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Accreditation Report for the New Undergraduate Study Programme in operation of:

Digital Industry Technologies

Institution: National and Kapodistrian University of Athens

Date: March 12, 2025

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης
ΕΣΠΑ 2021-2027
Πρόγραμμα
Ανθρώπινο Δυναμικό και Κοινωνική Συνοχή
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Report of the Panel appointed by the HAHE to undertake the review of the New Undergraduate Study Programme in operation of Digital Industry Technologies of the National and Kapodistrian University of Athens for the purposes of granting accreditation

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PART A: BACKGROUND AND CONTEXT OF THE REVIEW

I. The External Evaluation & Accreditation Panel

The Panel responsible for the Accreditation Review of the new undergraduate study programme in operation of Digital Industry Technologies of the National and Kapodistrian University of Athens comprised the following four (4) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. Professor Dimitrios S. Nikolopoulos (Chair)
   Virginia Tech, United States

2. Professor John Botsis
   Swiss Federal Institute of Technology, Lausanne, Switzerland

3. Professor George Tsatsaronis
   Technical University of Berlin, Germany

4. Ms. Magdalini Dragatsika
   University of Western Macedonia, Greece

II. Review Procedure and Documentation

Please refer briefly to the Panel preparation for the new undergraduate study programme in operation review, as well as to the documentation provided and considered by the Panel. State the dates of the site visit and describe the visit schedule and the meetings held. Feel free to mention any additional information regarding the procedure as appropriate.

Introduction

The External Evaluation and Accreditation Panel (EEAP) conducted an extensive review of the Undergraduate Study Programme (USP) in Digital Industry Technologies at the National and Kapodistrian University of Athens (NKUA), scheduled between March 4 and March 9, 2025, including a virtual visit and working sessions for the preparation of the visit and the Panel's report. The review aimed to assess the strategic planning, feasibility and sustainability of the programme while ensuring alignment with the Quality Standards for Accreditation.

Panel Preparation and Documentation Review

Before the site visit, the Panel conducted a comprehensive review of the documentation provided by NKUA, which included:

- The Strategic Plan (2019-2028), which outlines the University's academic priorities and the institutional development strategy.
- A feasibility study that evaluated the alignment of the programme with national and international academic and labour market trends.
- A four-year business plan detailing financial resources, faculty expansion, infrastructure development, and student enrolment projections.
- SWOT analysis that examines the strengths, weaknesses, opportunities, and risks of the programme.
- The curriculum structure, including the course syllabus, faculty qualifications, student learning outcomes, and research integration.

This preparatory phase allowed the Panel to develop key areas of inquiry and focus on potential challenges and areas for further clarification. During the virtual visit, the Department provided a detailed presentation and substantial additional material and data concerning the evolution of the Department's programs, personnel, student body, and infrastructure since the submission of the Department's original accreditation report in September 2022. The Panel examined in detail the most recent material to capture the current state of affairs in the Department and its programmes.

Site Visit and Meetings

The visit took place virtually, following a structured visit schedule on March 4 and 5, 2025. The schedule included a series of teleconferences and a virtual tour of the facility involving a wide range of institutional stakeholders.

March 3, 2025

• A private meeting among EEAP members to discuss the programme proposal, task allocation, and key evaluation criteria.

March 4, 2025

• Teleconference with the Vice-Rector and Head of Department, providing an overview of the academic profile, history, strengths, and areas of concern.

• Meeting with the Quality Assurance Unit (QAU/MODIP) and OMEA, focusing on compliance with accreditation standards, student assessments, and learning materials.

March 5, 2025

• Meeting with faculty members to discuss their teaching responsibilities, professional development opportunities, research participation, and student engagement strategies.

• Meeting with students, addressing their learning experience, satisfaction with facilities, and feedback on curriculum and support services.

• Online facility tour, including classrooms, laboratories, libraries, and digital learning resources, as well as a discussion with the Department Chair and evaluation of their suitability to support educational and research activities.

• Discussion with employers and social partners, focusing on industry collaboration, graduate employability, and skill alignment with labour market demands.

• Follow-up discussions with the Quality Assurance Committee (QAC) and OMEA, clarifying key points of the evaluation process.

• Closing teleconference with the Vice-Rector, Head of Department, and institutional representatives, presenting the initial observations and key findings of the Panel.

March 6–10, 2025

• Drafting of the Accreditation Report (AR) by the EEAP members, refining the assessments, and formulating conclusions.

• Submission of the draft AR to HAHE on March 12, 2025.

Procedural Observations

The evaluation process was conducted efficiently and transparently, with full cooperation from University representatives. The Institution provided timely access to documentation, including additional documents beyond the submitted accreditation dossier, ensuring a comprehensive review of the program's academic structure, resources, and sustainability measures. The engagement with faculty, students, and external stakeholders was excellent and facilitated a well-rounded assessment of teaching quality, student experience, and industry alignment.

Overall, the review process confirmed the program's progress since its establishment, with evidence of institutional commitment to faculty development, research integration, and student-centred learning approaches. The findings and recommendations of the Panel were based on documentary evidence, stakeholder discussions and virtual observations, ensuring a rigorous and objective evaluation of the program's compliance with accreditation standards.

III. New Undergraduate Study Programme in Operation Profile

Please provide a brief overview of the new undergraduate study programme in operation with reference to the following: history, academic remit, duration of studies, qualification awarded, employment opportunities, orientation challenges, or any other key background information. Also, you may provide a short description of the home Department and Institution, with reference to student population, campus, or any other facts, as deemed appropriate.

The Undergraduate Study Programme on Digital Industry Technologies at the National and Kapodistrian University of Athens (NKUA) was established in 2019 as part of the School of Science. Designed to address the evolving demands of Industry 4.0, the programme integrates cutting-edge disciplines such as automation, artificial intelligence, big data analytics, robotics, and smart manufacturing. With industries undergoing rapid digital transformation, the curriculum is structured to equip graduates with the theoretical knowledge and practical skills necessary for modern industrial environments.

The four-year programme spans eight semesters, awarding a Bachelor's degree (Ptychion) in Digital Industry Technologies, requiring the completion of 240 ECTS credits. The curriculum is carefully crafted to provide a multidisciplinary foundation, incorporating mathematics, physics, programming, networks, AI, and robotics alongside specialized coursework in industrial automation, smart systems, and digital business management. Hands-on learning is emphasized, with students engaging in internships and research projects, ensuring they gain real-world experience before entering the workforce.

Graduates of this programme have strong career prospects in various high-tech sectors, including smart manufacturing, AI-driven industries, IT consulting, and digital transformation roles in enterprises. Employment opportunities span data analytics, cyber-physical systems, IoT, cloud-based industrial services, and automation technologies, making graduates highly sought after in both national and international markets.

As an emerging field, digital industry technologies present unique challenges, particularly in bridging the gap between traditional engineering disciplines and digital industrial applications. The rapid pace of technological advancement requires continuous updates to the curriculum, ensuring alignment with the latest developments in AI, robotics, and industrial automation. Additionally, fostering stronger industry partnerships is essential to enhance internship opportunities and applied research collaborations.

The programme is hosted in the Department of Digital Industry Technologies, which is part of the NKUA School of Science. Founded in 1837, NKUA is Greece's oldest and largest University, renowned for its academic excellence and research contributions. With a student population exceeding 100,000, the University provides a vibrant academic environment, fostering innovation and interdisciplinary collaboration. The University campuses offer state-of-the-art research facilities, further supporting students in developing technical expertise and engaging in cutting-edge industrial research.

By offering a future-orientated curriculum, the Undergraduate Study Programme in Digital Industry Technologies aligns with NKUA's mission to support Greece's digital transformation and improve industrial innovation, preparing students for the challenges and opportunities of the digital age.

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, 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 its 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. Documentation on 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 destitution 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-centred 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*

Evaluation Report: Compliance with the Principle of Strategic Planning, Feasibility, and Sustainability

Findings

Strategic Planning

The Digital Industry Technologies Department (DIT) was established as part of the University of Athens (NKUA) strategic plan, aligned with national and European priorities for digital transformation and Industry 4.0. The foundation of the Department is related to the NKUA Strategic Development Plan 2019-2028, which supports the creation of new academic units that focus on emerging technologies. The programme addresses skills gaps in the Greek and EU job markets, particularly in Artificial Intelligence, IoT, Cyber-Physical Systems, and Digital Industry Management. The Department has established formal collaborations with industry stakeholders and is strategically located near Greece's largest industrial zone (Schimatari-Tanagra-Inofyta), allowing direct engagement with relevant businesses.

Feasibility

The Department has 23 faculty members and additional academic personnel from other NKUA departments. The programme benefits from well-developed research laboratories, including the Robotics, Automation and Cyber-Physical Systems (EPAEK) and the Distributed Computing and AI (DEUKALION) laboratories. The Department has secured EU-funded research projects and national funding opportunities, ensuring sustainability in research activities. Its infrastructure includes three IT laboratories, 46 educational laboratories, and other supporting facilities. Enrolment data suggest a stable annual intake of approximately 230 students, ensuring programme continuity. However, identified weaknesses include limited technical and administrative support, slow faculty hiring processes due to national regulations, and delays in infrastructure upgrades due to funding constraints.

Sustainability

The programme is aligned with national and EU funding mechanisms, including Horizon Europe, Erasmus+, and the Greek Development Fund. However, there are significant concerns about the long-term strategic vision of the programme and its ability to differentiate itself from other similar programmes both nationally and internationally. The Department has not yet clearly defined its unique academic strengths or established a forward-looking vision that extends beyond the current state of Industry 4.0. This lack of differentiation raises concerns about its ability to remain competitive in the long term. Combined with funding uncertainties and student quality concerns, these issues present sustainability challenges. Although the Department has strong potential for industrial partnerships, the absence of a distinct academic identity and a long-term growth strategy can limit its ability to secure stable funding and attract high-quality students and faculty.

Analysis

Strengths

The programme has a strategic plan that meets industry needs. Faculty and research strengths, despite resource limitations, have enabled the establishment of high-quality research laboratories and attracted competitive funding. The Department benefits from its industrial collaboration and location advantage, as proximity to Greece's industrial hub enhances

feasibility and practical learning opportunities. Additionally, the Department's growth potential is evident through its ongoing expansion of graduate programmes and international research collaborations, ensuring long-term sustainability.

Weaknesses and Risks

The Department faces several challenges, primarily concerning resource limitations. The limited number of faculty and administrative staff results in a high workload, while slow hiring processes due to national regulations affect programme scalability. Funding dependence remains critical, as the programme relies heavily on government and EU funding, with limited private sector financial contributions. Procurement delays for lab equipment further impact hands-on learning and research. Additionally, student preparation, progression, and graduation rates remain areas of concern. Many incoming students lack strong foundational knowledge in mathematics and physics, leading to lower graduation rates. The absence of structured remedial support programmes exacerbates this issue. More critically, the Department has not developed a long-term strategic vision that distinguishes it from other academic units in Greece and abroad. Without a clearly defined area of academic excellence or a roadmap for research and education beyond the current state of Industry 4.0, the Department risks stagnation. Coupled with existing funding and student quality concerns, this raises significant questions about its long-term sustainability and competitiveness.

Conclusions

The Digital Industry Technologies Department (DIT) complies strongly with Strategic Planning, Feasibility, and Sustainability Principles. The programme is aligned with NKUA's long-term strategy, has a clear industrial and academic focus and is positioned for growth in the digital transformation sector. However, challenges in faculty recruitment, resource allocation, and student quality and progress need to be addressed to ensure long-term success. Furthermore, the Department has not yet articulated a long-term strategic vision differentiating it from similar programmes. Without a clear roadmap for its academic and research identity beyond Industry 4.0, its ability to attract funding, high-quality students, and excellent faculty remains uncertain. This poses a significant risk to its sustainability.

Study Programme Compliance

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

The programme meets the compliance requirements for Strategic Planning, Feasibility, and Sustainability, but its long-term differentiation and sustainability remain areas of concern. Addressing faculty recruitment delays, strengthening private sector participation, and improving student support mechanisms will ensure the Department's continued growth and global competitiveness. Most importantly, the Department must establish a long-term strategic vision that defines its unique academic and research identity beyond the current Industry 4.0 framework. Without this, its ability to remain a leading programme in digital industry technologies remains uncertain.

Panel Judgement

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

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

Panel Recommendations

R1.1. Establishing a Long-Term Strategic Vision for Differentiation

The Department should conduct a strategic planning process to clearly define its academic strengths and areas of specialisation that will distinguish it from similar programmes in Greece and abroad. This could include focusing on emerging technologies beyond Industry 4.0, such as human-centred AI or sustainability in digital manufacturing. Engaging faculty, industry partners, and international collaborators in this process will help create a unique identity for the Department, ensuring its long-term competitiveness and sustainability.

R1.2. Faculty and Administrative Support Enhancement

Securing funding for new faculty positions and technical or administrative staff hires is essential to improve student-to-faculty ratios and reduce workload pressure. Additionally, establishing faster faculty recruitment processes will help maintain academic continuity.

R1.3. Strengthening Industry & Private Sector Involvement

Developing joint industry-funded research projects can diversify funding sources and support faculty development and equipment acquisition. Expanding internship and apprenticeship programmes with leading Greek and multinational companies will strengthen industry ties.

R1.4. Improving Student Support and Graduation Rates

Establishing more structured preparatory programmes for incoming students, such as online seminars or summer courses in mathematics and physics and offering extended office hours and discussion sessions to support students at risk individually can address foundational knowledge gaps. Implementing adaptive learning technologies and peer mentoring programmes will further help students. Increasing student participation in research labs and industrial projects will improve practical skills and motivation.

R1.5. Infrastructure & Equipment Modernisation

Expediting lab equipment procurement by exploring alternative funding options, such as private donations and EU infrastructure grants, is recommended. Developing a long-term IT and laboratory maintenance plan will ensure sustainability.

R1.6. Expanding International Collaborations

Establishing dual degree programmes with European universities in Industry 4.0 disciplines will enhance global partnerships. Increasing participation in Erasmus+ faculty and student mobility programmes and seeking membership in global digital transformation research networks will further support internationalisation.

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 Institution's 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

- *Institutional Revised Quality Assurance Policy of the Institution*
- *The Academic Unit 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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The findings of the External Evaluation and Accreditation Panel (EEAP) regarding the quality assurance policy of the Institution and the academic unit are based on the material received and the detailed discussions with the USP chair and cochair, the Vice-Rector of the University for Academic Affairs, the head of the MODIP,

members of the Internal Evaluation Group, faculty members, students, and external stakeholders. All discussions were held in a very positive atmosphere and were informative.

The USP has established some quantitative and qualitative goals. Suitable KPIs have been formulated and are being monitored. Teaching, services, students, and course structure data are collected and documented internally. The relevant documents comply with the quality policy of the National and Kapodistrian University of Athens and affirm the commitment of the academic unit to establish, maintain, monitor, and improve quality assurance. Periodic internal evaluations are conducted to identify improvement issues and improve the overall performance of the programme. The Internal Evaluation Group regularly meets and reviews specific quality goals to improve the programme. The programme aims to continually evolve following developments in the field, enhance educational and research activities, and promote high-quality services according to the HAHE guidelines. Teaching faculty and administrators are committed to ensuring high-quality student support services.

Student participation in the formal evaluation of classes is very low (3%-5%). The Internal Evaluation Group analyses and reviews each course's evaluation results. The current students interviewed by the EEAP expressed their satisfaction with the programme and confirmed that they are consulted for input into the quality assurance system. Faculty members are experienced and well-qualified to support the programme effectively.

Analysis

The quality objectives associated with the programme are established and reviewed annually. These objectives are communicated to all faculty members, documented, and monitored as required.

The response rate to formal student evaluations of class quality must be improved. Through the intensive interaction faculty members have with students in the laboratories, the former receives valuable input from students about issues that can be enhanced in classes. However, this is not sufficient for the Internal Evaluation Group and MODIP to decide about the required changes and to fully implement some required quality assurance measures. Faculty members must clearly emphasise to students the importance of class evaluations and find creative ways to increase student participation in these evaluations significantly.

Conclusions

The EEAP concludes that the required policies for quality assurance are in place. The faculty are dedicated to teaching and are committed to sustaining and expanding the programme. More attention should be paid to receiving more responses from students during the evaluation of courses.

Panel Judgement

Principle 2: Institutional quality assurance policy of the Institution and the academic unit	
Fully compliant	√
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R2.1 Communication with Students

Improve communication with students regarding the importance of class evaluations.

R2.2 Increased Student Attendance

Develop innovative approaches to increase student participation in class evaluations

R2.3 Improve course evaluation questionnaire

HAHE might consider developing a more concise questionnaire for the evaluations of classes

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The undergraduate study programme has been developed on the basis of appropriate standards that are internationally recognized. The curriculum has been compared with similar study programmes to ensure it meets appropriate, universally accepted standards. The study program is appropriately designed, containing theoretical courses and many laboratories where students can practice their skills. In addition, the feasibility study for the study programme adequately addresses its objectives, expected outputs, and required inputs. This also confirms the sustainability of this undergraduate programme. Furthermore, there is a great emphasis on courses and laboratories related to Industry 4.0, including Automation Systems, Robotics, and Artificial Intelligence. This focus ensures that graduates are well prepared for evolving technological trends and ready to enter the highly demanding and challenging industry field.

Analysis

The structure of the programme is also clear and rational. It includes core courses that are basic and compulsory for everyone and other elective courses based on the available divisions. Additionally, there are more specialised courses and seminars available. In addition, there is a procedure for periodic curriculum review, which ensures continuous improvement. The study programme undergoes systematic revisions based on feedback from students, industry experts, and external stakeholders. More specifically, student feedback is collected through evaluations, while stakeholders and other external industry experts seem to be consulted in the curriculum review process. This process ensures that the course content is always relevant and up to date, following the technological and industry trends. Furthermore, the Student Guide is publicly available, comprehensive, and provides detailed information about anything a student may need, such as the study programme structure, course descriptions, learning objectives, ECTS allocation, and assessment methods.

Conclusions

In general, the programme meets all the necessary requirements. It is a carefully and well-designed undergraduate study programme that is constantly ensured to remain dynamic and relevant, always in line with the increased demands and the continuous changes and updates that happen in the industry field.

Panel Judgement

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

Panel Recommendations

R3.1 Strengthening Placement and Internships

As the study program aims to prepare students as skilled graduates to face realistic problems in the industry field, greater emphasis should be given to Training placements/ Internships, ensuring they correspond to more than 8 ECTS. This adjustment would encourage more students to participate in these placements and internships, as they are essential for their professional development.

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. 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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The Digital Industry Technologies Department is part of the School of Science at the National and Kapodistrian University of Athens. Both students, teaching, and administrative staff express their high satisfaction with the facilities and all the equipment, e.g. laboratory equipment, recognizing their essential role in enhancing the total learning experience. Additionally, students benefit from Academic Advisors, who are assigned from their first semester until the completion of their studies, ensuring continuous academic support and guidance whenever needed. Furthermore, the Department has adopted diverse teaching methods, including lectures, exercises, laboratory activities, seminars, and support classes. Finally, the programme integrates various pedagogical approaches and dynamic learning models to actively engage students and accommodate different learning needs.

Analysis

The Digital Industry Technologies Department adopts a student-centred approach by integrating a variety of teaching methodologies that support different students' learning needs and make students participate actively in the teaching process. The courses are delivered through lectures, exercises, laboratory activities, seminars, and support classes, ensuring a balance between theoretical knowledge and practical application. The curriculum incorporates modern teaching technologies and flexible learning paths, allowing students to develop skills through theoretical background, laboratory exercises, weekly projects, and interactive classroom discussions. Additionally, since students are seen as active participants in their learning journey, they are encouraged to participate in collaborative research projects and industry-related activities. These experiences enhance their academic knowledge and help them acquire teamwork, communication, and professional development skills. Support classes and additional seminars provide students with further guidance on more challenging courses. In addition, students are well informed about expectations, coursework requirements, and assessment processes through the Student Guide.

Additionally, the Department conducts regular student satisfaction surveys to evaluate the effectiveness of teaching methods, course content, and assessment fairness. Feedback collected is analysed and used to make changes and improvements, ensuring continuous development. Academic support is a fundamental aspect of the Department structure, with Academic Advisors assigned to students from their first semester until graduation. These advisors provide personalised academic guidance, assisting students with questions, problems, or concerns. Furthermore, the University maintains a formal appeal process, ensuring that academic evaluations remain fair and objective. The learning environment is highly student-centred, inclusive, and respectful, fostering collaboration and academic engagement. The combination of flexible learning pathways, diverse teaching methods, structured academic support, and clear assessment policies ensures that students receive a well-rounded and engaging educational experience.

Conclusions

The undergraduate programme successfully implements a student-centred approach by incorporating a sufficient variety of teaching methodologies, flexible learning strategies, and well-equipped laboratory facilities. However, some challenges remain concerning demanding theoretical subjects such as mathematics and physics, which may require additional academic support mechanisms to enhance student performance.

Panel Judgement

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

Panel Recommendations

R4.1 Additional support for students at risk

Extra lectures should be implemented to support students with weaker backgrounds in some essential but also difficult courses. Teachers need to encourage students to attend these lectures. Furthermore, to ensure flexibility and accessibility, these additional lectures can be offered offline or online. In addition, at the beginning of each semester and throughout the semester, the teacher can identify which specific parts of the course need additional support. This can be achieved via short tests or everyday questions and exercises to understand the student's level better. In this way, teachers can adjust the content of the additional lectures, making them more flexible and geared toward the needs of the students.

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, internships, 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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The NKUA Department of Digital Industry Technologies (DIT) undergraduate programme has developed and implemented internal regulations that describe the admission, development,

and education of the students throughout the programme. These rules aim to support the students, their progress, available means, mobility programmes and relevant stipulations. In addition, the quality standards for the final year bachelor's thesis and/or practical exercise are included and well explained.

At the beginning of each academic year, the DIT Department organises a formal welcoming event for the new students by the head, academic staff, and the administrative support of the Department. An academic advisor for each incoming student is currently assigned and serves as such for the entire study period.

Students are informed about programme requirements, credit hours, and the two directions of study through the Department's website and other IT infrastructure resources (e-class, my studies, email, open-source educational materials, etc.) and their academic advisor.

Furthermore, students are informed about practical industry training, mobility in other Greek institutions, and Erasmus + programmes through the Department and NKUA website and the Department's staff. After completion of the requirements for graduation, a diploma and a diploma supplement with details on the education are provided to the student.

Analysis

The number of first-year students is not fully controlled by the DIT/NKUA since the number of admitted students is decided based on national higher education entrance examinations that take place every year. Statistical data is tracked through the student's 'handbook' and MODIP, such as student admission, participation, and performance in exams, the spread of grades, and per cent of students who excel in exams, duration of studies and students who graduate in the 4-year period. Such statistical data are reported in the annual report of OMEA.

The DIT undergraduate programme is new (since 2019). The provided data show that a relatively small number of students completed their studies in the four-year timeframe. It is unclear to the EEAP if this low number reflects students' difficulties with the programme or other personal issues. The relevant information was not clear.

Discussions with academic staff showed that the level of incoming students in mathematics and physics is relatively low to follow the programme requirements. The Department recognises this critical issue and tries to address it with limited reviews of the subjects needed in relevant courses.

Regarding mobility programmes and advantages, students are informed via the DIT and NKUA Web sites, and some students have benefited from such programmes so far.

It is noted that the bachelor thesis and/or practical exercise is mandatory and conducted during the 8th and ultimate semester of studies or later after completing the coursework required by the programme. Opportunities are offered to the students for internships and practical training, and participation is healthy but relatively low.

Conclusions

There is a well-planned effort by the Department to expose and train the students with practical aspects of their education via projects, industry contacts, and interactions.

The mobility provided by the ERASMUS+ and other programmes is in operation, and students have started to benefit from such programmes.

Overall, the Department has the necessary documentation and means to support this Study Programme. The documentation provided was sufficient and clear. Students were familiar with the departmental procedures for the topics referred to above. They were enthusiastic about their decision to study in this undergraduate programme, although it was not the first choice for most of them.

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	√
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R5.1 Addressing Foundational Gaps in Student Preparation

The Department must exploit avenues to improve the low mathematics and physics levels of the incoming students.

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The Institution has implemented a rigorous and transparent process for recruiting, evaluating, and developing its teaching staff. Faculty members are carefully selected based on their academic and professional qualifications, ensuring that they meet the needs of the academic unit while maintaining a balance between teaching and research responsibilities. The Institution also provides structured professional development opportunities, including participation in research initiatives, training programmes, and international conferences. Faculty members benefit from mobility programmes encouraging collaboration and knowledge exchange, reinforcing their academic and research growth.

Research is integrated into the academic framework, with faculty members actively contributing to scholarly work evaluated through internationally recognized indices such as Google Scholar and Scopus. Curricular updates, student engagement in research, and external partnerships strengthen the connection between education and research. Institutional funding, including resources from the ΕΛΚΕ, supports faculty participation in national and international research projects, ensuring that they remain actively involved in their fields.

Despite these strengths, there are significant challenges related to the high administrative and teaching workload. While the programme meets the necessary requirements, faculty members face a considerable burden of teaching responsibilities and administrative tasks, which limits their ability to dedicate time to research. The issue is compounded by the relatively small number of faculty members, particularly in the program's early years. Administrative duties also consume a significant portion of faculty time, potentially hindering their research productivity and participation in scholarly activities.

The Institution has established systematic quality assurance mechanisms to monitor faculty performance in teaching and research. These evaluations provide constructive feedback and offer pathways for professional development, ensuring that faculty members receive the necessary support to enhance their teaching and research activities. However, despite these measures, the sustainability of faculty research output remains a concern due to the pressures of a demanding workload.

Analysis

The Institution has demonstrated a strong commitment to ensuring its teaching staff's competence and high quality. Recruitment and evaluation processes align with international best practices, and faculty members benefit from a supportive environment that encourages continuous professional development. Integrating research into teaching further enhances the programme's academic quality, allowing students to engage with cutting-edge knowledge and methodologies.

However, the high administrative and teaching load presents a significant structural challenge. Despite their qualifications and research potential, faculty members face constraints on their ability to participate in scholarly activities due to heavy teaching schedules and administrative responsibilities. This challenge is particularly pressing given the relatively small faculty size, which increases the burden on existing members. Although the Institution has implemented quality assurance mechanisms and research support policies, the effectiveness of these initiatives is limited if faculty members do not have the necessary time and flexibility to dedicate to research.

The long-term sustainability of research productivity requires careful consideration of workload management. Without addressing this issue, the Institution risks diminishing the research contributions of its faculty, which could, in turn, impact the overall academic reputation and competitiveness of the programme.

Conclusions

The programme fully complies with Principle 6, which shows excellence in faculty recruitment, development, and research support. However, the high workload of faculty remains a challenge that requires targeted interventions. To address this issue, strategic measures should be implemented, including faculty expansion to reduce workload per member, redistribution of administrative tasks to free up time for research, and adjustments to teaching loads for faculty members who are highly engaged in research.

Furthermore, introducing targeted incentives, such as internal grants, dedicated research time, or reduced teaching obligations for active research faculty, could help sustain and improve scholarly output. By proactively managing faculty workload and monitoring research productivity, the Institution can ensure that its academic staff continues to excel in teaching and research, ultimately reinforcing the program's long-term success.

Panel Judgement

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

Panel Recommendations

R6.1 Strategic Faculty Hiring

Increase the number of faculty members to ensure a balanced distribution of teaching responsibilities and reduce excessive workload.

R6.2 Redistribution of administrative tasks

Delegate or streamline administrative duties to allow faculty more time for research activities.

R6.3 Targeted Adjustments to Teaching Loads

Implement policies that reduce teaching obligations for faculty members with high research productivity.

R6.4 Expansion of internal funding mechanisms

Provide additional institutional support for research through dedicated grants, fellowships, or seed funding for faculty projects.

R6.5 Structured Research Incentives

Strengthen sabbatical opportunities, research leave, or performance-based teaching load reduction to encourage faculty participation in scholarly activities.

R6.6 Continuous Monitoring of Faculty Workload and Research Performance

Establish a systematic review process to ensure faculty members maintain a sustainable balance between teaching, administration, and research.

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The Department is housed in the old Evripos campus of the former TEI at Psahna, near Chalkida. Inevitably, there has been a lot of restructuring work, which has provided some space for laboratories and offices. The classrooms and laboratories presented appeared to be clean and tidy. There is a library on campus, and students can also use the central library of NKUA in Athens.

A comprehensive range of support services is available to the students, including a restaurant, free meals for low-income students, low-cost transport, career counselling, and opportunities

for sports and cultural activities. There are no boarding dormitories, but a service helps students find accommodation outside of the campus.

Incoming students are informed about existing services during a welcome ceremony at the start of the semester and on the department site. In addition, students, coupled with an open and accommodating faculty and support staff, ensure an effective information flow.

The Department has 23 faculty members, one laboratory engineer and one laboratory technician.

Educational material offered to the students includes printed and electronic textbooks through EVDOXOS and ALIPPOS systems, the material taught in classes via the e-class and other recorded lectures found online. Furthermore, the infrastructure of the NKUA library is available for review and study of relevant published literature.

The ERASMUS+ programme for practical exercise and mobility in Greek universities is in place, and some students have profited from the programmes. Internships are also available to students.

Analysis

Most student support services seem to be in place. There are plenty of classrooms, and the six laboratories of the department seem sufficient and have contemporary instrumentation. Students are informed about the programme requirements, campus activities, seminars, etc., from various sources, including the Department's well-structured website, email, and direct contact with faculty and staff.

The number of academic staff in the Department is healthy and active in research and teaching. However, the Department is staffed with only one laboratory technician and another laboratory mechanic. These are far too few to maintain and keep active the research laboratories and the laboratory components of the courses. The Department claims that post- graduate students and academic faculty complement the laboratory personnel. This may work for a while, but in the long run, it may compromise the operability of the laboratories, given the engineering and practical approach to education provided by the programme.

The EEAP also noticed that four (4) administration staff members are insufficient to serve the faculty and students and often must spend excessive hours to complete their tasks efficiently.

Regarding student mobility, the material provided by the Department indicates that it works well.

Conclusions

The learning resources provided by the Department and the NKUA must be good and appreciated by students. The technical staff of two is found to be too low to efficiently support the faculty's research and the curriculum with significant project and practical components.

There appears to be sufficient and competent administrative staff to ensure the smooth operation of the student support services in a small office space. With the potential increase in student numbers, additional staff may be required.

Panel Judgement

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

Panel Recommendations.

R7.1 Addressing Technical Staff Shortage

The Department should increase the number of permanent laboratory technicians.

R7.2 Office Space

The Department should increase and improve the quality of the office space for the faculty and administrative staff.

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The NKUA has established and operates an information system for the management and monitoring of data concerning students, faculty members, programme structure and organisation, teaching and provision of services to students. The Quality Assessment Unit collects and analyses data and provides the results to the Internal Evaluation Group of the USP, and to faculty members for them to take action, if necessary.

The online information systems used for the collection of data about student satisfaction with the courses, their content, and examinations are not used effectively by students and, therefore, very limited input is collected.

The University's electronic services are satisfactory, and the data seems reliable, essential for accurate information and decision making as well as for identifying areas of smooth operation and areas for improvement. The information provided on the web pages dedicated to the USP in English needs to be expanded to include, as a minimum, a brief presentation of the offered classes and short profiles of the faculty members.

Analysis

From the presentations and discussions of the EEAP with all participants in this evaluation, it appears that there are procedures for collecting and analysing information on teaching, study programmes, project work, and other activities. The data are fed into the internal quality assurance system. The procedures seem to work well, but some enhancement may be required. The USP is relatively new. Future career paths of USP graduates must be included and presented and the employability of graduates should be evaluated.

The course evaluation questionnaire contains more than 30 questions that students are asked to answer every semester to provide information about the course and projects, laboratories, faculty members' teaching performance, learning outcomes, etc. The participation of students in the survey is very low and must be increased.

Conclusions

The USP has established procedures to collect data, analyse and communicate the results to the relevant bodies. Data reflecting the evolution of KPIs are presented. More detailed data relevant to the analysis and evaluation related to the availability and accessibility of resources (equipment, social services, etc.) are not easily accessible.

Panel Judgement

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

Panel Recommendations

R8.1. Data Collection

Ensure that data on the employability and carrier path of graduates are collected in the future.

R8.2. Participation in Course Evaluation

Improve efforts to improve the participation of students in the evaluation of classes.

R8.3. Presentation of the Study Programmer in English

Improve the presentation of the USP in English

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 Institution's 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 with complete, clear and objective information*
- *Provision for website maintenance and updating*

Study Programme Compliance

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

The website of the Department of Digital Industry Technologies is easily accessible to everyone and user-friendly. It contains all the information related to the academic unit and the study programme, ensuring transparency for students and stakeholders. As it concerns the study programme, all the details, including available courses, laboratories, information about the academic staff, and the general regulations and criteria governing the study programme, are available online. Furthermore, the Academic Unit Policy for Quality Assurance is also available online and follows the guidelines established by the National and Kapodistrian University of Athens, which continues the continuous improvement of the programme. However, a key issue identified is that practical matters, such as accommodation places and other services which are helpful for all undergraduate students, are not published on the website.

Analysis

A significant limitation of the website is the insufficient availability of English content. All website content is provided only in Greek, which does not give anyone who does not speak Greek the opportunity to visit any of the website's information. In addition, the absence of

practical information (accommodation, other services) makes it difficult for new students to navigate university life.

Conclusions

The department website provides essential information about the academic unit and the study programme, ensuring accessibility for students and stakeholders. The programme is well-structured and clearly presented. Additionally, the curriculum can be revised through a collaborative process that involves stakeholders beyond just students and teaching staff to ensure continuous improvement and alignment with academic and industry standards.

Panel Judgement

Principle 9: Public information on the new undergraduate programmes	
Fully compliant	√
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

R9.1 Complete and Improve the English version of the Program's Website

To improve the completeness of the public information available on the Department's website, an English version should be available without missing any of the existing information. Furthermore, practical information would help students navigate and improve the overall experience of students.

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

A good infrastructure is in place for extensive data collection, objective analysis of quantitative metrics, and qualitative assessment based on student and academic staff surveys. The OMEA/MODIP collects feedback on the programme content through a range of sources.

Data collected for quality indicators include course enrolment, exam attempts, grades, teaching load, faculty performance metrics, and others. The administration reviews and analyses these data annually in a comprehensive report.

Discussions with employers and social partners show that they are generally satisfied with the preparation of the students and that the programme provides a good foundational

preparation for industrial practice. The panel interviews confirmed a good level of interaction between faculty and employers.

Changes to courses and the Programme are proposed and evaluated through a formal process and are approved by the Department. During discussions with a part of the faculty, it was stated that the Department has not undertaken any major change since the launch in anticipation of the first external review.

Student assessment is well-structured and is monitored primarily through course surveys that take place toward the end of each semester.

Analysis

The Department collects feedback on the content of the programme through various sources. The annual internal evaluation report is available on the Department's Web site. The EEAP found that the participation of the students in the course evaluation was very low.

Several faculty members are actively in contact with external industrial groups, providing critical input to the profile of the programme and possible adaptation to meet industry needs.

The interviews with employers confirmed this good level of interaction and the alignment of the programme with their needs.

Conclusions

The internal periodic review process of the programme is well structured and documented. Student workload is monitored primarily through course surveys.

The participation of students in the surveys is very low and must be improved.

The Department plans to implement a platform to follow up with its alumni. The EEAP found this effort important and one that can benefit the programme and the long-term image of the Department.

Panel Judgement

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

Panel Recommendations

R10.1 Annual Internal Evaluations by Students

The EEAP recommends that reports of annual internal evaluations submitted by students be discussed between the academic staff and the head of the Department to address the issue of very low student participation in course evaluations.

R10.2 External Stakeholders Advisory Board

An industrial/external stakeholders advisory board should be established, and discussions should be actively held with the faculty to improve the programme.

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 administering 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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

Findings

This is the first external evaluation of this USP. Therefore, there are no previous reports or action points that can be addressed. Persons who participated in this evaluation made clear that they understood the importance of the external evaluation and would address any significant issues identified in this external report from the EEAP. Overall, the external evaluation procedure of the USP Digital Industry Technologies at the National and Kapodistrian University of Athens was conducted well. All presentations and discussions took place in a very constructive atmosphere.

Analysis

This EEAP finds the accreditation procedure appropriate for its further evolution in training undergraduate students in digital industry technologies.

No formal external advisory board has yet been established for this USP. The external evaluation and the quality of this USP would benefit from the input of such a formal board.

Conclusions

The EEAP thanks all the participants in the evaluation for their cooperation.

Panel Judgement

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

Panel Recommendations

R11.1. Formal Involvement of External Stakeholders

The external evaluation process will benefit from an established formal process involving external stakeholders rather than an ad hoc process, usually based on personal contacts.

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

Please comment on the compliance with the Principle. Specifically: Please describe the findings related to the Principle, analyse, and conclude your judgement. Findings, analysis of judgement and conclusions should be developed below in three distinct parts.

I. Findings
II. Analysis
III. Conclusions

Panel Judgement

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

Panel Recommendations

Please provide your recommendations with regard to issues that need to be addressed, as appropriate.

PART C: CONCLUSIONS

I. Features of Good Practice

The Undergraduate Study Programme in Digital Industry Technologies at the National and Kapodistrian University of Athens demonstrates exemplary alignment with national and European strategic priorities for digital transformation and Industry 4.0. The programme's curriculum is well-structured, incorporating a strong balance between theoretical foundations and hands-on learning experiences, ensuring that graduates are well-prepared for modern industrial environments. A key strength is its integration of cutting-edge disciplines such as automation, artificial intelligence, big data analytics, and smart manufacturing, which are complemented by a forward-looking approach to research and industry collaboration. The programme benefits from well-equipped laboratories, active faculty involvement in research, and an emphasis on applied learning through internships and industrial projects. Furthermore, the proximity of the Department to Greece's largest industrial zone enables strong partnerships with industry stakeholders, fostering opportunities for students to gain real-world experience and ensuring the relevance of the curriculum to the demands of the labour market.

The programme's commitment to continuous improvement is evident in its structured quality assurance mechanisms, including regular internal evaluations, student feedback collection, and alignment with international accreditation standards. Faculty members demonstrate high expertise and engagement, contributing to teaching excellence and research advancements. The Institution has implemented transparent and merit-based faculty recruitment procedures, ensuring a high standard of teaching and research. Additionally, the strong student support system, which includes assigned academic advisors, flexible learning pathways, and opportunities for international mobility through Erasmus+ and other exchange programmes, enhances the overall student experience. The Department's efforts to foster interdisciplinary collaboration within the Institution and with external partners contribute further to its long-term sustainability and competitive positioning in the academic and professional landscape.

II. Areas of weakness

Despite its strong foundation and alignment with industry needs, the Undergraduate Study Programme in Digital Industry Technologies faces several challenges that may impact its long-term sustainability and competitiveness. One of the primary concerns is the high workload placed on faculty members due to the limited teaching and administrative staff. Although faculty are highly qualified and engaged, the slow hiring process and insufficient administrative support constrain their ability to balance teaching, research, and student mentorship

effectively. Furthermore, the lack of a distinct long-term strategic vision that differentiates the programme from similar academic offerings in Greece and abroad presents a risk to its future development. Without a roadmap beyond the current Industry 4.0 framework, the programme may struggle to establish itself as a unique and leading institution in digital industry technologies.

Another key weakness is the limited participation of students in course evaluations and feedback mechanisms, which hinders the effectiveness of the internal quality assurance process. Participation rates in formal student surveys remain low, reducing the Institution's ability to gather meaningful information for curriculum and teaching improvements. Additionally, while the programme offers strong theoretical foundations, many students face challenges with fundamental courses, particularly in mathematics and physics, which contribute to lower-than-expected graduation rates. The Department has yet to implement structured remedial support mechanisms, such as preparatory courses or enhanced tutoring services, to address this gap. Furthermore, while industry partnerships are in place, there is room for greater involvement of external stakeholders in shaping the programme's curriculum and strengthening internship opportunities, ensuring a seamless transition for students from academia to the workforce.

III. Recommendations for Follow-up Actions

To enhance the long-term sustainability and competitiveness of the Undergraduate Study Programme in Digital Industry Technologies, the Department should develop a strategic roadmap that clearly defines its unique academic identity beyond the current Industry 4.0 framework. This could include a focus on emerging areas such as Industry 5.0, human-centred AI, or sustainable digital manufacturing, ensuring differentiation from similar programmes. Additionally, the securing of additional faculty positions and administrative staff is essential to alleviate the high workload on existing personnel and improve the participation of faculty and students. Streamlining faculty recruitment processes and increasing funding for research activities will further support the Department's growth and its ability to attract top-tier educators and researchers. Strengthening industry partnerships through expanded collaborative research projects, industry-funded scholarships, and structured internship programmes will also ensure that graduates are better prepared for workforce demands.

To address student performance challenges, the Department should implement structured academic support mechanisms, such as preparatory courses in mathematics and physics, dedicated tutoring services, and adaptive learning technologies to help students strengthen foundational knowledge. Improving student participation in course evaluations is also critical; this can be achieved through better communication about the importance of feedback,

offering incentives for participation, and simplifying the evaluation process. Additionally, the programme should improve its public visibility and accessibility by developing a fully bilingual website with comprehensive information on curriculum, faculty and student resources, and practical information on housing, transportation, and student services. Finally, establishing a formal advisory board of external industry stakeholders and alumni can provide valuable input on curriculum improvements and ensure that the programme remains aligned with evolving industry needs.

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: 1, 2, 3, 5, 6, 7, 8, 9, 11

The Principles where substantial compliance has been achieved are: 4, 10

The principles where partial compliance has been achieved are:

The Principles where failure of compliance was identified are:

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

The members of the External Evaluation & Accreditation Panel

Name and Surname Signature

1. Professor Dimitrios S. Nikolopoulos (Chair)
   Virginia Tech, United States

2. Professor John Botsis
   Swiss Federal Institute of Technology, Lausanne, Switzerland

3. Professor George Tsatsaronis
   Technical University of Berlin, Germany

4. Ms. Magdalini Dragatsika
   University of Western Macedonia, Greece