



**ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ**  
HELLENIC REPUBLIC



**Εθνική Αρχή  
Ανώτατης Εκπαίδευσης**  
Hellenic Authority  
for Higher Education

Αριστείδου 1 & Ευριπίδου 2 • 10559 Αθήνα | 1 Aristidou str. & 2 Evripidou str. • 10559 Athens, Greece  
**T.** +30 210 9220 944 • **F.** +30 210 9220 143 • **E.** secretariat@ethaae.gr • [www.ethaae.gr](http://www.ethaae.gr)

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

**Civil Engineering**

**Institution: University of West Attica**

**Date: 10 December 2022**

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

## TABLE OF CONTENTS

<b>Part A: Background and Context of the Review</b> .....	<b>4</b>
I.    The External Evaluation & Accreditation Panel.....	4
II.   Review Procedure and Documentation .....	5
III.  New Undergraduate Study Programme in operation Profile.....	6
<b>Part B: Compliance with the Principles</b> .....	<b>8</b>
Principle 1: Strategic Planning, Feasibility and Sustainability of the Academic Unit.....	8
Principle 2: Quality Assurance Policy of the Institution and the Academic Unit.....	18
Principle 3: Design, Approval and Monitoring of the Quality of the New Undergraduate Programmes	20
Principle 4: Student-centred Approach in Learning, Teaching and Assessment of Students.....	23
Principle 5: Student Admission, Progression, Recognition of Academic Qualifications and Award of Degrees and Certificates of Competence of the New Study Programmes.....	26
Principle 6: Ensuring the Competence and High Quality of the Teaching Staff of the New Undergraduate Study Programmes .....	30
Principle 7: Learning Resources and Student Support of the New Undergraduate Programmes...	33
Principle 8: Collection, Analysis and Use of Information for the Organisation and Operation of New Undergraduate Programmes .....	36
Principle 9: Public Information Concerning the New Undergraduate Programmes .....	38
Principle 10: Periodic Internal Review of the New Study Programmes.....	40
Principle 11: Regular External Evaluation and Accreditation of the New Undergraduate Programmes.....	42
Principle 12: Monitoring the Transition from Previous Undergraduate Study Programmes to the New Ones.....	44
<b>Part C: Conclusions</b> .....	<b>46</b>
I.    Features of Good Practice .....	46
II.   Areas of Weakness .....	46
III.  Recommendations for Follow-up Actions .....	47
IV.   Summary & Overall Assessment .....	48

## **PART A: BACKGROUND AND CONTEXT OF THE REVIEW**

### **I. The External Evaluation & Accreditation Panel**

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

- 1. Panagiotis (Panos) D. Prevedouros, PhD (Chair)**  
Professor Emeritus and past Chairman, Civil Engineering, University of Hawaii, USA
  
- 2. George Haritos, PhD**  
Professor Emeritus and Past Dean of Engineering, University of Akron, Ohio, USA
  
- 3. Dimitrios Kolymbas, PhD**  
Professor Emeritus, Universität Innsbruck, Austria
  
- 4. Ms. Aikaterini Poda**  
Technical Chamber of Greece
  
- 5. Ms. Georgia Tsafaridou**  
Student of Civil Engineering, Democritus University of Thrace, Xanthi, Greece

## II. Review Procedure and Documentation

The five members of the External Evaluation and Accreditation Panel (EEAP) met on December 5, 2022, three at the hotel conference room and two via synchronous Zoom connection. The team members introduced themselves, spoke about their relevant experiences and discussed the format and agenda of the visit, and the roles of each panel members including the focus principles (in Greek axones) for questioning during the interviews. The chair sent the members a summary of all the files provided by the CE department. Most members had reviewed most of the documents provided. In the remaining of the document, we will be referring to the Civil Engineering department (CE) at the University of West Attica (PADA in Greek) as CE-PADA.

The visit at CE-PADA was a comprehensive 2-day affair with physical on-campus presence for three members (Chairman Prevedouros along with Dr. Haritos and Ms. Poda,) and via continuous online connection (Dr. Kolymbas and Ms. Tsafaridou) including the visits to the labs, classroom, library, etc. The visit was conducted on December 5 from 1 pm to 8 pm, and on December 6 from 10 am to 6 pm. Given the size of the department and its facilities combined with the 12 principles of assessment, our panel felt that the time allotted was short. More time should be allocated for larger institutions and departments in the future.

The meetings including the people present are detailed in the final timetable of the visit and will not be duplicated herein, with the addition that the Rector of PADA who also attended and spoke at both the introductory and concluding sessions of the meetings. In summary, various members of the department and the Vice-Rector provided detailed presentations of the institution, the department and the 12 principles. The first day also included a meeting with a dozen teaching staff members\* (~75 minutes). The second day included interviews with ten students\* (~70 minutes) and interviews with employers and social partners (~60 minutes), and a visit of ten labs, several classrooms, two amphitheatres and the campus library. A few omissions of materials were observed by our panel such as potentially corrupted file B32, samples of diploma studies and technical studies, and the curriculum vitae for all faculty and teaching staff. These items as well as all the presentations were provided to the panel in a timely way for review and inclusion in the panel's assessment.

(\*) Note: During these two meetings the chair of the panel provided his email in case a meeting participant wished to share thoughts other than those discussed in the open meetings. No additional input was received.

Overall, the visit was organized and presented very well. All administrators and faculty were well informed and eager to provide detailed and specific answers to questions. Both students and employers were also eager to share their experiences and respond to direct questions. The overall impression of our panel is that this is a rigorous program in civil engineering offering quality education at the undergraduate level using fairly spacious, well maintained and expanding and improving facilities.

### III. New Undergraduate Study Programme in operation Profile

Selected time milestones of the program are as follows:

1983: "Construction Civil engineers" TEI of Piraeus and "Infrastructure Civil Engineers" TEI of Athens

2013: "Civil Engineering Technologists"

2013: Establishment of the first two Graduate Programs of the Department.

2018: Establishment of a University Department of Civil Engineering by merging the two departments and designing a new 4-year Bachelor's Program.

2019: New 5-year Bachelor's Program; added PhD study program; election of program supervisory committees; 174 admitted.

2020: Two first graduates; 187 admitted.

2021: Greek Government (ΦΕΚ) listing of the integrated Master's program; 165 admitted.

2022: Relocation to the current PADA buildings; 100 graduates to date; 161 admitted.

CE-PADA went through various transformations in terms of degrees offered and degree requirements. At every stage they developed tractable course equivalencies. We met with several students who were caught in the recent transformations from 3- and 4-year degrees to the final 5-year civil engineering diploma (integrated master degree). Without exception, they were all pleased with the guidance offered for course equivalencies and they all noted the substantial upgrading of the courses from TEI level to University level.

At the undergraduate level, CE-PADA offers a 5-year program with 61 courses and a Diploma Thesis; students have the option to substitute two courses with a 4-month Technical Study (also known as engineering internship). The program has an equivalency of 300 ECTS. After the sixth semester, the students must choose to follow one technical discipline among Structures, Geotechnics, Hydraulics and Transportation. A detailed ~380-page, well organized Curriculum Guide is provided on the Internet. The department employs course evaluations and other custom assessments to gauge student satisfaction with courses and other aspects of the program.

CE-PADA totals 29 members of staff of which 21 are professors at various ranks, 7 are laboratory lecturers and 1 is a laboratory specialist (a slight variance in these counts was noted due to the different times the tables were completed, including the list of CVs in the CE-PADA documentation our Panel received through HAHE and the list of CVs our Panel received directly from CE-PADA on December 8, 2022).

The law does not allow for laboratory technicians who take care of electromechanical equipment; lab equipment maintenance is provided by the teaching staff and in case of major problems, it is contracted out to specialists. The panel believes that CE-PADA has sufficient staffing for providing a rigorous degree in CE, but staff needs are likely to increase for the program to become more competitive in the areas of graduate study and research.

Classrooms, laboratories, the library, etc. are adequate but some of them show their age. A few labs are fully modernized, and a few others are currently under renovation and not in operation. A couple more labs are expected to be in full operation in spring 2023 semester but two more will take much longer to complete and energize. The panel finds that the process of consolidating labs from two campuses into one needs to be accelerated and completed as soon as possible, and hopefully no later than summer 2024. All rooms seem to have adequate HVAC service and at the time of the visit were fully functional, well lit, reasonably clean, and free of odours or graffiti; some corridors and external walls had some graffiti. Access and parking to campus were deemed reasonable. Overall, the Ancient Olive Tree campus we visited gives impressions of a normal, welcoming university campus.

An important side note is that during the review, our panel became aware of the distinction between Polytechnic and Engineering Schools in Greece: The former graduate Engineers with recognized professional engineering status. The latter graduate engineers with not recognized professional engineering right. The panel finds the absence of governmental action (suitable law to adjust their Polytechnic School status) to be a deficiency or discrepancy because the CE-PADA degree content is clearly equivalent (and in fact it is substantially more comprehensive) than the standard ABET-accredited Bachelor's in Civil Engineering degree in the US.

## **PART B: COMPLIANCE WITH THE PRINCIPLES**

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

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

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

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

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

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

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

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

#### **b. The strategy of the Institution for its academic development**

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

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

*The feasibility of the operation of the new department should be justified based on:*

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



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

**d. The documentation of the sustainability of the new department**

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

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

**e. The structure of studies**

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

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

**f. The number of admitted students**

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

**g. Postgraduate studies and research**

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

**Relevant documentation**

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

## **Study Programme Compliance**

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

#### *Findings*

The mission of CE-PADA is detailed in Appendix B1 and was presented in the first session by the Chair and the Vice Rector. The mission of CE-PADA is to develop graduates who research, analyse, design, and perform Civil Engineering studies, projects, and investigations, while simultaneously satisfying modern requirements for sustainable development, economy and adaptability of infrastructure, better management of existing infrastructure and respect and protection for the natural and man-made environment. The program aims to provide graduates with the required theoretical and applied knowledge of science and engineering – through the application of classical and contemporary methods and tools in the educational process – to cultivate critical thinking and develop skills of analysis – synthesis of data, information, and interdisciplinary knowledge, so that the graduates can respond to new and emerging needs of infrastructure. The undergraduate program is structured to provide first all the basic knowledge of science and then specialization in four main areas: Geotechnics, Hydraulics, Structures and Transportation. Overall, the focus area of CE-PADA is compliant with Greek Law N.4485/2017 and UNESCO’s categorization of scientific fields in education 0732 Building and Civil Engineering category (ISCED 2013).

#### *Analysis of judgement*

The mission of CE-PADA is appropriate for the field of civil engineering and is given in sufficient detail. It guides and motivates the department to provide its graduates with the necessary skills and education for the successful practice of civil engineering, consistent with local and international standards.

#### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part a** requirements. No weaknesses have been found and no recommendations for action are given.

### ***b. The strategy of the Institution for its academic development***

#### *Findings*

The strategy for academic development of CE-PADA is detailed in Appendix B1 and was presented in the first session by the Chair and the Vice Rector. The strategy is operationalized by the CE-PADA business plan 2021-2024 in Appendix B5 which is based on two detailed investigations for the department: **PEST-DG** (Political, Economic, Social, Technological – Demographic, Global), and **SWOT** (Strengths, Weaknesses, Opportunities, Threats), both of which have been completed and reported.

#### *Analysis of judgement*

The outcomes of the PEST-DG and SWOT analyses resulted in specific strategic targets, as follows:

- Progressive reduction of new entrant students for improving the quality of education delivery in more manageable groups of students.
- Progressive increase of teaching members 2+2 in 2023 and 2+2 in 2024 (ΔΕΠ and ΕΤΕΠ).
- Obtaining more funding for teaching and research programs.
- Enrichment of existing labs with new equipment from ΕΣΠΑ funds and development of novel research labs.
- Securing more space for laboratories.
- Continuous improvement of the curriculum and continuous evaluation and improvement of existing courses.
- Development of an external advising committee with distinguished members from academic and research institutions.
- Expansion of asynchronous education modules which makes it more convenient for student to follow the course material.
- Continuous improvement of secretarial support and web resources.
- Expanding opportunities for students outside the campus with various exchange program and technical internships.
- Development of a contact list of CE-PADE graduates for future communications and support.
- Improvement of the general research enterprise and ambitions for CE-PADA.
- Taking advantage of additional funding sources.

### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part b** requirements. No weaknesses have been found and no recommendations for action are given.

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

#### *Findings*

The feasibility of the operation of CE-PADA is detailed in Appendix B4 and was presented in the first session by the Chair and the Vice Rector. The feasibility analysis investigated the following seven dimensions.

A. The needs of the economy, national and regional: economic sectors, employment, supply-demand, expected academic and professional qualifications.

B. The comparison with other national and international study programs in the same scientific field.

C. The developments in science (state-of-the-art).

D. The existing academic map.

E. Services provided.

F. Existing infrastructure.

G. Human resources.

Internationally, the expectation is for strong continued demand for civil engineers to provide for the maintenance, upgrade or replacement of existing infrastructure, and the development of new infrastructure as Earth's population expanded from 7 billion people in 2011 to 8 billion in 2022, and expected to grow to 9 billion people around 2035.

The feasibility of the civil engineering program offered by CE-PADA is undermined by the fact that its graduates do not enjoy the same professional rights as the five traditional universities with polytechnic schools whose graduates can automatically register as TEE members. The civil engineering program at CE-PADA has been fully developed and graduates students who have knowledge comparable to those graduating from the traditional polytechnic schools. This discrepancy needs to be resolved quickly as a priority based on the principle of fairness.

#### *Analysis of judgement*

CE-PADA has developed a program which is comparable with other institutions in Greece, Europe, and the US; our panel members agree that CE-PADA offers a standard, comprehensive undergraduate program in civil engineering with a number of interesting extensions, as specified below.

- Emphasis on the environmental dimension of civil engineering projects (courses, course contents, institutionalized workshops).
- Emphasis on civil engineering problem management tools (operations research methodologies, artificial intelligence-based methods).
- Elements of architectural design in several courses and projects.
- Connections of the course material with practice through seminars, workshops, site and technical visits, lectures, etc.
- Extensive use of asynchronous distance learning tools.
- Student-centred culture which is a tradition of CE-PADA from its earlier times as a TEI.

Of substantial relevance importance is that CE-PADA is located at a high demand area for engineering services from both a population and industrial perspective. Specifically, Western Attica has a total permanent population of more than 1,100,000 people in 16 municipalities, such as Chaidari, Petroupoli, Peristeri, Aigaleo, Agioi Anargyroi – Kamatero, Aspropyrgos, Elefsina, Mandra, Megara, Ag. Ioannis Rentis, Nikaia, Perama, Keratsini and Drapetsona. Western Attica also includes a large number of heavy industry companies such as refineries, cement industry, steelworks, building materials, etc. which routinely require a number of civil engineers on staff.

### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part c** requirements. No weaknesses have been found and no recommendations for action are given.

### ***d. The documentation of the sustainability of the new department***

#### *Findings*

The feasibility of the sustainability of CE-PADA is described in parts in Appendices B4 and B5 and was presented in the first session by the Chair and the Vice Rector. This is not a new department and in fact it is fully instituted in terms of people, infrastructure, and funding with a substantial availability of buildings, classrooms, offices and laboratories, 21 teaching staff members and substantial support from PADA which is a full-fledged university, the 3<sup>rd</sup> largest in Greece with 6 schools, 27 departments, with nearly 60,000 students. The department is focused on the well-established discipline of civil engineering for which the worldwide demand is strong and growing.

#### *Analysis of judgement*

In addition to the core provision of theoretical and practical education in civil engineering and related subject, CE-PADA and the university provide a comprehensive set of services including an academic advisor for each student, detailed student guide, electronic records, e-learning, a student advocate, an advanced medical care unit, and various sports facilities and teams. In addition, a fully operational Erasmus platform exists for student exchange and course correspondence and crediting.

The combination of existing operations, strategic goals and SWOT elements suggest that under reasonable economic and geopolitical conditions in the Balkan region, CE-PADA is a highly sustainable and useful entity, with the caveat that the professional rights of the engineering degree graduates of CE-PADA are recognized in Greece. Ironically, the CE-PADA degree would have no issue of recognition as a CE degree once the graduate steps out of Greece; i.e., the qualified graduate would gain admission to a graduate school abroad for advanced study or would be hired to work in the CE area.

### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part d** requirements. No weaknesses have been found and no recommendations for action are given.

## ***e. The structure of studies***

### *Findings*

Section 6 of the study guide (Appendix B11) details the requirements of the undergraduate degree (ΠΠΣ) in civil engineering offered by CE-PADA. The program requires attendance over 10 academic semesters, obtaining 300 credits (ECTS), including a diploma thesis and the option of a 4-month Internship and results in the Diploma in Civil Engineering. After the 6th semester it branches out to four civil engineering specialties, as they have been established in Greece such as structural, geotechnical, hydraulics and transportation.

Table 6.1 in Appendix B11 details the classification of courses and credits in various categories and Table 2 is a comprehensive list of all courses by semester, 1<sup>st</sup> to 10<sup>th</sup> including their lecture hours and ECTS credits. CE-PADA offers a fairly typical civil engineering program, but much more comprehensive than the typical 4-year Bachelor's in civil engineering offered in the US.

Section 7 in Appendix B11 describes each course and in the ways, it is delivered, including homework, projects and exams. It includes the grading scheme and a list of required readings and sources.

At the meetings with the faculty, we discussed the fact that some students do not enter the field of engineering with an adequate preparation, particularly in math and physics. We learned that various voluntary "after hours" sections are offered with remedial classroom instruction and that most of them are well attended which is helpful to both students and lecturers; students fill their knowledge gaps and lecturers can focus on the subject of the course instead of providing remedial instruction.

### *Analysis of judgement*

Overall, the study program is complete and comprehensive, and the number of faculty and lecturers cover all stated courses and laboratories required for the diploma (ΠΠΣ), and are able to offer some out-of-the-classroom experiences as well. Some laboratory sections may be crowded due to both the size of the labs (rather small in terms of space) and the size of the course (large enrolment.) CE-PADA is making efforts to expand and update labs (some modern equipment is more capable and more compact) as well as hire additional professors and lecturers. These additions will also help the department to expand their graduate program and research.

### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part e** requirements. No weaknesses have been found and no recommendations for action are given.

## ***f. The number of admitted students***

### *Findings*

CE-PADA has a large number of entering students in the undergraduate program (ΠΠΣ), as follows (detailed in section 6 of Appendix B4.)

Academic Year 2020-2021: 190

Academic Year 2021-2022: 170

Academic Year 2022-2023: 120

According to the Department, a gradual reduction in the number of students is sought in order to avoid overcrowding, overworking and to provide a better-quality graduate.

### *Analysis of judgement*

CE-PADA does not have a problem attracting new students; the opposite is true. For today's amount of resources in staff and facilities, a lower number of students is desired.

### *Conclusions*

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part f**. No weaknesses have been found and no recommendations for action are given.

## ***g. Postgraduate studies and research***

### *Findings*

CE-PADA has a substantial post-graduate program, as summarized in section 7 of Appendix B4 and discussed during our meetings. There are three Master's Degree Programs in which more than 120 postgraduate students study and more than 35-40 specialized staff and distinguished visitors participate as advisors, lecturers and collaborators. The PhD program currently has eight doctoral candidates who actively conduct research projects and some of them also contribute to the educational process by being course lecturers. A post-doctoral is also available and currently there is one post-doc researcher.

Several of the faculty members have demonstrable research productivity as evidenced by their curriculum vitae and brief research presentations during our meetings with them. Due to time limitations, our panel limited the time devoted to research in order to investigate in depth the core program of this accreditation visit (ΠΠΣ).

### *Analysis of judgement*

CE-PADA strategy is to expand the graduate and research endeavours, but resources and workload limitations have kept this activity at modest levels. However, there is evidence of publications in international journals and presentations in various technical conferences, as well as (modestly) funded research projects. The faculty members are aware that these activities improve the reputation of a university or program and intend to improve in this area.

## Conclusions

The undersigned EEAP members find that the CE-PADA program is fully compliant with **part g** requirements. No weaknesses have been found and no recommendations for action are given.

### Panel Judgement

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



<b>g. Postgraduate studies</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

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

### Panel Recommendations

- The panel recommends that the strategic, SWOT and operational analysis be continuously revisited, preferably at set future intervals for adjustments and improvements. There are no concerns regarding the feasibility and sustainability of CE-PADA.
- The continuous collection of quality assurance data is recommended, leading to the effective revision of operational and strategic decisions.
- Undergraduate students should be incentivized to be involved in research, possibly by utilizing some form of research or government funding.
- Additional internal and external funding sources should be pursued to support expanded research and post graduate programs.
- The lack of clarity regarding the professional engineering status of CE-PADA graduates is a detriment to the program and an impediment to the students entering the program. This needs to be resolved as soon as feasible.

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

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

*The quality assurance policy of the Institution must be formulated in the form of a published statement, which is implemented by all stakeholders. It focuses on the achievement of special annual quality goals related to the quality assurance of the new study programme offered by the academic unit. In order to implement this policy, the Institution, among others, commits itself to put into practice quality procedures that will demonstrate: the adequacy and quality of the academic unit's resources; the suitability of the structure and organisation of the curriculum; the appropriateness of the qualifications of the teaching staff; the quality of support services of the academic unit and its staffing with appropriate administrative personnel. The Institution also commits itself to conduct an annual internal evaluation of the new undergraduate programme (UGP), realised by the Internal Evaluation Group (IEG) in collaboration with the Quality Assurance Unit (QAU) of the Institution.*

*The quality assurance policy of the academic unit includes its commitment to implement quality procedures that will demonstrate: a) the adequacy of the structure and organisation of the curriculum, b) the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education, c) the promotion of the quality and effectiveness of the teaching work, d) the adequacy of the qualifications of the teaching staff, e) the promotion of the quality and quantity of the research work of the members of the academic unit, f) the ways of linking teaching with research, g) the level of demand for graduates' qualifications in the labour market, h) the quality of support services, such as administration, libraries and student care, i) the implementation of an annual review and audit of the quality assurance system of the UGP through the cooperation of the Internal Evaluation Group (IEG) with the Quality Assurance Unit (QAU) of the Institution.*

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

Both PADA and CE-PADA, the subject of this external evaluation, have put in place an Internal Quality Assurance System to apply a Quality Assurance Policy. The EEAP met with Dr. E. Papageorgiou, Head of this Unit (MODIP), and discussed the modalities of its function and operation. Our panel found that MODIP strictly applies its policy in collecting appropriate data related to the academic program and its delivery, i.e., number of students registered, student evaluations of the teaching staff, quality, and quantity of research activities of academic staff, quality of support services etc., analysing them and making them available, as appropriate. The collection and analysis of data takes place on an annual basis, as per current policy. A number of detailed indices have been developed and provided for review.

### *Analysis of judgement*

Course evaluation questionnaires are complete, well designed and are available for all courses of the program. Our panel particularly appreciated the fact that the participation rates in completing these course evaluation questionnaires are exceptionally high. On the top, the general response of the students is pronouncedly positive. Since this is a fairly new 5-year program, there has been insufficient time to operationalize changes from the first round of quality control assessments which have been completed.

### *Conclusions*

The EEAP established that there is full compliance with the initial stage of application of Principle 2.

### **Panel Judgement**

<b>Principle 2: Quality assurance policy of the Institution and the academic unit</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### **Panel Recommendations**

The continuous quality assessment is encouraged but at a cycle more compatible with the four-year evaluation cycle (e.g., the US ABET that requires a minimum of two cycles of assessment every six years.)

### **Principle 3: Design, Approval and Monitoring of the Quality of the New Undergraduate Programmes**

Institutions should design the new undergraduate programmes following a defined written process, which will involve the participants, information sources and the approval committees for the programme. The objectives, the expected learning outcomes, the intended professional qualifications and the ways to achieve them are set out in the programme design. The above details, as well as information on the programme's structure, are published in the Student Guide.

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

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

#### **Relevant documentation**

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

## **Study Programme Compliance**

### *Findings*

The new 5-year civil engineering program was developed based on the existing civil engineering programs of the other polytechnic universities in Greece. The program was developed by faculty members with the participation of students and approved by the relevant PADA committees. The structure of the program is satisfactory in terms of courses (core courses and electives) including courses dedicated to the acquisition of computer skills. The objectives, the expected learning outcomes, the intended professional qualifications have been included in the program design, and the details of the program structure along with the course outlines and information about the teaching staff have been published in the Student Guide, as required. Strategic objectives and performance indicators KPI have been set in CE-PADA's operational plan (Appendices B8 and B9), but our panel was not given target values to assess the level of achievement of the objectives because all these are set to be assessed in 2023. The future assessment will require a detailed inspection of these indices and targets.

The curriculum must prepare graduates to apply knowledge of mathematics through differential equations, calculus-based physics, chemistry and at least one additional area of basic science.

Our panel believes that this is an overall sound program, the design, approval, and the monitoring of the new undergraduate program in CE of PADA is compliant with the requirements of Principle 3.

### *Analysis of judgement*

The development of the CE-PADA Diploma program based on the other programs in Greece has not adequately considered the proportions of the number of students, available resources, and number of faculty members (i.e., their workload). In the short term, our panel suggests that the department consider a scheduling plan in which some elective courses are offered every two years to reduce the cost of the program and the workload of the teaching staff, given their heavy administrative and service requirements.

### *Conclusions*

The EEAP has been satisfied by the quality of the academic program, the enthusiastic dedication, as well as the positive evaluation expressed by the students and stakeholders. However, the worthy effort that has already been made might become problematic without the provision of substantial resources in terms of academic positions, space, and laboratory equipment. A number of recommendations have been made by the EEAP, as shown below.

## Panel Judgement

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

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

## Panel Recommendations

- The content of studies should be reviewed regularly and possibly enriched. The curriculum should include principles of sustainability in design, explain basic concepts in business, public policy and leadership and analyse issues in professional ethics as well as humanities courses.
- Some unprepared students in Math, physics, etc. are admitted to the department (ΕΠΑΛ, μεταγγραφές, etc.). They require certain remedial courses which need to be compulsory.
- It is suggested that the learning outcomes models used in the US become progressively adopted in Greek universities to better assess specific abilities in each professional field.

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

The academic unit should ensure that the new undergraduate programmes are delivered in a way that encourages students to take an active role in creating the learning process. The assessment methods should reflect this approach.

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

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

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

Our Panel found clear evidence that student-centred learning, teaching, and assessment is a priority of the department chair and of the teaching staff of the department. The teaching staff deploys a variety of modes of delivery of the material (through lectures, lab sessions, small group projects, electronic, other) that offer students the flexibility to choose the learning path that works best for each of them. When asked about the quality of instruction and the commitment of the teaching staff to their learning, the interviewed students' responses were invariably very positive. Also, our Panel found that there exists excellent rapport between the students and the teaching staff which underlines the mutual respect that characterizes their relationship. Students offered that informal, direct communications with teaching staff (in-person, via email, or through telecom) are easily arranged and that their questions and/or suggestions for adjustments are considered carefully. Our Panel was also told that many faculty members gave them their cell phone numbers so they can be reached when away from their offices.

### *Analysis of judgement*

The students are aware of the attendance and assessment criteria for each lecture and laboratory class. Student assessment is carried out in accordance with the program's regulations, which are consistently and fairly applied to all students. Grade components and assessment methods are published in advance and are available in the courses' syllabi.

Students are encouraged to develop individual skills. In several of their classes they are routinely asked to work with classmates in well-organized small groups and complete a project and, when completed, they are to present their work and results. That helps them develop invaluable "soft" skills which they will help them succeed throughout their professional careers: communication, teamwork, leadership, public speaking, are just a few of such skills.

Students can assess the quality and effectiveness of instruction and of each course's material via course evaluation surveys conducted near the end of each semester. On average, the statistics presented indicate that the students regularly rate the department teaching staff as highly effective – upper 4's out of 5. Moreover, the number of students completing these surveys is quite satisfactory – much higher than at other universities in Greece previously evaluated by Panel members.

All entering students are assigned an academic advisor and are made aware of an existing formal process for student appeals and complaints, along with a considerable amount of general useful information about the university, buildings, facilities, and the local area. All interviewed students complimented the completeness and usefulness of information on the Department's web page. These same students indicated that appeals/complaints are almost invariably considered and/or resolved within the Department of Civil Engineering – usually by the appropriate faculty member or, in certain cases, by the head of the department.

There is no formally organized tutoring program. A few faculty members offer tutoring sessions which students attend voluntarily, mostly to address certain entering students' inadequate background in mathematics. In general, students seek out the faculty teaching the topic they need help with for assistance.

### *Conclusions*

Our Panel found that the undergraduate program in the Department of Civil Engineering is highly student-centred and cultivates and promotes mutual respect between the students and the faculty and staff. Students believe that they have sufficient freedom to plan their academic path and vocalize their appreciation for the support they receive from the faculty, the Chair of the Department, and the administrative staff. Some small adjustments which are needed for continuous improvement can be easily applied and are to be expected in new academic programs.

The EEAP finds that CE-PADA is in full compliance with Principle 4.



## Panel Judgement

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

## Panel Recommendations

- Increase opportunities for students to gain additional hands-on experience and soft skills by including class group projects to be carried out by small groups of students. Assign to such projects an appropriate portion of the course's final grade to incentivize participation.
- Identify and assist underprepared entering students with better organized/new optional remedial courses, tutoring, and the like, so that they become competitive in class and not interfere with the planned pace of the teaching staff's delivery of the course material. Examine the possibility of developing a placement test for all entering students to determine their level of preparedness for University classes in basic scientific subjects and, especially, in mathematics.
- Increase partnerships to enhance the interactions of the faculty with local agencies and industry thus promoting continued collaboration.

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

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

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

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

*as well as*

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

*Appropriate recognition procedures rely on relevant academic practice for recognition of credits among various European academic departments and Institutions in line with the principles of the Lisbon Convention on the Recognition of Qualifications concerning Higher Education in the European Region. Graduation represents the culmination of the students' study period. Students need to receive documentation explaining the qualification gained, including achieved learning outcomes, and the context, level, content and status of the studies that were pursued and successfully completed (Diploma Supplement).*

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

### **Relevant documentation**

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

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

### **Study Programme Compliance**

#### *Findings*

CE-PADA has developed, published, and effectively applies regulations that pertain to all aspects of students' admission, progression, recognition, and degree/certification award. All entering students are provided with helpful information pertaining to their studies, academic life, the University, the Department, and all available services and facilities. They are also

informed on how to keep themselves updated through the department's website and the program study guide. The program study guide includes detailed information about the goals and structure of the program.

The students' progress in their classes is continuously monitored through class assignments, written examinations, successful completion of laboratory and practical projects, and oral presentations of individual and/or teamwork assignment results.

Entering students are appointed an academic advisor who is a faculty member. Each advisor follows the progress of each of his/her advisees until graduation. The duties of the academic advisor, as outlined in the study guide, include the creation and updating, as necessary, of a student personal information and contact record which also includes written comments as to his/her progress each semester.

The program follows the ECTS credit system which is applied across the course curriculum and supports students' later recognition and certification, as well as facilitates their possible mobility. Students can select courses based on their student year (up to the authorized number of 35 credit hours per semester).

Student mobility is encouraged via the ERASMUS program and the University's ERASMUS staff has negotiated a high number of agreements with quality universities in several countries. To date, however, the number of students who have taken advantage of this program is small. The Panel was told that the main cause for this low level of participation was the COVID pandemic. The University has designated several courses that can be delivered in English. At present, seven students participate in ERASMUS, while eight visiting ERASMUS students are hosted annually.

All graduating students are issued Diplomas and/or Certificates in both Greek and English.

Regarding the integrated master, that students engage in during their 9<sup>th</sup> and 10<sup>th</sup> semesters, a detailed regulation is in place that outlines the entire process and quality expectations. Our Panel was provided with samples of completed projects. The quality of work is judged as ranging from good to excellent.

#### *Analysis of judgement*

CE-PADA has a well-established process for students to register and matriculate through the study program. It was noted that there is a relatively low level of attendance of the lecture sessions. Although this is fairly common in many European Universities, our Panel feels that it needs to be addressed. Students offer a variety of explanations, such as the high quality of class notes prepared by the faculty and the plethora of helpful information which is available electronically, such as lecture videos, material on the internet, and the like. Another possible reason for low class attendance, one that the Panel feels is extremely serious and requires urgent action by the appropriate Offices, is the lack of approval (to date) for granting professional engineering status to students graduating from this program. This appears to be causing additional stress to the student body – an unwarranted distraction from their studies.

As outlined in the student guide, the students' overall progress toward degree completion is to be formally monitored by their academic advisor. Academic advisors are asked to meet with each advisee twice each semester – first near the start and second after the examinations are

completed. It is not clear whether this process is strictly followed. Students indicated that they have ready access to their academic advisors whenever they wish to seek guidance on a variety of issues – contacts are student-initiated.

Students praised the department’s and teaching staff’s flexibility and cited specific examples of changing the schedule (time or days of the week) various courses are offered to resolve conflicts with other required courses.

*Conclusions*

The Panel finds that the Civil Engineering Undergraduate Program at UWA has developed, published, and is fully committed to managing, administering, and applying all regulations that pertain to all aspects of students’ admission, progression, recognition, and degree/certification award. The department chair, teaching staff, and administrative staff have worked tirelessly and effectively during a very demanding transitional period and are to be commended for bringing this new program forward in an exceptional manner.

Our Panel also found that an excellent level of support exists, multi-faceted and at many fronts, by PADA administration. This is applauded and necessary, especially during this very difficult transition period.

The EEAP finds the Department in full compliance with Principle 5 and offers certain recommendations for continuous improvement.

**Panel Judgement**

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

### **Panel Recommendations**

- Clarify the graduates' professional engineering rights as soon as feasible. This is deemed imperative for boosting the morale of present students and attracting future ones.
- Increase opportunities for students to gain even more hands-on experience via practical training, as well as through class and laboratories group design projects, and the like, and motivate broader participation by assigning to such activities a commensurate portion of the course grade.
- Engage additional local public and private organizations which may be interested in offering opportunities for practical training to the students.
- Increase the academic advisor-initiated number of contacts with advisees per semester and academic year.
- Motivate students to take advantage of the ERASMUS and/or other similar programs.

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

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

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

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

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

The 5-year Civil Engineering program is offered by a variety of academics including 8 full professors (καθηγητές Α βαθμίδας), 7 associate professors (αναπληρωτές καθηγητές), 8 assistant professors (επίκουροι καθηγητές), 4 lecturers, 8 other teaching personnel (ΕΔΙΠ), and approximately 50 temporary personnel (ακαδ. υπότροφοι, etc.) About 75% of the faculty members have Ph.D. degrees and are eager to carry out research. The eligibility criteria for hiring are prescribed by law, and the university administration pursues a high level of qualifications of the applicants, for whom they provide the necessary funding. Funds are also provided for an impressive number of academic fellows (ακαδημαϊκοί υπότροφοι), who significantly improve the level of teaching.

We asked CE-PADA to provide a reasonable estimate of their student to faculty ratio and justify it. Their response was as follows: “The number of active students is estimated, based on their participation into exams and compulsory practicals or projects, at about 796 students. Currently, the teaching staff includes 65 members (30 tenured or tenure track staff of UNIWA,

35 adjunct faculty, not including Emeritus Professors and PhD candidates). Thus, the rate of students to faculty staff is estimated at approximately 12/1.”

The faculty members are also responsible for managing the semester examinations of students registered in the previous technical program (TEI), although this additional duty will be phased out in the next few years. All teaching staff are extremely committed and enthusiastic about their academic activities, have an excellent relationship with the students and show significant interest in research programs and activities – some have an excellent research record in terms of funding and publications. The opportunities for continuing education and professional development are supported by the administration, attendance of conferences and ERASMUS programs is supported and promoted. Furthermore, the quality of teaching is generally excellent, as stressed out by the students during the interviews, with the offer of preparatory courses in the theoretical subjects of the first year being particularly appreciated.

Faculty members have opportunity to join Erasmus program exchanges, receive annual funding for conference participation and are eligible for a sabbatical leave approximately every three years.

#### *Analysis of judgment*

The good quality of the academic staff has been reflected in the impressively positive response of the students but also in the strikingly positive assessment of the employers of the graduates. The academic teachers have succeeded in arousing and fostering the students' interest and motivation, so that they have given us an excellent impression of maturity and willingness to cooperate not only with the employers but also with the EEAP.

#### *Conclusions*

The EEAP finds that the program is fully compliant with Principle 6.

### **Panel Judgement**

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

## Panel Recommendations

- CE-PADA is encouraged to seek additional resources to replace the large number of external lecturers with permanent academic staff.
- HAHE should consider developing a standardized student-to-faculty ratio for academic institutions in Greece. It is suggested that a full-time-equivalent of FTE is used in the denominator to represent the sum of teaching staff accurately. Example: If an institution's full teaching load for the academic year is 6 courses, then a faculty member who teaches four courses is counted as  $2/3$  (for the purposes of estimating this ratio) and an external lecturer who teaches 1 is counted as  $1/6$ .<sup>1</sup> The denominator can be even more precise if credits taught instead of courses taught are used.

---

<sup>1</sup> Example continued: Let us assume that the 30 tenured or tenure track staff of UNIWA work 60% on teaching and 40% on administration, research, etc. and the 35 adjunct faculty, etc. have a 33% FTE teaching equivalency. In this example, the denominator becomes  $65 \times 0.6 + 35 \times 0.33 = 50.5$ , and the student ratio is  $796/50.5 = 15.8$  to 1, which is a better way of representing the ratio of students to faculty.



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

**Institutions should have adequate funding to meet the needs for the operation of the academic unit and the new study programme as well as the means to cover all their teaching and learning needs. They should -on the one hand- provide satisfactory infrastructure and services for learning and student support and -on the other hand- facilitate direct access to them by establishing internal rules to this end (e.g., lecture rooms, laboratories, libraries, networks, boarding, career and social policy services, etc.).**

*Institutions and their academic units must have sufficient resources, on a planned and long-term basis, to support learning and academic activity in general, in order to offer students the best possible level of studies. The above means include facilities such as, the necessary general and specific libraries and possibilities for access to electronic databases, study rooms, educational and scientific equipment, information and communication services, support and counselling services. When allocating the available resources, the needs of all students must be taken into consideration (e.g. whether they are full-time or part-time students, employed students, students with disabilities), in addition to the shift towards student-centred learning and the adoption of flexible modes of learning and teaching. Support activities and facilities may be organised in various ways, depending on the institutional context. Students should be informed about all available services. In delivering support services, the role of support and administration staff is crucial and therefore this segment of staff needs to be qualified and have opportunities to develop its competences.*

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

CE-PADA has been allocated very good facilities in an excellent campus which allows it to adequately support its academic mission. There is an adequate number of fully equipped classrooms and amphitheatres, library, teleconferencing and e-Learning facilities. Available IT support also appears to be adequate. Most areas are accessible by students with disabilities. It appears that overall, the facilities are distributed rationally.

Only four laboratories out of the sixteen appear to be permanently designated. Three of them (the laboratory of Geoenvironmental Science & Environmental Quality Assurance, Soil Mechanics and Roadways Laboratory, and the Hydraulic Laboratory) are not yet ready to operate due to renovation problems and installations after moving from a different campus. Two of them have not been yet installed: The laboratory of Reinforcement Repairs & Non-

Destructive Testing because the space for its operation has not yet been determined, and the Road Construction & Engineering Works Laboratory due the renovation of the new space. Some of them appear to lack some required equipment.

There is a variety of support services available to the students and they are all listed on the Department’s web site including sport and cultural facilities. All entering students are assigned an academic advisor and are made aware of an existing formal process for student appeals and complaints, along with a considerable amount of general useful information about the university, buildings, facilities, and the local area. Some career counselling is provided by the academic advisor. All entering students are assigned an advisor during their first semester on campus. Students are also informed about all available services during their first semester.

There are no student housing facilities at PADA, but their construction on a new plot of land has been planned.

*Analysis of judgement*

Overall, there are adequate facilities at CE-PADA to carry out its academic mission. As noted above, many laboratories are not yet ready to operate, and some do not have some typical equipment.

There is a need for additional administrative staff specially to deal with the large student body size, mainly due to continuing TEI students. Also, the students interviewed were satisfied, but it was evident that the faculty members are carrying a heavier than normal administrative load.

There is a need for additional technical support staff for the laboratories, and adequate resources for the needed maintenance and periodic modernization/update of laboratory equipment, laptop computers, and the like.

*Conclusions*

Our Panel found that the Department has been provided with sufficient and well-equipped facilities, except laboratories, to ensure a high-quality teaching and learning environment for the new undergraduate program. The EEAP finds that the CE-PADA is in compliance with the principle.

**Panel Judgement**

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

### **Panel Recommendations**

- Plan and secure resources for required maintenance and update of facilities and laboratories which is essential for continued adequate support of student learning and for the expansion of research activities.
- Increase department administrative support to relieve faculty members from the currently excessive administrative load.

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

**The Institutions and their academic units bear full responsibility for collecting, analysing and using information, aimed at the efficient management of undergraduate programmes of study and related activities, in an integrated, effective and easily accessible way.**

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

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

PADA has established procedures to collect and present data regarding the student body, the staff and the department's continuous improvement. A substantial amount of quantitative data is managed and presented by MODIP, while the department's OMEA has established additional indicators to monitor its progress. Students can track their progress, select courses, request transcripts and certificates and access their scores online. Details regarding the availability of laboratories and lecture halls are obtainable in real time via an online platform.

Course feedback is conducted between the 8<sup>th</sup> and 11<sup>th</sup> week of each semester with questionnaires about the teaching staff, the materials used, satisfaction with course quality, learning resources and the effort and time required by the students. The questionnaires are structured and analysed by MODIP. CE-PADA also conducts an additional satisfaction online survey for the staff members, the infrastructure, and the overall curriculum.

The annual assembly of faculty of CE-PADA evaluates the data provided by MODIP and OMEA, and detects the weaknesses. The report of proposed changes is submitted to MODIP for further investigation.

#### *Analysis*

A large number of online platforms are available that provide individual access. The questionnaires are conducted through MODIP's platform, while the CE-PADA's survey is conducted through e-class. Both procedures are anonymous. CE-PADA faculty mentioned that

a large percentage of active students engage in the process, due to the fact that the evaluation is conducted during the lectures. The teaching staff can access the results a month after the semester's exams and the collective ones are available at MODIP's website.

CE-PADA currently doesn't collect information regarding the career paths of its graduates, but it was noted that they are planning to do so in the near future. PADA has established an alumni association with its main purpose to make the institute better known.

The annual assembly of the department evaluates the teaching staff, the available equipment, the undergraduate program, and the progress of the students through the KPIs and questionnaires that are collected each semester. The main focus is to detect the weak areas and improve them.

### *Conclusion*

PADA has established the appropriate procedures for data collection and analysis to ensure the continuous improvement of the CE-PADA. The EEAP finds the Department fully compliant with Principle 8.

### **Panel Judgement**

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

### **Panel Recommendations**

None.

## **Principle 9: Public Information Concerning the New Undergraduate Programmes**

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

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

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

CE-PADA's website (<http://www.civ.uniwa.gr>) is comprehensive and well indexed. Details regarding the staff members, curriculum, research programs, the policy for quality assurance and the department facilities are provided both in English and Greek.

CE-PADA also offers public information on their Facebook page and group (for students and alumni), and they update it regularly. Videos uploaded on *YouTube* provide a detailed introduction and overview of the campus and its buildings.

#### *Analysis*

The website is up-to-date and is accessible for all relevant information needed. A detailed curriculum plan, the new 5-year undergraduate program and the old ones \*from TEI), the course outlines, staff CVs, research and a well-structured student guide are available. Online maps and contact information are also easily accessible, but transportation and accommodation details are not available. In some categories on the website's menu there are functional hyperlinks that lead to PADA's or MODIP's websites that provide additional information. News and announcements are updated daily. The Greek version of the website is richer; however, all of the important information is also provided in English.

#### *Conclusion*

Overall, the CE-PADA's website is easy to navigate and provides clearly all the information needed. The EEAP finds the CE-PADA fully compliant with Principle 9.

### Panel Judgement

<b>Principle 9: Public information concerning the new undergraduate programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

None.

## **Principle 10: Periodic Internal Review of the New Study Programmes**

**Institutions and academic units should have in place an internal quality assurance system, for the audit and annual internal review of their new programmes, so as to achieve the objectives set for them, through monitoring and amendments, with a view to continuous improvement. Any actions taken in the above context, should be communicated to all parties concerned.**

*Regular monitoring, review and revision of the new study programmes aim at maintaining the level of educational provision and creating a supportive and effective learning environment for students. The above comprise the evaluation of: the content of the programme in the light of the latest research in the given discipline, thus ensuring that the programme is up to date; the changing needs of society; the students' workload, progression and completion; the effectiveness of the procedures for the assessment of students; the students' expectations, needs and satisfaction in relation to the programme; the learning environment, support services, and their fitness for purpose for the programme. Programmes are reviewed and revised regularly involving students and other stakeholders. The information collected is analysed and the programme is adapted to ensure that it is up-to-date.*

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

The teaching program is systematically revised and adapted to the ongoing needs of science and the market. Special attention is paid to its resonance with students, and relevant conclusions and decisions are discussed and agreed at the department's general assembly. This naturally promotes their acceptance.

The course evaluations are on par with other similar surveys and cover adequately the various aspects of the course as well as other academic activities. Summaries that are provided to the faculty with the results of these evaluations have been provided as part of CE-PADA presentations to our Panel. The discussions with faculty indicated the high response rate of the course evaluations.

#### *Analysis of judgement*

The satisfaction of both students and teaching staff was clearly evident in the presentations and can also be read from the several indicators which are overall satisfactory. The emphasis placed by teaching staff on practical knowledge, instrument handling and interactive practice



seems to produce particularly good results in engineering education. The EAP noticed that this has virtually increased the students' appreciation of the theoretical foundations.

### *Conclusions*

The EEAP finds the Department fully compliant with Principle 10.

### **Panel Judgement**

<b>Principle 10: Periodic internal review of the new study programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### **Panel Recommendations**

None.

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

The new undergraduate study programmes should regularly undergo evaluation by panels of external experts set by HAHE, aiming at accreditation. The results of the external evaluation and accreditation are used for the continuous improvement of the Institutions, academic units and study programmes. The term of validity of the accreditation is determined by HAHE.

*HAHE is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure and implemented by a panel of independent experts. HAHE grants accreditation of programmes, based on the Reports submitted by the panels, with a specific term of validity, following to which revision is required. The accreditation of the quality of the programmes acts as a means of verification of the compliance of the programme with the Standards, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees. Both academic units and institutions must consistently consider the conclusions and the recommendations submitted by the panels of experts for the continuous improvement of the programme.*

### **Relevant documentation**

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

### **Study Programme Compliance**

#### *Findings*

This year's external evaluation of the new undergraduate program in CE-PADA is the first one conducted for this department. As such, there are no prior recommendations to be evaluated to determine whether the department has considered them and implemented them.

CE-PADA has established a process for reviewing the findings and recommendations of such external evaluations. This includes a preliminary review by the Chair and notification of all department faculty and staff of the upcoming evaluation. A faculty meeting is scheduled to discuss the external reviewers' findings and recommendations and decide how to proceed. Various committees are organized to formulate and offer their recommendations for action in subsequent faculty meetings.

CE-PADA has established a 5-step implementation process for those recommendations of the external evaluation deemed feasible, keeping in mind the existing capabilities and resources available to the department.

It should be noted that within the materials prepared prior to the present external evaluation and sent to the members of the Panel, there was an information memo from HAHE dated Sept. 20, 2022 noting that they (HAHE) found that CE-PADA was only "partially responsive" or "non-responsive" with regard to two of the submitted Sections, namely B2 and B20.

### *Analysis of judgement*

All preparations made and coordinated by PADA, the College of Engineering, the Chair of CE-PADA, and the department faculty and staff prior to the arrival of our Panel were meticulous, leaving no doubt that they consider this first external evaluation important to the further development and success of this new program. The impression formed prior to the visit was strongly reinforced during the discussions, presentations, and walk-through visits and informal presentations at laboratories, classrooms, lecture halls, and library available to the students and faculty and staff of CE-PADA.

The Panel was also pleased to note the high level of interest displayed by the participation in most meetings and presentations as well as through comments offered by senior officers of the University – Rector, Vice Rector, Dean of the College of Engineering.

All of the above, as well as many formal and informal interactions with faculty, staff, and students demonstrated to our Panel the excellent organizational climate that is in place at the University, as well as the high level of collegiality that is clearly evident between the faculty, staff, and students of CE-PADA.

### *Conclusions*

Our Panel hopes that its recommendations will be considered carefully and those that can be implemented will be incorporated subject to the resources that become available to CE-PADA.

Therefore, the EAAP finds the UWA CE Department fully compliant with principle 11.

### **Panel Judgement**

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

### **Panel Recommendations**

None.

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

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

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

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

### Relevant documentation

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

### Study Programme Compliance

#### Findings

Our panel was both surprised and impressed with the efforts and time that the CE-PADA faculty have devoted for the dual transitions to aid students in completing their degrees. CE-PADA developed plans to transition from its former 3- and 4-year programs to a 5-year degree in civil engineering. The plan allowed for TEI students to continue and complete their studies under the original study plan. The last year for these students when courses were offered was Academic Year 2021-2022. The graduates are given the option to continue their studies in the new program by registering for 21 additional courses and graduating with a diploma in civil engineering. Apparently, there are many students who have not graduated, and they can participate in the exams and complete their degree. All students we interviewed were pleased with the enriched courses and the specific instructions for course correspondence and degree completion. The faculty members are well informed about all these transitional issues to guide students and continue to support the various educational requirements.

The large number of students still in the program, well over one thousand, means that exams need to be scheduled for these students for all exam periods. This creates a disproportional load for the faculty since they need to set up exams and grade them as well as supervise diploma theses and the practical training. The anticipated reduction in student numbers through the automatic removal from the registry over the coming years could provide some relief.

#### *Analysis of judgement*

The Department is commendable for their efforts to accommodate students that are already in their program and attempting to graduate with the old degree. They have made every effort to ensure a smooth transition and they have developed a path for the students to enrol in the new program and graduate with a new degree. The students we interviewed were pleased with the program updates and were looking forward to completing the full 5-year degree for a diploma in civil engineering.

#### *Conclusions*

The EEAP established that there is full compliance with Principle 12.

#### **Panel Judgement**

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

#### **Panel Recommendations**

None.

## **PART C: CONCLUSIONS**

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

CE-PADA has demonstrated many good practices during the onsite visit and through the documentation provided. Their good practices include:

- A comprehensive study program that compares well with the programs of peer universities. It provides the necessary core and options to follow one of the four civil engineering areas of geotechnics, hydraulics, structures and transportation with interesting extension into architectural engineering and other enriching areas.
- Faculty members who are dedicated to the teaching program and worked continuously to deliver a quality program.
- Faculty members who deliver a large number of courses and try their best to accomplish the full range of responsibilities of running a fairly large department with diploma, Master's and PhD students.
- Several faculty members who have developed a substantial research enterprise and have managed to do this despite their teaching and administrative loads.
- Faculty members who students can access immediately, frequently, and continuously to address concerns and course questions.
- An adequate and improving set of major facilities to deliver the program such as a sizeable library and a good number of classrooms and amphitheatres.

### **II. Areas of Weakness**

CE-PADA has a number of weaknesses, as follows.

- The application of the student advising model needs to be followed more closely.
- A fairly large number of courses are being covered by temporary teaching staff.
- At least half of the laboratories are in a developmental stage with most equipment in boxes and unutilized. Also a few labs are in the early renovation stages and may take many months or years to bring them to full operation.
- The approval of granting professional engineering rights for the program graduates is required for a fair position of their graduates in the job market.

Remedial courses to address students coming from educational systems that do not fully prepare students for the rigors of the university courses should be made mandatory.

### III. Recommendations for Follow-up Actions

Our Panel proposes the following **final recommendations** as follow-up actions:

- The lack of clarity regarding the professional engineering rights of CE-PADA needs to be resolved as soon as feasible.
- The strategic, SWOT and operational analysis should be continuously revisited, preferably at set future intervals for adjustments and improvements.
- The continuous collection of quality assurance data is recommended, leading to the effective revision of operational and strategic decisions.
- Undergraduate students should be incentivized to get involved in research, possibly by utilizing some form of research or government funding.
- Additional internal and external funding sources should be pursued to support expanded research and post graduate programs.
- The continuous quality assessment is encouraged but at a cycle more compatible with the four-year evaluation cycle.
- Increase opportunities for students to gain additional hands-on experience and soft skills by including class group projects to be carried out by small groups of students. Assign to such projects an appropriate portion of the course's final grade to incentivize participation.
- Identify and assist underprepared entering students with remedial courses, tutoring, and the like, so that they become competitive in class and not interfere with the planned pace of the teaching staff's delivery of the course material.
- Increase partnerships to enhance the interactions of the faculty with local agencies and industry thus promoting continued collaboration.
- Increase the academic advisor-initiated number of contacts with advisees per semester and academic year.
- Motivate students to take advantage of the ERASMUS and/or other similar programs.
- Seek additional resources to replace the large number of external lecturers with permanent academic staff.
- Plan and secure resources for required maintenance and update of facilities and laboratories which is essential for continued adequate support of student learning and for the expansion of research activities.
- Increase department administrative support to relieve faculty members from the currently excessive administrative load.

#### IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.**

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	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

<b>The External Evaluation &amp; Accreditation Panel agrees that this Programme leads to a Level 7 Qualification according to the National &amp; European Qualifications Network (Integrated Master)</b>	<b>YES</b> <b>X</b>	<b>NO</b>
--	------------------------	-----------



## The members of the External Evaluation & Accreditation Panel

**Name and Surname**

**Signature**

- 1. Panagiotis (Panos) D. Prevedouros, PhD (Chair)**  
Professor Emeritus and past Chairman, Civil Engineering, University of Hawaii, USA
- 2. George Haritos, PhD**  
Professor Emeritus and Past Dean of Engineering, University of Akron, Ohio, USA
- 3. Dimitrios Kolymbas, PhD**  
Professor Emeritus, Universität Innsbruck, Austria
- 4. Ms. Aikaterini Poda**  
Technical Chamber of Greece
- 5. Ms. Georgia Tsafaridou**  
Student of Civil Engineering, Democritus University of Thrace, Xanthi, Greece