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

Naval Architecture

Institution: University of West Attica
Date: 14 February 2023

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

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I.   The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the new undergraduate study programme in operation (Integrated Master) of **Naval Architecture** of the **University of West Attica** comprised the following four (4) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. **Prof. Dr-Eng Orestis Schinas (Chair)**
   Hamburg School of Business Administration (HSBA), Germany

2. **Professor Emeritus Anastassios N. Perakis, PhD (MIT)**
   University of Michigan, Ann Arbor, MI USA 48103

3. **Msc Naval Architect & Marine Engineer D. Pappas**
   Technical Chamber of Greece (TEE-TCG)

4. **Mr. Sarantis Antoniou**
   Democritus University of Thrace, Xanthi, Greece

II.   Review Procedure and Documentation

The Hellenic Authority for Higher Education (HAHE) mandated an external and independent panel of experts to conduct an assessment of the compliance of the undergraduate study programme (UGP) on Naval Architecture (NA) of the Department of Naval Architecture (DNA) of the University of West Attica (UWA) under the provided Quality Assurance requirements. The assessment was conducted at the premises of the UWA and through document reviews (related to the UGP, the DNA, and the UWA), its operation and quality assurance initiatives, interviews, and online material (website), and visit of facilities. The assessment aims to:
- evaluate the fulfilment of the HAHE requirements of the relevant quality standard of the study programme,
- comment on its compliance, effectiveness, and applicability for the scope of the requirements,
- provide constructive remarks regarding the improvement of the delivery of the UGP for the perusal of the DNA and UWA.

As per the revised schedule, on Monday, 6 February 2023, at 11:00, the External Evaluation and Accreditation Panel (EEAP) had a private online meeting to discuss the proposal report, allocate tasks, and list related issues to the accreditation process.

On Tuesday, 7 February 2023, at 11:00, EEAP attended a scheduled appointment with the Rector, the Vice-Rector, the Chairperson of MODIP, the Dean of the School of Engineering, as well as the Head of the Department. The Rector and the Vice-Rector outlined the institutional transition and the critical strategies developed for all Schools and Departments of the UWA that govern the DNA and the UGP. In addition, the Vice Rector and the representatives of the DNA gave detailed presentations on the principles and issues under assessment, the profile of the DNA, its aims and objectives, staffing and their achievements, student numbers, SWOT Analysis, and structure and overview of the programme.

After the introductory session, the panel had a scheduled virtual meeting with selected stakeholder and potential employers. All stakeholders, employers, and social partners provided positive comments regarding the department and its students, highlighting their willingness to employ department graduates in the future and cooperate with the department for its further development, as well as to provide input for the updating of its curriculum.

Then the panel had a meeting with the team of OMEA. The discussion was focused on academic issues, mainly on strategic issues, quality control and assurance procedures. The panel had the chance to ask OMEA and MODIP members questions, exchange views, and offer constructive comments and examples of best practices from Universities abroad.

In the last meeting of this day, the panel met with the department's teaching faculty members. During this meeting, the panel had extensive discussions on the practice and internships, research issues related to the development of the faculty, as well as student-centred teaching and learning processes. Other topics discussed were methods currently used to couple teaching with research, staff workload, professional development, career advancement, research and administration, funding of the departmental staff, staff and student mobility, and the curriculum's structure, content, and evolution.

On Wednesday, 8 February 2022, the panel had a meeting with undergraduate students. During this meeting, the students expressed their overall satisfaction with the department and the faculty, its study programme, and their overall learning experience. In addition, they provided ideas and suggestions that aim at the improvement of their overall learning experience and employability after graduation. The discussion was lively, and the panel collected many ideas that were later considered in the recommendations.

After the meeting with the students, the panel visited all laboratories and teaching facilities that support the UGP. The visits were as detailed as possible given the strict timetable, yet the faculty successfully conveyed the necessary information on the educational perspective of the operation of all these laboratories.

Various clarifications and explanations were provided throughout all these sessions in a free, and deliberately unstructured way, with the aim of covering all principles and identifying the dependencies among all parameters.

Finally, the panel had a debriefing to discuss the outcome of all discussions and the message to be conveyed in the final sessions with the representatives of the DTM. During a closing meeting with the Rector, the Vice-Rector who is also leading MODIP, the Deputy Head of the Department, OMEA, and MODIP, the panel provided initial feedback regarding the accreditation process.

III.   New Undergraduate Study Programme in operation Profile

The Department of Naval Architecture (DNA) is located in the Athens Campus, and in particular in Aigaleo, in the western side of the city. The UGP was offered by the Technological Educational Institute of Athens (TEI-Athens) and evolved as an academic curriculum after 2018 with the institutional evolution of the UWA.

The undergraduate studies in the DNA last 5 years (10 academic semesters). The UGP is frequently the first choice of applicants; this trend seems solidified in the last few years. The DNA offers doctoral degrees too.

Moreover, the DNA enjoys established links with stakeholders and industrial partners, as a result of over 30 years of operation of the TEI-Athens. Links to the industry and potential employers are in place, servicing mainly student internships.

The UGP envisages to offer a solid background in the field of Naval Architecture and related fields of marine and ocean engineering to the graduates. This educational orientation is similar to the Department of Naval Architecture and Marine Engineering (NA&ME) of the National Technical University of Athens (NTUA) as dictated by the Law that regulates the professional licensing of the graduates of the UWA in the field of engineering. In this regard, the UGP aims to further support the development of Greek shipping, as well as support the maritime cluster in Piraeus with graduate engineers of high level.

Successful completion of the UGP leads to the combined title of MEng/BEng in Naval Architecture.

PART B: COMPLIANCE WITH THE PRINCIPLES

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

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

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

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

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

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

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

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

c. The documentation of the feasibility of the operation of the department and the study programme
The feasibility of the operation of the new department should be justified based on:
- *the needs of the national and regional economy (economic sectors, employment, supply-demand, expected academic and professional qualifications)*
- *comparison with other national and international study programmes of the same scientific field*
- *the state-of-the-art developments*

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

d. The documentation of the sustainability of the new department
Mention must be made to the infrastructure, human resources, funding perspective, services, and all other available resources in terms of:
- educational and research facilities (buildings, rooms, laboratories, equipment, etc.)
- staff (existing and new, by category, specialty, rank and laboratory). A distinct five-year plan is required, documenting the commitment of the School and of the Institution for filling in the necessary faculty positions to cover at least the entire pre-defined core curriculum
- funding (funding possibility from public or non-public sources)
- services (central, departmental / student support, digital, administrative, etc.)

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

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

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

Relevant documentation

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

Study Programme Compliance

I. Findings

Based on the provided material, as well as the discussions with all members of faculty, students, and stakeholders, the following significant findings are listed below:

- The Strategic Plan of the Institution considers the UGP as an integral part of its academic offering;
- The provided strategic and SWOT analysis at the level of UWA and DNA sufficiently considers the current academic environment in Greece and assesses the impact, at the strategic and tactical level, of operating the UGP;
- The provided material, namely the feasibility study for the UGP, sufficiently addresses the related objectives, input, and expected output; and
- The scientific field of the UGP is included in the internationally established scientific areas of Higher Education, as they are designated by the international categorization of scientific fields in education by UNESCO;
- A four-year business plan of the academic unit considers all issues related to the structure, operation, and activities of the DNA. It provides critical figures, such as the number of admitted students, staff, funding, and infrastructure allocated for the operation of the UGP.

Moreover, the panel also highlights the following findings:

- The DNA experienced a relatively unique institutional transition. Before 2018, the UGP was re-engineered two times to accommodate the educational needs of the former institutional frameworks. After 2018 the DNA operates under the new institutional framework of Higher Education, and the UGP had to be adjusted to the new academic reality. In this regard, the curriculum of the UGP should have at least 70% overlap with the curriculum of the Integrated Masters (BEng/MEng) in Naval Architecture and Marine Engineering of the National Technical University of Athens (NTUA). This formal requirement is necessary for granting the professional licence of Naval Architect to the graduates.
- The higher-level management of the UWA applied a common strategy for all new programmes (at least for the case of DTM), and many administrative and academic issues were addressed with a top-down approach that resolved many operational complexities.
- The DNA has already established many cooperations with industrial and academic partners, and the UGP takes advantage.
- The high number of students vis-à-vis the number of the permanent faculty members. In this regard, the ratio of faculty members against the total number of students is reported 1:36, while the average of the UWA is 1:25 considering permanent and non-permanent staff (the ratio of 1:50 for the UWA was reported for the permanent faculty members). This ratio implies a rather heavy workload for lecturing and deems many other administrative and research objectives unachievable.
- There is a continuous interaction of the faculty with the students; faculty members actively support students with their educational needs and fulfil their expectations.
- The high employability of the average graduate is reported and praised by all stakeholders, namely students, faculty, and industry representatives. No signs of structural unemployment after graduation were identified or reported.

- The research strategy is still in development at the level of UWA and DNA. The research output substantially varies per faculty member.
- Academic resources, such as HEAL, are available. The students confirmed that they are aware of the available libraries and sources, and they regularly use them for their educational needs.
- The set-up, operation and development of laboratories is an issue that needs further attention. However, the UWA is aware of this problem and soon new laboratories and facilities will be available in the Piraeus-campus that will host the laboratories. A policy on the subject matter at the level of the School of Engineering is expected also within the next months.
- Streamlining of examination procedures of the UGP should be discussed and agreed upon within the framework of the UGP to increase transparency and fairness in didactic methods.
- The mobility of students and faculty has been severely hampered by the recent pandemic; the faculty is aware and aims at mobilising resources of the ERASMUS Programme to enhance the number of "in" and "out" students by increasing the number of affiliated programmes and associated Universities.
- All buildings and facilities offer access to students with disabilities; the effort of the central library to support challenged students should be praised.
- An effort to monitor the professional course of the graduates is at its infancy with the setup of Alumni groups and associations.
- Contemporary issues, such as Sustainable Development Goals (SDG), still need to be fully addressed or considered in the offered content and delivery of the UGP.
- The panel did not identify any practice or procedure that was not streamlined with Regulation 2016/679 of the EU on GDPR (General Data Protection Regulation). However, cyber-security issues should be examined in detail by the DTM due to the online offering and the expected hybrid nature of work and delivery in the future.

II. Analysis

Given the findings, the panel would like to focus on the following points:
- The strategic initiative of the UWA to consider a cut-off date and commence operations as an academic unit (University - AEI) resulted in saving effort and resources in transitional stages from a technological (TEI) to the current administrative framework, educational concept and vision. The DNA addressed all these issues successfully, and currently the students, who enrolled in the former TEI, are gradually concluding their studies and obligations.
- The obligation of the Law regarding professional licensing of engineering graduates (Κοινή Υπουργική Απόφαση Αριθμ. 241205/2022, ΦΕΚ 4124/Β/3-8-2022) that mandates 70% similarity of the curriculum to that of the Department of NA&ME of the NTUA, is fully covered.
  a. The panel considers that the similarity level is substantially higher than mandated, and covers the scientific field and requirements of professionals in Marine Engineering too.

b. As a result of the application of this Law, the UGP is pegged to the one of the NTUA. This suggests also an in tandem strategic orientation of the DNA and of the UGP. In this regard, it is strongly suggested, the faculty to consider strategic options, based on the curricula and strategic orientation of other renown NA&ME programmes, once more degrees of freedom are granted or become available.

- There is no clear research strategy and policy. This could be a drawback yet not in the case of the UGP of the DNA, as fundamental changes in the operation of laboratories in the UWA are expected.
  a. The UWA and the School of Engineering have already scheduled the relocation and the re-engineering of all laboratories of all Departments of the School. This development will impact not only the physical infrastructure and the equipment of the laboratories but also their operational and business models.
  b. The School of Engineering will examine possible synergies among existing laboratories and subject to further conferring with the Departments will determine the new map of laboratories and their link to the educational and research output of the faculty.
  c. The existing laboratories of the DNA are fully oriented to the needs of the UGP. In many cases, they offer more opportunities to students to get a better understanding of phenomena, techniques and daily practical problems than other undergraduate programmes in Greece and abroad. In this regard, laboratories in traditional ship design, welding practice, electronics and automation, as well as in computational practice among others should be praised for their dedicated character and orientation to the educational needs of the students. These laboratories are not sufficiently equipped to provide services in the industry.
  d. The faculty of the DNA has already identified this issue; the management of the UWA has also scheduled initiatives at a high level.

- Regarding the research output of the faculty, a subject that is also coupled with the operation of the laboratories, there is a strong recommendation to all faculty members to increase the number and the quality of publications. It is also expected that doctoral students will contribute to the research output. Recently, the first intake of doctoral students was welcomed and results are expected shortly.

- The panel fully supports the following recommendations of the students:
  a. the faculty to organise internal competitions;
  b. the faculty to support groups of students in interdepartmental, regional or international scientific contests;
  c. the Department or the School to offer scholarships for the postgraduate programs on a merit-based selection procedure;
  d. the UWA and the School to offer awards for excellent academic performance.

- The panel considers that issues related to SDG and ESG should become focal and pivotal in all curriculum modules. International practice suggests that almost all modules are re-engineered or reconsidered based on the SDG, and ESG and relevant policies run horizontally (all modules) or vertically (specialisation modules). The UGP sufficiently addresses the 'environmental' element of the ESG in many modules; nevertheless, the other aspects of 'society' and 'governance' need further attention.

- The ratio of gender split in the faculty is not satisfactory; only 2 out 16 faculty members are females. The gender split of the students is better. Apparently, this issue is beyond the control of the DNA. However, it is necessary to consider this issue in all administrative procedures related to the UGP.
- The panel considers the monitoring of the professional and educational progress of the graduates of the UGP critical for quality assurance, control, and 'marketing' purposes. It is important for the evolution of the UGP to maintain steady feedback from the circles of graduates regarding the content and direction of the programme as well as for the employability of graduates.
- The panel considers soft skills, as well as academic writing, as indispensable qualifications of the graduates. Therefore, it is encouraged to include model examination forms that strengthen these skills and competencies of the students in all modules, besides the final diploma-thesis.

Indicative information on the postgraduate programme was provided to the panel, too; the aim of presenting the postgraduate offer was no other but to assess the faculty's workload and demonstrate the visibility of the lectures in the local scientific field in Greece.

III.   Conclusions

The following points conclude the key findings and analysis of this principle:

- All points requested in the mapping grid are covered.
- The transition to the new academic curriculum is successful and almost concluded.
- Current strategy and orientation of the UGP is mandated by the Law regarding professional licensing; the requirements of the Law are fully satisfied not only for the field of naval architecture but also for marine engineering.
- The faculty is aware of weaknesses related to research and research output of permanent staff; nevertheless, institutional and organisational developments regarding the operation of the laboratories are expected within the next months that will impact all relevant decisions.
- The relationship and interaction with the students is strong and reflected in the evaluations of students. Minor educational and didactic issues are identified yet the faculty is aware and has a plan to address them.
- The DNA and UGP enjoy strong ties and links with the industry, which are also reflected in the employability of the graduates.

The postgraduate offer is deemed satisfactory.

Panel Judgement

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

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

Panel Recommendations

Based on the findings, the panel recommends the following:

R1.1 The faculty is to discuss and agree on a research strategy with measurable objectives and results, to enhance the academic visibility and integrate research findings in the modules.

R1.2 All faculty members should be encouraged to increase their research footprint, either by increasing the number and quality of their publications or by participating in research projects. In this regard, the DNA is encouraged to determine a list of journals for consideration of the staff and doctoral candidates, aiming also at a higher cumulative impact factor per member and as a team. Moreover, the DNA could also outline the requirements for a cumulative doctoral thesis, thus increasing the visibility of the DNA in the research community.

R1.3 All existing and new laboratories should acquire certificates of quality assurance and control for their instruments, equipment, services, and operation. This is of critical importance for the quality of experiments and of services, necessary for building trust in experimental research and delivered services.

R1.4 The laboratories should gradually get the necessary equipment, software etc. to offer services to the industry. The decision to open up the laboratories for services to the industry is a critical one, as it will enhance the visibility of the DNA in the industry and therefore the employability of the graduates.

R1.5 The faculty is to update the material (modules) with special consideration of the SDG and related policies.

R1.6 To determine standard examination methods for all modules to enhance transparency and the soft and academic skills of the graduates as well as to address the issue of the relatively high number of the annual intake of students.

R1.7 The faculty should consider enhancing internships or including modules with practical experiences in the mandatory courses.

R1.8 The mobility of students and faculty members should be enhanced once the pandemic restrictions are fully lifted off. Further integration in the ERASMUS network is recommended.

R1.9 The School or the Department should grant awards for outstanding academic effort or results, as well as to support students' participation in various scientific contests and competitions.

R1.10 The Department in cooperation with UWA should develop and implement cyber security policies and practices at levels and functions. These policies should also address the GDPR requirements.

R1.11 It is strongly suggested that the Department adopts ESG policies that concretize and fine-tune broader ESG policies of the UWA, such as quotas of males/females in assignments, projects, etc., or policies related to recycling and paperless delivery. In principle, gender and diversity issues should also be considered at all levels. Ergo, it is an excellent opportunity to incorporate them as early as possible in any strategic revision and plan.

R1.12 It is strongly recommended to develop an electronic system for maintaining contact with the graduates as well as for the monitoring of the professional and educational progress of the graduates (alumni associations).

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

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

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

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

Relevant documentation

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

Study Programme Compliance

I. Findings

- The UWA has established a Quality Assurance Policy for the undergraduate programmes, along with an Internal Quality Assurance System (IQAS) that follows specified guidelines set by HAHE.

- QAU includes representatives from the School of Engineering and the DNA in turn has one of these representatives.

- The Quality Assurance Policy (QAP) of the UWA aims to continually improve the institution and to establish it nationally and abroad as a centre of innovation and excellence.

- The DNA has designed and implemented its study programme based on appropriate international standards and current practice, and also ensuring that there is at a minimum a 70% overlap with the program at the School of NA&ME at the NTUA.

II.   Analysis

Using QAP, the UWA commits itself to continuous improvement of its teaching and research in its departments. based on the following strategic goals:

1. Excellence in Education
2. Encouragement of Research
3. Digital Transformation
4. Improvement of the Academic Environment
5. Transparency and Accountability
6. Internationalisation
7. Sustainability
8. Quality Assurance

QAP at the DNA is consistent with the UWA strategy but specialises so it can serve the mission and peculiarities of the DNA. The strategic aims to design that QAP include

- high level education with international criteria to produce graduates with depth and breadth of knowledge and skills;
- world-class research in specific sectors that have applications helping the Greek Maritime Industry;
- International cooperation with peer institutions.

The UWA has established a Quality Assurance Policy for the undergraduate programmes, along with an Internal Quality Assurance System (IQAS) that follows specified guidelines set by HAHE. The Quality Assurance Unit (QAU) of the University, defines, reviews, and evaluates regularly pertinent procedures, redesigns and redefines quality assurance objectives, and has established a comprehensive process that enables and allows for continuous improvement of institutional quality and strategy.

QAU includes representatives from the School of Engineering and the DNA in turn has one of these representatives.

The DNA has designed and implemented its study programme based on appropriate international standards and current practice, and also ensuring that there is at a minimum a 70% overlap with the program at the School of NA&ME at the NTUA.

The basic factors that are taken into account in the design of the programme include, but are not limited to, the institutional strategy, the active participation of students, the anticipated workload according to the ECTS system, the smooth progression of students throughout the stages of the programme, the linking between teaching and research, the option to provide work experience to the students, as well as the relevant regulatory framework.

III.   Conclusions

The DNA of the UWA is fully compliant with the current Quality Assurance requirements.

Panel Judgement

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

Panel Recommendations

None.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

I. Findings

- The DNA of the UWA developed their 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 were described according to the European and National Qualifications Framework for Higher Education.

- The DNA was especially active in introducing courses for the acquisition of digital skills.

- The program includes 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, and optional student internships.

- The program takes into account 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).

II. Analysis

The curriculum is coherent, comprehensive and quite extensive, covering most scientific and technological areas related to the modern practice of Naval Architecture and Marine Engineering, even though the Department has only "Naval Architecture" and not "Marine Engineering" in its title.

Further, it follows appropriate accepted standards for studies in these engineering disciplines. All aspects and details regarding the undergraduate programme are published in a comprehensive and well-prepared study guide.

The main features of the study programme are the following.

Each academic year is divided in two semesters. There are three examination sessions per year (one at the end of each semester and one in September).

The early semesters of study consist of courses in mathematics and the basic sciences basic courses in mechanical engineering (thermodynamics, fluid mechanics, heat and mass transfer, machine elements and others), as well as basic, foundational courses in naval architecture (naval-architecture drawing, ship hydrostatics, intact stability and damage stability, and others). In later semesters, the courses become more technology-oriented and of more applied nature.

The programme of the first few semesters consists almost entirely of compulsory courses (i.e., courses that all students must take), whereas there are many more optional courses in the later semesters.

The 10th (last) semester of study is devoted to the master's thesis, which counts for 30 ECTS, i.e., 10% of the required ECTS for the title of the Masters in Engineering.

These features are common in engineering curricula across the European Union. In other words, the curriculum structure fully conforms to current practice and standards.

Furthermore, the curriculum is fully appropriate with regard to the current needs of the relevant industries (shipping industry, shipbuilding industry etc.).

It helps that several of the Faculty members are graduates of the Department of Naval Architecture and Marine Engineering of the NTUA of Athens, a university widely regarded as Greece's top Engineering School, as well as one of the best Technical Universities in the World.

The DNA has designed its undergrad studies program (USP) following a process that determines the aims, the organisation, and the areas of interest, as well as the expected learning outcomes and professional skills, according to the European and National Framework for Higher Education. In addition, they took into account active student participation, the jobs market in shipbuilding and shipping and its prospects, the availability of student internships, the connection between teaching and research, the international experience of typical USPs leading to a degree in NA&ME.

The DNA belongs to the School of Engineering at the UWA and is an evolution of the Department of NA of the Athens Technological Institute (TEI). The law gave existing students the option to either join the new University's DNA, or to continue and complete their TEI studies, which were initially only 8 semesters long, corresponding to 240 ECTS, and held for academic year 2018-19 only. After that, the law allowed the DNA to specify a 10 semester USP, with courses worth 300 ECTS. Based on this, the DNA created a new 5-year USP approved by the UWA Administration, and began to be implemented in Academic year 2019-20.

The USP serves the aims in DNA's mission, namely the transmission of integrated NA&ME and Ocean Engineering knowledge, theoretical and applied. The USP is periodically updated to respond to the latest Scientific and Technological developments in the field, as well as to the changing jobs market.

The Design of the USP is done by the USP Committee. It ensures that the basic science foundations are in place, that the core courses are well developed, and the elective courses allow a specialisation at a high level, while at all times being compatible with the 7th level of the European Qualifications Framework (EQF).

A priority for DNA is the creation of an External Advisory Committee (EAC), consisting of academic and industry representatives. It will monitor the activities of the DNA and cooperate with it on topics of USP revisions as well on more general topics and strategic planning directions.

Changes to the USP are made using a process that allows the exchange of views in meetings with students and the faculty. Finally, the basic steps to approve the USP are:

a. the submission of the USP to the Faculty,
b. the approval by the faculty, and
c. the submission of the USP to the University Deans.

The USP is monitored using, among other metrics, the student course evaluations. In addition, the research active faculty is following developments in the field and propose changes and additions to the USP. The DNA faculty feel that the EAC will considerably help to monitor the USP and its aims as well as the incorporation of new material in the USP.

The DNA's USP is comparable only to the curriculum of NTUA's School of NA&ME in Greece, and several NA&ME programs overseas. Those were taken into account to develop the USP, and especially programs at Strathclyde and Newcastle U in the UK, Delft in the Netherlands, TU Berlin in Germany, NTNU in Trondheim, Norway, the Technical University of Denmark, and others.

The total of 70 courses offered are divided into background courses (11) offering background in the basic sciences, Special background courses (20) and specialisation courses (39).

When first year students are registered, the DNA appoints one faculty member as a Studies Advisor for every incoming student, throughout their studies.

Weekly hours of instruction are between 24 and 26 hours each semester, with the only exception of the fifth semester, where they are 27, and each semester contains 30 ECTS, according to European practice.

Internships are available to the students, they are 4 months long, corresponding to one elective course, and are offered in the 7th-9th semesters. They aim to acquire work experience in shipyards, ship registers, design firms, shipping companies or other technical and service companies in the field, in Greece or overseas.

Teaching and Research are connected via projects in several courses, the diploma thesis, which allows the graduating student the opportunity to synthesise, critically evaluate and exploit, their knowledge acquired during their studies, to advance scientific thought and research. Students are also participating in research projects via diploma theses or internships.

The DNA also has formed a Seminar Committee, to organise, on a regular basis, seminars by invited scientists and industry players. It is considered that attending such seminars will have multiple benefits for the students.

III.   **Conclusions**

The Panel has found that the Department Faculty and staff has made an exceptionally good effort to develop the new undergraduate program that teaches its students the principles of naval architecture and marine engineering in all the sub-disciplines of the field.

Panel Judgement

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

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

Panel Recommendations

None.

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

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

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

Relevant documentation

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

Study Programme Compliance

I.   Findings

The DNA's undergraduate programme offers teaching methods that enhance student-centred learning. Specifically, in addition to traditional teaching methods, they include:

- Laboratory courses, where students seem (through the layout of the laboratories) to be divided into small groups. The department has many laboratories that are mainly student-learning oriented, and less research-oriented, with components and tools for tangible supervision of various mechanical (steam turbines, operational Diesel internal combustion engine, lathes, and CNC cutters), electrical processes (modern automation systems - PLCs, electric motors and generators) but also rapid prototyping methods (3D Printers). Finally, through their laboratory exercises, the students are led to write and present scientific reports, which lead them to strengthen their soft skills, but also to develop scientific discourse.
- In many of the course outlines, more than half of them, the teaching is also done by assigning assignments, according to the students, these assignments are usually part of their overall score, but they do not have the character of an exempt assignment from the written assignments exams, which are usually conducted in most of the taught courses.

- There is a clear development of the digital skills of future shipbuilding engineers through contact with high-level programming languages (mainly Python), but also by performing numerical simulations in the department's computer laboratory. While several programs related to the science of naval engineering are offered (ShipFlow, Ansys Fluent, SolidWorks, etc.). Finally, emphasis is placed on the use of open-source software (e.g. OpenFoam), which the committee notes positively, while finally, the resources available in computing power are satisfactory and modern (Lab Personal Computers, Cluster & Servers).
- The department maintains that lectures, seminars, educational visits, and excursions take place, however after the discussion with the students there is a relative suspension of the above mainly due to the outbreak of the COVID-19 pandemic. The students noted that the last time something like this was done was before the outbreak of the pandemic.
- The department, in the context of strengthening student-centred learning, has optionally incorporated the implementation of an optional internship, which before the upgrading of the undergraduate study program, was mandatory and done every six months. In the online meeting held by EEAP, the industrial Stakeholders highlighted the importance of student participation in internships, since it helps them to quickly integrate into a real professional environment. The department, to highlight the importance of the internship, has structured the internship examination through a specific process - delivered by the students which, among other things, includes the presentation of the work done to a three-member committee of faculty members, where it is then unanimously defined and a score for the internship elective. Its duration is set at four months in total.
- The department of shipbuilding engineers, after its promotion, was able to enter into bilateral relations with universities abroad to be able to cooperate within the framework of ERASMUS+, a European program that concerns the mobility of students both for studies of a certain duration or for internships in an institution of abroad. However, the inflow and outflow of students throughout the duration of the department's support do not seem to be particularly significant. The department maintains that if deemed necessary and the number of incoming foreign students is satisfactory, parallel teaching in the English language can be done.

To support the educational delivery the following tools are used:
- The University's Open eClass platform. Where there is all the supplementary material that students need in order to be able to study their courses.
- The Microsoft Teams platform used according to the faculty members for online visits of the students to discuss possible topics for the preparation of diploma theses, but also for the meeting of various working groups - committees composed of faculty members. The use of which was established during the outbreak of the COVID-19 pandemic, while today its use for course deliveries is not approved by the ministry.

To assess student performance:
1) Written exams are used and, in only some few cases, oral exams.
2) They participate in many courses in grading, and laboratory exercises or group or individual assignments.

The department operates the institution of an academic advisor, where a faculty member is matched with students in order to provide guidance throughout the student's studies, and to provide a more personalised study experience according to the needs and interests of each student. EEAP also noted the establishment of a formal student grievance management process, with a three-level process, starting with direct communication with the professor directly involved, up to the opinion and final decision-making by the department assembly.

An important point is the evaluation of the course and the teacher by the students, where the department seems to give special importance to the promotion of this institution. The questionnaire presented to the committee is complete and covers a number of statistically significant elements under investigation. However, the number of questionnaires is probably not particularly large, given that the department consists of more than nine hundred students, but the completed questionnaires for the spring semester of 2022 were a little more than four hundred, where a student can fill in more than one questionnaire. The indicators presented to the committee from the extracted results were quite satisfactory, of course it is important to know the number of students who participated in the process and the number of those who did not. OMEA appears to use and pass this data on to MODIP so that departmental objectives are regularly reviewed.

Finally, respect is given to the diversity of the students, this results from all the measures taken by the department and the institution as a whole. The students informed the committee that they have not detected any incident of discrimination throughout their studies. The institution offers a fully accessible library, with workbenches with special equipment (computer use through their vision, braille printers, large keyboards with colours, but also levers in place of conventional mice). The department as a whole has all the means that enhance accessibility (ramps, elevators, etc.).

II.   Analysis

The committee believes that the laboratories, although not fully renovated and equipped, place great emphasis on student-centred education and help students easily gain experience in their taught courses. The department has access to fully functional PCs and computing resources that help it overall in processing its needs (Learning design programs, arithmetical solutions of fluid dynamic models, etc.).

After the discussion with the students, it did not emerge that there is an active activity with the institution of the academic advisor, however, this possibility is institutionalised, and the students were informed.

The committee points out that more importance needs to be given to the movement of both faculty members and students through the ERASMUS+ program, EEAP fully understands the reasons that may lead to low numbers of incoming and outgoing students, such as the pandemic but also delayed establishment of bilateral relations due to the bureaucracy that arose with the institution's supremacy.

The participation of students in the evaluation of courses and faculty members should be particularly encouraged to ensure a statistically significant sample of students. The students

also expressed their desire to encourage participation in international competitions which the committee believes will give a great incentive to students' engagement with applied shipbuilding issues by helping to connect theoretical knowledge with practical and meaningful experiences and also expressed the desire to reward them for their efforts in an official way (e.g. progress excellence or better performance), the members of the OM.EA. They informed the committee that from this year the award for the best diploma was officially instituted.

Ultimately, the OMEA's constitution, as presented, does not include student representation in accordance with Law 3374/2005, article 5, par.2, and it does not appear that the procedures for electing student representatives at the department's assembly were followed in accordance with the law 4957/2022, while after a search on the website of the department, the announcement of the election of student representatives was not announced, as defined until September 30 (4957/2022, article 42, par. 5), however, according to the announcement of the institution on December 7, 2022 (Prot. No.: 119939, ΑΔΑ: ΡΠ0Δ46Μ9ΞΥ-67Ω), the institution-wide procedure was followed for all departments declaring an election date of January 19 and two total elective positions for the DNA, the committee is not in position to verify in writing whether elections were held, which persons constituted the Election Conducting Body (which is determined by lot by the Dean).

III.   Conclusions

Overall, the undergraduate program follows a student-centred approach regarding how to deal with the input of information from the students, such as the use of questionnaires and the institution of the Academic Advisor, however vital details as the strengthening of student mobility and the active representation of students in the committees of the department, through the prescribed legal and transparent elections, with the prescribed action of the department.

Panel Judgement

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

Panel Recommendations

R4.1 Encourage and support students to participate in ERASMUS-type exchange programs and cooperation with the institution's ESN (Erasmus Student Network) for student information days.

R4.2 Establish progress or performance awards (monetary and non-monetary) so that excellence and continuous self-improvement are more incentivized.

R4.3 Promotion of the institution of Academic Advisor to students in the context that the academic, research, and administrative obligations of each faculty member allow it.

R4.4 Promotion of the questionnaires to the students highlighting the importance of their results in the evaluation of the strategic objectives of the study program, to increase the requested sample of students.

R4.5 Immediate and transparent initialization of the electoral process of student representatives which, according to the current law, cannot be hindered by critics of the process, due to its electronic nature. The nomination process and electoral roll should be communicated immediately to the students so that they know who has the right to participate. If no nominations were submitted by the number of students, a targeted open briefing on the process and the benefits of the participation of student representatives in the assemblies and the relevant committees of the department.

R4.6 Strengthen presentations and group assessment, to strengthen cooperation and soft skills. Due to a high students/faculty ratio the panel advises to assess theses to groups of two or three so as to minimise the workload of the faculty staff.

R4.7 Primary design of a system for matching courses offered by partner universities through ERASMUS in the context of mobility, to reduce the process of personalised supervision of matching courses to each interested student.

R4.8 Encourage and support students to participate in international competitions related to the science of marine engineering, setting up a student team to participate in competitions such as MEBC 2023 – Energy Boat Challenge, strengthening student participation and the department's identity at the international level.

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

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

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

✔ *the registration procedure of the admitted students and the necessary documents - according to the law - and the support of the newly admitted students*

✔ *student rights and obligations, and monitoring of student progression*

✔ *internship issues, granting of scholarships*

✔ *the procedures and terms for writing the thesis (diploma or degree)*

✔ *the procedure of award and recognition of degrees, the duration of studies, the conditions for progression and assurance of the progress of students in their studies*

as well as

✔ *the terms and conditions for enhancing student mobility*

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

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

Relevant documentation

▪ *Internal regulation for the operation of the new study programme*
▪ *Regulation of studies, internship, mobility and student assignments*
▪ *Printed Diploma Supplement*
Certificate from the President of the academic unit that the diploma supplement is awarded to all graduates without exception together with the degree or the certificate of completion of studies

Study Programme Compliance

I. **Findings:**

The department has developed various methods to have a smooth transition during their transition to academic life. In particular, different support structures for new incoming students have been developed, among others:

- There is a reception and information ceremony for first-year students on the first days of each academic semester.
- There is the institution of the Academic Advisor, who helps to support the students regarding the organisation of their studies, and solve the problems that may arise.

In the UGP, the DNA has organised the monitoring of students' progress according to the following:

a. There are three examination periods, two at the end of the semesters of each academic year, and one repeat examination period.
b. At regular intervals during the semester, students are asked to hand in or present their work in their courses, sometimes it is about half-term work or laboratory reports.
c. The way students are evaluated is mainly evaluated by a final written exam, or else by combining the student's performance in the final written exam and some progress, work, or a series of laboratory exercises carried out during the semester.
d. Usually in the last academic years, complex evaluation methods are applied.
e. The thesis, which is prepared for one semester, with a potential extension of another semester, is usually prepared by one only student, and one or more faculty members are usually assigned to him.
f. Finally, the progress is recorded in their file and in the electronic student log which they have access to through their institutional account.

Scholarships are coordinated centrally at the University level, but also by bodies such as the State Scholarship Foundation (IKY), and also by endowments. There are no other awards at the department level other than the newly instituted best thesis award which will operate this year for the first time. Finally, for students who participate in the ERASMUS+ program, a grant is given that covers the difference in the cost of living abroad through the European Union.

The mobility of students through the ERASMUS+ program is coordinated by the department, however, there has not been satisfactory participation by the students of the department nor a satisfactory influx of foreign students into the department.

The offered courses of the study program have been assigned credits (of the ECTS type) according to the European Credit Transfer System.

The Diploma Supplement is awarded to all graduates together with the diploma or certificate of completion of studies, it is issued electronically in Greek and English.

Diploma theses are prepared according to specific quality standards announced by the department to the students.

Finally, the Internship has been instituted from the academic year 2019-2020, as an optional compulsory course. The Internship is financed either through NSRF (ΕΣΠΑ) or outside NSRF. The student finds and chooses by himself the organisation he wishes to carry out his Internship. In the Internship two supervisors are appointed, one from the side of the organisation and the other appointed by the faculty members. The Internship must be presented to a three-member committee appointed by faculty members.

II.   Analysis:

The committee considers that with the existing methods of student reception, the issue of new students is largely covered, the student experience could be enhanced by preparing a "Survival Guide", where students can immediately obtain information about their arrival at the University, various useful information about life at the University (Reading Rooms, Libraries, Canteens, etc.), as well as how to get to the Campus.

Progress monitoring is largely satisfactory, and nothing needs to change, other than to further strengthen the institution of the Academic Advisor as the academic, research, and administrative responsibilities of faculty members allow.

In discussions with students, the issue of rewarding student excellence emerged, specifically by designing and promoting progress and development awards each academic semester, both monetary and non-monetary.

Concerning ECTS and ERASMUS+, the committee considers that the matching of ECTs with the courses offered is properly planned; it may be helpful to design a system of matching the courses offered by the department with those of other departments. Finally, the regulations governing the preparation of a thesis are sufficient, it might have been helpful if it could be extended more than one academic year, given its research nature, and more than one student could undertake a thesis topic due to the high ratio of faculty members to students, with the ultimate goal of less burden on faculty members from the factor of diploma work. The mobility of both faculty members and students should be promoted and enhanced, through the ERASMUS+ program, the committee realises and understands that the participating students may have been few due to the Pandemic and the delay for bureaucratic reasons in establishing bilateral relations with Universities abroad.

The Internship Committee is fully satisfied with the regulations and examination governing the Internship. The committee considers that the Internship is a necessary element of the department but also the department's interconnection with the labour market. However, relations with the labour market should be strengthened, establishing relations for the better absorption of students in internship institutions.

III.   Conclusions:

In general, all the above make up a very good plan regarding the way students are integrated into academic life. Ultimately through institution maximisation the allocation of ECTS is properly distributed. The mobility of students and faculty members should be promoted, and a strong network of Internship host organisations should be established, as it emerged from discussions with students and experts in the field that Internship is a very important process. An important point is the rewarding of students with the establishment of progress and development awards.

Panel Judgement

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

Panel Recommendations

R5.1 Design a more general "Survival Guide", with academic and non-academic information.

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

I.   Findings

- The DNA follows applicable laws and regulations and implements a transparent and rigorous procedure for the recruitment of new faculty members (academic staff), as well as for the promotion of existing ones.

- The DNA emphasises excellence in teaching and frequently uses research, especially lab based, to enrich its teaching.

- The DNA evaluates the needs for new academic members, and with the support of the UWA, it has been able to recruit four new faculty, adding value on emerging areas of knowledge and research. In this way, the School has managed to a large extent to alleviate the effect of recent and forthcoming retirements of academic staff, as well as dealing with its current needs.

II.   Analysis

The DNA currently has 16 faculty members, including one full professor, 8 associate professors, 5 assistant professors and 2 lecturers. The DNA has announced three new positions, two in Naval Architecture and one in Marine Engineering, which should cover much of its teaching and research needs. The faculty are obligated to teach UG and Graduate courses, organise and execute lab exercises, author class notes, evaluate students, conduct research, basic or applied, supervise diploma and doctoral dissertations, and service (participations in administration, committees and councils). About 70% of required and 64% of elective courses are taught by the DNA faculty. The rest are taught by adjunct staff of various kinds. In 2019-20, the ratio of active students to faculty was 1038/15=69.2, considered relatively large. However, if you add the adjunct faculty, this ratio becomes a satisfactory 34.5. The minimum weekly teaching load is by law 6 teaching hours, yet the teaching load of the DNA faculty is usually higher than that.

Selection and advancement processes for faculty follow existing law. The DNA has clear and transparent processes for the hiring of high-quality faculty. New faculty positions take the teaching and research needs of the DNA. A key consideration is the hiring of faculty active in research areas considered of strategic importance for the DNA.

The promotion of faculty begins with an application by the faculty, whose Sector proposes the area of the position to be announced. This is discussed in the faculty meeting, where it is decided to announce the position and to determine its area. The announcement is open, meaning that not only the faculty who caused the announcement has the right to apply for the position. Potential candidates are informed via announcements to peer universities in Greece and overseas, etc, securing transparency and meritocracy. The announcement is then sent to the Dean and the Ministry of Education. Due to lack of space, we do not cite the detailed process here.

The DNA aims in the conduct of high-quality research and the propagation of knowledge in modern Naval Architecture, including ship design, construction and operation and marine structures in general. Faculty are active researchers and publish their findings in archival journals and refereed conferences, direct research projects either by themselves or via international cooperation, despite their heavy teaching load. Their areas of interest are Ship Design, Hydrodynamics, Strength, Construction, Marine Engineering, Floating Structures, Economics of Marine Transportation, Design and development of products, Computational Fluid Mechanics, numerical methods. The DNA tried to support the above with upgrades and expansion of lab equipment and infrastructure, the acquisition of new space, the maintenance of existing facilities etc. Just in the last year, lab equipment competition was announced in the sum of 215,000 Euros.

There is significant evidence of linkages between teaching and research. DNA labs used for teaching purposes also have potential as research and development labs. Most academic-staff members in the DNA have significant research output in all applicable metrics, including volume and quality of scholarly publications, award of significant research grants by the European Commission, National sources and the industry, a small (7) but growing number of quality doctoral candidates, and recognition of quality of research by academic staff as recipients of international awards.

This linkage has a lot of benefits on student learning and development, such as appreciation and engagement with current industrial trends, coursework of authentic content, and selection by the students of research-intensive topics for their master's thesis. All these create a holistic learning environment. There is lack, however, of expert technical lab staff, as well as significant bureaucratic barriers for the procurement, renewal and maintenance of lab equipment.

The professional development of faculty is achieved via a transparent and rigorous process for academic promotions, and active involvement in teaching, research and development activities, as mentioned above.

III.   Conclusions

The panel agrees that the criteria of this principle are fulfilled.

Panel Judgement

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

Panel Recommendations

R6.1 Intensify efforts for the hiring of new faculty members, with special emphasis on hiring more qualified new female faculty members.

R6.2 Prioritise the finding and the recruitment of specific expert technical staff for the laboratory facilities, as needed.

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

I.   Findings

The DNA is established in an excellent campus with all necessary facilities such as the classrooms, IT infrastructure and necessary for their studies laboratories. The students also have access to the main library, reading room, lecture room, teleconferencing and e-Learning facilities. The classrooms have interactive whiteboards, and most areas are accessible by students with disabilities. It appears that overall, the facilities are distributed rationally.

A full range of supporting services is available for the students apart from the lack of dormitories.

Students informed the panel that all information related to available services offered by UWA is provided in the first days of enrolment.

Administrative staff is sufficient and competent but must be increased to cover the 'after office' hours for the students in places such as the main Library. Must be noted that all students have access to the library through the internet 24/7.

The laboratories are numerous and cover the basic courses with practice as well as the courses in the specialty of Naval Architect and Marine Engineer.

II. Analysis

Overall, there are adequate facilities at the campus and at the unit to carry out its academic mission for student's high-level education. Some laboratories need to be organised with certification of instruments and procedures for documented scientific research. There is a need for additional administrative and technical support staff for the laboratories to maintain and update the equipment. It was evident that the faculty members are carrying a heavier than normal administrative load.

III. Conclusions

The EEAP panel found that the DNA has been provided with sufficient and well-equipped facilities, to ensure a high-quality teaching and learning environment for the new undergraduate program is fully compliant with all the principle 7.

Panel Judgement

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

Panel Recommendations

R7.1 Additional administration and technical support staff to support the big number of laboratories.
R7.2 Some laboratories need certification for their equipment and their procedures for accurate and documented scientific research.

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

I. Findings

- PWA has quality targets that clearly show the indicators that monitor the targets used, with the corresponding base values and target.
- Besides the targets generated, MODIP tasks her collaborators to extract useful indicators for PWA, such as the ones related to the annual bases needed to enter a Department, School or University in Greece via the annual entrance exams.

II. Analysis

UWA offers an integrated series of network services to the academic community, supporting the educational process, the research activities, and the administrative and support services of the university. Following the above framework, a series of applications have been developed, which are accessible by the entire academic community, using usernames and passwords that are secret and unique to the user. (responsible outfit: Department of Network Support). The DNS offers a series of voice services and data to the community. Specifically, 1. Student Register, 2. MODIP applications, 3. Research Programs, 4. Classroom Scheduling, 5. Personnel, 6. Payroll, 7. Supplies.

According to a recent decision of the Dean's council, MODIP personnel have the right to access the data produced by all the applications of the integrated information system of the UWA. The indicators extracted are rendered with statistical depictions and comparative analyses and evaluated first by MODIP and then the information and the conclusions are used in the decision-making process for the corresponding level of the university, such as funds allocation

in expendables and equipment and the allocation of new faculty positions to schools and departments. The indicators are further used to monitor, evaluate and possibly revise the strategic and operational targets of the UWA. At the U level, MODIP organizes or participates in processes needed for the participation of students and UWA alumni in satisfaction surveys regarding courses and teaching at the UG or G level using questionnaires filled to ensure anonymity of the students participating. The statistics are automatically generated within the application. Cumulative data are uploaded on MODIP's webpage. in the form of diagrams and tables.

Another application is the survey of alumni of undergraduate programs, which contributes to the description and analysis of the professional/scientific profile of the alumni. It aims to answer questions re the success of the alumni in the workplace, track the alumni who continue to graduate studies, etc. This is communicated to a large number of alumni via web pages, emails, social media etc, and the results are cc'd to MODIP and the Deans. The results of the above are evaluated by MODIP and the Deans, leading to conclusions and perhaps corrective measures.

III.   Conclusions

The panel agrees that the above principle is fulfilled.

Panel Judgement

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

Panel Recommendations

The panel does not have to recommend something on this principle.

Principle 9: Public Information Concerning the New Undergraduate Programmes

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

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

Relevant documentation

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

Study Programme Compliance

I. Findings

The website of the DNA (http://www.na.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.

The UNIWA also offers public information via their main website (http://www.uniwa.gr) and provides a detailed introduction and overview of the campus, its buildings and facilities in English and Greek.

II. Analysis

The website is up to date for the new 5-year undergraduate program and is accessible for all relevant information needed. A detailed curriculum plan, the course outlines, staff information and their social communication contacts, research and a well-structured student guide are available. Due to lack of accommodation in the campus some more transportation and accommodation details for the total area (Attiki) are necessary. 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. All the important information is also provided in English.

III.   Conclusions

Overall, the DNA website is easy to navigate and provides clearly all the information needed. The Panel found the DNA fully compliant with Principle 9.

Panel Judgement

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

Panel Recommendations

R9.1 The website must be upgraded with photos and videos.

R9.2 A more friendly presentation for the curriculum plan must replace the existing one.

R9.3 The adjunct teaching staff must have a place on the website.

R9.4 Career opportunities for teaching staff must be provided from the website.

R9.5 There should be a secure connection to the website (SSL, https://).

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

I.   Findings:

There is going to be a regular internal evaluation of the curriculum, on a basic basis the OMAE can assist the curriculum. Specifically, the update consists of:

1) Add or remove courses.

2) In changing the content and learning objectives of individual courses.

3) In the redistribution of courses in teaching semesters.

The committee, in the final introductory report of the curriculum, takes into account the report:

1) Announcements in the Shipping Industry.

2) The results of the internal evaluation of the curriculum by MODIP.

3) The comments of students during the internal evaluation of courses/teachers.

4) The relevant performance indicators (KPIs).

5) Any recommendations from the involved teachers of the courses.

The departmental assembly by majority approves, rejects or partially modifies the proposal of the curriculum committee and makes the final decisions on whether or not to update the curriculum that will be effective in the next academic year.

If the curriculum is reformulated, it is posted on the department's website before the start of the next academic year.

II.   Analysis:

The internal evaluation committee of the curriculum is sufficiently structured, and its objective is quite clear, to update the curriculum, and to formulate the annual introductory report of the evaluation of the curriculum.

The same committee then presents its findings and recommendations to the departmental assembly, and then by majority vote the recommendation of the curriculum committee is approved, rejected, or partially modified.

A very important issue that arises is whether the committee takes into account comments from a potential committee of external experts since, to date, no such relevant committee exists. The above is quite critical for the curriculum to be in line with the new data set by the labour market.

Finally, there is no official representation of the students in the assembly of the department as defined by law 3374/2005, article 5, par.2, because the official candidate election procedures, as defined by law 4957/2022, article 42.

III.   Conclusions:

The internal evaluation committee should immediately initiate the procedures for establishing the external committee of experts, and then be able to assimilate in its procedures the student representatives, who must be elected transparently and legally according to the forthcoming law. Otherwise, EEAP considers that the internal evaluation committee is functioning smoothly.

Panel Judgement

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

Panel Recommendations

R10.1 Immediate and transparent initialisation of the electoral process of student representatives which, according to the current law, cannot be hindered by critics of the process, due to its electronic nature. The nomination process and electoral roll should be communicated immediately to the students so that they know who has the right to participate. If no nominations were submitted by the number of students, a targeted open briefing on the process and the benefits of the participation of student representatives in the assemblies and the relevant committees of the department.

R10.2 Completion of the establishment of the external expert evaluation committee, to have a direct connection with developments in the labour market.

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

I. Findings

This is the first external review for the DNA, but recommendations from previous external reviews in other Departments from the same sector (engineering) have been taken into account for the new programme.

All members are aware of the importance of the external review. They gave us actual answers for their actions, and they discussed with us all, even small, our recommendations.

All the stakeholder of the unit, the administration staff, the Dean of the Engineer Sector, the Vice-Rector and the Rector of the UWA were involved in the entailed follow-up actions.

II. Analysis

Must be noted the high level of interest displayed by the participation in all meetings and presentations as well as through comments offered by senior officers of the University and the discussion in EEAP recommendations.

III. Conclusions

Hopefully that our recommendations will optimise the curriculum and the DNA continue their efforts to upgrade the already high-level education, the EEAP Panel found the unit fully compliant with Principle 11.

Panel Judgement

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

Panel Recommendations

None.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

I.   Findings

The Accreditation Proposal submitted by the DNA was found to have provided the necessary documentation for the transition period that the department is going through. Provision was made for students that were enrolled in the pre-existing technological undergraduate programme to continue smoothly their studies in the new study 5-years programme.

On the other hand, however, there are students who were enrolled in the old programme and want to continue and complete this old technological program. All students who were enrolled in the pre-existing study program and had at the start of the academic year 2018-2019 exceeded the necessary number of years to complete their programme by over 2 years, they had to continue and complete the old program. Special provision has been made for them to conduct the obligatory practical training. More specifically, practical training will be performed with the same regulations and duration as in the previous study program.

At the present time there are too many students (300) from TEI who have not graduated, and they can participate in the exams and complete their degree.

II.   Analysis

The department's plan to facilitate the smooth conclusion of the first cycle of study for students completing the pre-existing study programme is to do so by the matching table of courses issued by the department. More specifically, the Head of the Department has provided a table matching all the courses of the pre-existing study programme with courses from the new programme. The students can be consulted by this table to understand which courses from the new study programme they must complete.

Finally, it should be mentioned that little information was given about the efforts the department is going to or has made in order to help students still enrolled in the pre-existing programme of study to be able to cope with the more demanding level of classes they have to now complete, in order to be able to get their diploma.

III.   Conclusions

The department has made considerable progress in the transition period from the previous study programme. The procedures for monitoring the progress of students still enrolled in the previous study programme are in place but it is unclear if implementing measures sufficient to ensure the smooth conclusion of studies for these students have been adopted. The panel found the unit fully compliant with Principle 12.

Panel Judgement

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

Panel Recommendations

None.

PART C: CONCLUSIONS

I.   Features of Good Practice

The following identified aspects are considered as 'areas of good practice':

- Almost all faculty (>80%) members possess a doctoral title in naval architecture and marine engineering, hence they have the proven capacity to develop further the educational offering as well as the scientific area. This is an advantage and should be considered in any benchmarking analysis of the DNA and of the UGP.
- The curriculum of the UGP is more than 70% similar to the curriculum of the Department of NA&ME of the NTUA. In this regard, the statutory requirements of the Law (KYA 2412025/2022) are fully satisfied. This is a critical milestone in the current strategic and development plan.
- The laboratories exclusively serve the didactic needs of the UGP. This is a significant advantage, as in most Universities students do not have the opportunity for a 'hands-on' experience.

II.   Areas of Weakness

The following points should be considered and improved in the next stage of development and evolution:

- The ratio of faculty against students is high and should reach European averages or at least the averages of the UWA. It is strongly suggested to recommend a drastic reduction of the annual intake of students, if possible, in cooperation with the NTUA, as this will also impact the supply of naval architects in the market and their employability.
- The number of women in the faculty as well as in all groups of the DNA and of the UGP should increase. A better gender split is envisaged and required also by ESG policies in the EU.
- The research footprint of the faculty members, in terms of number and quality of publications should be increased in the next few years. Apparently, the operation of new laboratories will amplify the research output, yet a coherent research policy or 'agreement' among all faculty members should guide the allocation of resources, effort, and targeting.

III.   Recommendations for Follow-up Actions

The panel recommends the following points to be considered in any further development or improvement plan and internal discussion:

- The DNA in cooperation with the School of Engineering and potentially with the UWA, should consider the use of the new laboratories for research purposes too, as well as the offering of services to the industry. This implies not only new equipment, allocation of

resources and staff, but also certification and verification of all instruments and procedures. Results from highly accredited laboratories enjoy higher visibility in the global research community and may also attract the interest of the industry.

- As per the suggestion of the students, the UWA, the School and the DNA should institutionalise merit-based awards and support the participation of students in scientific and engineering contests.

- The DNA with cooperation with the students and graduates to develop a strong alumni association. The objective is to establish a mechanism for regular exchange of views on the UGP, the employability of the students, as well as for the increase of the visibility of the DNA and of the UWA in the industry and the society.

- It is suggested to the faculty to consider improvements and deepening in mathematics and economics in various subjects; the goal is to convey better the economic perspective of engineering output in all modules and results.

- It is suggested to the faculty to consider the Principles of Naval Architecture (PNA) published by the Society of Naval Architects and Marine Engineers (SNAME) as key reference books for all relevant subjects.

- The students should familiarise themselves with the use of English at all levels and for all purposes; this aspect will increase their employability.

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	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

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

The members of the External Evaluation & Accreditation Panel

Name and Surname   **Signature**

1. **Prof. Dr-Eng Orestis Schinas (Chair)**
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