted at these collaborating research centres. Current research programmes of the teaching staff, in which master's students participate, include projects on electroplating methods for coins, optimization of seawater electrodialysis, photocatalytic inactivation of pollutants, development of hydrogen production processes from biogas, and scaling up CO2 hydrogenation for fuel production.

The excellent and highly productive collaborative relation(s) with both of the above two national research centers is apparently a tremendous asset for the PSP and needs to be promoted and publicized as an indispensable asset of the program.

The PSP has a system for student evaluation of courses and instructors. The provided documentation offered sample questionnaires and results for the academic years 2020-2021 and 2022-2023. The evaluation results are very positive, with quality indicators of 99.7 and 98.1, respectively. However, the 2023 internal evaluation report notes that student participation is low (e.g., 3 out of 14 students participated in 2022-2023). Students are often reluctant to participate, citing concerns about identification especially in view of the low number of students involved in certain classes. The evaluation system therefore exists and functions, but its effectiveness is limited by low response rates as already noted in other parts of this report.

The PSP does not have a separate, defined research strategy document. However, a defined research strategy focusing on specific scientific areas is evident through the "Quality Goal Setting" document, which includes strategic goals for research stating, "Excellence in the research performance of scientific staff."

While the specific quality goal is to increase the number of peer-reviewed scientific publications per faculty member, there is no specific process and/or relevant documentation dealing with “PSP strategic direction” aimed at increasing its international standing, competitive nature and innovative research activities.

A comprehensive summary of the scientific-research performance of the PSP's teaching staff, based on Scopus and Google Scholar data was provided to the panel. The average Scopus h-index of approximately 27 indicates that the PSP faculty have achieved a sustained level of international scholarly impact. This applies to: Core faculty from the Chemistry Department who teach in the PSP; Faculty from other AUTH departments (Physics) who teach in the PSP; Research staff from collaborating research centres ("Demokritos," EKETA) who teach in the PSP; Laboratory Teaching Staff (EDIP) who teach in the PSP.

The 2021 accreditation report noted a "low ratio of (# of female assistant professors) / (all assistant professors)" and recommended that the Department "be more sensitive to issues like gender diversity when looking at new hires." The current PSP teaching staff list shows that among the core faculty from the Department of Chemistry, female representation is limited. The 2021 report also noted the absence of formal mechanisms for rewarding excellence in teaching and service, recommending the establishment of awards such as "Teacher of the Year" and "Exemplary Service Award."

II. Analysis

The Department of Chemistry has established a formal and legally compliant framework for the recruitment, development, and evaluation of its teaching staff for the PSP. However, the analysis reveals a distinction between the existence of policies and the full effectiveness of their implementation.

The recruitment procedures are fully merit-based, transparent, and follow strict national legislation. The requirement for a public scientific lecture involving the academic community and students is a good practice that ensures openness and accountability. The PSP Regulation clearly defines who can teach in the programme, providing flexibility to bring in external experts from research centres.

The Department has a published policy for staff support and development, and legally mandated leaves (sabbaticals, etc.) are available. The collaboration with KEDIMA for pedagogical training is a positive initiative. The Institution actively participates in international networks that facilitate mobility. However, the 2021 accreditation report identified a lack of clarity on how professional development opportunities are systematically offered beyond what is legally required. This suggests that while opportunities exist, a proactive, structured strategy for staff development may be missing. Overall, while mobility procedures are in place and are intended overall mobility of students and faculty is rather limited.

The integration of research performance goals into the PSP's formal "Quality Goal Setting" document indicates that research excellence is a recognized strategic priority. However, the PSP lacks a dedicated, long-term research strategy document separate from the quality assurance framework. more explicit research strategy could provide stronger thematic direction to leverage this exceptional talent.

The low representation of women among the core teaching staff is a significant concern that the Department has acknowledged but has not yet substantially addressed. Furthermore, the absence of formal mechanisms to recognize and reward excellence in teaching and service represents a missed opportunity to incentivize high performance and improve staff morale.

III. Conclusions

The PSP is Substantially Compliant with the requirements of Principle 5. The Department has established the necessary policies, procedures, and legal frameworks for the recruitment, development, and evaluation of its teaching staff. The teaching staff themselves are highly qualified, with research profiles documented by adequate Scopus and Google Scholar metrics. Their research productivity demonstrates international-level competence in the field of electrochemistry.

The areas requiring improvement relate to the implementation and enhancement of these policies, as well as addressing specific weaknesses:

1. Proactive Staff Development: Moving beyond legally mandated leaves to a more structured, proactive strategy for professional development and mobility.
2. Strengthening the Teaching-Research Link: Integrating research examples

more consistently throughout the entire programme, not just in the final thesis, leveraging the faculty's strong research output. This will satisfy the expressed student's needs for more exposure to applications related knowledge.

3. Formalizing Research Strategy: Developing a clearer, long-term research strategy for the PSP to complement the existing quality goals and provide stronger, more focused and competitive thematic direction.

4. Gender Diversity and Recognition of Excellence: Implementing policies to improve gender balance in junior faculty hires and establishing formal awards to recognize excellence in teaching and service.

Panel Judgement

Principle 5: Teaching staff of postgraduate study programmes	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

Based on the findings and analysis, the following recommendations are made:

R.5.1 Strengthen the link between teaching and research throughout the programme. Faculty should make a conscious effort to incorporate recent, exciting examples from their own research activities into lectures, even in the first semesters. Given the research output documented, there is a wealth of material available. Master's students should be actively encouraged to participate in research labs from early semesters.

R.5.2 Establish formal mechanisms to reward excellence in both teaching and service. Adopt a peer evaluation process or a student-nominated "Teacher of the Year" award, with no faculty involvement in the nomination process to ensure objectivity. Similarly, create an "Exemplary Service Award" for administrative and technical staff who perform outstanding service.

R.5.3 Adopt a proactive recruitment strategy looking outside the Department. Actively recruit outstanding talent from national and international sources. Without compromising meritocracy, be more sensitive to gender diversity when considering new hires. Given that the percentage of female students in the Department is significant, encourage the best female undergraduate and graduate students to pursue academic careers.

R.5.4 Develop a clearer, documented research strategy for the PSP. While the quality goals address publication outputs, a broader research strategy outlining priority thematic areas (e.g., battery technologies, green hydrogen, CO2 conversion, photocatalytic environmental remediation), targeted funding schemes (e.g., Horizon Europe), and international collaboration goals would provide stronger strategic direction for the PSP's research activities.

R.5.5 Strongly encourage mobility for scientific personnel. Continue to promote Erasmus+ and other mobility schemes. Participation in sabbaticals and Erasmus+ projects should be actively encouraged by the PSP and the Department.

PRINCIPLE 6: LEARNING RESOURCES AND STUDENT SUPPORT

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

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

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

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

Documentation

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

Study Programme Compliance

I. Findings

The academic unit provides the PSP with adequate teaching and research infrastructure, including lecture rooms, specialised laboratories, scientific equipment, IT infrastructure, digital services, and access to library resources and databases. The Programme also benefits from access to facilities and equipment provided through collaborations with external research centres, particularly CERTH (EKETA) and NCSR “Demokritos”.

A broad range of student support services is available through the University and the Department, including counselling and psychological support, accessibility services, career services, mobility support, digital services, sports facilities, library

services, housing and welfare support.

Students confirmed during the meetings with the EEAP that they are informed about the available support services at the beginning of their studies and that relevant information is accessible through the PSP website and the Department's online platforms. Students also stated that communication and support throughout the Programme are very effective.

Administrative support is mainly provided through the Secretariat of the Department of Chemistry and the Coordinating Committee of the PSP. The administrative procedures appear to function effectively, and students expressed satisfaction with the level of administrative support and communication provided throughout their studies.

No tuition utilisation plan is applicable, as the PSP is offered without tuition fees in accordance with the institutional framework governing the Programme. Students stated that they had no significant concerns regarding the coverage of laboratory supplies and research-related consumables required for the implementation of the educational and research activities. The EEAP notes, however, that isolated delays in the availability of certain materials were reported; nevertheless, these did not appear to substantially affect the operation of the Programme and were not considered specific to this PSP.

II. Analysis

The EEAP considers that the PSP is supported by adequate educational, laboratory, technological, and administrative resources that are aligned with its scientific orientation and learning objectives. The availability of specialised electrochemical and analytical equipment, combined with access to external research infrastructures through collaborations with research centres, provides a supportive environment for teaching and research activities.

The support services available to students are extensive and cover both academic and welfare-related needs. The documentation submitted, together with the discussions held during the site visit, indicate that students are aware of the available services and are able to access them effectively through institutional structures and digital platforms. The PSP website provides direct access to essential academic and student support information, including digital services, student benefits, complaint mechanisms, the Internal Regulation, the Student Guide, and the e-Study Guide. This contributes positively to the accessibility and transparency of information available to students.

The EEAP notes that the primary laboratory infrastructure supporting the PSP is provided through the Physical Chemistry Laboratory of the Department of Chemistry, which appears adequately equipped for the educational and research needs of the Programme. Students also expressed particularly positive views regarding the research infrastructure and support services available through the collaboration with CERTH (EKETA), which further enhances the research environment of the PSP.

During the meetings, some students expressed the wish for broader accessibility

to facilities and resources available within the Department of Physics. The EEAP considers that further strengthening interdepartmental accessibility and collaboration, where feasible, could further enrich the educational and research experience offered by the Programme.

The administrative support mechanisms appear to operate satisfactorily for the current size and needs of the Programme. Students particularly highlighted the effectiveness of communication with both academic and administrative staff.

As the Programme does not charge tuition fees, no tuition utilisation plan is required. The EEAP notes that students generally expressed satisfaction regarding the availability of the resources necessary for laboratory and research work, although limited delays in the provision of certain materials were mentioned during the discussions.

III. Conclusions

The PSP demonstrates full compliance with Principle 6. The available learning resources, infrastructure, student support services, and administrative support mechanisms adequately support the implementation of the Programme and the achievement of its educational and research objectives.

The collaborations with external research institutions further strengthen the educational and research environment of the PSP, while students expressed satisfaction with the communication and support provided throughout their studies. The EEAP nevertheless encourages the Programme to continue promoting and further communicating the full range of available student support services and institutional resources in order to maximise their effective utilisation by students.

Panel Judgement

Principle 6: Learning resources and student support	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R.6.1 Continue promoting the full range of available student support services and institutional resources to students throughout their studies, not only at the beginning of the Programme.

R.6.2 Continue monitoring the timely availability of laboratory consumables and research-related materials, in order to support the smooth implementation of experimental activities.
R.6.3 Explore, where feasible, broader access to relevant interdepartmental facilities and equipment, including resources available within the Department of Physics.
R.6.4 Continue strengthening the collaboration with CERTH (EKETA), as this contributes positively to the educational and research environment of the PSP in terms of laboratory equipment

PRINCIPLE 7: INFORMATION MANAGEMENT

INSTITUTIONS BEAR FULL RESPONISBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF POSTGRADUATE STUDY PROGRAMMES AND RELATED ACTIVITIES, IN AN INTEGRATED, EFFECTIVE AND EASLILY ACCESSIBLE WAY.

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

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

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

- *key performance indicators*
- *student population profile*
- *student progression, success, and drop-out rates*
- *student satisfaction with their programmes*
- *availability of learning resources and student support*

A number of methods may be used to collect information. It is important that students and staff are involved in providing and analysing information and planning follow-up activities.

Documentation

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

Study Programme Compliance

I. Findings

The graduate program in electrochemistry has the support of the department of chemistry and the university. It is using the system wide instruments to collect, store and evaluate information. It is guided by the Quality System Management (MODIP). In these systems there are course scheduling and electronic systems to deposit and archive scientific research and reports (IKEE, APQ). Additional electronic support is provided for e-learning, online instruction, and website design.

Virtual tour of the program facilities indicated modern instructional and research spaces including an impressive array of instrumentation. There is also technical and administrative support provided by the extended department and university

services such as access to student support and services, student with disabilities services etc.

Information collected is made available to program, department, and university committees to evaluate, assess and improve the program as needed.

MODIP creates and makes available to interested and authorized stakeholders detailed reports encompassing student performance, course and faculty evaluations, and related aspects. Program and department (OMEA) and university committees and personnel are using these reports to gain feedback, evaluate and improve the instructional and research components of the program.

II. Analysis

The department of chemistry and PSP program faculty have authorized access and use of university instruments that enable them to manage student admission, monitor student academic progress and advisement, maintain student records, course and faculty evaluation, manage course scheduling and offer course in person, online and in hybrid mode. Data and information from these systems are submitted to the appropriate program and department administrative committees (OMEA, formal department meetings, curriculum committee) for consideration pertaining to program changes. They are used in support of proposals to modify courses and other program activities. The information gathered from these systems contributes to the annual program assessment to improve instructional and research methods and the student experience.

III. Conclusions

The committee finds that the PSP program is fully compliant with requirement seven. However, there is room for improvement. In addition to the formal annual program assessment, a term-by-term assessment may be also useful in providing timely information on the effectiveness of instructional methods. Also, analysis of the profile of the applicant pool and the admitted students after each cycle would provide timely information to modify and focus the criteria for new applications and admissions. When permitted by university policies and regulations statistics describing the student profiles, graduates' placement, partnerships, faculty and student awards and activities should be posted on the program's website.

Panel Judgement

Principle 7: Information management	
Fully compliant	**X**
Substantially compliant	
Partially compliant	

Non-compliant	

Panel Recommendations

R7.1 Highlight and post student profiles on the website and in the report to show the student demographics, academic profile, background and other available information as allowed by university and policies and procedures.
R7.2 Create a dedicated student and alumni portal on the website, updated regularly with their achievements, awards, related events and providing networking opportunities and continuity
R7.3 Highlight the very strong faculty and student interactions, advisement, mentorship research to show the program success.
R7.4 Use the available data for more frequent, targeted and timely analysis to improve recruitment, enhance instructional, research methods and improve student experience

PRINCIPLE 8: PUBLIC INFORMATION CONCERNING THE POSTGRADUATE STUDY PROGRAMMES

INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES RELATED TO THE POSTGRADUATE STUDY PROGRAMMES IN A DIRECT AND READILY ACCESSIBLE WAY. THE RELEVANT INFORMATION SHOULD BE UP-TO-DATE, OBJECTIVE AND CLEAR.

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 PSP they offer, the intended learning outcomes, the degrees awarded, the teaching, learning and assessment procedures applied, the pass rates, and the learning opportunities available to their students. Information is also provided on the employment perspectives of PSP graduates.

Documentation

- *Dedicated segment on the website of the department for the promotion of the PSP*
- *Bilingual version of the PSP website with complete, clear and objective information*
- *Provision for website maintenance and updating*

Study Programme Compliance

I. Findings

The public awareness or the marketing for the PSP was identified by the internal evaluators as the only weakness of the program (see Principle 9). Since then, there is a website in both English and Greek. The committee visited the website and looked at the material shown.

II. Analysis

There is considerable material presented in the website. However, there are also several inconsistencies. In the school website the PSP in Greek as a higher number of supporting material than the English version. The reason is unclear.

The "News" header is not updated in the English version since 2022, while the Greek appears to be current. The content of the "Contact" header is not the same (please look under "Latest Articles").

These are all minor issues and it is unclear whether it is an omission or there is a mandate for different content.

III. Conclusions

The website is up and running and there is an English version and a Greek version. These are inconsistencies between the two versions but they are minor.

Panel Judgement

Principle 8: Public information concerning the postgraduate study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R.8.1 Please establish a procedure with fixed dates for the updating of the website and a template for consistent presentation of the material.
R.8.2 Please add content that celebrates successes within the student population, the graduates, and the collaborating industries.

PRINCIPLE 9: ON-GOING MONITORING AND PERIODIC INTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES

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

The regular monitoring, review, and revision of postgraduate 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:

a) the content of the programme in the light of the latest research in the given discipline, thus ensuring that the PSP is up to date
b) the changing needs of society
c) the students' workload, progression and completion of the postgraduate studies
d) the effectiveness of the procedures for the assessment of students
e) the students' expectations, needs and satisfaction in relation to the programme
f) the learning environment, support services, and their fitness for purpose for the PSP in question

Postgraduate study programmes are reviewed and revised regularly involving students and other stakeholders. The information collected is analysed and the programme is adapted to ensure that it is up-to-date.

Documentation

- *Procedure for the re-evaluation, redefinition and updating of the PSP curriculum*
- *Procedure for mitigating weaknesses and upgrading the structure of the PSP and the learning process*
- *Feedback processes concerning the strategy and quality goal setting of the PSP and relevant decision-making processes (students, external stakeholders)*
- *Results of the annual internal evaluation of the PSP by the Quality Assurance Unit (QAU), and the relevant minutes*

Study Programme Compliance

I. Findings

Extensive documentation on the internal review of the PSP is provided via the report issued by the Department of Chemistry dated 12.29.2023.

The committee found that the program complied with all the objectives but one evaluation criterion. The number of good practices was listed as follows:

The Department of Chemistry of the Aristotle University of Thessaloniki has prepared a Quality Policy for its PSP Programs, which is harmonized with the Quality Policy of the Aristotle University of Thessaloniki. The Quality Policy promotes the academic character and orientation of the Postgraduate Program, promotes its purpose and scope, as well as records those quality procedures that have as their ultimate goal its continuous improvement. The PSP has Quality

Goals, according to the model of the HAHE. The PSP made sure to explore and study the needs of the labor market and society, while taking into account the developments and recent trends in the international scientific scene.

The MSc contacted and took into account the opinions of collaborating institutions, students and graduates in its design. The design of the program takes into account the strategy of the Institution and was carried out in the context of a coordinated process, determining academic physiognomy, orientation, research character, scientific goals, etc. The Curriculum has been organized according to the latest trends in the scientific field and covers a wide range of knowledge, there is no overlap with the courses of the Undergraduate Program, and the learning outcomes of the PSP Program were designed according to level 7 of the Educational Program. The PSP is oriented towards deepening knowledge, on the one hand it will give students multiple and important stimuli and on the other hand it will equip them with skills and capabilities, which in turn will enhance their employment prospects.

The PSP focuses on the implementation of student-centered learning and teaching, regularly evaluating the quality and effectiveness of the teaching work (analyzing the students' questionnaires for its evaluation). The PSP has recorded the teaching and evaluation methods of students, having published in advance the criteria and the method of their evaluation. In addition, it ensures adequate guidance and support to students, especially through the institution of the Academic Advisor and implements a formal procedure for the management of any student complaints.

The PSP has ensured that all the necessary regulations are available and published, which regulate all issues from the beginning to the end of studies, indicatively selection procedures, stages of study, other progress monitoring, terms of preparation of assignments and in general the rights and obligations of students. The website of the MSc enhances public information, providing useful and necessary information about its activity to future and current students, graduates and other stakeholders.

The Teaching Staff has the appropriate qualifications, which are continuously cultivated through appropriate actions and policies. Academic activity is based on adequate resources and means. There are an appropriate student-faculty ratio, appropriate staff categories and knowledge of the appropriate subjects. The MSc offers students the best possible level of study and enhances student-centered learning, taking into account the needs of all students. In this context, an important role is played by the support and administrative staff, and the support services they offer to all students.

The Aristotle University of Thessaloniki has installed and operates the necessary information systems in order to manage and monitor the data of students, teaching staff, the structure and organization of courses, teaching and the provision of services to students. The data is analyzed, fed into the internal quality assurance system and used for the objective of continuous improvement of the MSc.

Regular monitoring, scheduled annual internal evaluations and control of the PSP,

with the operating information systems, contribute to the achievement of the objectives, ensure the maintenance of the supportive and effective learning environment and the continuous improvement of the Program.

The only identified weakness was related to the PSP website which is now addressed.
A list of recommendations and possible corrective actions included.
1. In the context of the continuous improvement of the PSP, it is proposed to place special emphasis on the monitoring of the implementation of the objectives, in order to ensure the improvement and development of the quality policy. For the implementation of the above, the active participation of external bodies, as well as students and graduates, through specific feedback mechanisms, plays a special role.
2. Compliance with the regulations and systematic compliance with the prescribed procedures is also an important pillar of continuous improvement. The PSP should ensure that all obligations arising from the relevant regulations are fully implemented (indicatively, the Academic Advisor's Regulation, the Complaint and Objection Management Mechanism's Operating Regulation, etc.) and be able to provide sufficient documentation for this purpose (internal evaluation framework).
3. The website of the PSP must be updated at regular intervals, in order to publicize and provide all the necessary information (objectively and clearly), both to students (current and future), as well as to graduates and interested bodies. It is noted that public information must be provided on the professional employment of the graduates of the PSP Program.
4. In the context of preventive actions, the PSP is recommended to take special care of the teaching staff, providing optimal employment conditions, opportunities for their professional development and encouraging academic activity and the quality of research work. It is noted that relevant opportunities for capacity building should be offered to support and administrative staff, whose role is particularly important in terms of student support services. Clear and transparent procedures must be followed to achieve the above. Throughout the duration of the PSP Program, the adequacy of resources, infrastructure and services for student learning and support should be ensured (on a planned and long-term basis).
5. The PSP should also emphasize the collection and analysis of data, which will allow it to ensure the level of quality of educational services and to maintain a supportive and effective learning environment for students. It is emphasized that the examination of the PSP Program (as well as any revision) must be carried out with the participation of students and other interested parties. Regular monitoring and in particular the annual internal evaluation are important tools in the process of re-evaluation, readjustment and updating of the PSP to the new elements. The assessment includes different parameters, indicatively:
- Objectives, content and structure of the curriculum and the knowledge offered
- Changing needs of society

- Workload assessment
- Meeting student expectations and needs
- Learning environment and support services
- Graduate Professional Development

etc., the monitoring of which allows on the one hand to maintain a supportive and effective environment and on the other hand to achieve the continuous improvement of the Program.

Finally, the MODIP, completing the audit of the file and the documentation, proposes the following corrective actions:

- Update, as soon as possible, the Greek and English website of the MSc
- Enhancing student mobility
- Strengthening the institution of the academic advisor.
- Completion of the Progress Report of the PSP

II. Analysis

The committee assessed that the internal evaluation was fair and concurs with the positive practices. With respect to the PSP websites please refer to Principle 8. With respect to the recommendations on everything except for the website (that is discussed in Principle 8) the PSP is responding in a satisfactory manner. The committee found that the students and graduates were impressive and that the private sector stakeholders are very supportive of the program and wish to contribute to its growth. This despite the fact that the assessment of some faculty assessed the quality of incoming students as not the best. A number of success stories outlined by both students and industrial stakeholders are not highlighted in the material provided by the Department or PSP. This reduces the visibility and the significance of the PSP unnecessarily.

The committee feels that there is an opportunity for the PSP to align and grow with a growing industry and to become a cornerstone of the Graduate Program of the Department and the AUTH. A lot of good work was done.

III. Conclusions

The PSP is advancing well and it has potential for growth and increased significance in the postgraduate canvas of the educational environment.

There is opportunity in increasing the visibility and value of the program with the private sector.

Panel Judgement

Principle 9: On-going monitoring and periodic internal evaluation of postgraduate study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R.9.1 Please take advantage of the opportunities for collaboration with the private sector.
R.9.2 Please promote and advertise more success stories.

PRINCIPLE 10: REGULAR EXTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES

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

HAHE is responsible for administrating the PSP accreditation process which is realised as an external evaluation procedure, and implemented by panels of independent experts. HAHE grants accreditation of programmes, based on the Reports delivered by the panels of external experts, with a specific term of validity, following to which, revision is required. The quality accreditation of the PSP acts as a means for the determination of the degree of compliance of the programme to 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.

Documentation

- *Progress report of the PSP in question, on the results from the utilisation of possible recommendations included in the External Evaluation Report of the Institution, and in the IQAS Accreditation Report, with relation to the postgraduate study programmes*

Study Programme Compliance

I. Findings

The PSP “Electrochemical Systems Science and Technology" has not previously been subjected to an external evaluation for accreditation purposes. Under the provisions of Law 4485/2017, the programme should have been evaluated and accredited by an External Evaluation and Accreditation Committee appointed through the relevant institutional procedures. However, this process was not completed prior to the implementation of Law 4957/2022, which introduced the current accreditation framework. As a result, the present accreditation constitutes the first formal external evaluation of the PSP and is being conducted by the current EEAP appointed by HAHE. Furthermore, the results indicate prompt utilization of recommendations as exemplified and discussed in various other sections of this report.

II. Analysis

The current evaluation is the PSP’s first external accreditation review. The EEAP found that the PSP faculty and supporting staff were very helpful in answering the panel’s questions during the current review. Moreover, they showed that they understand the importance of the accreditation process and the panel’s recommendations. The PSP follows a commonly used procedure for utilizing the outcomes of the external evaluation. These outcomes are shared with the PSP Steering Committee, the OMEA, the Head of the Department of Chemistry, and the MODIP. The PSP has stated that it will take into consideration all relevant recommendations and is willing to proceed with the implementation of recommendations that will be received upon the completion of the accreditation process by the HAHE.

III. Conclusions

The Panel is confident that the PSP coordinators the OMEA and MODIP of the Department of Chemistry will comply with Panel recommendations and fulfil the targets set for the improvement of the programme. The PSP has implemented several changes from the previous program Physical Chemistry of Materials. The EEAP found that the PSP is in full compliance with Principle 10.

Panel Judgement

Principle 10: Regular external evaluation of postgraduate study programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

None

PART C: CONCLUSIONS

I. Features of Good Practice

- There is an overall exemplary compliance of the PSP as far as legal requirements are concerned
- Overall, the committee feels that the program is competitive adhering to international standards and practices
- Based on student feedback, the interaction between faculty and students is outstanding
- Infrastructure, laboratories, learning resources and support systems are adequate for the PSP
- There are adequate qualified faculty and personnel, with room to grow
- Functional procedures for student admission, progression, thesis supervision, mobility, and degree completion.
- Clear programme regulations for students

Details are provided under each Principle

II. Areas of Weakness

- Student evaluation participation is an endemic weakness which needs to be improved
- Effort should be directed towards faculty and student mobility should be cultivated and promoted
- Mechanisms for technology related thesis is a more industrial direction should be considered. Options include industrial scholarships/internships
- Practical laboratory training and hands-on experience should be further expanded

Details are provided under each Principle

III. Recommendations for Follow-up Actions

- We recommend that the PSP should capitalize on its novelty and success of its graduates by further advertise and promote on its webpage for growth without compromising the quality of the program
- We encourage further engagement with the industry which is willing to support the program
- Improve visibility of alumni outcomes and external collaborations.
- Enrich participation of the Greek Industry within the advisory board

Details are provided under each Principle

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are:

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

The Principles where substantial compliance has been achieved are:

The Principles where substantial compliance has been achieved are: 4, 5

The Principles where partial compliance has been achieved are:

None

The Principles where failure of compliance was identified are:

None

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

The members of the External Evaluation & Accreditation Panel

Name and Surname	Signature
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