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HELLENIC REPUBLIC

Εθνική Αρχή
Ανώτατης Εκπαίδευσης
Hellenic Authority
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Accreditation Report
for the New Undergraduate Study Programme in operation of:

Surveying and Geoinformatics Engineering

Institution: International Hellenic University
Date: 28 November 2022

Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο
Επιχειρησιακό Πρόγραμμα
Ανάπτυξη Ανθρώπινου Δυναμικού,
Εκπαίδευση και Διά Βίου Μάθηση
Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης
ΕΣΠΑ 2014-2020
enqa.

Report of the Panel appointed by the HAHE to undertake the review of the New Undergraduate Study Programme in operation of **Surveying and Geoinformatics Engineering** of the **International Hellenic University** 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 **Surveying and Geoinformatics Engineering** of the **International Hellenic University** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. **Prof. Emeritus Michael Sideris (Chair)**
   University of Calgary, Calgary, Alberta, Canada

2. **Prof. Diofantos Hadjimitsis**
   Cyprus University of Technology, Limassol, Cyprus

3. **Assoc. Prof. Dimitrios Skarlatos**
   Cyprus University of Technology, Limassol, Cyprus

4. **Mr. Michail Kalogiannakis**
   Technical Chamber of Greece, Athens, Greece

5. **Ms. Georgia Tsaftaridou, student**
   Democritus University of Thrace, Greece

II. Review Procedure and Documentation

The Hellenic Authority for Higher Education (HAHE) provided electronically to the External Evaluation & Accreditation Panel (EEAP) the evaluation template plus several other documents with evaluation information and guidelines. Also provided were 41 support documents about the International Hellenic University (IHU), the Department of Surveying and Geoinformatics Engineering (DSGE) and its undergraduate programme (UGP), including the proposal for the accreditation of the academic programme of the Department, full information on the curriculum, its facilities, academic requirements, courses, examinations, instructors and their evaluation by students, regulations on the operation and internal assessment of the programme and its academic staff, as well as on its history and its transition from the status of Technological Institute (TEI) to University status.

The committee conducted a site visit on November 15 and 16, 2022. The two members from the Cyprus University of Technology, the representative from the Technical Chamber of Greece (TCG) and the student member participated remotely through the Zoom connection made available by the IHU, while the EEAP Chair visited the IHU in Serres in person. The EEAP met and conducted interviews with the University and Department administration, several members of the Department, students, and external stakeholders, including:

- the Vice Rector of the University (on November 21 and 22),
- the Head of the Department (on November 21 and 22),
- teaching staff of the Department (on November 21),
- students of the Department (on November 22),
- administrative staff of the Department (on November 22),
- laboratory and research staff of the Department (on November 22),
- members of the University's and the Department's Quality Assurance Units (on November 21 and 22), and
- employers, social and research partners, and other external stakeholders from the public and private sectors (on November 22).

The Vice Rector, Department Head, faculty members and members of the Department's Internal Evaluation Group (IEG, MO.E.A.) gave presentations during the site visit about the organisation, operation, facilities, strategic plans and self-assessment of the University and the Department, the UGP requirements, the curriculum, student services, as well as their teaching and research activities. All presentations were provided as electronic copies to the EEAP. On the second day of the site visit, the EEAP visited the academic facilities of the Department, including classrooms and amphitheatres, faculty offices, research and computer laboratories, and other facilities of the University.

The documents and the Mapping Grid provided by HAHE, the interviews, and the presentations and documents prepared by the Department provided all the essential information for the EEAP to complete its task. The Proposal for Accreditation of the

Undergraduate Studies Programme of the DSGE addressed all 12 principles that must be satisfied by the new programme in a well-structured and comprehensive manner. The Chair of the EEAP, on behalf of all EEAP members, would like to thank all involved and in particular the Department Head, the members of the IEG and all faculty members for a well prepared and conducted site visit, their collaboration, and their hospitality during the EEAP Chair's time on campus.

III. New Undergraduate Study Programme in operation Profile

The Department was first established in September 1999, as the Department of Geoinformatics and Surveying in the School of Technological Applications of TEI Serres. It was the first Department to offer the state-of-the-art discipline of Geoinformatics in Greece. Its four-year programme of study was approved a year later, and it accepted its first cohort of students in the academic year 2000-2001. In the period 2004-2013, the Department collaborated with the department of Geology and Environment of the University of Athens (ΕΚΠΑ) to offer a graduate programme in Prevention and Management of Natural Disasters. In 2017, another graduate programme was established and officially approved on Improvements in Existing Buildings and Urban Structures. The Department had very successful internal and external evaluations in 2006 and 2012, respectively, and has periodically updated and modernised its programme of study. It has gone through various stages of merging with other engineering units, managing at the same time to retain and enhance its identity, and it was re-established in 2019 as a distinct Department of Surveying and Geoinformatics Engineering in the Engineering School of the IHU, with a five-year programme of study. This five-year programme accepted new students in the 2019-2020 academic year. In parallel, the DSGE continued offering the prior four-year programme, giving the opportunity to existing TEI students to complete their studies. By law, TEI students had to finish their four-year programme, as they were not offered the choice of transferring (with additional requirements) to the new, university-level programme. This unfortunate government decision placed undue strain on faculty members, students, and resources, and made unnecessarily complicated the transition of the programme from TEI-level to university-level.

The DSGE is one of the 7 Departments in the School of Engineering, which is one of the 7 Schools that comprise the International Hellenic University. The IUH has a total of 30 departments. The Department accepted 123 and 119 new students in the academic years 2019-2020 and 2020-2021, respectively, but, despite the availability of jobs and the need of the market for university-trained surveying and geoinformatics engineers, these numbers dropped significantly to 13 and 18 in the academic years 2021-2022 and 2022-2023, respectively, due to, primarily, the change in the minimum entrance basis and the lack of Level-7 recognition and professional accreditation of the programme, and, secondarily, various socioeconomic factors.

The programme offers 71 courses including 30 electives, and the degree requires the completion of 55 courses (270 ECTS units) in 9 semesters and a diploma thesis (30 ECTS units) in the 10th semester. The delivery of the programme is currently supported by 10 teaching staff members, 11 sessional/term-limited instructors on contract, 3 technical staff members, and 2 secretarial/administrative assistants. The programme covers the following broad areas of teaching and research: Surveying and Mapping of the Earth's Surface and Sub-surface; Urban and Spatial Planning; Geoinformatics; Geographic Information Systems Science and Technologies; and Remote Sensing and Earth Observation with applications in Environmental Protection and Management and in Natural Disaster Mitigation. In addition, the graduates of the programme (first graduating class will be in 2024) will possess broad knowledge in

additional areas important for their professional qualifications, such as road design, hydraulics, spatial and urban planning, cadastre, and regional and agricultural development.

The DSGE's graduates will be employed in municipalities, public agencies, private industry, and, after graduate and postgraduate degrees will be approved, in research institutions and academia. Currently, however, there are serious obstacles in the professional success of the Department's graduates, as well as in the attractiveness of the programme to new students. These are the lack of accreditation and official recognition of the professional rights of the graduates, as well as the delays in the official approval of the new programme's degree as a Level-7 Integrated Master diploma.

PART B: COMPLIANCE WITH THE PRINCIPLES

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

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

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

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

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

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

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

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

c. The documentation of the feasibility of the operation of the department and the study programme
The feasibility of the operation of the new department should be justified based on:

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

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

d. The documentation of the sustainability of the new department

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

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

e. The structure of studies

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

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

f. The number of admitted students

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

g. Postgraduate studies and research

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

Relevant documentation

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

Study Programme Compliance

Findings

a) **The Department's mission** is to provide an educational programme of high quality in Surveying and Geoinformatics Engineering incorporating basic and applied research, equivalent to similar university programmes in Greece and abroad, which equips its graduates with all skills necessary for their professional success and serves regional and national societal needs. **The Department's academic profile** spans a wide range of scientific fields related to the collection, mapping, organisation, analysis, and management of geospatial information. Many of these scientific fields are included in internationally established scientific fields of Higher Education designated by UNESCO (ISCED 2013), such as those of Earth sciences, surveying and cartography, architecture and urban planning, hydraulic works and building, water and road infrastructure development, and environmental sciences. The academic profile of the Department is supplemented by additional scientific fields in GIS, remote sensing, geoinformatics, photogrammetry, satellite positioning, and Earth Observation. Currently, the Department's UGP is not organised around distinct learning directions, but the students can create their own streams through the selection of elective courses that serve a specific area of specialisation.

b) The strategic plan document for the University was provided to the EEAP. From it, and from information provided on IHU's web site under its quality assurance policy, it is concluded that **the University's strategic plan** is basing its academic development on digital transformation, green environment, support of research activities, development of programmes of study that serve entrepreneurship, market needs and society at large, and internationalisation. These goals are informed by measurable key performance indicators (KPIs), questionnaires, strengths, weaknesses, opportunities, and threats (SWOT) analysis, market needs and trends, and external socioeconomic factors. The Department's initial creation in 1999 and re-establishment twenty years later were informed by these factors, as well. **The Department's four-year strategic plan,** which is described in a 15-page document, is aligned with the University's, and serves the same strategic priorities of excellence in education and research, internationalisation, serving societal needs, and continuous improvement of its curriculum through quality assurance measures. It specifies that these goals are achievable through:
   - systematic monitoring and periodic updating of the curriculum, and modernisation of the programme of study,
   - adopting student-centred learning processes and acting on student feedback,
   - incorporating research results on the programme of study,

- ensuring that faculty members stay at the cutting edge of current and future research developments,
- supporting opportunities for new collaborations with other universities and public agencies for education, joint research, and development,
- judicious selection of the required background of new faculty member positions in order to cover any gaps in the delivery of the program, and
- obtaining additional field and laboratory equipment and facilities for teaching and research.

This strategy has already yielded positive results, such as the recognition of the UGP within and outside the country, the high satisfaction of employers with the quality of the graduates (thus far, from the previous TEI programme), the significant number of funded research projects, the establishment of international collaborations, the support of the local community, and the very high satisfaction of past and current students with the quality of education they have received. The SWOT analysis showed these strengths but also identified weaknesses – most of which are due to no fault of the programme – that threaten the sustainability of the Department and the employability of its graduates; see part (d) below.

c) The claim for **the feasibility of the operation of the Department and the programme** can be supported by several factors. It was designed based on, and therefore aligns well with, existing UGPs in Greece and internationally to meet the needs of the country for engineers specialising in new geospatial technologies and applications. It has expanded the traditional surveying engineering curriculum with a more modern part in geoinformatics engineering that offers more opportunities to its graduates based on geospatial technologies and applications which meet the needs of the market and serve societal needs. The program compares well to the other three university programmes in Greece that offer five-year surveying and geospatial engineering UGPs, and to Geomatics Engineering UGPs in Europe and North America. With a large number of elective courses, it allows the students to design their own specialisations in geodesy and surveying, photogrammetry and remote sensing, GIS and geoinformatics, spatial and urban planning, hydraulics, road design, and environmental monitoring. Other electives introduce new, unique areas in the curriculum (location-based services, management of agricultural lands, precision farming, environmental and hazards monitoring, mapping of cultural heritage, virtual and augmented reality, and cloud computing), which differentiate this Department from its 'sister' departments in Greece. The Department has a small number of fully qualified teaching staff, modern laboratories and specialised measuring and computing equipment, and sufficient lecturing facilities to effectively deliver its academic program.

d) Although the Department has the necessary educational and research facilities, equipment, and student support services, it is understaffed and underfunded, and its long-

term **sustainability** is in question. Its staff complement consists of only 10 faculty members (2 professors, 1 tenured assistant professor, 4 term-limited assistant professors, 1 lecturer and 2 applications lecturers), 3 technical staff members, and 2 administrative assistants. For the delivery of the full UGP, the teaching staff was supplemented in the 2022-2023 academic year by 11 sessional instructors. With this arrangement, the curriculum's teaching requirements were covered, especially since the number of students entering the program has been dramatically reduced, but it cannot sustain the programme in the long term. This very worrisome reduction from over 120 entering students to less than 20 in the last two years poses another threat to the sustainability of the programme. The situation is exacerbated by the current lack of recognition (i) of the program as Level-7 Integrated Masters, and (ii) of the professional rights of its graduates. Besides solving the aforementioned problems, which require decisions and quick actions by the government, the DSGE needs the full support of the University administration in order to secure its long-term sustainability. It was the EEAP's impression from the site visit that the University leadership is not as engaged with and as supportive of the Department as it should be.

e) **The structure of studies.** The Department offers a 5-year study programme (10 semesters) which corresponds to 300 units of the European ECTS system. Of these, a total of 30 ECTS units refer exclusively to the diploma thesis in the 10th semester. The successful completion of the first study cycle of the DSGE should lead to the granting of an Integrated Master, Level-7 diploma but, curiously, this has not yet been approved by the government. **The organisation of studies** is in 9 teaching semesters and one semester of diploma thesis and includes 71 theoretical and practical courses, of which 41 are compulsory and 30 are electives, as well as laboratory assignments, practice exercises, and individual and group projects. The teaching hours per week do not exceed 26. The diploma thesis is compulsory, and its topics categories can be characterised as theoretical/research, development/research, applied, mixed, and extensive literature review; the inclusion of research in every diploma thesis is not currently required. To obtain the diploma, 55 courses and a diploma thesis must be successfully completed.

The learning process is under the supervision of the Department Head, is approved and monitored by the Department's Assembly, and is executed by the faculty members. The content of each course is described in the programme of study, is provided to the students at the beginning of the semester and is also available online in the e-learning platform. Thirteen weeks of lectures and exercises are given in the classrooms, computer rooms and laboratories of the Department. Books, lecture notes, assignments and supplementary learning materials (extra assignments, explanatory notes, past exams, application examples, multimedia presentations, etc.) are distributed through the Eudoxos system. The web sites of individual courses and the use of the e-learning platform facilitate the delivery of the course material and provide an effective way of communication between course instructors and students, submitting the students' work, and obtaining student

feedback. The online publication of lecture notes and recorded lectures via the Open Academic Course initiative enables the students to have remote access to the learning materials of many courses in their programme. The way of students' assessment is communicated to the students in the course outlines and varies from course to course; components contributing to the final mark include midterm tests, marked assignments, student projects, a final exam, or a combination of the above, with most of the courses being assessed only though a final exam at the end of the semester. Questionnaires are used to assess the student satisfaction with the course and the instructor, and their results are used regularly to improve the course delivery and/or update the course content.

The UGP is designed to arm its students with a solid theoretical and practical background in Surveying and Geoinformatics Engineering. Its **learning outcomes** provide a set of competences to its graduates so that they become successful professional engineers. These include ability to: think critically and develop strategies to solve complex problems based on specific needs, priorities and operating constraints; use their knowledge and experience to work in and manage engineering projects, working independently or in a large interdisciplinary team; always work with integrity, professionalism and respect for others and for the environment; manage large projects and personnel under their supervision; always strive for excellence and further development of their educational, personal and professionals kills. These learning outcomes are also very important for the professional rights of the graduates, which unfortunately have not yet been officially approved.

f) In the four years since the programme's first academic year in 2019-2020, **the number of admitted students** per year has been 123, 119, 13 and 18, respectively. As it has been mentioned before, the drastic reduction in the last two years is partly due to the location of the University and related socioeconomic factors, and primarily due to the facts that (i) the programme's diploma has not yet been approved as a Level-7 Integrated Master diploma, (ii) the programme has not obtained professional accreditation/professional rights for its graduates, and (iii) the recent change in the minimum entrance basis of the candidates and the type of the special courses that a portion of the candidates have to be examined on, which are not relevant to/important for the field of study of the programme. There have also been no transfers from other programmes, such as the one of the Department of Surveying and Geoinformatics Engineering of the University of West Attica. The Department specifies the optimal number of admitted students to be 80 per year and believes that with the hiring of additional faculty members, the introduction of new courses and directions of study, its outreach efforts, and the approval of the professional rights of its graduates the number of admitted students will increase back to the levels of the 2019-2021 period. In the academic year 2022-2023, the total number of registered students in the programme is 191.

g) **Postgraduate studies and research.** The DSGE does not currently offer postgraduate programmes at the Master and Doctorate level. The research level and output of the Department is also lower than that of the similar departments. This is due to the long history of the unit in the TEI of Serres, where research was not required as that programme was focused on technical education and practice, and also the lack of tangible support by the IHU for research activities and research needs of (particularly the new) faculty members. Nevertheless, the Department has established an extensive network of research collaborations with other institutions in Greece (Universities of Athens, Crete, Macedonia, Thessaloniki, Thessaly, and Thrace, the Institute of Engineering Seismology and Earthquake Engineering, and the Foundation of Research and Technology) and abroad (Bulgaria, Italy, Romania, The Netherlands, Turkey), and with local and regional authorities. Members of the Department have had a long involvement in individual and collaborative research projects within and outside the institution, funded from different sources. This involvement, however, is uneven amongst the faculty members, and the number of refereed publications and conference presentations is well below average.

Analysis

a) The academic profile of the Department is in full agreement with its academic mission. Its scientific field is, with only a few exceptions, in agreement with the relevant scientific areas established by UNESCO and similar programmes in Greece and abroad, includes new areas in geospatial sciences and engineering, though with no organized streams in its UGP.

b) The four-year Strategic Plan of the Department informs the establishment, operation, and solid delivery of its UGP. However, the IHU leadership is not providing any significant support to the DSGE to enable it to reach its full potential.

c) Even with the limited number of teaching and technical staff and some deficiencies in the curriculum, the feasibility of the undergraduate programme is justified by considering that it serves the current educational, scientific, and employment needs of its graduates, as well as societal needs regionally and nationally, the high demand for its graduates, the qualifications of the teaching staff, and the offering of several unique electives in novel areas of application.

d) The long-term sustainability of the new UGP and the DSGE cannot be guaranteed at present. The program is understaffed, underfunded and ill-supported, and in the last two years it has had a very small number of admitted students whose professional rights and Level-7 Integrated Master diploma qualifications have not yet been officially recognized.

e) The Department provides full information on the structure of its UGP (number and level of courses, their categories and distribution into semesters, learning resources, course content, course assessment, and their ECTS units). The student-centric learning process is based on traditional lectures in classrooms, laboratories, and in the field, and on online methods using the e-learning platform, the Eudoxos system and the Open Academic Course initiative. The curriculum is evaluated and improved regularly using the student feedback collected in course questionnaires. The detailed set of learning outcomes and competences is communicated to the students and is very important for the professional development and professional rights of the graduates. It has to be mentioned, however,

that currently there are deficiencies in the UGP's curriculum (see Principle 3 below) that may affect negatively the professional rights of the graduates and may hamper the future introduction of postgraduate programmes in the DSGE.

f) The number of students admitted annually to the programme has decreased significantly from the first two years to the last two years of its operation since 2019. The main contributing factors to this have to do with missing government approvals of the diploma qualifications of this programme and of the professional rights of its graduates. These, and the other contributing factors mentioned in part (f) of the Findings section, need to be addressed immediately to ensure the viability of the programme.

g) The Department offers no postgraduate programmes, and its research output is below average overall, despite a few notable exceptions. The research activities in particular need significant improvement especially since the Department plans to eventually introduce postgraduate level programmes of study and needs to make its UGP as attractive and as competitive as the other university-level programs in the country.

Conclusions

Based on the above findings and analysis, the committee rated the 7 components of Principle 1, as follows:

a) substantially compliant

b) substantially compliant

c) substantially compliant

d) partially compliant

e) partially compliant

f) partially compliant

g) partially compliant

and the overall Principle 1 as partially compliant.

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 strategy of 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 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

The following recommendations of the EEAP are provided to help the DSGE rectify the deficiencies identified above, recognizing that some of them (e.g., accreditation/professional rights, number of faculty positions, number of admitted students) are beyond the control of the Department and the University:

- Find ways to increase, and maintain, the number of students admitted annually to the programme.
- Increase the number of permanent faculty members, with competences complementary to those of the existing faculty members.
- Attend to the deficiencies of the curriculum and introduce streams/specialisations in the undergraduate program.
- Re-establish the engineering practice course, and consider making it compulsory.
- Promote the benefits of internship to the students and provide them with more internship opportunities.
- Introduce graduate courses and start offering Master and Doctorate level postgraduate programs.
- Increase the research involvement and performance of all faculty members.
- Provide support, incentives and rewards to students and staff to excel in education and research.
- Promote the programme as widely as possible and increase the Department's outreach.
- Obtain programme accreditation and professional rights for the graduates.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The EEAP met with IEG and Quality Assurance Unit (QAU, ΜΟ.ΔΙ.Π.) representatives and found that both the IHU and the DSGE have well-established an Internal Quality Assurance System and implemented a solid Quality Assurance Policy. Both the IEG and the QAU receive and analyse data to continuously improve the programme. Overall, the University and the programme demonstrated through the material contained in the proposal of academic accreditation of the UGP, through the presentations made by its leadership, and through content available on the QAU website, that a robust Quality Assurance System is in place. The

EEAP found that QAU and IEG inform and implement the quality assurance policy by collecting performance indicators related to the academic program and its delivery, student evaluations of the teaching staff, quality and quantity of research activities of academic staff, quality of support services, the evaluation of the educational process, and the achievement of the objectives of the UGP (also, through cooperation with professional bodies), covering also issues related to the operation and mission of the Department. The IEG is responsible for the analysis and utilization of the data and information collected, for generating an annual internal evaluation report, for providing input to the strategic planning and curriculum committees, for assessing the various performance indicators, and for submitting the internal evaluation report for approval to the Department Assembly. During the meeting with QAU and IEG, the EEAP was informed that a repository of faculty publications will be established centrally as soon as possible.

Analysis

Well-designed course evaluation questionnaires are available for all courses of the programme. However, the EEAP noticed that the participation rates in completing these questionnaires are very low, ranging between 0 and 46% of registered students. This is problematic because such low participations make the results and the feedback statistically invalid and does not give the opportunity to the IEG and the Department to make effective decisions. This issue was discussed extensively in the interviews of the EEAP with both the teaching staff and the students. The Department should motivate the students to participate more in the course evaluation questionnaires in order to improve the participation rate and the validity of the results.

Conclusions

The EEAP was very impressed by the thoroughness and effectiveness of the procedures and processes in place to ensure quality assurance. The EEAP concluded that although there is full compliance with this Principle, some improvements regarding the student participation in the critical course evaluation process must be urgently taken into consideration.

Panel Judgement

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

Panel Recommendations

- Improve participation rates in course evaluation surveys.
- In addition, the results of questionnaires from the first graduates of this programme should be studied carefully in the future, as they can provide valuable information for the UGP's improvement.
- A repository of faculty publications must be established by QAU and IEG, linked to the library and to the Department's web page.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The IHU developed its new undergraduate study programmes following a well-defined and well-described procedure, as specified by university regulations. During the design of the UGP, the Department also took into consideration the definition (2004) of Surveyors from International Federation of Surveyors (FIG), current trends in the scientific field, and:

- study programmes of the other similar Departments in Greece and abroad, focusing on international rankings, good practices of the best Universities, and broader subjects in 'Surveying Engineering', 'Geomatics Engineering' and 'Earth Sciences';
- the recommendation in the external evaluation of the old UGP of TEI Serres;
- the Department's strategic planning objectives;
- the opinion of all stakeholders on the priorities in the academic subjects and the needs of future employers;
- opinions of and suggestions from undergraduate students;
- analysis of graduates' employment statistics;
- students' admission level;
- legal requirements in relation to the qualifications of the teaching staff, students, and available resources; and
- the transfer of experiences gained from research projects of faculty members to
  The teaching process and the design of courses.

The UGP completion requires 55 courses, 41 compulsory and 14 elective from a pool of 30 courses. Overall, the Department offers 71 courses. A serious effort to evenly distribute the students' workload among semesters is apparent in the detailed table of ECTS units per semester. Students who participated in the meeting with the EEAP verified the findings about their workload, both for each course as well as among semesters. Out of the 71 offered courses, 20 are related to digital skills, either directly (i.e., 102, 202, 302), or indirectly for courses with laboratory or computer exercises components. Digital skills are fully covered given the 'Geoinformatics' aspect of the UGP.

The academic profile, the identity and orientation of the programme, its objectives and subject areas, the structure and organisation, and the expected learning outcomes are well described in the existing study guide. The UPG fulfils the relevant regulatory framework, the official procedure for the approval of the programme by the Institution, and addresses intended professional qualifications according to the European and National Qualifications Framework for Higher Education. The new UGP of the DSGE is a modern program, corresponding in large part to similar UGPs in the National Technical University of Athens, the Aristotle University of Thessaloniki and the University of West Attica. The new curriculum is primarily based on the

previous four-year UGP, with significant improvements and appropriate adjustments to cover both the requirements of the 5-year program (10 semesters, 300 ECTS) and the recent developments in the scientific fields it curates.

The main areas of professional rights, such as surveying, geodesy, spatial planning, urban planning, transportation, road design, hydraulics, are treated with at least 3 courses each out of the 41 obligatory ones, plus additional elective ones. Structural and architectural design are not treated at all, which may endanger the professional rights of the graduates. There are no specified course streams/directions ('ροές'), nor organised clusters of courses leading to an official or unofficial specialisation. Students simply select their elective courses according to their preferences, without any structure.

Analysis

The key points of analysis of the findings are summarized below:

- Although the content of some courses is almost identical to similar ones in other universities, their titles are not; hence the direct correspondence and comparison of the UGP with similar UGPs in other universities is difficult.
- There is a large overlap among existing courses (i.e., 104-206, 406-701-802-804, 703-805, 403-906, 606-708).
- There is significant emphasis on spatial and urban planning courses (405, 406, 305, 601, 606, 701, 704, 705, 809, 901). The same holds for Surveying courses (201, 801, 802, 711).
- Some core subjects (i.e., 301, 304, 402) are taught at the very early stages of the programme, when the students are overloaded with many foundation courses and do not yet realize how important such courses are for the more specialized courses they will take in later years.
- Several courses are designed to treat applications of scientific fields, as their title suggests (708, 807, 908, etc). They also serve as platforms to link teaching and research. These courses support a level-7 accreditation, provided that all core scientific subjects are covered fully.

The UGP, although in line with equivalent UGP from similar Universities, has some distinguished differences. It is evident that the UGP is designed around the concept of preparing graduates to enter the market, however there is a lack of courses with strong theoretical background. While this is much needed and well adopted from the market (as verified from the stakeholders and employers), this might come at the cost of future self-development ability of the students and after all become a threat for the Department's sustainability. Despite the fact the design of the UGP focuses on practical skills, internship/practical training ('Πρακτική') is missing, since it was removed from the previous

TEI programme. Interviews with the QAU, students, and stakeholders confirmed that it must be reintroduced in the next update of the UGP.

As expected, the EEAP's findings verify that the current UPG was designed based on the previous one of TEI and the expertise of current faculty members. This is also stated in document B1, paragraph 3.8. In the same document it is also mentioned that the level of entering students, and the absence of Professional Rights are the main threats for the sustainability of the UGP. There is also a concern that the number of students admitted in the programme may continue to be very low in coming years due to common minimum entrance basis and the Department's location.

Conclusions

The new UGP is designed with strong practical appeal, incorporates some cutting-edge applications and has a distinguishable identity focusing on Planning, Surveying and Risk Management. The research experience and professional experience of faculty members is reflected within the UGP, and results obtained in research projects are incorporated in several courses in the programme's curriculum. Nevertheless, there are many overlapping courses and a gap among the core courses and the highly specialised ones, which raises concerns on whether the students are fully equipped with the background needed to cope with the advanced content of the latter. There are also some scientific fields missing from the UGP, either by title or in substance.

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

- Measures should be taken to attract and retain more students each year.
- Internship/practical training ('Πρακτική') should be re-introduced in the UGP, preferably as a compulsory course with appropriate ECTS units.
- To avoid overlaps and repetitions, similar courses (e.g., urban and spatial planning) could be merged.
- Strengthen and/or increase courses with strong scientific/theoretical background.
- Provided that the core subjects of geodesy, cartography, spatial analysis and GIS, photogrammetry and remote sensing are fully covered, important additional subjects can be added, such as navigation, machine learning, computer vision, Earth observation, land management, big data analytics, and BIM. These subjects might be already addressed within existing highly specialised courses, but the subjects themselves must become evident on course titles and in the course content, and the curriculum should be adjusted accordingly.
- Redesign the UGP with a more structured layout so that students may select a specialisation, which would significantly help them when looking for a job and better support a level 7-accreditation.
- Ensure that the curriculum offers all courses necessary for obtaining professional rights for the graduates.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The Department leverages several ways to support student-centred learning, while ensuring that its learning outcomes are reached. The UGP emphasises the acquisition of knowledge, not just information, and supports active learning over passive. Several methods of delivery are used, such as lectures, textbooks, field measurements, laboratory exercises, projects and the e-learning platform (https://elearning.cm.ihu.gr/), which is used to provide additional learning materials and for coursework delivery. Sixteen open courses are included in the e-learning platform, with full recordings of the lectures and laboratory exercises. From the first year, students are invited to work on their own or in groups, select topics and projects, and work on tasks assigned to them with the supervision and guidance of the teaching staff. In this way, they acquire soft skills through teamwork and cooperation, and they learn to work both independently and in part of a team. Students are aware at the beginning of the semester of the ways they will be assessed for the final mark in each course, and they are informed in a timely manner in case of a change.

Students evaluate each course they take. Instructors issue anonymous random assessment codes for online evaluation. The data collected through questionnaires are strictly confidential and are used by the teachers for their self-evaluation and improvement of their teaching, as well as for the improvement of the UGP courses. The Department Head and the Chair of the IEG have access to them.

The Academic Advisor institution is established in the University and the Department. Nevertheless, while each student has full access to their course grades through the University's platform, the Academic Advisor has no such access. This fact diminishes the role of the Advisor to a mere studies advisor on items like course selection, professional potential, post graduate studies, etc., unable to monitor the students' progress throughout the duration of their studies in order to help them with any performance or other problems that could delay their graduation or hamper their success in the programme. This need is covered only unofficially, since students contact the more familiar faculty member to obtain such advice. In fact students' interviews confirmed that academics are very approachable and supportive, and that the student-teacher relationships withing the Department are exceptional.

Student's complaints and objections are received from the Department's Secretariat and forwarded to the Department Head to resolve. If students consider that their complaints or objections have not been resolved, then they can submit them to the Department's Assembly. If the students are still not satisfied, then they can approach other bodies of the University, such as the Student Advocate, the Senate, or the Rector's office. A student representative is always present in Departmental Assembly meetings and may pose any issues concerning the student community.

Analysis

Unfortunately, the students' participation in the programme evaluation process is low, as confirmed in the students and faculty members interviews of the EEAP. It was apparent that students do not fully appreciate the value of assessment, nor do they realise that this is their contribution to future improvements of the UGP, the curriculum and the teaching methods.

Conclusions

Overall, the UGP is dedicated to a student-centred learning approach, with respect and consideration of personalised needs. The Department encourages students to take an active role in creating the learning process. The assessment methods in place ensure that student feedback is taken into consideration, but the students themselves are not supporting the procedure.

Panel Judgement

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

Panel Recommendations

- Engage students and increase student participation in student surveys. Use student survey results to improve teaching practices by all academic staff.
- The Academic Advisor must be allowed to have access to students' complete grades record to monitor their progress and be able to intervene for support as needed in a timely manner. Legislation and General Data Protection Regulation (GDPR) have provisions for such cases, and the Administration must obtain students' written permission during enrolment for the Academic Advisor to have confidential access to their records.

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

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

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

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

as well as

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

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

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

Relevant documentation

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

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

Study Programme Compliance

Findings

The Department has developed, published, and effectively applies regulations that pertain to all aspects of students' admission, progression, recognition, and degree/certification award. Indeed, the programme maintains effective processes and tools to properly manage,

coordinate and act on student admission, progression, recognition and certification. The Department provides an orientation day for all new students each year. A dedicated welcome day for the reception of first-year students by the Head of the Department and the academic staff is also organised. The students are provided with a lot of information pertaining to their studies, academic life, the University, Department, facilities, and the surrounding community. The programme has established processes and mechanisms to provide support to incoming students and has created a welcoming and engaging environment. The EEAP found that a Student Advisor is assigned to every student. The programme has also established mechanisms to monitor student satisfaction through student course evaluations. Depending on the course specifics, the student progress is continuously monitored and assessed through written and oral exams, presentations of individual or teamwork assignments, and successful completion of laboratory and practical projects and thesis. The e-platform https://egram.cm.ihu.gr/ is well used for student progress monitoring. The QAU's quality assurance system provides the opportunity to export overall statistics regarding student progress (e.g., percentage of pass or fail in the exams, etc.)

The program follows the ECTS credit system, which is applied across all courses in the curriculum, supports the students' graduating qualifications, and facilitates their possible mobility. A total number of 300 ECTS credits (level 7) and 10 semesters of study are required for graduation. There are well-defined criteria for the completion of the diploma thesis (30 ECTS), described in documents of the evaluation/accreditation proposal and confirmed by the site visit. A thesis handbook has been recently approved by the Department Assembly and will be communicated to the students. Graduating students will be issued Diplomas and Certificates in both Greek and English.

The good relationship of the Department and its academic staff with the key stakeholders such as companies and governmental organisations (e.g., municipalities, Civil Defence, public agencies, etc.) was confirmed in EEAP's meeting with their representatives. Indeed, such stakeholders are willing to collaborate with the Department to support the practical training of the students. The EEAP found that practical training is not currently offered as a compulsory or elective course ("Praktiki") despite the well-established network with key stakeholders. As well, student mobility, such as participation in the ERASMUS programme, is encouraged in general, but the number of students entering European exchange programmes is zero.

Analysis

Through the discussions with the students, it was found by the EEAP that despite the fact that a Student Advisor is assigned to every student, the students are not fully aware of the role of this advisor, and they instead seek advice from the UGP faculty member.

In their interview with the EEAP, the students mentioned that the inclusion of practical training in the curriculum will be very beneficial for their career and their skills development.

During the discussion with the students and the staff, the EEAP found that the lack of approval (to date) for granting professional engineering status to students graduating from this programme is one of the main barriers for the future development of the Department. Indeed, the EEAP noted that this will be an obstacle for the first graduates to promote their profile at the national and European level more effectively, and for prospective students to select the UGP of the DSGE for their university studies.

Conclusions

The EEAP concluded that the Department delivers all essential aspects for ensuring student admission, progression, completion of studies and degree/certification award. The EEAP finds the Department is in full compliance with this principle and offers certain recommendations for continuous improvement.

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

- The EEAP strongly recommends that the current efforts to increase student mobility (e.g., ERASMUS or other relevant exchange programmes) should be further expanded and encouraged. This will promote further the internationalization of both the students and the DSGE.
- The EEAP strongly recommends that the Department and the University must take urgently all the necessary actions for clarifying the graduates' professional engineer status. This is a critical issue for boosting the morale of present students and attracting future ones.
- The EEAP strongly recommends that the Department take advantage of the existing supportive network of stakeholders (e.g., industrial partners, local and regional public and private organizations) who are very interested in offering opportunities for practical training to the students. Practical training / Internship ("Praktiki") must be offered in the UGP as a compulsory course, if possible, in which the students will have the opportunity to obtain valuable practical experience.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The Surveying and Geoinformatics Engineering program is served by 10 faculty members: 2 Professors, 5 Assistant Professors, 1 Lecturer and 2 Lecturers for applications (‘εφαρμογών’). All faculty members, except for the lecturers for applications, have PhD degrees and contribute to research projects and also perform independent research. The faculty members bear a significant course load to cover all teaching needs of the programme, supported by only 11 sessional instructors (on contract-basis) and 3 technicians. The faculty members currently have an additional duty since they are responsible for managing the semester examinations of students registered in the previous TEI programme.

The EEAP found from the meetings with staff and students that all members of the teaching staff are extremely committed and enthusiastic about their academic activities. The students expressed their great satisfaction regarding the commitment and dedication of the faculty members in their programme of study. The EEAP noticed that the faculty members have indeed an excellent relationship with the students and show significant interest in research activities. The teaching staff is regularly evaluated by the students through surveys, between the 8th and 12th week of the semester.

The EEAP found that there are limited opportunities for continuing education and professional staff development, they stressed that these are useful tools, and the faculty members showed a keen interest in utilizing them for their benefit. In addition, the EEAP found that since there is no existing PhD programme, this affects also the further professional development of the staff. During the meetings with the EEAP, the staff expressed their willingness to participate as members of supervisory committees in other PhD programmes of other Universities.

During the meeting with the students and the faculty, the EEAP found that there is a clear synergy between teaching and research by integrating in courses research outcomes and activities directly from funded projects (e.g., 'ARTEST' and 'MERGIN MODE' projects).

EAAP noted that the participation of staff in mobility schemes is limited and not satisfactory due to the small number of faculty and their heavy teaching and administration duties. It also found that some of the faculty staff are active in securing funding from competitive schemes (e.g., ERASMUS).

Analysis

The opportunities for personal development are minimal. The high teaching load has a negative impact on research outputs and activities of the academic staff. EAAP confirmed that the faculty members wish to be more actively involved in research activities and projects, but their teaching and administrative workload is still one of the main obstacles. The lack of schemes for motivating faculty members and supporting their professional development (e.g., via allocated budget for research activity, conference attendance, and networking) is one of the main reasons why faculty members have very low publication record in the last 3-4 years.

Conclusions

Teaching staff is hired in accordance with national law with clear and open procedures. Procedures and criteria for teaching staff recruitment are of high standards. Opportunities for personal development are minimal and most faculty members do have the opportunity for sabbatical leaves due to their heavy teaching and administrative load. The increased

administrative and teaching load has also a negative impact on their research productivity, such as publications in high-impact journals.

The Department and the University seem to lack regular and systematic recognition of staff achievements through awards. Teaching, research, and service awards have multiple benefits for both the awardees and the Department/University as a whole and should be established as soon as possible. The University should also consider providing monetary rewards to the academic staff for developing their research, based on the submission of annual report activities and pre-defined annual key performance indicators (KPIs) in research, teaching, contribution to the society, etc.

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

The University and the Department must consider the following actions for the benefit of the programme:

- Accelerate procedures for hiring new teaching and technical staff.
- Reduce the inherent bureaucracy of administrative processes (for example, for purchasing software and modernizing existing or buying new computer equipment).
- Allocate budget to the Department that will support acquiring new equipment and consumables and will enable the professional development of the faculty members.
- Consider recognizing and rewarding academic staff, based on submission of annual report activities and pre-defined annual KPIs, for excellence in research, teaching, service to society, etc.

- Make it a high priority for the University (Senate, Board) to allocate to each academic staff, and in particular to new hires, a certain budget for their research, for attending conferences, and for research and academic networking activities.
- Encourage the academic staff to submit proposals to European competitive schemes such as HORIZON Europe, LIFE+, MED, etc.
- Try to attract more women applicants for future faculty positions in the Department in order to achieve a more balanced gender representation in the future pool of faculty members.
- Establish a clear research strategy by focusing on specific scientific areas in surveying engineering and geoinformatics with the assistance of the DSGE's Advisory Body (see also Principle 10).

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The DSGE teaching staff comprises 8 members with Ph.D. and 2 more permanent teaching staff. 11 additional teaching staff members are hired on contract to cover all offered courses. The building facilities of the Department are relatively newly built and cover fully the needs for offices, classrooms and 10 specialized laboratories. Hardware and software licences can cover the students' needs as confirmed by faculty members and students. Apart from commercial software, the use of Open Access and Open-Source software is encouraged, where possible.

The library and its portal include the main catalogue, electronic journals and books, all with free access. All topics for Surveying and Geoinformatics are fully covered by the library resources, and the faculty members regularly suggest new titles for the expanding the main catalogue. The new students of the Department, when enrolled, are offered a set of digital services through the Centre for Electronic Government (ΚΗΔ) of the IHU. These services offer email, cloud storage, MS Office 365, e-learning, and a variety of administration services (semester enrolment, applications, study records, timetable, etc). At the same time, they are granted access to all student services and benefits (academic identity, library, free textbooks, gym, restaurant, doctor's office, etc.).

In terms of counselling, as mentioned in Principle 4, the institution of the Academic Advisor exists, but it is not functional because of restricted access to the students' records. The University provides support to students with special needs and disabilities, through the adaptation of the program delivery, the utilisation of IT support technologies and the provision of services to facilitate it.

Analysis

Equipment covers all subjects and varies from old but functional to brand new. As in most cases in similar departments, the equipment needs to be upgraded on a regular basis. In a similar manner, commercial software covers most, but not all (GNSS and RS processing, MATLAB), topics. As reported by students, computers in some labs are old and can only be used for simple tasks, forcing students to bring in their own laptops. Also, there is no full Wi-Fi coverage throughout the Department's facilities.

Conclusions

In summary, amongst building facilities, equipment and human resources, the latter is the one that needs immediate attention. The equipment of the Department is adequate both in terms of quantity and quality. Software covers most topics. The building facilities are, in general, better than other universities with similar UGP.

Panel Judgement

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

Panel Recommendations

- New faculty members covering some crucial scientific topics must be hired promptly.
- Computer classrooms must be fully functional and well equipped, so new computers need to be acquired for some of them, and older ones need to be upgraded.
- Wi-Fi should be offered in all areas of the campus.

The University's Administration must allocate resources to cover all needs because they are crucial for the smooth operation of the Department and the delivery of its UGP.

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The IHU and the DSGE have established procedures to collect, analyse and present a variety of data. Students have online access to their academic records and progress and can request basic certificates. Course feedback is conducted between the 8th and 12th week of each semester with questionnaires about the teaching staff, the materials used, the course's quality and learning resources, its level of difficulty and the effort and time required by the students. The questionnaires are structured, conducted and analysed by IHU's QAU, and only the teaching staff can access the results after posting the semester's grades.

The IEG collects information regarding the student body (success and dropout rates, number of students admitted, etc.) and is responsible for the course evaluation each semester. An internal evaluation of the UGP is conducted annually and the findings are provided to the QAU of the University.

Analysis

Online platforms (e-gram, e-learning) are available with individual access in order for students to track their progress and request certificates.

During our meetings it was evident that the staff members were open to constructive criticism provided by the students through anonymous questionnaires. It was noted that a low percentage of students engages in the process, with an average of 46% (in some courses, as low as 5%). The reasons for this problem were not clearly stated, but some staff members attributed it to the evaluation being online and not conducted in class (as it was done a few years prior with higher participation rates). Moreover, students stated that they were comfortable addressing their concerns and criticism in person directly with the faculty members as a more direct way of communication.

The annual internal evaluation is mandatory; however, the panel was not presented with sufficient evidence that the analysed data and information collected are taken into consideration for constant academic improvement and growth.

Conclusions

The University has established the appropriate procedures for data collection and analysis to ensure the continuous improvement of the Department. The EEAP finds the Department fully compliant.

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

- The Department should use the data collected more efficiently in order to improve the weaknesses detected.
- The questionnaires should be distributed and collected during lectures to improve the student participation rates.

Principle 9: Public Information Concerning the New Undergraduate Programmes

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The Department has developed the website http://topogeo.ihu.gr. The website is suitably structured in sections for easier access by visitors, and all the basic information concerning the academic unit is posted. Specifically, it provides information on its operation and activities (undergraduate programme and course description, infrastructure, location, research, staff, announcements). In the English version, there is not enough information about the curriculum. In both the Greek and the English version, there is also no information of a practical importance for the students, such as accommodation and public transport.

The website is not fully up to date, and its structure could be further improved to provide more information and a better user experience. The Quality Assurance Policy of the DSGE is also not accessible on the website. The posted information is not easily accessible. Important information such as student care, library operation, scholarships, and various activities (e.g., sports, cultural) are not available in specific fields, and one has to search the announcements to find them. There is also no mention of, or links to, the IHU's presence in social networks so as to inform the public about the activities of the University and the Department.

Analysis

Overall, the public information available on the web site could be significantly improved in order to effectively promote the Department and enhance its outreach through information delivery and an active presence in social networks. The basic need for daily information for students is met, but there is a lack of information that would be of interest to alumni and other stakeholders, as well as to the public.

Conclusions

Principle 9, on informing the public about new undergraduate programme complies substantially. Despite the mentioned deficiencies, the website is modern and informative so that visitors can easily search and access the information they are looking for. There are several possibilities for improvements to make Principle 9 fully compliant.

Panel Judgement

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

Panel Recommendations

Public information about the new UGP could be significantly improved by:

- adding detailed information to the English version of the website about the curriculum,
- providing information to users via social networks,
- including information of practical nature for students and visitors, and
- posting information for the promotion of the activities of the DSGE to schools, prospective students, other educational institutions, stakeholders, and the general public.

Principle 10: Periodic Internal Review of the New Study Programmes

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The Quality Assurance Policy (QAP) of the Department is aligned with the QAP of the IHU and is developed and applied with the participation of all its staff (teaching, technical and administrative). The QAP, following the strategic goals of the Department and the University, ensures that the quality of the undergraduate programme is monitored regularly and improved as needed. An Internal Evaluation Group (IEG) comprising members of the teaching and technical staff is appointed by the Department's Assembly, which performs an annual internal evaluation of the quality of the programme and submits a written report containing its findings to the Department's Assembly and to the University's QAU. This annual evaluation report contains all the information necessary for the Department to assess the academic quality of the UGP, to identify its strong points and weaknesses, and to take measures for its improvement. It also enables the self-evaluation of the teaching staff and the improvement of the delivery of their courses, and informs the Department Head on these matters, who can

intervene and advise the teaching staff on how to improve their teaching methods and/or to initiate any necessary changes in the content of the curriculum.

Through the students' questionnaires, the Department can also monitor their satisfaction in relation to their programme, workload, assessment methods, progression, facilities, classrooms, laboratories, and provided services, so as to create for them an environment conducive to learning.

Analysis

The annual internal evaluations, including the student feedback, are used for the continuous improvement of the student-centred programme of study and the delivery of a quality, up-to-date curriculum that is informed by the latest research in surveying and geoinformatics. It also serves the improvement of staff, resources, facilities, work environment and administrative processes in support of the educational activities.

Conclusions

The above findings and analysis illustrate that, through the annual self-assessment, the Department is committed to providing quality educational experience to its students, quality professional experience to its staff, and maintaining a positive learning environment. The findings of the self-assessment are shared within the Department as well as with the QAU of the University, are communicated to all stakeholders, and form the plan for the actions that should be taken to update and enhance the programme's curriculum.

Panel Judgement

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

Panel Recommendations

The systematic annual self-assessment of the Dependent should be continued, and its results should be documented and shared widely, in order to inform and motivate all involved to strive for excellence. The annual evaluation reports could be used not only to monitor the progress of the UGP, but also as valuable information to be used in future external evaluations of the programme and the Department.

The Department may want to consider the establishment of an External Advisory Board, with academics from other universities and employers, who could advise on the UGP improvements and updates that would reflect current and future market needs, and international trends in education and research.

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

This is the first external evaluation carried out under the new academic unit format (five-year UGP). The first evaluation carried out under the previous structure was in 2012, as we were informed by the management of the Department. There is no report on this matter in the documents available to the EEAP. Even if it were available, it would not add anything useful to the present evaluation because it concerned a different structure and there has been a significant time lag from the old to the present one. Moreover, there has been no external evaluation either at university level either.

Analysis

Before the first external evaluation is completed, there is no possibility for a meaningful and documented analysis of its effectiveness in evaluating and accrediting the new UGP. However, from the process so far, it is evident that faculty members attach great importance to the external evaluation of their programme and improvement of the Department because they showed great interest in presenting and explaining all the required information to the EEAP. All stakeholders participated enthusiastically, including student and employer representatives.

Conclusions

Meaningful evaluation of Principle 11 "Regular external evaluation and accreditation of new undergraduate programmes" cannot be carried out during the first external evaluation.

Panel Judgement

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

Panel Recommendations

The DSGE should a stablish a process for using the EEAP's recommendations as soon as it receives them to improve the quality and to update the curriculum of the new five-year UGP.

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

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

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

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

Relevant documentation

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

Study Programme Compliance

Findings

The Department has provided a detailed transition plan from its former 4-year programme (TEI) to a 5-year engineering programme that has been examined and certified by MODIP. The new programme started in the 2019-2020 academic year and currently the Department is running both programs. Students that were admitted in the TEI programme were allowed to continue their studies under the original study plan (4-year programme) and after they graduate, they are given the opportunity to be placed in the new 5-year university programme, if they do not exceed the necessary number of years by more than 2. The 2020-2021 Fall semester was the last that the old courses were offered but the Department continues to support students by scheduling exams, completing practical training, and supervising theses.

Since 2019-2020, 104 students have graduated from the 4-year programme and there is a total of 1,307 active ones. This number is expected to decrease in the following years as by the end of 2026-2027 the ones that do not complete their studies within the maximum allowed time will be removed.

The new study program consists of 71 courses, with 55 of them required for the diploma. 41 courses remain the same from TEI and students from both programs can register in them. 30 new courses, 8 compulsory and 22 electives, have been added. Practical training is not currently provided by the Department.

Analysis

It is evident that the existence of two challenging study programs creates a disproportionate workload for the faculty. The small number of staff members have to schedule additional exams and deliver both study programmes, but in the near future this problem will be solved with the removal of inactive students.

The Department has made efforts to ensure a smooth transition and complete both programmes efficiently. Students from the old programme, after completing the mandatory 39 courses, thesis, and practical training, can request to register for 16 additional courses and graduate with the engineering diploma. However, it was noted that none of the TEI students expressed the desire to do so.

The removal of practical training (it was mandatory for a full semester in TEI) is a weakness for the current program. Students and social partners expressed during the meetings with the EEAP the need for practical training as it can be beneficial for a successful engineering career.

Conclusions

The EEAP finds the Department fully compliant regarding the students' transitioning to the new programme.

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

- The DSEG should consider adding practical training / internship to the new programme's curriculum; and
- should contact the students in the original program (TEI) to inform them about the deadlines for graduating.

PART C: CONCLUSIONS

I. Features of Good Practice

The Department and the Programme demonstrated, during the EEAP's visit and through the documents provided, that a series of good practices have been adopted and employed, as follows:

The Department:

- promotes the synergy between research findings and teaching,
- maintains an excellent learning environment for the students,
- has good facilities and equipment, and
- high student and employer satisfaction.

The faculty members:

- are enthusiastic, hardworking, and dedicated to the teaching values and duties;
- are found to be willing and open to future continuous improvements in the curriculum based on student feedback and quality indicators, and remain committed to being aligned with research, industry and societal needs;
- have excellent direct connections and links with the stakeholders from the industry and the public sector, and their work is very highly appreciated by them; and
- have achieved high student satisfaction regarding their dedication to the programme and the quality of their teaching.

II. Areas of Weakness

The programme of study has the following weaknesses (some awaiting government decisions) that need to be addressed:

- Low number of admitted students.
- Existing deficiencies of the curriculum and lack of postgraduate programmes.
- The lack of Professional Qualifications.
- The lack of level-7 recognition of the UGP.
- The lack of support from the University Leadership and Administration.
- The lack of a formal process for seeking input from external stakeholders and employers to improve the UGP (e.g., Advisory Board).

III. Recommendations for Follow-up Actions

Recommended follow-up actions have been identified from assessing each principle earlier in this report. The Department is encouraged to consider these recommendations and take relevant actions before the graduation of the first cohort of students that were admitted to the new five-year programme. Emphasis should be given to the following actions:

- Intensify efforts to secure professional engineering status for the graduating students. This is a high priority indeed that must be considered by the Department and the Rectorship.
- The Department should consider, with the support of the University, all possible ways to increase the number of annually admitted students to a sustainable level for the operation of the programme.
- Increase faculty positions with backgrounds in missing scientific fields, including those supporting professional qualifications.
- Ensure that the curriculum offers all courses necessary for obtaining professional rights for the graduates.
- Add 'Practical training'/internship in the curriculum and consider making it a compulsory course with appropriate ETCS credits.
- Student/Staff mobility should be further expanded and encouraged. This will promote further the internationalisation of the students and the Department.
- Improve the research activity and output of the Department.
- The University should return part of the research overhead to the faculty members for publishing their research results and supporting future research activities based on predefined annual key performance indicators (KPIs).
- It is highly recommended that the University (Rectorship, Senate) will provide to new faculty members a starting grant to develop and promote their research activity (e.g., networking, conference participation, etc.).
- Allocate Departmental budget for supporting the programme and staff development.
- Establish an External Advisory Board as a consultative body to the Department for the improvement of the academic programme and the Department's outreach activities
- Merging similar courses in the curriculum and, assuming that the core subjects of geodesy, cartography, spatial analysis, GIS, photogrammetry and remote sensing are fully covered, introduce additional courses on important subjects such as navigation, machine learning, computer vision, Earth observation, land management, big data analytics, BIM.
- The Department, in consultation with the Advisory Board, can establish unique concentrations in the curriculum (using existing and/or new courses) such as, for example, 'Navigation and Guidance', 'Geospatial Technologies', 'Smart management of the Environment', 'Earth Observation', etc., so as to differentiate the program from the other Surveying and Geoinformatics Engineering programmes in Greece.

- Improve participation rates in course evaluation surveys.
- Improve the web site and outreach of the Department.
- An online repository of faculty publications must be established for the Department and/or the University centrally, easily accessible through links in the library's and the Department's web pages.
- Recognise and reward excellence in research, teaching, and student performance.
- Computer facilities and networks must be fully functional and robust, so new computers must be acquired, older ones should be upgraded, and reliable Wi-Fi should be offered in all areas of the campus.

IV. Summary & Overall Assessment

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

The Principles where substantial compliance has been achieved are: **6, 7, and 9.**

The Principles where partial compliance has been achieved are: **1 and 3.**

The Principles where failure of compliance was identified are: **None.**

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

The members of the External Evaluation & Accreditation Panel

Name and Surname **Signature**

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2. **Prof. Diofantos Hadjimitsis**
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3. **Assoc. Prof. Dimitrios Skarlatos**
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4. **Mr. Michail Kalogiannakis**
   Technical Chamber of Greece, Athens, Greece

5. **Ms. Georgia Tsaftaridou, student**
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