



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
HELLENIC REPUBLIC



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Accreditation Report for the New Postgraduate Study Programme of:

Modern Exploitation of Marble and Natural Stones

Department: Mineral Resources Engineering

Institution: University of Western Macedonia

Date: 17/07/2025



Με τη συγχρηματοδότηση
της Ευρωπαϊκής Ένωσης



Πρόγραμμα
Ανθρώπινο Δυναμικό και
Κοινωνική Συνοχή



Report of the Panel appointed by the HAHE to undertake the review of
the New Postgraduate Study Programme of Modern Exploitation of
Marble and Natural Stones of the University of Western Macedonia for
the purposes of granting accreditation.

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the new postgraduate study programme of Modern Exploitation of Marble and Natural Stones of the University of Western Macedonia comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

- 1. KATOPODES NIKOLAOS (Chair)**
(Title, Name, Surname)
University of Michigan
(Institution of origin)
- 2. ALVANIDES (ΑΛΒΑΝΙΔΗΣ) SERAPHIM (ΣΕΡΑΦΕΙΜ)**
(Title, Name, Surname)
Otto-Friedrich-Universität Bamberg
(Institution of origin)
- 3. CONSTANTINOU STAVROS**
(Title, Name, Surname)
Department of Geography, College of Arts and Sciences, The Ohio State University
(Institution of origin)
- 4. KOUTSOS VASILEIOS**
(Title, Name, Surname)
University of Edinburgh
(Institution of origin)
- 5. Ζυγούρη Ευαγγελία**
(Title, Name, Surname)
National and Kapodistrian University of Athens
(Institution of origin)

II. Review Procedure and Documentation

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

In preparation for the review and assessment of the PSP Modern Exploitation of Marble and Natural Stones of the University of Western Macedonia (UoWM), the External Evaluation & Accreditation Panel (EEAP) reviewed a multitude of materials provided by the Hellenic Authority of Higher Education (HAHE). These included background information and guidance on the review and accreditation process, as well as detailed data related to the Programme under evaluation, such as the accreditation proposal and its associated appendices.

The Programme review was conducted via teleconference, which was organized and coordinated by HAHE and the University of Western Macedonia. The schedule and agenda of the review were as follows:

1. Monday, 07/07/2025:

Preliminary private teleconference meeting of the EEAP. Discussion of the Programme under review and assignment of responsibilities.

2. Tuesday, 08/07/2025:

a. Meeting with the Vice-Rector/President of MODIP, and the Head of the Department/Director of the PSP.

Welcome teleconference meeting and overview of the PSP with the Vice-Rector/President of MODIP, Prof. Nikolaos Sariannidis, and the Head of the Department of Mineral Resources Engineering and Director of the PSP, Prof. Ioannis Kapageridis. The meeting included a general introduction of UoWM, the Department of Mineral Resources Engineering, and the new postgraduate Programme. Emphasis was placed on the academic profile, status, strengths, and possible areas of concern. The meeting included a discussion of the degree of compliance of the Programme with the Standards for Quality Accreditation.

b. Meeting with the teaching staff members of the PSP, which included the following:

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- Anna Karatzetzou, Assistant Professor, MRE, UoWM
- Annanias Tsirampidis, Emeritus Professor, Department of Geology, Aristotle University of Thessaloniki
- Argyro Asvesta, Associate Professor, MRE, UoWM
- Christos Roumpos, Public Power Corporation SA
- Dimitrios Marinakis, Assistant Professor, MRE, UoWM
- Francis Pavloudakis, Assistant Professor, MRE, UoWM
- Konstantinos Vatalis, MRE, UoWM

The discussion focused on the professional development opportunities, mobility, competence, and adequacy of the teaching staff to ensure learning outcomes, workload, and evaluation by students; link between teaching and research; teaching staff involvement in applied research, funded projects, and research activities directly related to the Programme, and possible areas of weakness.

c. Meeting and discussion of facilities and learning resources with teaching faculty and support staff, including the following:

- Kyros Koios, ETEP, MRE, UoWM
- Francis Pavloudakis, Assistant Professor, MRE, UoWM
- Mr. Zisis Stogiannis, IT Representative
- Mrs Maria Lappa, Library Representative
- Mrs. Georgiadou Konstantina, Career Office Representative
- Mr. Dimitris Tarnanidis, Representative of Accessibility Centre for Students of Vulnerable Social Groups

d. Meeting with employers and social partners, including the following:

- Antonios Koronaios, Professor, Department of Geology, Aristotle University of Thessaloniki
- Charalambos Albanopoulos, Director of Quarries, Iktinos Hellas SA
- Christos Roumpos, Public Power Corporation SA
- Emmanouil Steiakakis, School of Mineral Resources Engineering, Technical University of Crete
- Konstantinos Laskaridis, Director of Mineral Resources & Mining, Hellenic Survey of Geology and Mineral Exploration
- Konstantinos Vythoulkas, Head of Quarry Development, GEOHELLAS SA
- Maria Menegaki, Professor, School of Mining and Metallurgical Engineering

e. Private debriefing meeting (EEAP members only).

f. Closure meeting. Informal oral presentation of the EEAP key findings and clarifications to:

- Mr. Sariannidis Nikolaos, Vice Rector of Academic Affairs/President of MODIP
- Ioannis Kapageridis, Associate Professor, Head of the Department of Mineral Resources Engineering (MRE) and Director of the PSP, University of Western Macedonia (UoWM)
- Mrs Kafetzi Argiro, Administrative staff of MODIP

3. Wednesday, 09/07/2025 to Saturday 12/07/2025:

Draft report writing. EEAP virtual meetings. Review and finalization of draft report.

Throughout the review and evaluation process, the EEAP communicated with the Department and the PSP administration, which were very helpful in providing answers to questions posed by the EEAP. The EEAP found that the Department administration and the faculty, staff, and stakeholders interviewed were courteous, cooperative in our discussions, and eager to provide additional information.

III. Postgraduate Study Programme Profile

Brief overview of the new 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) Modern Exploitation of Marble and Natural Stones is organized by the Department of Mineral Resources Engineering of the University of Western Macedonia (UoWM). The PSP will operate for the first time in the academic year 2025-2026, following approval by the University Senate (205/13-03-2024).

The objectives of the PSP are the multidisciplinary training and specialization of scientists and engineers in the Modern Exploitation of Marble and Natural Stones, aiming to promote a natural resource of great importance to Greece. Specifically, the study programme involves the characterization and estimation of marble deposits, the design and monitoring of mines, the technology of natural stone exploitation and associated economic and legal problems, and environmental issues related to mining natural stones.

The new PSP is ideally located near several marble mines, which offer numerous opportunities for tours, collaborations, student internships, and data for research projects. Furthermore, the new PSP is the only PSP in Greece addressing the exploitation of marble and natural stones. Five (5) members of the faculty of the Department of Mineral Resources Engineering will provide teaching in the PSP. In addition, four (4) external instructors will contribute to the educational process of the PSP. The language of instruction will be Greek, and all lectures will be delivered remotely using several synchronous and asynchronous platforms. Students will have access to the most advanced software for mine design and modelling.

The Programme has set the maximum number of admitted students per academic year to 40. The EEAP did not interview current students or recent graduates because this is a new Programme. The PSP requires a minimum of three (3) academic semesters of study. To graduate, a student must have completed 90 European Credit Transfer System (ECTS) credits (60 ECTS for coursework and 30 ECTS for preparing and completing a postgraduate thesis). The EEAP found that the courses offered cover most topics of interest in the area of specialization of the PSP.

The Department of Mineral Resources Engineering does not offer any other postgraduate program. The Department also maintains a growing programme in doctoral and postdoctoral studies. The Department of Mineral Resources Engineering maintains an External Advisory Board (EAB) whose members are the Who's Who in Mineral Engineering. The EAB has played a major role in the design of the new PSP.

PART B: COMPLIANCE WITH THE PRINCIPLES

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

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

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

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

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

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

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

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

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

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

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

Documentation

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

Study Programme Compliance

I. Findings

The new Postgraduate Study Programme (PSP) in the Modern Exploitation of Marble and Natural Stones at the University of Western Macedonia reflects the University's strategic direction toward developing specialized postgraduate study programmes that address specific scientific, regional, and national priorities. The new PSP reflects this strategic direction by broadly targeting an economic and industrial-relevant sector in the region and Greece.

The new PSP is characterized by its innovative approach, incorporating cutting-edge topics such as circular economy, environmental sustainability, and advanced processing technologies. The curriculum is designed to be dynamic, with mechanisms for regular revision based on research developments and industry feedback. Integrating research into teaching is a core feature, ensuring that students are exposed to the latest advancements in the field.

The Programme's design has been well thought out and includes documented feasibility and sustainability studies, demonstrating the demand for marble and natural stone graduates.

The academic unit responsible for the Programme applies a robust and clearly defined Quality Assurance (QA) Policy, fully aligned with the University's Internal Quality Assurance Unit (MODIP) and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015). This policy includes commitments to continuous improvement, transparency, and active stakeholder involvement, particularly from external partners in the marble and natural stone industries. The QA policy is publicly available and operationalized across academic and administrative levels, ensuring shared ownership and accountability among faculty, staff, and external collaborators.

The Programme has been developed in collaboration with professional bodies, regional industry representatives, and development agencies. A dedicated advisory committee, comprising external stakeholders, provides input on curriculum design, emerging industry trends, and graduate competencies. This approach ensures that the Programme remains relevant, practical, and aligned with labour market needs.

The new PSP targets graduates from engineering and geoscience fields, professionals already working in the marble and natural stone industry, and individuals from related disciplines seeking specialization. It is open to candidates aiming to enhance their expertise in sustainable extraction, processing technologies, and sector-specific innovation.

The review panel greatly appreciated the clarity and quality of the documentation provided. All submitted materials were well-written, well-organized, and easy to navigate. The presentations delivered during the review process were highly informative and effectively supported by a variety of visual aids, including graphs, maps, and tables, which enhanced the understanding of the Programme's structure and objectives. Furthermore, the department demonstrated excellent coordination and professionalism by supplying all required documents promptly, ensuring the EEA Panel had sufficient time for thorough preparation and evaluation.

II. Analysis

The new Postgraduate Study Programme (PSP) in the Modern Exploitation of Marble and Natural Stones at the University of Western Macedonia reflects a strategically sound, academically innovative, robust initiative. The documentation shows that the PSP aligns with the University's strategic goals and broader educational and economic priorities.

The feasibility and sustainability studies are thorough, including detailed analyses of market conditions, graduate employability, and financial viability. Including tuition-based funding models and stakeholder partnerships further enhances the

Programme's sustainability.

Moreover, the Programme's interdisciplinary nature and appeal to a broad target group—including engineers, geologists, industry professionals, and international candidates—enhance its academic and professional impact. The strong link between learning and applied research, particularly in sustainable extraction and circular economy practices, further strengthens the Programme's contribution to innovation and knowledge transfer.

The alignment of the Programme's intended learning outcomes with Level 7 of the European and National Qualifications Frameworks ensures that graduates will achieve advanced academic and professional competencies. Furthermore, the academic unit's commitment to quality assurance—through structured reviews, alignment with qualification frameworks, and collaboration with the Quality Assurance Unit (QAU)—ensures that the Programme remains responsive to academic standards and evolving industry demands, thereby improving and fostering stakeholder confidence.

III. Conclusions

The new Postgraduate Study Programme (PSP) in Modern Exploitation of Marble and Natural Stones of the University of Western Macedonia meets all the requirements of Principle 1 regarding strategic management, quality assurance policy, and quality goal setting.

The Programme is strategically aligned, academically sound, and structurally robust. It is underpinned by comprehensive feasibility studies and a clearly defined quality assurance framework. Its outcomes align with Level 7 of the European and National Qualifications Frameworks, ensuring academic rigor and labour market relevance.

Panel Judgement

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

Panel Recommendations

R1.1. Consider integrating sustainability metrics into programme evaluation to reinforce its environmental focus.

Principle 2: Design and Approval of New Postgraduate Study Programmes

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

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

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

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

In addition, the design of PSP must consider:

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

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

Documentation

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

Study Programme Compliance

I. Findings

The Department of Mineral Resources Engineering of the University of Western Macedonia was established by Law 4610/2019 (Government Gazette 70/A/07.05.2019) and accepted students in the academic year 2019-2020. The new PSP has been designed to give its students a deep understanding of modern techniques and practices governing the marble and natural decorative stone exploitation industry. From geology and mining to processing and the latest trends in the global markets, the Programme offers an excellent opportunity for those seeking to further their professional knowledge in marble and natural stone exploitation.

The Programme combines the fields of geology, mining engineering, environmental sciences, and economics to cover the whole process of marble and natural stones from surface and underground exploitation. Topics range from geological exploration to mining techniques, geotechnical aspects, environmental issues, such as mine rehabilitation and environmental licensing, and economics. It is worth noting that the term “marble” utilised in the Programme is the commercial term used to describe all decorative stones and also their derivatives and secondary products, such as aggregates.

The teaching staff comes mainly from the Department of Mineral Resources and Engineering (5 members). There are also visiting members from the Hellenic Survey of Geology & Mineral Exploration (HSGME), Public Power Corporation (PPC), the Department of Geology of the University of Patras, and the School of Mining and Metallurgical Engineering of the National Technical University of Athens.

The design of the PSP is in line with the institutional strategy. It considers both the opinion of prospective students (an extensive poll was conducted via social media and other channels) and the experience of external stakeholders from the

labour market and the academic community. For the design and future assessment of the curriculum, an 11-member external advisory board has been established, which meets at least twice a year. The curriculum has been designed to meet the profile, the goals, the breadth and depth of the subject area, and the expected learning outcomes. All aspects are in line with international standards in science and technology.

The Student Guide is well articulated, concise and complete, and contains the Course Outlines. All courses are compulsory. Field trips to various marble exploitation regions and mining companies are also included. No Erasmus+ mobility or internship opportunities are planned for the students during their studies at the PSP.

The anticipated student workload is level 7, according to the European Credit Transfer and Accumulation System (ECTS). The duration of the new PSP is three (3) academic semesters, including the preparation and evaluation of a postgraduate thesis. The maximum time allowed to complete studies is six (6) semesters. To obtain the postgraduate diploma (MSc), attendance and successful examination in all compulsory courses and laboratories of the first and second semester are required, as well as the preparation of a postgraduate diploma thesis in the third semester. After completing ninety (90) ECTS credits, the postgraduate diploma is awarded: 30 ECTS for each of the two instructional semesters, and 30 ECTS for the thesis.

II. Analysis

The proposed PSP is an entirely new programme that has no precedent. There is also no similar programme at any other Greek university, making the PSP a unique opportunity for graduates and professionals in various fields, such as geology and mining. A carefully designed curriculum will teach students about marble and natural stone exploitation processes. All the teaching staff members and external stakeholders (external advisory board) are experts in their respective fields and have contributed significantly to the design of the PSP.

During the meetings with the EEAP, the university faculty and the external stakeholders expressed their desire to collaborate and share their resources, such as primary data and laboratory equipment, for the postgraduate thesis. The external stakeholders praised the department for the initiative in creating this PSP. They stressed the lack of anything similar at other Greek universities, as well as the need of the industry for such a programme. It will therefore provide future and current professionals a unique opportunity for scientific knowledge and skills in marble and natural stones exploitation.

The individual courses are well aligned with the overall goals and objectives of the PSP and work synergistically towards creating rounded professionals in this

field. The individual course content, workload, and assessment methods are in line with Level 7, and adhere to the quality requirements of the University. There are 6 compulsory courses of 5 ECTS each in each semester, resulting in 30+30=60 ECTS over two academic semesters. This is an efficient way of delivering required content, but there is little flexibility in specialization, as there are no elective courses on offer. The compulsory thesis (30 ECTS) is also well-designed in terms of requirements and regulations, allowing a whole semester for its completion. However, there seems to be no dedicated course on research methodology or lectures on thesis preparation and presentation. Furthermore, the expected thesis length is too short, not reflecting the 30 ECTS workload, and the word count range is very wide, “between 8000 and 15000 words”, creating potential difficulties upon assessment.

According to the relevant study guide (A12), the PSP is “designed to provide high quality postgraduate education, research and expertise for the production of new knowledge in modern areas of technologies required for modern, sustainable and rational exploitation of marble and natural stones in two semesters, while the third semester is devoted to the preparation of a thesis. Thus, no practical training is foreseen”. In addition, the PSP “does not participate in mobility programmes, as it is designed to provide high quality postgraduate education, research and specialisation in three (3) semesters.” Both these statements make it clear that there is no opportunity for practical experience or international exchanges, including the 3rd semester of the studies, i.e., during the compulsory thesis research.

III. Conclusions

The Department should be congratulated for engaging with employers, stakeholders and potential students at the design phase of this comprehensive PSP. The design of the PSP is in line with the standards of the HAHE, but the Department should consider potential improvements to the Programme.

Panel Judgement

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

Panel Recommendations

R2.1 The word count for the compulsory thesis should be revisited to reflect the 30 ECTS workload with a range of 20000-24000 words.

R2.2 The PSP should offer students more opportunities for specialisation through elective courses and additional mining software in the respective courses.

R2.3 The PSP should encourage students to participate in national and international practical experience, e.g., in Erasmus+, during the 3rd semester of their studies while researching their thesis topic.

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

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

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

Indicatively:

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

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

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

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

Documentation

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

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

Study Programme Compliance

I. Findings

The new PSP embraces the principles of student-centred teaching and active learning. Additionally, it implements systematic evaluation methods, ensuring students are informed about the assessment criteria and methods used.

The EEAP has confirmed that predefined and published regulations regarding student admission are in place. The PSP has implemented a system of points reflecting the admission criteria:

- Undergraduate diploma/degree grade
- Relevance of undergraduate dissertation to the PSP
- Second diploma/degree
- Postgraduate diploma
- Doctoral degree
- Scientific papers in peer-reviewed journals or proceedings of conferences
- Training seminars of at least four months' duration related to the PSP subject

Predefined, published, and clear regulations regarding student progression are in place. All regulations and information are conveyed to students clearly and transparently. All academic and other relevant data are readily available to students on the PSP and the University websites. The Programme has established services to ensure effective delivery of courses online and mechanisms to monitor student satisfaction through course evaluations. The necessary administrative support and technological infrastructure are in place to deliver the programme of study.

The new PSP provides detailed and comprehensive information that students will find useful. The student handbook thoroughly describes the procedures for preparing a successful thesis. It also includes information about ethics rules, plagiarism and distance learning. Student support and services systems are in place to assist students with academic and personal challenges.

The PSP spans one and a half academic years, or three semesters, during which students earn 90 European Credit Transfer and Accumulation System (ECTS) credits. Graduation requires 90 ECTS, of which 60 ECTS are obtained from 12 compulsory courses and 30 ECTS are allocated for the thesis. There are well-defined criteria for completing the thesis, which can take various forms. Various scholarship opportunities and awards are available to students.

Certification procedures are established, and students are properly informed about them. A diploma supplement is provided to all programme graduates in Greek and English. Receiving the postgraduate diploma allows graduates to enhance their profiles more effectively, professionally and academically, at the National and European levels.

II. Analysis

The subject of the PSP is the modern exploitation of marble and natural stones, following the contemporary international and domestic practices and trends in the extraction and processing of marble and other natural stones. The various courses cover current developments in research and exploitation, emphasizing technology, the circular economy, and environmental protection. The PSP targets Geologists, mineral resource Engineers, mining/metallurgical Engineers, engineers of related specialties, executives of companies already active in the field of marble and natural stone exploitation who want to acquire specific knowledge, to upgrade the knowledge they already have, and to learn about the current trends and developments in this field.

The EEAP meeting with employers and other stakeholders highlighted the need for the proposed PSP, emphasizing the demand for qualified graduates that the Programme aims to produce. The stakeholders strongly supported the new Programme and the Departmental faculty members who will implement it. Employers with long-standing relationships with the Department faculty members appreciated this ongoing collaboration.

The new PSP employs effective processes and tools to manage, coordinate, and address student admission, progression, recognition, and certification. The internal assessment mechanisms are well-developed and enable the continuous monitoring of key student performance indicators. Programme requirements and other relevant information are readily available to both prospective and current students on the dedicated PSP webpage. The Programme adequately addresses all individual aspects required to ensure student admission, progression, and completion of studies. However, the EEAP also made certain observations in the following areas:

- The instruction is entirely delivered online to accommodate distance learners and professionals working full/part time. Although this strategy has advantages for the students, it does not make the most of the unique geographical location of the Department, which is ideally located for fieldtrips/fieldwork at the various quarries and sites of mineral extraction.
- The workload required for the thesis is 750 hours, corresponding to 30 ECTS. However, the expected word count of a thesis is rather low, and does not reflect national and international standards.
- The student mobility for the PSP appears limited, even though industry and

Government partners / employers have emphasized the value of practical experience and site visits.

III. Conclusions

The Programme employs effective processes and tools to manage, coordinate, and address student admission, progression, recognition, and certification. The Programme is fully compliant with the Principle.

Panel Judgement

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

Panel Recommendations

R3.1 The PSP should consider opportunities for practical experience through strategically designed fieldwork/fieldtrips.

R3.2 The PSP should consider opportunities for international mobility, for example, Erasmus+, during the 3rd semester for the research and writing of the thesis.

Principle 4: Teaching Staff of New Postgraduate Study Programmes

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

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

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

Documentation

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

Study Programme Compliance

I. Findings

The process of recruiting and appointing faculty members is regulated by applicable state laws and regulations (APELLA). The professional advancement of teaching staff, including tenure and promotion, is following State laws and University regulations, and is overseen by the Department that supports the PSP. Lists of teaching staff members (both internal and external) are maintained and were provided to the Panel. They include information addressing their professional qualifications and areas of expertise. The EEAP considers the Teaching Staff for this PSP highly qualified, self-motivated, and enthusiastic for educating a good number of PG students (the overall target is 40 students).

There is high-quality administrative and secretarial support although the workload for the related staff is high. The members of the administrative and secretarial staff are highly motivated, and they excel in their duties.

The EEAP found that mentorship arrangements are informal, regular sabbaticals are not pursued, there is no reduced teaching for new members of academic staff, and the specific training in soft and technical skills is not applied with the consistency needed.

All teaching staff and the courses they teach are regularly evaluated by students at the end of each semester through evaluation questionnaires. Relevant examples were presented, and the EEAP found them extremely useful. The results of the questionnaires are carefully considered by the staff members. The percentage of students participating in these evaluations is high.

The PSP staff members are involved in research activities, which include publication of articles in journals and presentations at academic conferences, both national and international. The faculty possesses complementary expertise and covers a wide range of subjects relevant to the PSP, including policy, regulation, commercial and economics topics.

In summary, faculty recruitment, employment regulations and contracts, and advancement policies and processes appear to be highly effective in achieving successful teaching and learning outcomes. There are clear provisions for the systematic evaluation of staff members.

II. Analysis

The issues pertaining to the staff development are due to the relatively recent establishment of the university department and the overall small number of academic staff.

As established in the discussion with the industrial/consulting board, there are excellent opportunities for interactions with the local industry.

The educational theme of the new PSP is of commercial, industrial and research relevance and is expected that there will be a synergistic and added-value effect for the department.

The student-staff ratio may become high soon, and this might pose a threat to the delivery of the PSP. The panel found that many aspects of the delivery of instruction, research, and administrative provisions depend on the good will of the staff to work overtime, which may not be sustainable in the long run.

III. Conclusions

The EEAP found that the teaching staff of the PSP is of high quality with significant and increasing research activity.

The existing processes for the recruitment of new members of staff are judged fair and transparent and in line with National Laws and Regulations.

The EEAP recognises that this PSP will produce graduates who will be able to

contribute to strategic national needs. Efforts to grow this PSP would be in the national interest.

In conclusion, the EEAP believes that the success of the PSP depends on the support of the central Government and the availability of National funding. The Panel recognizes the strategic importance of the PSP and recommends that the Government provide the necessary resources to sustain and expand this PSP for its great potential for economic return to the Greek economy.

Panel Judgement

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

Panel Recommendations

R4.1 Formalize staff development as widely as possible, including mentorship arrangements, regular sabbaticals, reduced teaching for new members of academic staff, and specific training in soft and technical skills.

R4.2 Increase the academic, administrative and secretarial staff to support this educational and research activity that addresses a strategic need of the Greek economy.

Principle 5: Learning Resources and Student Support

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

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

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

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

Documentation

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

Study Programme Compliance

I. Findings

The University makes available a number of facilities to cover the teaching and learning needs for the duration of the PSP. These include:

1. The University Library and the University Information Systems Centre;
2. Holistic well-being facilities, such as the various sports centres of the University (in all five campuses), mental health advisors and counselling for the staff and students, and a plethora of cultural activities;
3. An Accessibility Centre for Students of Vulnerable Social Groups;

4. The Career Office, which informs on scholarships, PSPs, the Erasmus+ programme, lifelong learning programmes, seminars, conferences, job positions, and volunteering programmes. The Career Office also offers advice via the Academic Counsellor, and includes the Alumni Community.
5. The Student Advocate, and
6. The Distance Learning Unit, which offers full coverage of the PSP's needs, utilising a variety of platforms.

The Department of Mineral Resources Engineering includes various classrooms and laboratories. The University also provides a range of IT services via the Information Systems Centre and the corresponding student portal (eClass). The entire instruction will be delivered exclusively via Zoom and Moodle. All students will have access to laboratory equipment for their thesis and other projects related to the PSP.

Regarding the PSP teaching staff, it is comprised of nine members, five of whom are members of the Department of Mineral Resources Engineering. Two administrative staff members also cover the needs of the PSP. External contractors will be employed to cover additional administrative needs of the PSP, as the tuition utilization plan states.

The student guide is well developed, covering all aspects of the PSP.

A tuition utilization plan was submitted by the Department in the context of this report, based on revenues and costs for 40 students per year.

II. Analysis

The University and the Department offer a variety of student services and resources (online and in person) for the successful implementation of the new PSP, all of which are functional and easily accessible. The teaching resources will cover the courses' learning objectives. The administrative staff is very competent and ensures the smooth operation of the student support services. The Department has secured the collaboration of various external stakeholders with very high competence and excellent facilities that may be utilized both during teaching and during the writing of the theses. During the meetings with the EEAP, all the teaching staff members and the external stakeholders were open to collaborations and the use of their facilities and resources, such as raw data and laboratory equipment.

According to the proposed tuition utilization plan, the University will not contribute financially to the operational costs of the PSP, all of which will be covered by the tuition fees. The costs include consumables, transportation costs for the students, teaching staff stipends, additional administrative and technical support, and promotional measures. A significant fraction of the fees (30 %) will

be retained by the University.

III. Conclusions

The learning resources and student support are in line with the standards of the HAHE.

Panel Judgement

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

Panel Recommendations

R.5.1 Inform students at the beginning of the second semester about available research projects, so they can make timely and informed decisions when selecting and planning their thesis research.

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

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

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

The above comprise the assessment of:

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

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

Documentation

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

Study Programme Compliance

I. Findings

The new PSP Modern Exploitation of Marble and Natural Stones at the University of Western Macedonia has created an excellent process for internal and external evaluation. The Programme will follow the principles and standards of the

Internal Quality Assurance System of the Department of Mineral Resources Engineering. The self-assessment of the PSP will be guided by procedures that generate a learning environment for students according to the strategic plan of the University of Western Macedonia. Assessment methods will include student workload, expectations, and an assessment of student satisfaction. Additionally, the PSP self-assessment will take into consideration technological developments, societal and job market needs, and national and European policies.

The PSP coordination committee will collect information from student evaluations and proposals by the faculty. The annual report will be submitted to MODIP for review, and recommendations will be shared with the general faculty assembly. Decisions for improvement will be made at the end of the academic year.

Although this is a truly new PSP, the EEAP was given access to the accreditation report of the department's recent Undergraduate Study Programme, which shows a commendable response to the recommendations of the external review committee. In addition, comprehensive data on student evaluations and external stakeholders were made available to the EEAP, which shows a remarkable commitment of the faculty to continuous improvement. Finally, during the meeting with selected stakeholders, it became evident that the existing Programme is highly respected in the profession.

The Department of Mineral Resources Engineering of the University of Western Macedonia has created an External Advisory Board, which meets at least once per semester. The Board consists of employers, executives of industrial and Government units, and academics from other universities. The Board has played a major role in the design and internal evaluation of the new PSP.

II. Analysis

The PSP has created an excellent process for internal review and continuous improvement. The commitment of the faculty makes the EEAP believe that the strengths of the Programme will be reinforced on an annual basis. The information collected through student evaluations will be studied and documented. Programme weaknesses will be addressed and remedies will be provided. The presence of an External Advisory Board makes the new PSP a leader in the implementation of evaluation procedures; thus, the potential for the Programme's success is very high.

III. Conclusions

The proposed Programme self-assessment process is excellent. It includes a formal participation of students, alumni and external stakeholders. Documentation of the efforts addressing the recommendations of previous external evaluations is comprehensive and well articulated.

Panel Judgement

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

Panel Recommendations

None

PART C: CONCLUSIONS

I. Features of Good Practice

- The educational theme of the new PSP is of commercial, industrial, and research relevance.
- The teaching staff of the PSP is of high quality and has significant and increasing research activity.
- The PSP has the potential to produce graduates who will contribute to strategic National needs.
- The design of the Programme includes documented feasibility and sustainability studies, demonstrating the demand for graduates in the marble and natural stone industry.
- The processes for the recruitment of new faculty members and staff are fair and transparent, and in line with National Laws and Regulations.
- The Department has established an External Advisory Board that meets at regular intervals and participates actively in the design and revision of the PSP.
- There is an excellent evaluation process for both courses and instructors.

II. Areas of Weakness

- Courses are available for distant learning only.
- There is no dedicated course on research methodology to prepare students for thesis work.
- There is little flexibility in specialization, as there are no elective courses offered in the study programme.
- The size of the faculty is small relative to their teaching and research responsibilities. The student-staff ratio may soon become high, which might pose a threat to the delivery of the PSP.
- No Erasmus+ mobility or internship opportunities are planned for the students during their studies at the PSP.
- The mentoring arrangements are informal, regular sabbaticals are not pursued, and there are no reduced teaching responsibilities for early-career faculty members.

III. Recommendations for Follow-up Actions

- Increase the number of academic, administrative and secretarial staff to support the educational and research activity of the PSP, which addresses a strategic need of the Greek economy.
- Formalize faculty development as early as possible, including mentoring arrangements, regular sabbaticals, reduced teaching for early-career faculty, and specific

training in soft and technical skills.

- Consider a hybrid method of delivery to take advantage of the geographic location of the campus near major marble mining operations.
- Offer more opportunities for specialization through elective courses and additional mining software in the respective courses.
- Encourage students to participate in national and international practical experience, e.g., in Erasmus+, during the 3rd semester of their studies while researching their thesis topic.
- Inform students at the beginning of the second semester about available research projects, so they can make timely and informed decisions when they select and plan their thesis research.
- Consider integrating sustainability metrics into programme evaluation to reinforce its environmental focus.
- Revisit the word count for the thesis to reflect the 30 ECTS workload with a range of 20000-24000 words.

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are:

1-6

The Principles where substantial compliance has been achieved are:

None

The Principles where partial compliance has been achieved are:

None

The Principles where failure of compliance was identified are:

None

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

The members of the External Evaluation & Accreditation Panel

Name and Surname	Signature
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