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HELLENIC REPUBLIC

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Accreditation Report
for the Undergraduate Study Programme of:

Informatics

Institution: Aristotle University of Thessaloniki (AUTH)

Date: 20 February 2021

Report of the Panel appointed by the HAHE to undertake the review of the Undergraduate Study Programme of **Informatics** of the **Aristotle University of Thessaloniki** 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 Undergraduate Study Programme of **Informatics** of the **Aristotle University of Thessaloniki** comprised the following five (5) members, drawn from the HAHE Register, in accordance with Laws 4009/2011 & 4653/2020:

1. **Professor George A. Papadopoulos (Chair)**
   University of Cyprus, Nicosia, Cyprus

2. **Professor Costas Iliopoulos**
   King's College, London, United Kingdom

3. **Professor Constandinos Mavromoustakis**
   University of Nicosia, Nicosia, Cyprus

4. **Professor Emeritus Panagiotis Papamichalis**
   Southern Methodist University, Dallas, Texas, USA

5. **Professor Emeritus Nicolas Spyratos**
   University Paris-Saclay, Paris, France

II. Review Procedure and Documentation

The Panel (External Evaluation and Accreditation Panel or EEAP for short) visited virtually the Aristotle University of Thessaloniki (AUTH), Department of Informatics (DoI) on Monday 15th, Tuesday 16th and Wednesday 17thof February 2021. Prior to the virtual visit, on Thursday, January 28th of 2021, the Panel members were briefed by members of HAHE on the standards and guidelines of the QA accreditation process, as well as on the national framework of HEIs.

On February 15th, the Panel first met with the Vice-Rector/President of MODIP (Professor Dimitrios Koveos) and the Head of the Department of Informatics (Professor Eleftherios Angelis) to discuss the history, academic profile, current status, strengths, and possible areas of concern for the Department. The meeting was followed by a detailed two-hour presentation by Associate Professor Amalia Miliou (OMEA Head), discussing the degree of compliance of the undergraduate programme to the Quality Standards for Accreditation.

On February 16th, the EEAP first met with multiple teaching staff members. This meeting focused on a discussion of professional development opportunities, mobility (e.g., via the ERASMUS+ programme), workload, and student evaluations. The day continued with a meeting with active undergraduate students of the Department. Discussions during this meeting focused on student satisfaction from the undergraduate curriculum and the departmental facilities, as well as issues concerning student life and welfare. Following this meeting was an online tour of departmental facilities (classrooms, lecture halls, libraries, and laboratories). This was done mainly by means of two video presentations, one for AUTH as a whole and one for the DoI. In addition, a discussion took place between the EEAP on the one hand and members of teaching and administrative personnel on the other hand. This discussion focused on evaluating facilities and learning resources to determine whether the available equipment and facilities are adequate for the department's undergraduate curriculum. After a short break, the EEAP met with a set of students who recently graduated from the department and discussed their experiences during their undergraduate studies in the department and their career paths. The EEAP also met with an extensive set of employers and social partners of the department, in order to discuss relations of the department with stakeholders from the private and the public sector.

On February 17th, the EEAP met first with OMEA and MODIP representatives, followed by an extended meeting where, additionally, the Vice-Rector/President of MODIP and the Head of the Department were present. These meetings served the purpose of discussing Panel findings that might need further clarification and to present the key findings of the EEAP.

In preparation for the virtual visit, the EEAP had access to a wealth of information regarding the Department of Informatics of AUTH. The Department provided detailed data on each of the ten principles that this report will address and HAHE provided access to the previous external evaluation report (from October 2011). It is worth noting that the previous evaluation had a broader scope than the current one, which only focuses on the undergraduate programme. Additionally, HAHE provided detailed information on an annual basis for a multitude of quality indicators that are measured by HAHE using data provided by the Department. Furthermore, upon request by Panel members, the Department expeditiously provided additional data, including additional details on course evaluation forms, course homework and exams, self-assessment reports, etc.

Finally, the EEAP held multiple internal meetings to discuss the outcomes of the virtual meetings and the contents of this report. This report represents the collective findings of the Panel after the aforementioned discussions were concluded.

III. Study Programme Profile

The Department of Informatics at the Aristotle University of Thessaloniki was founded in 1991 and received its first students in the academic year 1992-1993. The undergraduate curriculum is revised regularly, and the last major revision occurred in July 2019.

Undergraduate studies in the Department have a four-year duration and are concluded after a student successfully completes 25 compulsory courses, a number of optional courses, as well as a one-semester-long diploma thesis. The Department currently offers 9 concentrations ("streams") for its undergraduate students, namely Artificial Intelligence, Data and Web Management, Software Engineering, Learning Technologies, Scientific Computing, Communication Networks and Systems Security, Computer and Communication Systems, Digital Media – Computational Intelligence, and Robotics – Autonomous Systems. To obtain the degree, a student must select and pass optional courses that will lead to the completion of at least one of these streams and up to two such streams.

During the first five semesters, a student is expected to take and pass 5 compulsory courses per semester. These courses cover topics related to the main subject of Informatics, as well as courses in Mathematics. Over the next three semesters, students select optional courses that should eventually lead to the completion of one or two streams. During the last (eighth) semester, students undertake a diploma thesis (worth of 15 ECTS). The students graduate with a minimum of 240 ECTS credits.

During the last three semesters the students have also the option to undertake an internship at industry or through the Erasmus+ programme or for the purposes of obtaining the Pedagogical and Didactical Competence Certificate. Furthermore, a number of more general electives (notably on foreign languages) are offered during these semesters. Typically, these courses are awarded ECTS credits beyond the 240 required ones for obtaining the degree.

According to data provided to the EEAP by the Department, after graduation students typically pursue one of the following three directions: (i) employment in the public sector; (ii) employment in the private sector; (iii) graduate studies, either towards an MSc or a PhD degree. Students can seek advice for employment opportunities either at the departmental or university level. Finally, it is worth noting that 75% of the Department's undergraduate students are within the first six (4+2) years of their studies. The current undergraduate student population of the Department is slightly above 1400 students.

PART B: COMPLIANCE WITH THE PRINCIPLES

Principle 1: Academic Unit Policy for Quality Assurance

INSTITUTIONS SHOULD APPLY A QUALITY ASSURANCE POLICY AS PART OF THEIR STRATEGIC MANAGEMENT. THIS POLICY SHOULD EXPAND AND BE AIMED (WITH THE COLLABORATION OF EXTERNAL STAKEHOLDERS) AT ALL INSTITUTION'S AREAS OF ACTIVITY, AND PARTICULARLY AT THE FULFILMENT OF QUALITY REQUIREMENTS OF UNDERGRADUATE PROGRAMMES. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.

The quality assurance policy of the academic unit is in line with the Institutional policy on quality, and is included in a published statement that is implemented by all stakeholders. It focuses on the achievement of special objectives related to the quality assurance of study programmes offered by the academic unit.

The quality policy statement of the academic unit includes its commitment to implement a quality policy that will promote the academic profile and orientation of the programme, its purpose and field of study; it will realise the programme's strategic goals and it will determine the means and ways for attaining them; it will implement the appropriate quality procedures, aiming at the programme's continuous improvement.
In particular, in order to carry out this policy, the academic unit commits itself to put into practice quality procedures that will demonstrate:

a) the suitability of the structure and organization of the curriculum;
b) the pursuit of learning outcomes and qualifications in accordance with the European and the National Qualifications Framework for Higher Education;
c) the promotion of the quality and effectiveness of teaching;
d) the appropriateness of the qualifications of the teaching staff;
e) the enhancement of the quality and quantity of the research output among faculty members of the academic unit;
f) ways for linking teaching and research;
g) the level of demand for qualifications acquired by graduates, in the labour market;
h) the quality of support services such as the administrative services, the Library, and the student welfare office;
i) the conduct of an annual review and an internal audit of the quality assurance system of the undergraduate programme(s) offered, as well as the collaboration of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU).

Study Programme Compliance

The Department of Informatics of the Faculty of Sciences of the Aristotle University of Thessaloniki was established in 1991 and offers an undergraduate programme of studies which comprises three fields, with 9 different concentrations ("streams"). The undergraduate programme encompasses the common core programme courses during the first five (5) semesters. In the last three (3) semesters the programme contains compulsory courses of the selected course stream (flows) and offers a number of elective courses. The programme meets the state of the art, and has substantial width/depth whereas, it converges with the international standards of the fields involved and the subjects taught at undergraduate level.

An important part of the latter is the academic staff who teaches the programme's courses that are close to their specialization and/or have substantial knowledge of the course topics.

The Department underwent external review of its undergraduate programme in 2011 and has subsequently addressed most of the recommendations made in the 2011 report. From this, it is clear to the EEAP members that the Department has the willingness to promote the quality and effectiveness of its teaching, and that it puts the needs of the students at the heart of its activities. The high quality and quantity of faculty members' research activity, results in substantial funding (based on the presentation, the Department participates in 20 European projects, 10 National/ ΕΣΠΑ-ESPA and some society development programmes, novelty transfer schemes for the year 2019) and research outputs making the Department one of the top (as evident by international rankings) research-active Informatics Departments in Greece and internationally. Linking of teaching and research is actively pursued mainly through the thesis projects. It is noted that a number of graduates of this programme pursue graduate (MSc and PhD) studies at the Department and are also employed as researchers in on-going research projects. A number of undergraduate theses, with some additional effort, have been published in international journals and conferences.

The process of assessing and examining students is along the lines. The Quality Assurance (QA) policy has been developed by the MODIP in cooperation with the OMEA of the Department; its quality assurance policy follows the strategic goals and quality policy of the Faculty of Sciences of the AUTH. The Department conducts electronic faculty evaluations using questionnaires that are created by the OMEA and the MODIP. The programme's review along with the contents of the courses offered by the programme are periodically evaluated. However, there is a lack of guidance by external stakeholders so that the programme is up-to-date and aligned with trends and demands of the industry-needs. EEAP members strongly encouraged the faculty members of the Department to develop the appropriate mechanisms for a multi-stakeholders' feedback on a periodic basis. Within these lines, there are no feedback reports provided by both academic and industry/external advisors (joint-consolidated reports with the extracted outcomes) on the quality and efficiency of the programme.

The EEAP found that the Quality Assurance Policy is communicated to all stakeholders involved. There is adequate up-to-date information on the Department website (KPIs, analysis, statistical data), including the report of the External Evaluation that took place back in 2011.

The students confirmed that the Department actively promotes their involvement in the evaluation processes and discloses the information in class and via electronic means. The EEAP also confirmed with the students their willingness to participate actively in the evaluation process.

The administrative staff members offer services to the students in a well-organized manner, and they are dedicating a daily slot of face-to-face service of 90 minutes duration. They are easily approachable and available in-person, as well as via phone and email. Information can be easily obtained online with students' registered account/credentials. Students and staff seem to be actively participating in the local community and industry through social and training activities.

The Department's documentation clearly states the learning outcomes and qualifications of its programme, following the guidelines of the National Qualifications Framework for Higher

Education. The programme of the School of Informatics should better combine both theoretical and practical knowledge in the fields involved. It is important to highlight that the EEAP spotted that there is a link of teaching and research with several examples that were presented, demonstrating the use of research topics used in teaching and project work by students. To this extent, social partners and market representatives have excellently figured-out the value of knowledge of the graduates of the Department and their effective contribution in real-time.

Panel Judgement

Principle 1: Institution Policy for Quality Assurance	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- The Department is encouraged to establish systematic processes for eliciting input from external stakeholders, like industrial partners and alumni, for reviewing and /or consulting purposes towards the continuous enhancement of its study programme and QA policy and processes. The input by external stakeholders so that the programme is aligned with the industrial needs, trends and demands is strongly encouraged to be established. To this extent, a consolidated feedback report with the extracted outcomes should be -on a periodic basis i.e., bi-annually or annually- provided by both academic and industry/external advisors on the quality of the programme.
- Strengthen the administrative personnel team responsible for the departmental tasks so that students and internal tasks of the Department can be served efficiently.

Principle 2: Design and Approval of Programmes

INSTITUTIONS SHOULD DEVELOP THEIR 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.

Academic units develop their programmes following a well-defined procedure. The academic profile 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 National Qualifications Framework for Higher Education are described at this stage. The approval or revision process for programmes includes a check of compliance with the basic requirements described in the Standards, on behalf of the Institution's Quality Assurance Unit (QAU).

Furthermore, the programme design should take into consideration the following:

- *the Institutional strategy*
- *the active participation of students*
- *the experience of external stakeholders from the labour market*
- *the smooth progression of students throughout the stages of the programme*
- *the anticipated student workload according to the European Credit Transfer and Accumulation System*
- *the option to provide work experience to the students*
- *the linking of teaching and research*
- *the relevant regulatory framework and the official procedure for the approval of the programme by the Institution*

Study Programme Compliance

The Department of Informatics at the Aristotelian University of Thessaloniki appears to have a well-established process of developing and revising its academic programme. The study of any changes starts by the faculty considering practices in other similar programmes in Greece and internationally. The fist deliberations are done at the Section level after which they are advanced to the Curriculum Committee, which forwards it to the departmental assembly. After departmental approval, the plan is sent to MODIP, and then to the University General Assembly (Senate). This guarantees sufficient scrutiny for the approval of any changes.

To get input for the programme and any needed changes, the faculty uses their own exposure to and knowledge of other similar programmes domestic or international, but they also solicit input from local Industry and other employers. This is a very good practice, and it was confirmed in this Panel's session with employers and other stakeholders. However, such interactions are on one-on-one basis and miss the group dynamics of getting input from different sources gathered in the same place. It is recommended that the Department institutionalizes an External Advisory Board (possibly consisting of the same people that the EEAP met), which could meet once a semester or once a year to hear in one place the plans for evolution of the programme and give their input. These friends of the Department seemed eager to contribute in this way in the improvement of the Department, not only in terms of the programme of study, but also in areas affecting other principles too.

The current form of the programme, using streams for the elective courses after the 5th semester, was established in 2019. As a result, there has not been sufficient time for this approach to be tested completely, since any potential problems will not be known until the incoming class in 2019 reaches the point to use it fully. However, a look at the rules for taking courses, as well as the availability of courses in the different streams, inspires confidence that this change will be successful.

Every course uses the same standard form (form M1) to list all the parameters of the course, including objectives, learning outcomes, textbooks, modes of assessment, ECTS, etc. This is an excellent and consistent way to present the information and makes it very easy for someone to locate any information of interest. It corresponds to a collection of syllabi (term used in the US), described in a consistent and coherent way.

It is appropriate that the Internal Assessment Team (OMEA), according to the information shared with the EEAP, keeps a close eye in assessing the different performance indicators, and shares the observations with the Sections, the Department Chair, and the whole faculty. The active involvement of the OMEA team in this process was evident from the EEAP's interactions, and it is to be commended.

It is assumed that the OMEA assessment includes any related items in the Target-Setting plan. For the Target-Setting plan (which is thorough), it might be more realistic to specify in the Timetable dates that make sense, depending on what they measure: Currently, all the target dates are either 31/08/2021 or 31/12/2021. But how can one, e.g., reduce by the end of this year the percentage of students taking over n+2 years to graduate? This sounds more like needing a multi-year plan, which should be tracked over time.

The Student Guide is concise, complete, and appropriate. Actually, its main sections can also be found on the department's website, which has an excellent structure, under "Undergraduate Studies". Additionally, it is expected that today's Internet-savvy students will find the website handier than the Student Guide itself. The Student Guide contains all the necessary information, but it is suggested that sections 5 (Past Department Chairs), 6 (Awarded Doctoral Degrees), and 7 (Doctoral Candidates) be moved to the end of the Guide as Appendices, since it is expected that they would have secondary importance for most students looking for information in the Student Guide.

Panel Judgement

Principle 2: Design and Approval of Programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Adjust the target dates in the Target-Setting plan (Στοχοθεσία) to correspond to realistic time frames for what they are tracking.
- Institutionalize an External Advisory Board, consisting of employers and other external stakeholders, which will hear as a group the Department's plans for changes and give feedback.
- Move Sections 5, 6 and 7 of the Student Guide to the end of the Guide (maybe as appendices).

Principle 3: Student- centred Learning, Teaching and Assessment

INSTITUTIONS SHOULD ENSURE THAT THE 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.

Student-centred learning and teaching play an important role in stimulating students' motivation, self-reflection and engagement in the learning process. The above entail continuous consideration of the programme's delivery and the assessment of the related outcomes.

The student-centred learning and teaching process

- *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 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.*

In addition:

- *the academic staff are familiar with the existing examination system and methods and are supported in developing their own skills in this field;*
- *the assessment criteria and methods are published in advance;*
- *the assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary is linked to advice on the learning process;*
- *student assessment is conducted by more than one examiner, where possible;*
- *the regulations for assessment take into account mitigating circumstances;*
- *assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures;*
- *a formal procedure for student appeals is in place.*

Study Programme Compliance

All the evidence from the discussions with the students and the faculty, as well as from the documentation, indicates that the Department and the Instructors take extensive steps to meet the learning needs of the students, and interact with them as much as possible. The new system of streams for the elective courses permits the students to tailor their directions according to their aspirations, after they go through the core part of the curriculum.

Different techniques are used to share knowledge, such as projects or group assignments, beyond the traditional lectures. Of course, the possibilities are dictated by the nature of the course material too. An interesting practice is the use of SPOC material (Short Private Online Courses) which can be used for "flipped" classes, where the SPOC takes the place of the lecture,

and the lecture time is used for practice and interaction with the students to reinforce the acquired knowledge. But it was not clear to which extent the SPOC method was used.

There were complimentary comments by the students regarding the eLearning.org system, where they can find what they need regarding the course. They appreciated that the instructors were very responsive to requests on eLearning, which then served as "office hours" but at irregular times. The office hours are still available, and it did not appear that the COVID-19 restrictions had presented insurmountable difficulties in that respect. It also appears that the students are offered all the modern electronic ways of access to the department, including webpages, Facebook page, email, etc.

Students had complaints about the accessibility of the Secretariat (only 90 min/day). The Department explained that this was due to sharing of the Secretariat offices between different Schools, but this is still a concern. A related suggestion by the students (that could alleviate the previous issue) was to make their records accessible electronically. This way, if students required an unofficial transcript, they could print it out themselves, without a need to go to the Secretariat for an official copy.

Regarding the course exams, they seem to take place during well-defined periods during the year. The students who have failed three times in an exam are given the opportunity to appeal and be examined by a committee of experts in the subject matter. The assessment criteria for the courses are spelled out in the M1 form of that course and are known to the students beforehand.

The student evaluation of the courses / instructors is conducted at the end of the semester, but it is completed by a relatively small percentage of the students who have registered. Some members of the faculty argued in the discussions with our Panel that the total population of registered students (and, hence, the percentage of completed evaluations) is misleading because there is a significant number of no-shows at exams. It needs to be investigated if this is indeed the case and examine possible steps to address this problem. If, on the other hand, there is indifference to participation in the evaluations, incentives need to be given to the students (besides appealing to their "filotimo"). The evaluations can be conducted during the last class of the semester, where the students enter their responses using their smartphones or laptops. In that case, there could be positive incentives too. Or there could be other incentives, outside the class time, where students who have responded to the survey are permitted to see their course grades early.

There is a designated Studies Advisor who seems to be addressing broader issues of the students. There is no Academic Advisor, as is currently a standard practice in many Universities abroad. When the subject was brought up to the faculty meeting with the EEAP, they indicated that the establishment of Academic Advisors was attempted but it was not successful, because of the culture and the mentality of the Greek students. So, it was abandoned (except possibly for graduate students, where their research professor can act as an advisor too). However, the Panel feels that it would help to have academic advisors track the academic needs and performance of the students, and it may help in on-time graduation. So, it is recommended to give it another try. It is recognized that this will impose additional load to the faculty, but it is hoped that the results will outweigh the costs.

There is a concern that, although course prerequisites are mentioned in the M1 forms, it appears that there is no enforcement to the students (something that an Academic Advisor would be responsible to ascertain). This may be handicapping the progress of weaker students, who sign up for new courses without having passed courses whose content is essential for the new courses. It is recommended that fulfilment of such prerequisites is more rigorously enforced. If

the prerequisites mentioned in M1 are only suggestive and not absolute requirements, the phrase “on consent of the Instructor” could be added next to them, so that they may be bypassed upon the Instructor’s consent.

The current evaluations are primarily subjective (how one feels about the question). However, there is a need to assess objectively how well the students fulfilled the Learning Objectives and outcomes. The overall grade in an exam is a rough measure of that outcome. However, in order to have a more specific view, it would help the instructor to assess particular aspects of the learning outcome. For this purpose, it is recommended to structure portions of the assigned problems (or a whole problem) to address a particular aspect of the Learning Outcome. Then, when grading this particular problem, the instructor can designate the level of performance (e.g., grade 9 to 10 = Excellent, 7-9 = Satisfactory, …, <5 =unsatisfactory). This will provide the faculty an objective measurement and an alert if the students do not get a particular aspect of the Learning Outcome.

The issue of soft skills, especially the ability to express ideas in both oral and written form, is a universal problem of STEM students. Developing such skills will help students not only in their technical communication, but also in their careers, as these skills become more essential as the graduates progress on the managerial/leadership ladder. Besides recommending courses and opportunities outside the Department (or even the University), such as attending Toastmasters Clubs (if they exist in the area), steps can be taken within the current curriculum. In particular, courses that have projects/reports as part of their assessment, could require some oral presentation too, and a portion of the project/report grade can be based on the ability to communicate the information effectively (both written and oral).

Panel Judgement

Principle 3: Student- centred Learning, Teaching and Assessment	
Fully compliant	
Substantially compliant	**X**
Partially compliant	
Non-compliant	

Panel Recommendations

- Try to encourage an increase of the student participation in course/ instructor evaluations by holding the evaluation during the last class of the semester, and the students using their smartphones or their laptops to enter their responses. Additionally, restrict releasing early the course/exam grades to only those who have responded.

- Recommend to the appropriate authorities to re-establish the position of the Academic Advisor (Tutor), where students are required to get approval by this advisor before registering for next-semester's courses.
- Examine the possibility of having objective criteria of meeting the learning outcomes. This is to measure the extent to which the class actually achieved the particular outcome. For instance, if there are relevant questions in exams, relevant homework problems, or relevant (pieces) of a project, isolate the score for that section only, and measure it for all students in a class. Then, set a threshold of success for the average class score (e.g., 70% of the maximum grade for that section) to determine whether the learning outcome was achieved.
- Enforce course prerequisites if they are essential. The study guide (English: art. 21, p. 33; Greek: art. 19, p. 15) indicates that students are forced to register in mandatory courses that they have not passed yet. However, no rule was seen about students being prevented in registering in subsequent courses, which have the not-passed courses as prerequisites.
- Educate the students in soft skills (presentation skills) by requiring oral presentations in courses with projects/reports. Base part of the grade on how well any written/oral presentation was composed and delivered.

Principle 4: Student Admission, Progression, Recognition and Certification

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

Institutions and academic units need to put in place both processes and tools to collect, manage and act on information regarding student progression.

Procedures concerning the award and recognition of higher education degrees, the duration of studies, rules ensuring students progression, terms and conditions for student mobility should be based on the institutional study regulations. Appropriate recognition procedures rely on institutional practice for recognition of credits among various European academic departments and Institutions, in line with the principles of the Lisbon Recognition Convention.

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).

Study Programme Compliance

Admissions to all Greek universities are governed by the rules decided by the Ministry of Education, based on various criteria: Panhellenic exam results, health reasons, nationality (Cypriot, foreigners), athletes etc. Universities do not have a choice in the admission criteria of new students.

The progress of the students and the evaluation of their performance in the courses, may include assignments, midterm examinations, tests, and final examination. Exams can be written, oral, lab work or a combination of these. The final exams are conducted in three periods: January-February (1st), June (2nd), and September (3rd) (examines the courses of both semesters).

The Department of Informatics participates in the ERASMUS + and ERASMUS + International in cooperation with European Universities in its area of education. In terms of incoming mobility, the students can attend courses of the undergraduate study programme of the Informatics Department as well as courses offered by other Departments of the University. Students who successfully pass the exams of the courses, are credited with ECTS Units as stated in the Learning Agreement for Studies.

A dissertation worth 15 ECTS and undertaken during the last (8th) semester is a necessary condition for obtaining a degree in the Department of Informatics. The dissertation in the Department is considered and is an opportunity for the student to work as a researcher and demonstrate his / her ability for scientific research. The Panel has been told that one semester (which is the current duration period for the dissertation) is not sufficient. The Panel agrees with this opinion and suggests that: (i) the thesis period covers the last two semesters (7th and 8th) with an appropriate splitting of the ECTS (say, 5 ECTS in the 7th semester and 10 ECTS in the 8th semester), and (ii) the allocation of thesis topics and supervisors to students is done at the end of the previous academic year (namely, end of the 6th semester). The combination of these two measures will effectively increase the time period that a student can spend for his/her thesis (e.g., s/he would be able to use the summer period between the third and final year of studies). Granted that a student at the end of the 7th semester will know more about the potential topics

for the thesis than at the end of the 6th semester, but: (i) the student has already chosen a stream by the end of the 6th semester and therefore s/he should have some idea about the topics s/he would like to pursue for the thesis, (ii) there are specialised (stream) courses even in the 8th semester which the student won't have been taught about before choosing the topic thesis, and (iii) this problem can be alleviated by producing a catalogue of the thesis topics offered every year with a short description of each topic and encouraging the students to contact the advisors of these topics in order to get more information. In fact, this process may actually assist the student who completes the third year to select more wisely the specialised courses of the 7th and 8th semester.

The informatics students have very limited opportunities to take courses from other Departments of the University. The courses that they have the opportunity to take are either also related to Informatics (e.g., 'Law of Informatics') or are themselves prerequisites to some additional qualification (e.g., 'Education and Schooling' for the Pedagogical and Didactical competence) It will be beneficial for the students to be able to take 2-3 completely free courses of their choice that will make their degree balanced and complete. For example, on Philosophy, Music, etc.

The management of student progression is fully integrated and automated within the University computer systems. Similarly, the course and teaching staff evaluations are all done online, and their analysis is fully automated. They have vigorous procedures to address any problems that may arise from the evaluations.

The processing of information concerning admissions, certification, etc. is automated to a high standard.

Panel Judgement

Principle 4: Student Admission, Progression, Recognition and Certification	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Improve access to the student progression records.
- Offer students the opportunity to take generic courses of their choice, from other Departments (other curricula). These courses should not be related to Informatics and should also not be needed for any additional qualification.

- Expand the dissertation period over the last two semesters (by splitting the ECTS over this period in an appropriate way) and allocate thesis topics and supervisors at the end of the previous year, in order to practically increase the time period that a student can spend on the thesis.

Principle 5: Teaching Staff

INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE QUALIFICATIONS AND COMPETENCE OF THE TEACHING STAFF. THEY SHOULD APPLY FAIR AND TRANSPARENT PROCESSES FOR THE RECRUITMENT AND DEVELOPMENT OF THE TEACHING STAFF.

The Institutions and their academic units have a major responsibility as to the standard of their teaching staff providing them with a supportive environment that promotes the advancement of their scientific work. In particular, 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 recognize 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.*

Study Programme Compliance

The hiring process for academic staff is centrally dictated, dominated by the Greek government laws; they use simple, transparent procedures for hiring adequately qualified staff who perceive the importance of education and research.

The Curriculum Vitae of academic staff shows that they have an appropriate background, and, to a large extent, their research publications are related to teaching subjects. In certain instances, the research output is exceptional, a fact reflected by the high ranking of the Department in various University guides.

The Panel considers that the Department had sufficient funding to support conference participation and other academic/research activities. Most teaching staff have made use of these opportunities to enhance and accelerate their research and academic development. The Department has signed a large number of ERASMUS+ agreements, the teaching staff have made extensive use of the ERASMUS+ travel funding, with a multitude of opportunities. Additionally, an impressively successful record in obtaining research funding, allowed a notable expansion of international and national research exposure.

The Department, on a regular basis, offers sabbaticals to their academic staff, vital for their professional development; it appears the majority of the academic staff made use of this opportunity. Similarly, promotion procedures are followed according to the rules and the staff seems to be happy with the overall handling by the Department.

The research ranking of the Department makes it an attractive place to work and we expect high calibre applicants for any open positions.

Panel Judgement

Principle 5: Teaching Staff	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

None.

Principle 6: Learning Resources and Student Support

INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER 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 funding and means to support learning and academic activity in general, so that they can offer to students the best possible level of studies. The above means could include facilities such as libraries, study rooms, educational and scientific equipment, information and communications services, support or 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 or international students, students with disabilities) and 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. However, the internal quality assurance ensures that all resources are appropriate, adequate, and accessible, and that students are informed about the services available to them.
In delivering support services the role of support and administrative staff is crucial and therefore they need to be qualified and have opportunities to develop their competences.

Study Programme Compliance

The Department has some shortcomings with its facilities. The lecture rooms located at mezzanine level are inadequate, often overcrowded with students sitting on the steps. The lectures rooms that are shared with other faculties are sufficiently large but inadequate as the students sitting on the higher-level rows, cannot read the whiteboard or the slides and furthermore they cannot hear the lecturer. This issue must be tackled for the students to receive the lectures in a satisfactory manner.

The academic staff split their time between the central campus and the Kalamaria campus. The distance between the two places is about 20 minutes by car or 30 minutes by bus. The academic staff have “hot” (shared) offices on the Central campus that they use to meet the students. The vast majority of the students were not very unhappy with the arrangement, but a few complained that it can take them up to an hour to go to Kalamaria (depending on where they are living).

The laboratories are well equipped. The equipment is up to date and modern. The software is updated and maintained regularly. Overall, the laboratories are well managed and operate smoothly for the good of the students.

The pastoral care is controlled by only 3 members of the academic staff. The Panel feels that the load of each of those 3 members is excessive, making it impossible to offer personalized pastoral care for such a large number of students. Every student should be assigned a tutor that advises them for the duration of their studies, addressing academic and personal issues that may arise.

Housing and eating facilities are adequate but rather small. The restaurant and the accommodation seem to be well managed. There is a WIFI network that allows the students to work from home.

The administration is run on modern computer systems and it is effective and well organized. It offers adequate support to the academic staff and students. The 90 minutes opening time of the Admin office is inadequate resulting in large queues of students on certain days. We understand that the office is located in a shared facility that limits the opening hours, but an alternative solution should be found.

The mobility of students is well coordinated. Many students take advantage of the opportunities of ERASMUS+ to broaden their knowledge and expose themselves to new ideas and approaches. The Department has ensured that there are many agreements in place, increasing the choice of places to visit and topics to be studied.

Panel Judgement

Principle 6: Learning Resources and Student Support	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Use electronic whiteboards on the large teaching rooms. Install multiple monitors replicating the main screen, especially in flat rooms, to improve visibility when these rooms are crowded.
- Request from the University to increase the public servicing hours of the admin office.
- Recommend to the appropriate authorities to re-establish the position of the Academic Advisor (Tutor), where students are required to get approval by this advisor before registering for next-semester's courses.

Principle 7: Information Management

INSTITUTIONS 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.

Institutions are expected to establish and operate an information system for the management and monitoring of data concerning students, teaching staff, course structure and organisation, teaching and provision of services to students as well as to the academic community.

Reliable data is essential for accurate information and for decision making, as well as for identifying areas of smooth operation and areas for improvement. Effective procedures for collecting and analysing information on study programmes and other activities feed data into the internal system of quality assurance.

The information gathered depends, to some extent, on the type and mission of the Institution. The following are of interest:

- *key performance indicators*
- *student population profile*
- *student progression, success and drop-out rates*
- *student satisfaction with their programme(s)*
- *availability of learning resources and student support*
- *career paths of graduates*

A number of methods may be used for collecting information. It is important that students and staff are involved in providing and analysing information and planning follow-up activities.

Study Programme Compliance

The Department of Informatics of the Faculty of Sciences of the Aristotle University of Thessaloniki is responsible for overseeing the continuous improvement of its academic provision and research outputs, as well as the efficient operation of its academic services, in accordance with international practices and the guidelines provided by Hellenic Authority for Higher Education. An internal evaluation and assessment are conducted annually, consisting of targeted student, academic, and administrative staff questionnaires (i.e., admin staff is evaluated by students only once in their student's lifetime). The Internal Evaluation Committee works in collaboration with MODIP to analyse and communicate the information obtained from the surveys. The Quality Assurance goals of the AUTH are based on its strategic plan and aim to provide specific and measurable KPIs for all its main activities. Efficiency measurements include quantitative and qualitative indicators which provide valuable and reliable information, and the collection of datasets encompassing the number and categories of indicators per quality objective, and their analysis and reporting for the purpose of supporting higher level decision-making.

The number of students in some courses seems to be relatively high, whereas it increases even more during examination periods. In addition, transferred students aggravate further the number of incoming students, increasing further the total number of students in the Department. It is worthy to mention that students seem to be very satisfied with the offered courses throughout the semester as well as the courses'-semester's breakdown. Considering

the latter students are satisfied with the learning outcomes of the courses, and with the acquired knowledge by the programme in total.

The Aristotle University of Thessaloniki provides an efficient IT infrastructure which ensures the collection of all relevant data, and the process of publishing of the annual reports which are posted on the website for public access. The overall process that the University employs, ensures that the anonymity and confidentiality is secured for the required data of all the above. Finally, it is worthy to mention that the questionnaires are undergoing continuous improvements so that students are urged to complete them accordingly. It is clear to the EEAP members that the staff of the Department feel satisfied by the provided electronic services and resources available to them, including the computer labs which in some cases play an important role in the conduct of research and effective teaching. The students are clearly satisfied with their learning experience in this respect and value the resources available to them.

Students can easily reach the industry sector of their discipline in their vast majority. They feel that the market/industry can easily absorb them, and this is evident by the high percentage of the graduates who are employed within a relatively short time after their graduation. The latter is clearly indicated by the social partners who mentioned that graduates are capable of finding jobs in their domain which in many other cases is extremely difficult and highly competitive.

The Department fully complies with Information Management principles. Its commitment to collect course evaluation data from students is exemplary and its staff was able to provide answers to all of the Panel's questions.

Panel Judgement

Principle 7: Information Management	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

The EEAP recommends that the Department prioritises the opportunities derived from having flagship stakeholders of the market as partners. This can be achieved if the Department:

- Establishes formal processes for involving Advisory Board members, including but not limited to external ones like industrial market players/partners and alumni in order to maintain the programme innovation and aligned with the market requirements (the

industrial partners called it "*Osmosis with the market"*). This will enable even smoother career pathways for the students, and more prepared students for the market needs.

- Performs dedicated surveys involving students, alumni and the industry regularly, and establishes procedures to incorporate the results in the assessment process.
- The Department should ensure that the self-assessment results should be shared among all members of the academic unit (including faculty, students, and non-teaching staff). Additionally, the Department -and based on the assessment reports- should create an action plan with aims, objectives and goals of their short- and long-term goals based on the feedback obtained by the involved stakeholders (i.e., students, alumni, external evaluators or Curriculum Advisory Programme Committees, etc).

Principle 8: Public Information

INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES WHICH IS CLEAR, ACCURATE, OBJECTIVE, UP-TO-DATE AND READILY ACCESSIBLE.

Information on Institution's activities is useful for prospective and current students, graduates, other stakeholders and the public.
Therefore, institutions and their academic units provide information about their activities, including the programmes they offer, the intended learning outcomes, the qualifications awarded, the teaching, learning and assessment procedures used, the pass rates and the learning opportunities available to their students, as well as graduate employment information.

Study Programme Compliance

The Department provides information through various channels to its principal stakeholders, namely prospective students, undergraduate and graduate students, as well as to industrial partners and to the public in general: presentations in high schools, information day for the new undergraduates, seminars by external speakers, close relationships with graduate students and strong links to industrial stakeholders (the latter provide student internships and hire most of the Department's graduates).

The Department also maintains a well-designed website with well-focused information (both in Greek and in English), although undergraduates seem to privilege the e-learning platform for their daily information needs. It is to be noted that public information is also provided through social networking.

Questionnaires provide an important way of communicating between faculty and the undergraduates. However, student participation in completing questionnaires seems to be relatively low and the Department should try to find ways to enhance it. Similar questionnaires and surveys could be sent to alumni and to industrial stakeholders as well.

The Panel met separately with groups of undergraduate students, graduate students and industrial stakeholders. In general, they all expressed their satisfaction in the quality of their communication with the Department. However, the undergraduates and the industrial stakeholders pointed out some areas in which there could be improvement.

The undergraduates expressed the need to have (a) longer opening hours of the secretariat (currently only 90 minutes per day!) (b) the possibility for full time internships, and (c) more comfortable teaching rooms (currently some rooms are too small for the number of students in certain courses or too large which causes difficulties to see the screen or hear the lecturer). The Panel members understand that longer opening hours can't be provided due to lack of sufficient administrative staff – a recurring problem in Greek Universities, whereas the introduction of full-time internships might cause problems to the normal course of studies at the undergraduate level. However, the problem of too large rooms could (and should) be solved at minimal cost by installing adequate audio-visual systems.

The graduate students seemed to be fully satisfied by the education they received and all those that we met had found interesting positions.

As for the industrial stakeholders, they all expressed their appreciation of the high-quality technical background of the Department's graduates that they employ and the excellent

personal relations they maintain with faculty members. However, they explicitly stressed the need for a more structured way of communicating with the Department in order to maintain a continuous dialogue and give their input to the curriculum as well as to the Department's strategic planning (for example, some of the industrial stakeholders expressed the need to see more emphasis in project management skills as well as more "soft skills" in the graduates' background).

There seems to be a discrepancy between the information presented in the undergraduate guides (both the Greek and English versions, section 8, bullet 18) and what is actually the case. Specifically, the guides state that the thesis undertaken in the 8th semester is optional (and could be replaced by 3 courses), although the Panel was told during the presentations that the thesis is compulsory.

Panel Judgement

Principle 8: Public Information	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Set up and activate an External Advisory Board.
- The student guides should be checked for consistency regarding study requirements (e.g., the 8th semester thesis as being optional even though it is compulsory).
- Find ways to ensure longer public servicing hours for the admin office.

Principle 9: On-going Monitoring and Periodic Internal Review of Programmes

INSTITUTIONS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR 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 study programmes aim to maintain the level of educational provision and to create 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. Revised programme specifications are published.

Study Programme Compliance

The programme contains the basic courses expected from a good Computer Science Department. Its contents are monitored and updated if needed, and the updated programme appears on the Department's website. The main input for eventual updates comes from faculty members and from students.

Student input is provided mainly through questionnaires, filled annually and then analysed. The questions concern mainly student expectations from the teachers and the courses they teach, the style of teaching, the course contents, the learning environment and the course workload. However, student participation in completing questionnaires seems to be relatively low and the Department should try to find ways of enhancing it.

The students met by the Panel were, in general, very satisfied with the quality of education they receive although they pointed out some areas in which the curriculum and the learning environment could be further improved (see Principle 8 above). In addition, they would like the exam schedules to be announced earlier in the year (not too close to the exams).

Apart from faculty and students two important sources of input for monitoring the Department's programme are the alumni and the industrial stakeholders; and indeed, both these sources provide their input through the strong links they maintain with the Department. However, these inputs seem to be obtained based mainly on personal relations that faculty members maintain with alumni and industrial stakeholders. What is needed here is some sort of coordination mechanism, such as an Advisory Board so that useful input is provided by industrial stakeholders and alumni on a regular basis and programme changes are motivated also by changing needs in industry and society.

One issue with the curriculum concerns prerequisites. The Panel heard that many faculty members do include in their course descriptions a quick reference to the desirable (not required) previous knowledge. The Panel believes that this is a good practice that should be followed by all faculty members and, indeed, the concept of prerequisites should be enforced.

Last but not least, the Department has responded positively to the recommendations by the 2011 evaluation regarding changes in the curriculum and most of the recommendations have been implemented in the current curriculum.

Panel Judgement

Principle 9: On-going Monitoring and Periodic Internal Review of Programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

- Appoint and activate an External Advisory Board of Alumni and Industrial Stakeholders.
- Develop effective means to increase the student participation in filling questionnaires so that to ensure statistically robust results.

Principle 10: Regular External Evaluation of Undergraduate Programmes

PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY COMMITTEES OF EXTERNAL EXPERTS SET BY HAHE, AIMING AT ACCREDITATION. 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 committee of independent experts. HAHE grants accreditation of programmes, 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 template's requirements, and as a catalyst for improvement, while opening new perspectives towards the international standing of the awarded degrees.

Both academic units and institutions participate in the regular external quality assurance process, while respecting the requirements of the legislative framework in which they operate.

The quality assurance, in this case the accreditation, is an on-going process that does not end with the external feedback, or report or its follow-up process within the Institution. Therefore, Institutions and their academic units ensure that the progress made since the last external quality assurance activity is taken into consideration when preparing for the next one.

Study Programme Compliance

The undergraduate programme and, indeed, the Department as a whole have not as yet undergone another accreditation process. However, 10 years ago the Department was externally evaluated by another HAHE appointed committee. The findings of that evaluation process cover all aspects of the Department's activities and a number of them are directly related to this accreditation process. The Department has sufficiently demonstrated that it has taken into consideration the majority of the recommendations of the external evaluation committee and these recommendations have now been integrated into the processes related to the implementation of the current undergraduate programme (to a percentage close to 80%). A relatively small number of these recommendations have not been implemented, mainly due to legal restrictions or because their effective implementation is beyond the influence of the Department. Every effort should be made for these recommendations to also be implemented. Furthermore, the established procedures for internal quality assurance are sufficient for ensuring that the findings and recommendations of this (or future) accreditation Panel will be implemented. The relevant Departmental and University stakeholders are well aware of the importance of these accreditation exercises, have been actively engaged in the current accreditation process and are committed to implementing its findings.

Panel Judgement

Principle 10: Regular External Evaluation of Undergraduate Programmes	
Fully compliant	**X**
Substantially compliant	
Partially compliant	
Non-compliant	

Panel Recommendations

Every effort should be made for the recommendations of the external evaluation process to be implemented to the full, in addition to those recommendations that are made by this accreditation Panel.

PART C: CONCLUSIONS

I. Features of Good Practice

- The Department has a solid undergraduate programme in place that is often revised and has been frequently adapted to incorporate state-of-the-art material in the course offerings.
- The undergraduate programme has incorporated elements of research (mainly via the diploma thesis).
- There is a high degree of student satisfaction from the undergraduate programme, in terms of professional or graduate studies preparation.
- The Department offers significant mobility opportunities to undergraduate students via the ERASMUS+ programme.
- The Department sufficiently monitors the career paths of its graduates. More importantly, there seems to be significant satisfaction among employers regarding the quality and the training of the Department's students.
- The Department seems to be a healthy environment for both students and faculty in order to pursue their academic endeavours.
- Forms M1 are an excellent and consistent way to present the parameters of each course.
- The website of the Department contains all the necessary information for students in an easy-to-access way.
- The eLearning system seems to work quite well for the students.
- The instructors were given high marks by the students on being responsive to questions and on helping them by email or eLearning.

II. Areas of Weakness

- There is a lack of guidance by external stakeholders so that the programme is up-to-date and aligned with trends and demands of the industry-needs. EEAP members strongly encouraged the faculty members of the Department to develop the appropriate mechanisms for a multi-stakeholders' feedback on a periodic basis. Within these lines, there are no feedback reports provided by both academic and industry/external advisors (joint-consolidated reports with the extracted outcomes) on the quality and efficiency of the programme.
- The number of students in some courses seems to be relatively high, whereas it increases even more during examination periods. In addition, transferred students aggravate further the number of incoming students, increasing further the total number of students in the Department.
- The overall infrastructure regarding teaching rooms and equipment, office space (and its dispersed location), etc. is not adequate for the needs of the Department.

III. Recommendations for Follow-up Actions

- Formal processes involving external Advisory Board members, like industrial market players/partners and alumni, should be established in order to maintain the programme innovation and align with the market requirements (the industrial partners called it “Osmosis with the market”). This will enable even smoother career pathways for the students, and more prepared students for the market needs.
- Dedicated surveys should be conducted regularly, involving students, alumni and the industry, and procedures should be established to incorporate the results in the assessment process.
- Self-assessment results should be shared among all members of the academic unit (including faculty, students, and non-teaching staff). Additionally, the Department - and based on the assessment reports- should create an action plan with aims, objectives and goals of their short- and long-term goals based on the feedback obtained by the involved stakeholders (i.e., students, alumni, external evaluators or Curriculum Advisory Programme Committees, etc.).
- The administrative personnel team should be strengthened, so that students and internal tasks of the Department can be served efficiently.
- The target dates in the target-setting plan should be adjusted to correspond to realistic time frames for what they are tracking.
- Sections 5, 6, and 7 of the Student Guide should be moved to the end of that document (maybe as appendices).
- Student participation in course/ instructor evaluations should be encouraged by holding the evaluation during the last class of the semester, and the students using their smartphones or their laptops to enter their responses. Additionally, restrict releasing early the course/exam grades to only those who have responded.
- Recommend to the appropriate authorities to re-establish the position of the Academic Advisor (Tutor), where students are required to get approval by this advisor before registering for next-semester’s courses.
- Examine the possibility of having objective criteria of meeting the learning outcomes (as per the explanation in principle 3).
- Enforce course prerequisites, if they are essential.
- Increase the electronic access of information, such as individual student records.
- Increase the training of the students in soft skills (presentation skills) by requiring oral presentations in courses with projects/reports. Base part of the grade on how well any written/oral presentation was composed and delivered.
- Improve teaching infrastructure by using electronic whiteboards and multiple monitors in teaching rooms.
- The student guides should clarify that the 8th semester thesis/dissertation is indeed compulsory, as in some parts it is given the impression that it is optional.

- Students should have the opportunity to take a number of free electives (from other Departments) as part of the overall 240 ECTS workload.
- Expand the dissertation period over the last two semesters (by splitting the ECTS over this period in an appropriate way) and allocate thesis topics and supervisors at the end of the previous year, in order to practically increase the time period that a student can spend on the thesis.

IV. Summary & Overall Assessment

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

The Principles where substantial compliance has been achieved are: **3.**

The Principles where partial compliance has been achieved are: **None.**

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

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

The members of the External Evaluation & Accreditation Panel

Name and Surname **Signature**

1. **Professor George A. Papadopoulos (Chair)**
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2. **Professor Costas Iliopoulos**
   King's College, London, United Kingdom

3. **Professor Constandinos Mavromoustakis**
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4. **Professor Emeritus Panagiotis Papamichalis**
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5. **Professor Emeritus Nicolas Spyratos**
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