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ΑΡΧΗ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ  
ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

H Q A

HELLENIC QUALITY ASSURANCE  
AND ACCREDITATION AGENCY

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

**Civil Engineering**

**Institution: University of Patras**

**Date: November 9, 2019**

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Ευρωπαϊκή Ένωση  
Ευρωπαϊκό Κοινωνικό Ταμείο

**Επιχειρησιακό Πρόγραμμα  
Ανάπτυξη Ανθρώπινου Δυναμικού,  
Εκπαίδευση και Διά Βίου Μάθηση**  
Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



EUROPEAN ASSOCIATION  
FOR QUALITY ASSURANCE  
IN HIGHER EDUCATION

Report of the Panel appointed by the HQA to undertake the review of the Undergraduate Study Programme (Integrated Master) of **Civil Engineering** of the **University of Patras** for the purposes of granting accreditation

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

### **I. The Accreditation Panel**

The Panel responsible for the Accreditation Review of the Undergraduate Study Programme (Integrated Master) of **Civil Engineering** of the **University of Patras** comprised the following four (4) members, drawn from the HQA Register, in accordance with the Law 4009/2011:

- 1. Professor George Deodatis (Chair)**  
Columbia University, United States of America
- 2. Professor Christos Anastasiou**  
Frederick University, Cyprus
- 3. Dr. Aristidis Asimakopoulos**  
Façade Architecture, Greece
- 4. Professor Antonis Zervos**  
University of Southampton, United Kingdom

## **II. Review Procedure and Documentation**

The Panel was invited to participate in the site visit at the University of Patras on September 9, 2019. The official invitation letter was sent on September 20, 2019.

A number of files documenting the visit were sent to the Panel members on October 24, 2019, including the detailed self-assessment study and proposal for quality assurance evaluation prepared by the department. Extensive documentation outlining the procedure of the accreditation process and associated rules was also sent by HQA.

The site visit at Patras took place from Monday, November 4 to Wednesday, November 6, including an orientation briefing in Athens on Monday, November, 4<sup>th</sup>.

The specific program at Patras included the following activities:

- 1) Meeting with the Vice Rector, President and Members of MODIP, Members of OMEA, and the Department Head
- 2) Meeting with faculty (tenured and non-tenured)
- 3) Meeting with students and graduates of the department (undergraduate program)
- 4) Meeting with employers and social partners
- 5) Visits to classrooms, lecture halls and laboratories
- 6) Closure meeting with the Vice Rector, President and Members of MODIP, Members of OMEA, and the Department Head

It should be mentioned that a number of additional documents was provided to the Panel during the site visit at Patras (upon request).

### **III. Study Programme Profile**

The University of Patras was founded in the city of Patras in 1964 as a self-administered Academic Institution under the supervision of the Greek Government. The University was established primarily with the intention to concentrate on science, engineering, technology, economics, business administration and social sciences.

The Department of Civil Engineering at the University of Patras was founded in 1972. Currently, it consists of 26 full time faculty members and has an undergraduate student body of about 1200. It operates a 5-year program of study and awards the degree of Diploma in Civil Engineering (equivalent to a Master of Science degree). The department consists of three divisions which cover the areas of Structural Engineering with 12 faculty members, Geotechnical Engineering and Hydraulic Engineering with 8 faculty members, and Environmental Engineering and Transportation Engineering with 6 faculty members.

The Department operates eight laboratories for teaching and research purposes. These are the Structural Engineering, the Structural Materials, the Geotechnical Engineering, the Hydraulic Engineering, the Environmental Engineering, the Transportation Works, the Architectural Technology and Spatial Planning (inactive at present) and the Surveying Laboratories. In addition, the Department has a Computer Center with a large number of personal computers, which provides computing facilities primarily for undergraduate education. Computational facilities for research purposes are attached to each of the eight laboratories of the Department.

The Department is also responsible for graduate education leading to the degrees of Master of Civil Engineering and Doctor of Civil Engineering through a comprehensive graduate studies program involving graduate level courses.

## 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 Civil Engineering has set specific goals and objectives for quality assurance of its academic undergraduate program. This set of goals and objectives is very detailed, appropriate, measurable, achievable and timely. The set follows national, European and international standards along these lines (e.g. US's ABET). The goals and objectives are described in pages 4-7 of the department's proposal for academic accreditation dated April 2019.

The department has already started a process to rigorously check whether its goals and objectives for quality assurance are met using exit surveys of graduating students (graduating students are considered the primary group for this purpose). These exit surveys contain a number of questions that relate very well with the department's goals and objectives. The related questions provide exceptionally useful information about the undergraduate program. Representative questions include: "have the department's goals and objectives been fully accomplished?", "has the study program been effective in reinforcing your oral communication skills?", "has the study program been effective in reinforcing your team-working skills?" What is

even more important, the exit surveys have already been implemented once and the corresponding results are available (they have been provided to the Panel).

Since the exit survey has been done only once (during the latest academic year), there has been no chance yet to implement the process of checking whether the department's goals and objectives are met to a satisfactory degree, and how to improve these that are not meeting the desired minimum standards. However, the department is finalizing the process to accomplish this objective through the following steps:

- Establish specific connections of exit survey questions to the department's goals and objectives (i.e. through a matrix)
- Establish a set of specific measures to improve departmental goals and objectives that are deemed unsatisfactory from the results of the exit surveys
- Observe whether aforementioned measures were effective in improving low-rated goals and objectives from subsequent years' results

The department should be commended for putting emphasis on quality of teaching and implementing teaching evaluations. This is done in close collaboration with the university's MODIP representatives.

The teaching staff is highly qualified to teach the corresponding courses. Furthermore, the students appear to be satisfied from the quality of teaching through the results of teaching evaluations and through personal interviews.

It is positive that undergraduate students are exposed to the faculty's research primarily through the extensive laboratories of the department.

Representatives of the labor market appeared to be highly satisfied from the qualifications of the department's graduates.

The administrative services provided by the department appear to be excellent as verified by the results of exit surveys and through personal interviews.

Finally, the department's OMEA produces detailed annual internal reports related to quality assurance (the Panel was provided with copies of the last two) and appears to be fully engaged with the process. Furthermore, its collaboration with the university's MODIP group appears to be excellent from their joint interview. It is critically important that the university's Provost (Vice-Rector) is fully engaged and recognizes the paramount importance of quality assurance.

### Panel Judgement

<b>Principle 1: Institution Policy for Quality Assurance</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	



## **Panel Recommendations**

- There is an urgent need to hire new faculty in order to maintain the quality of the undergraduate program as multiple faculty have retired/passed away without replacement in recent years.
- The department should consider additional measures beyond exit surveys of graduating students for the quality assurance of their academic undergraduate program. For example, surveys of their alumni several years after graduation (e.g. 2, 5 and beyond), surveys of employers of their alumni, etc. The department appeared open to consider such additional measures.
- The department should put some additional emphasis on developing the oral communication skills of its students.
- The department should complete the process of closing the loop in ensuring the quality assurance of its undergraduate program through the following (already ongoing) steps:
  - ✓ Establish specific connections of exit survey questions to the department's goals and objectives (i.e. through a matrix)
  - ✓ Establish set of specific measures to improve departmental goals and objectives that are deemed unsatisfactory from the results of the exit surveys
  - ✓ Observe whether aforementioned measures were effective in improving low-rated goals and objectives from subsequent years' results

## 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

During its last major revision in 2013, the undergraduate program has been designed in an exceptionally good way using appropriate and well-accepted national and international standards. It is very important that multiple stakeholders have been consulted during the structuring of the program including faculty, students, the university's central administration, government agencies, and private companies. Actually, the range of external stakeholders of the department is impressive. The undergraduate program is currently using the appropriate balance between basic science courses, applied science and engineering courses, and civil engineering focused courses, according to national and international standards. The balance between required and elective courses is also appropriate.

Students are fully engaged with the program and appear to be particularly proud about the department. Their involvement with the program appears to be increasing after the second or third year of study.

Government agencies and private companies employing the department's graduates appear to be highly satisfied by their qualifications and performance.

There is a very successful program providing work experiences to final year students in private companies and government agencies.

The program is posted online and its structure throughout the required ten semesters of undergraduate study is perfectly clear. Furthermore, the goals and objectives of the program are carefully elaborated.

There is a process in place to revise the undergraduate program on an annual basis. Documentation for this process was provided to the Panel for the last two academic years. The program revisions for these last two years were clearly explained and justified but they were relatively minor. However, it is important that a clear annual process is in place supervised by the department's OMEA.

### Panel Judgement

<b>Principle 2: Design and Approval of Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

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

*\*In case of negative judgement, please justify*

### Panel Recommendations

- There is an urgent need to hire new faculty in order to maintain the quality of the undergraduate program as multiple faculty have retired/passed away without replacement in recent years.
- The department could work on increasing and improving the involvement of undergraduate students during the first two to three years of their studies. Multiple students mentioned that their involvement with the department became significantly more substantial during the last two to three years of their studies. This can be accomplished through the concept of the academic advisor that the department already has. It was mentioned, however, that this concept has not been successful in the past. Consequently, it is the appropriate time now to make an effort to re-introduce it to the students, in parallel with a campaign to heavily advertise and promote it to the student body (especially during the first year).
- The very successful program providing work experiences to final year students in private companies and government agencies could be expanded as it appears that supply might be higher than demand. During interviews, it became clear that there are private companies eager to participate in this program. Furthermore, the program could become more flexible in considering companies outside the Patras area suggested by the students.

### Principle 3: Student-centered 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-centered learning and teaching plays 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-centered 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

**A student-centered approach is adopted in terms of teaching, incorporating flexibility and the use of different pedagogical methods and modes of delivery.** Flexibility is evidenced by recognition of the fact that student circumstances and needs may vary substantially, and the allowances that are made in response in terms of both teaching and examination modes. For example, students with special learning needs are allowed oral, rather than written, examinations; students unable to attend some lectures due to ill-health, family or financial circumstances benefit from extensive guidance during office hours and the availability of material through the e-class electronic platform. In terms of delivery and pedagogical methods, the Programme utilizes an appropriate range, which is commonly used in Engineering: lectures, presentation of worked examples, laboratory exercises, and use of problem sheets for self-

study. These are on occasion supplemented by external lectures and site visits. Each member of the staff is responsible for updating the methods used in his/her course, also facilitated by the results of regular student surveys evaluating the quality and effectiveness of teaching. In improving their teaching, staff have the option of seeking training or other support from the University's Office for Teaching and Learning, which is a central facility, as well as informal help from colleagues and the international literature.

Further evidence of a student-centered approach can be found in the appointment of a personal Academic Advisor for each student, who can act as a point of contact and source of advice for the whole duration of one's studies. This initiative is commendable. Nevertheless, some students did not appear aware that they had an Academic Advisor they could consult. Better, or perhaps more timely, dissemination is necessary for students to be able to benefit.

The good efforts of staff are undermined, nevertheless, by their reduced number in recent years due to a significant number of departures, mostly due to retirement, of (high-profile) staff; three further departures are expected at the end of the 2019-2020 academic year. A further issue is the lack of permanent technical staff in all labs except one, which puts in danger the necessary continuity of skills and places further demands on academic staff time in terms of preparing and running lab exercises.

Another constraint is the number of students admitted each year, which is significantly higher than what the department can reasonably accommodate. This leads to problems when it comes to hands-on laboratory experience which, although essential in engineering disciplines, due to the large number of students, is only possible in a minority of core courses.

**Students are encouraged to develop individual skills** through the provision of additional supporting information for each course, such as scientific and technical literature, relevant software or electronic resources. Carrying out a thesis, but also the incorporation of an optional internship in the Programme further encourages the development of individual skills, as the research topic for the thesis is different for each student, and day-to-day duties can vary widely among internship hosts.

Evidence that **students are seen as active partners in the teaching/learning process** includes regularly-conducted student satisfaction surveys in relation to teaching, the provision of self-assessment problem sheets, the open-door policy that staff employs and which allows students to receive personalized tutoring in ad hoc, one-to-one meetings. Students specifically commended how academic staff are always accessible and willing to help, whereas academic staff reported how on occasion they would adjust their subsequent teaching in response to informal, oral student feedback received in the lecture theatre.

**Assessment methods** are published in advance in course outlines, although the level of detail provided is not consistent: Some outlines only provide the mode of examination (e.g. "three-hour final exam") without any details (e.g. multiple choice, short answer, problem solution – including specific topics where relevant, etc.)

**Student satisfaction surveys** were discussed at some length during the visit, with both academic staff and students. Participation varies widely among courses, with core courses having generally low participation (there is also the issue of how participation is measured, since there is no reliable way of knowing how many students actually attended lectures). Students felt that their feedback was ignored and cited this as a reason for not taking part; the large number of questionnaires and the amount of time needed was also cited as a reason. Further, some academic staff expressed exasperation at the fact that, due to survey results being considered

protected personal data, it is impossible for them to be disseminated and discussed at meetings, or for administration to directly utilize them to intervene where evidence points to unsatisfactory teaching, although some limited information does become available as a result of promotion applications.

Although the above constraints limit somewhat the efficiency with which teaching evaluations can improve teaching, they can be a generally useful tool for academic staff. Their introduction is a positive measure, also in terms of reinforcing students' sense of autonomy and demonstrating that there is mutual student-teacher respect.

**Student appeals** follow a simple process. Students are encouraged to first discuss any complaints they have informally with the Department Head. If the issue is not resolved at that level, a student can write formally to the Department Head to file their complaint/appeal, or directly to the Vice Rector if the student considers that to be more appropriate. Students who complain in particular about repeatedly receiving a failing grade in a course, have the option of requesting re-examination by an independent three-strong committee appointed by the Department Head.

**Mutual respect** in the student - teacher relationship is evidenced, among others, by the flexibility of the educational process, which can adapt to the needs and circumstances of individual students, the existence of a route for examination by committee for students who feel that they are perhaps not being treated fairly in a particular course, and the option given to students to participate in surveys. It was also evident from our discussions with current students, who felt that they were provided with a very good learning/academic environment, and were taught by staff always available to them and striving to facilitate their professional development. Students even asserted that staff did their best to "shield them from difficulties related to the availability of funds," and even that "on occasion academic staff took responsibility for issues they did not have to take responsibility for," to benefit the students.

### Panel Judgement

<b>Principle 3: Student-centered Learning, Teaching an Assessment</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- The Department needs to appoint new members of academic and technical staff to replace those who have left in recent years or are in the process of leaving at the end of the 2019-2020 academic year, so that the quality and student-centeredness of the teaching and learning environment can be at least maintained.
- The number of undergraduate students admitted should be reduced in line with the Department's own recommendation, to better reflect the capabilities of the Department to provide a high-level education, especially in terms of essential hands-on experience in laboratory classes.

- Individual members of academic staff should consider initiating at least one, but ideally more, meetings with Year-1 students they are Academic Advisor of, e.g. by email, very early in Semester-1, at least by way of introduction.
- All course outlines should include details of the assessment methods and criteria employed.
- To demonstrate to students the relevance of their feedback, and thus further encourage them to take part in surveys, consider presenting, at the introductory lecture of each course, relevant points of feedback received in the previous year and any actions taken in response.

## 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

**Student support during the transition** from high school to university education is provided by staff teaching year-1 courses, where effort is made to help incoming students “bridge the gap” between the modes of learning and expectations of high school with those of university education. It is also available through events where staff inform students of the nature of the profession their studies prepare them for, and through the Academic Advisor. Nevertheless at least some students admit that they did not become fully aware of what civil engineering entails till year 4. As the idea of having an Academic Advisor will become more established with time, it is expected that such issues will ease. A further step that could be taken is to invite as external speakers practicing engineers, who can motivate students by presenting current projects, especially high-profile ones.

**Student progression** is monitored through interaction with students in the lecture room (e.g. asking questions that the class is expected to answer) and the provision of self-assessment problem sheets. On occasion, it is possible to use a mid-term examination, which is a more reliable indicator of student progress, nevertheless this is hampered by the large number of students vis a vis the reduced number of staff.

**Student mobility** is encouraged through the Erasmus Programme and the possibility of credit-bearing practical training with a company, both of which the department actively supports.

**ECTS** is applied across the curriculum; a **Diploma Supplement** is issued without request for all graduates.

**There is no separate Thesis Handbook**, however all procedures surrounding the carrying out of the thesis, as well as broad **quality requirements**, are included in the Study Programme Handbook. These include the ability to synthesize knowledge acquired in the course of one's studies, to acquire more specialized knowledge and apply it to real-world problems as appropriate, as well as an acquaintance with the process of carrying out research. Although broad assessment criteria for the thesis are defined in the Study Programme Handbook, there is no explicit mapping of different grades to their corresponding level of achievement, so uniformity cannot be guaranteed and it may even be difficult for students to appreciate what is



expected of them. Nevertheless, the Department’s current practice promotes uniformity to some extent and provides informal quality control by demanding that students pass all courses of the Division they will do their thesis in before embarking on it, and by requiring examination of the thesis by a panel-of-three following a public presentation. The use of anti-plagiarism software available via the University will be an additional positive.

**Practical training** by way of an internship with a company or state entity is considered a valuable part of the programme in terms of developing job-specific and further skills, as evidenced by the fact that it is credit bearing, by the Department’s formal requirement that students maintain a timesheet and send monthly reports on the nature of their work, and by requiring hosts to report any student absence without leave. It is also evidenced by the Department allowing students to miss lectures while on practical training, which is an implicit indication of the high value the department places on the latter. The department has a network of companies and public bodies, maintained through the Office of Practical Training, which offer opportunities for practical training every year. Students have also been able to secure opportunities themselves, by directly approaching companies. Nevertheless, although some stake holders we met during our visit were offering practical training and were enthusiastic about the students who took it up, others were not aware such an arrangement could be put in place. In addition, some students expressed concern that they had not been allowed to arrange their own practical training outside Patras where they have family, e.g. in Athens, or even abroad, given that for its duration they would anyway be unable to attend classes.

### Panel Judgement

<b>Principle 4: Student Admission, Progression, Recognition and Certification</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Where possible, consider inviting as external speakers practicing engineers working on high-profile and/or unique projects, so that students can appreciate, and be motivated by, what the profession entails, especially its less mundane aspects.
- The Department should replace the members of academic staff who left in recent years and reduce the number of undergraduate students admitted, in line with the Department’s own target, to make meaningful progression monitoring, e.g. via mid-term exams, viable.
- For each one of the assessment criteria of the thesis as found in the Study Programme Handbook, consider providing an explicit mapping of grades to their corresponding level of achievement.
- Bring the possibility of practical training to the attention of stakeholders already in touch with the Department. Also, consider allowing students to seek and take up internships outside Patras, either in Greece or abroad. This would allow a greater proportion of students to take up an internship.

## 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 department's faculty is generally highly productive in research with an impressive number of externally funded grants, dedicated to teaching, and eager to address students' concerns.

The recruiting process of new faculty members is standardized by the department and the central administration of the university. It is a clear, transparent and fair process. It has proved itself in the past through the recruitment of a significant number of internationally renowned faculty at the full professor level. Recruiting such star faculty is particularly difficult worldwide and the department's past success along these lines demonstrates its mentality and philosophy towards excellence in scholarly research.

However, the department currently faces a major problem with the dramatic reduction of its faculty in recent years. This is due to economic factors independent of the department or the university, as faculty slots are directly controlled by the Minister of Education. It is of paramount importance to add a substantial number of new faculty as soon as possible in order to maintain the extremely high status of the department (it is the highest ranked department in the university, according to the Vice Rector). Because of this dramatic reduction in the number of its faculty, the department has slipped in international rankings from the top 50 to the top 200 (still the highest ranked department in the university). It is expected that replacing the departed faculty with high-quality new faculty will bring the department back to its earlier ranking within the top 50 worldwide (and even higher).

The department (through the university) has a strong program for development of faculty in the early stages of their careers. It includes priority in securing internal university funds for PhD students, office of teaching and learning (available also to faculty at all levels), and indirect reduction of teaching load (as minimum number of teaching hours is six per week by law). Although this development program is considered to be strong, its dissemination to untenured faculty is not optimal as some Assistant Professors appear to be unaware of some (or all) of its components.

The department appears to be forward thinking as far as new teaching methods are concerned and has a close collaboration with the Office of the Vice Rector and the MODIP representatives.

The department has embraced regular teaching evaluations of its faculty from students and they are conducted on a semester by semester basis. However, at this stage, there is little done to convince faculty with poor teaching evaluations to improve.

The department's culture places major emphasis on scholarly research. A large percentage of the faculty are active in research with several of them involved in experimental work funded through external grants. However, there is only one permanent technical staff member among the eight laboratories of the department.

### Panel Judgement

<b>Principle 5: Teaching Staff</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- There is an urgent need to hire new faculty in order to maintain the quality of the undergraduate program and the department's reputation as multiple faculty have retired/passed away without replacement in recent years.
- The strong program for faculty development of Assistant Professors needs to be disseminated in a more effective way to junior faculty. This could be achieved through a combination of actions from the Department Head and the Vice Rector of the university. A dedicated workshop for Assistant Professors could also be very helpful.
- There is need to introduce some development opportunities for faculty at the mid-career stage.
- Although there are privacy issues involved, there is need to establish procedures to incentivize faculty with poor teaching evaluations to improve. There is a feeling among students that faculty with poor teaching records simply disregard teaching evaluations and do nothing to improve.
- Teaching faculty are in dire need of permanent technical staff for the multiple laboratories in the department. Such permanent technical staff are critical both for teaching and research.
- The number of undergraduate students admitted in the department is significantly higher than what the number of faculty and permanent laboratory staff can handle under internationally accepted standards. Although the department is asking every year for a reduction in the number of admitted students, the Minister of Education disregards their perfectly justified plea. The student per faculty ratio is higher than the corresponding ones of other civil engineering departments in the country. This places undue burden on the teaching faculty.

### 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 generally **has the necessary facilities**, such as good-quality classrooms with appropriate equipment such as projectors, adequately equipped laboratories and appropriate IT infrastructure, to support the Study Programme and create an appropriate teaching and learning environment. However, **a serious issue for the health of the Programme** as well as the department is that **only one** of the laboratories benefits from a permanent technician, whereas other laboratories either use research grant funds to employ temporary staff on a technical capacity, or have no technician support at all. Such temporary staff are generally researchers familiar with the laboratory, its facilities and the minutiae of its equipment and their operation: they are over-qualified for these jobs and could depart with little notice to pursue other career options, breaking the continuity of skills and knowledge every laboratory depends on and compromising the quality of the Programme. In laboratories without any technical support at all, academic staff need to spend time to set up and carry laboratory demonstrations and exercises for the students, whereas their time would be better spent elsewhere.

The **distribution of existing facilities** is generally rational, however on balance the current footprint of the Materials laboratory is barely adequate: additional space, which we understand has already been earmarked, would allow a better experience for students during laboratory classes, as well as better serve research needs.

The **range of support services** available to students is adequate, and includes access to central services such as library, boarding, career counselling, psychological support, medical support, gym, etc. and means-tested access to dormitories. Students commended libraries in particular, as good, organized and appropriate spaces for them to work.

Students can find **information on the available services** on the website of the University. However, the link to the website of the Social Care Office is difficult to find, as it only seems to

appear at the very bottom of the main page of the University (<http://www.upatras.gr/el>) but not in the page where other support services are listed ([http://www.upatras.gr/el/student\\_care](http://www.upatras.gr/el/student_care)), which is where one would expect to find it.

According to the students interviewed, all **central services were functional**. However, some services (such as Social Care) were less known to them than others (library and boarding), and they claimed that having the relevant information on the internet “was not sufficient.” Students had no complaints regarding the administrative staff of student support services, although they commented that the Office of Assistance was staffed by a single person who had a two-week waiting list for seeing a student to discuss future career paths.

### Panel Judgement

<b>Principle 6: Learning Resources and Student Support</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- The Department should replace the members of technical staff who left in recent years. All laboratories must have at least one permanent technician to ensure continuity of skills and knowledge, as well as the timely preparation and running of high-quality laboratory classes without the need for academic staff to be present.
- The webpage listing student support services ([http://www.upatras.gr/el/student\\_care](http://www.upatras.gr/el/student_care)) should contain a link to the web page of the Social Care Office (<http://eko.upatras.gr/>)

## 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 analyzing information and planning follow-up activities.*

### Study Programme Compliance

The AP studied the evaluation package submitted by the Department of Civil Engineering of the University of Patras, and through the onsite visit, a verification of the appropriateness and actual implementation of these procedures was attempted.

Data is collected through a series of regular assessments and reports, surveys (often conducted through the use of such tools as structured questionnaires), through dedicated data management systems of the university, and information systems that are managed by other institutions.

Some of the specific systems and methods identified as being used for the collection of data by the Department / University are the following:

- The University's Quality Assurance Information System (i.e. Πληροφοριακό Σύστημα Διασφάλισης Ποιότητας ΜΟΔΙΠ – acronym Π.Σ.ΔΙ.Π.)
- Teaching Evaluation Questionnaires (administered electronically)
- The ΟΠΕΣΠ information system
- The Students Information System (SIS) used by the Departmental and University Secretariat (i.e. φοιτητολόγιο),
- An information system dedicated to funded Research Activity (i.e. ΕΛΚΕ),
- The “Digital Leap” Information System, which supports the administrative operation of the University, including the following subsystems:

- a. Student Lifecycle Management
  - b. Human Resources - Payroll
  - c. Finance and Accounting
  - d. Project - Warehouse Management
  - e. Correspondence - Workflow - Document Management
  - f. Business Intelligence
- A Library Information System.

**Student satisfaction surveys** take several forms (i.e. Course evaluation; Program of Study survey; and Alumni survey, that latter of which has just been put into place).

Data concerning the **course evaluations** (i.e. evaluation of teaching methods) are collected from students. The data collection tool (i.e. student questionnaire) covers questions on teaching quality, course materials, infrastructure and focuses on the teacher's approach to the course. This assessment is carried out electronically (i.e. students can either use their computers or specialized application on their smartphones). The collection of information ensures the anonymity of respondents. The Accreditation Panel has verified (via meetings with faculty, students and alumni) that this procedure is ongoing, and continuously updated/improved (for example, the electronic collection of this information was a new transition from an older paper-based system). What came under discussion was the adequacy of the current teaching system, with an emphasis on the following two parameters:

- The rate of response was deemed as low. One of the contributing factors to the decreased response rate, according to the OMEA committee, was the transition to an electronic survey system. However, an additional contributing factor may have been the second key parameter related to the teaching evaluation process, described below.
- As raised during student interviews, there seems to be a general perception that the results of teaching evaluation surveys are not used in any meaningful manner. The perception that no change or improvement exists for specific courses has been cultivated among students. This is an item that has been indirectly corroborated by faculty members as well. The manner in which teaching evaluations are used for the improvement of specific courses, and hence the quality of the Program of Study, is an issue that must be addressed by the department, maybe starting by changing the perceptions of students on the matter.

Each individual **academic staff member** from the academic cohort is self-evaluated once a year, providing information on courses taught, supervision of students, laboratory sessions supervised, number of publications, relevant research data, administrative duties, etc. There is no evidence that individual data are collected about the innovation outcome of academic staff, however, one could assume that such information may be deduced from the activities reported in annual individual self-assessments to the department. Further, the department is implementing an annual procedure through which data is centrally collected on the aforementioned areas, alongside data on the **opinions/satisfaction of faculty** with regards to the adequacy of their laboratory/research-related infrastructure (including human resources). The response rate of faculty members, in this latter part of the data collection system/survey, is less than 60%. The questionnaire (and the associated responses for the academic year 2017-2018) was provided to the Accreditation Panel upon request, during the visit to the department.

No specific procedure concerning **supporting teaching staff** (i.e. contracted-instructors and lab assistants/technicians) or **administrative staff evaluation** has been identified. However, the Department's Administration has assured the AP that such a procedure, especially relating to supporting teaching staff, is in place. No evidence towards this procedure has been provided.

There is a procedure in place for the evaluation of Programs of Study (**student satisfaction with the programs of study**). This, also anonymous procedure, employs another structured questionnaire that is administered in the **end of studies and before the official graduation** of students. In the evaluation questionnaire for the Programs of Study, there are two items that provide some insight into the performance of administrative personnel and support services of the Department/University.

A procedure for collection of data related to the employability and career paths of **graduates** is in place but has yet to be fully implemented.

No **staff satisfaction surveys** have been identified and should thus be developed and put into place.

Up to date data related to the availability and accessibility of **infrastructure**, such as **equipment, social services** and **IT facilities**, is recorded centrally by the University and through the information system dedicated to funded Research Activity (i.e. ΕΛΚΕ). A procedure/system for the collection of information related to infrastructure, equipment, and IT facilities may prove invaluable to the Department's Administration, for better planning and management of resources.

The University's Quality Assurance Unit (ΜΟΔΙΠ) maintains an **Information System** (i.e. Πληροφοριακό Σύστημα Διασφάλισης Ποιότητας ΜΟΔΙΠ – acronym **Π.Σ.ΔΙ.Π.**) the functions of which were demonstrated to the Accreditation Panel members. The data collected and analyzed through this information system include, but are not limited to, the student population profile, student progression, success and drop-out rates, and key performance indicators set by the university/departments. The OMEA committee as well as the Department's Administration has direct access to this information system.

The accuracy and reliability of collected data is verified by way of collection, the anonymity of participating students in the evaluation of individual courses and programs of study, as well as by the large volume of data collected through the years, that allow for statistical comparisons and monitoring of the progress of certain programs, courses, or instructors.

The Department's accreditation proposal did not contain data presentation in graphs so as to easily demonstrate trends that allow direct interpretation and comparisons with similar institutions. However, data referring to student evaluations of individual courses, research reports of the faculty, programs of study, among others, were readily provided through a demonstration of the University QAU's Information System (Π.Σ.ΔΙ.Π.).

The Accreditation Panel recognizes the effort already put forth and encourages the department to implement possibly missing electronic reports so that future evaluations are statistically presented and interpreted for direct comparisons and used in the self-assessment reports of the academic units.

No meaningful analysis and evaluation of data pertaining to the availability and accessibility (including functionality) of equipment and IT facilities has been identified. The only evaluation of data is obtained from pertinent elements included in the surveys of Programs of Study. With the introduction of a centralized system for the collection of information related to



infrastructure, equipment, and IT facilities, a coupled analysis and evaluation system (possibly including a purchase prioritization rubric), may also be useful.

Currently, no formal monitoring procedure has been presented or identified with regards to analysis of data and the correlation of results with the strategic targets put forth by the department. A procedure that will allow the monitoring of suitability, adequacy and effectiveness of collected data may be in order for the department. This procedure could use such elements as the examination of deviation of target values from the real outcomes in the various strategic goals put forth. Any significant deviation identified will result in specific corrective actions that will be suggested by the OMEA committee.

There is strong evidence that the Department has taken measures to adhere to the recommendations of the external review that took place in the past. Many of those recommendations were effectively adopted as processes and procedures of the MODIP and are stated in the Quality Manual of the university and the department. The high quality of the documents presented to the Accreditation Panel may serve as proof of the remarkable attempt of the department to adhere to quality measures and indicators, as well as of their dedication to continuous improvement. It is acknowledged that some of the recommendations of the external evaluation committee (2014) are beyond the direct capabilities of the department. However, there are still a number of items that, while acknowledged/addressed in the departmental report as a response to the external evaluation comments received, have yet to be effectively addressed.

Key data and associated indicators have been set out and foreseen as input to setting and reviewing the department's strategic and operational goals. However, there is little evidence that this process has been implemented yet in its entirety.

### Panel Judgement

<b>Principle 7: Information Management</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

### Panel Recommendations

- A system for the collection of information related to infrastructure, equipment, and IT facilities may prove invaluable to the Department's Administration. Such a system can be used to improve the planning and management of essential resources (i.e. purchases, maintenance). This effort could include an analysis and evaluation procedure (including a purchase/maintenance prioritization rubric, which could be coupled with financial services databases).
- Support Staff (i.e. technicians, laboratory assistants, administrative personnel) satisfaction recording mechanisms should be put into place and properly monitored and documented.
- The system of Course Evaluations needs improvement with regards to the response rates, as well as the mechanisms through which the feedback obtained through these surveys can be better utilized.

- Data collected through the various procedures should be more clearly analyzed and presented (with the use of graphs and tables to present findings being an imperative). Publication of these results in the website would be useful, unless they include sensitive information, as this is determined by the legal framework of the country/University.

## 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

Information of department-related items and activities is publicized primarily through the department's website, and secondarily through the university's "UP" Newsletter, participation of faculty members, and students, in scientific conferences, technical committees, consulting teams, or other professional fora. Further, there are a number of activities organized by the department, which target lay audiences. Examples are provided through the lectures organized for the public, as well as organized tours for high school students, through which visitors can view the department's labs, facilities and research activities.

The overall picture of the **website** (i.e. the main avenue for public information) of the Department of Civil Engineering at the University of Patras is positive. The website is adequate with regards to the information included. Information provided is useful to current and/or prospective students, as well as to other visitors. The information made available through the website of the department was much more extensive than that provided in the evaluation package submitted to HQA's Panel.

The site is not difficult to navigate. The information provided is easy to locate.

There is a systematic lack of detailed information in English, which may result to certain audiences, like Erasmus Program incoming students, from receiving necessary information. This shortcoming should be addressed.

Information about teaching and academic activities is publicly accessible via the website. Included in this information are the following items:

- **Programs of study**, the **curriculum structures**, and pertinent **courses**, alongside the **academic calendar**
- **Course Outlines** (modes of attendance and the criteria for student assessment are provided through the course outlines)
- **Academic Sectors** and the faculty members associated with each sector.
- **Departmental staff**, including faculty (and their **CVs**), visiting instructors, and support personnel.
- **Laboratories**, their associated faculty members, and their research activities, including a list of the **doctoral students** and the associated faculty members.

- **Research projects / activities** are also publicized through a separate page on the website; however, this information seems to be outdated (newest research program that appears on this page dates back to 2013).
- Fully updated **Announcements and News**
- Important information, including **health and safety procedures**, information for **students** (e.g. **rules and regulations**, items of special interest such as participation in the **Erasmus+ Program**, as well as **student support services**), and useful information for faculty members (e.g. procedures for leaves of absences) is accessible through the Department's website.
- Information pertaining to Quality Assurance and to such units as the University's Quality Assurance Unit (QAU) is available in great detail on the University's website, through a dedicated site/page, as well as on the Department's website (for more specific items pertaining to the Department and the Programs of Study offered). A minor shortcoming may be the fact that this in-depth information is not available in English.

Some weaknesses of the website include the following:

- Some information is difficult to find. One example of such an item is the list of Academic Advisors of Students.
- The streamlining in the appearance of such items as faculty curriculum vitae, would improve access to the information.
- Course outlines are available. However, they are currently in a lengthy unified PDF document, which may be cumbersome to use. This information would best be presented as a link on the tab for each individual course. In addition, course outlines are available only in Greek, which is prohibitive for prospective Erasmus+ Program incoming students.
- It may be good practice to include the CVs of all visiting instructors (currently only some of their CVs are provided on the website).

### Panel Judgement

<b>Principle 8: Public Information</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

### Panel Recommendations

- Some important information (e.g. course outlines) is not available, and should be provided, in English.
- Provide key information, which is common among all affected parties (e.g. Academic staff CVs, Course Outlines, Program Guides, etc.), in a uniform manner.
- The webpage on the Department's website that includes research projects/activity needs to be regularly updated.

- The Department (or the University) may choose to implement a procedure that allows the evaluation of the quality of its website (through the use of a specially designed questionnaire), which may lead to its continuous future improvement.
- Several of the currently-running research programs may be maintaining their own websites. It may be advisable to provide links to those sites, for visitors who may want to learn more about a specific activity.
- Information and documents / forms of interest to faculty members, including available resources (e.g. Educational Center for Life-Long Learning) and procedures, could be made available through the Department's website.

## 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 and Panel Recommendations

The procedure of the on-going monitoring and periodic internal review of the department's program was presented during the first day of our visit, during the meeting with the OMEA and MDIP representatives.

The OMEA internal evaluation committee was created quite recently, in 2018 (11.09.2018), and is made up of four members of the Department's academic staff, Associate Professor I. Zacharias as the Coordinator, Professor D. Karabalis, Associate Professor E. Petropoulou, and Associate Professor A. Chassiakos. Its main characteristics and objectives were thoroughly presented by the OMEA committee coordinator. According to the information given, the OMEA committee is responsible for the following actions:

- To coordinate the internal evaluation procedure within the department according to the HQA rules and directions
- To collect and evaluate all the data created through the completion of the appropriate evaluation questionnaires given to the members of the academic staff, the undergraduate and the post graduate students
- To collect all the necessary data in relation to the department's academic performance, being available in external resources (Google Scholar, Scopus, ELKE <https://research.upatras.gr/>, etc.)
- To compose the annual internal evaluation report
- To share and discuss the internal evaluation report's findings within the department's committees

- To share all evaluation findings with the MODIP representatives and the university and government authorities
- To propose measures and actions that need to be taken for further improvement, according to the goals set by the department
- To ensure that the evaluation data are taken into consideration through every academic process within the department.

The presentation of the OMEA committee coordinator also referred to the set of goals being created throughout the internal evaluation procedure. These involve the current state of the department's facilities and their compliance to the actual department's needs, the performance of the teaching and research activities within the department, the number of members of the academic staff and the number of students to be admitted every year. The actions taken by the OMEA committee aim to identify all deficiencies and shortcomings found in the above mentioned activities and to propose measures for further improvement, within the context of HQA guidelines.

According to the discussion with and the questions asked to the OMEA and MODIP representatives, the accreditation Panel confirmed that the self-assessment procedure of the study program takes place annually since 2011 and all of the related evaluation report documents can be found in the relevant webpage of the MODIP of the University of Patras.

The QUA/MODIP representatives of the University also confirmed the fact that the outcomes of the self-assessments are properly recorded and submitted by the departments OMEA committee, by referring to the above mentioned webpage.

Furthermore, the material presented confirmed that the internal evaluation report of the OMEA committee, according to the new HQA guidelines, for the year 2017-2018 was completed on the 18<sup>th</sup> of April, 2019, while the evaluation report for the year 2016-2017 was completed by the end of 2017.

The evaluation reports presented to the Panel were found to be well prepared and extensive. They also provided a clear description of the department's academic structure and activities, both in the areas of research and teaching.

During the discussion with the OMEA committee representatives and the meetings that followed with 9 members of the academic staff and a group of 15 undergraduate students, the Panel focused on the on-going monitoring and the way the self-assessment is recorded, shared, documented and communicated within the department.

The type of the questionnaire presented for the evaluation of the teaching procedure, both for the students and the academic staff, were found to be comprehensive, covering all the possible aspects of the evaluation needs according to HQA guidelines.

The undergraduate students, interviewed by the Panel, showed to be well aware of the evaluation process being conducted for the department's undergraduate program. Moreover, they expressed the need for the evaluation data to be taken strongly into consideration through an immediate action plan.

The student's responses confirmed the Panel's impression, formed through the meeting with the OMEA and MODIP representatives, about the existing strong student-academic staff relationship which helps the self-assessment procedure substantially. Moreover, students

expressed their satisfaction on the contents and structure of the department's undergraduate program, which is considered to be consistent with their own future goals.

The 9 members of the academic staff who were interviewed by the Panel were well aware of the self-assessment procedure and its findings, since it was confirmed that all of the evaluation outcomes are being shared within the academic unit. All of them related the successful implementation of the action plans prepared by the OMEA committee, with three main deficiencies, that make the department's goals partially difficult to achieve. Those are:

- The continuous decrease in the number of faculty members during the last 6 years and the insufficient number of new faculty, along with the lack of permanent technical personnel
- The high number of students that have to be admitted every year, due to the directions given by the Ministry of Education
- The lack of sufficient funding, mainly for the support of the department's graduate program

As it was explained to the Panel, the department has no authority or any other kind of ability to intervene on any of these issues, thus being unable to resolve them in favor of some of the goals related to the department's undergraduate and post graduate activities.

The Panel, after taking into consideration the material presented and the opinions shared throughout the meetings both with the faculty and the undergraduate students, verified the successful implementation of the HQA guidelines within the context of the department's academic activities.

Both the faculty and the undergraduate students clearly acknowledge the importance of self-assessment and continue to put valuable effort in setting new goals, both in teaching and research, both of which are considered to be at a high level. The action plans presented to the Panel by the OMEA committee, were thorough and well documented and their implementation has become an on-going procedure widely accepted by both faculty and students.

Taking into consideration the information acquired from the meetings held after the presentation of the OMEA committee, the Panel would recommend that both the faculty and undergraduate students should preserve their already strong academic relationship in favor of self-assessment and excellence.

### Panel Judgement

<b>Principle 9: On-going Monitoring and Periodic Internal Review of Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	



## Principle 10: Regular External Evaluation of Undergraduate Programmes

**PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY COMMITTEES OF EXTERNAL EXPERTS SET BY HQA, AIMING AT ACCREDITATION. THE TERM OF VALIDITY OF THE ACCREDITATION IS DETERMINED BY HQA.**

*HQA is responsible for administrating the programme accreditation process which is realised as an external evaluation procedure, and implemented by a committee of independent experts. HQA 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 and Panel Recommendations

The department has undergone an external evaluation process on the 11<sup>th</sup> of December of 2013. The committee consisted of 5 expert evaluators, Professor N. Katopodes, Professor M. Constantinou, Professor S. Pagiatakis, Professor P. Papanastasiou, and Professor S. Pantazopoulou. The committee made 20 recommendations to the department in order to enhance its international ranking and teaching effectiveness.

According to the information shared by the OMEA internal evaluation committee and the presentation given by the coordinator of the committee, Associate Professor I. Zacharias, the final report of the external evaluation committee was delivered to the department administration on March of 2014.

The 2014 external evaluation and the associated final report focused on the following items:

- Undergraduate curriculum
- Graduate and doctoral curriculum
- Teaching
- Research
- All other services
- Collaboration with social, cultural and production organizations
- Strategic Planning, Perspective for Improvement and Dealing with Potential Inhibiting Factors
- Final Conclusions and Recommendations

The department, according to the document of its Accreditation Report proposal of 2019, implemented actions in response to the aforementioned number of recommendations by fulfilling their objectives by more than 70% in less than 4 years.

The Panel, after examining the objectives that were not fulfilled and interviewing both the OMEA evaluation committee representatives and the 9 members of the academic staff, confirmed that all of them remained far from the department's ability to act accordingly. The explanation to that remains, unfortunately, the last of the 20 recommendations given by the External Evaluation Committee of 2014, where the need for the autonomy of Academic Institutions was clearly acknowledged as one of the key factors for academic excellence.

Furthermore, the external evaluation of 2014 highlighted the disproportionately large number of undergraduate students with respect to the number of faculty, especially when compared to other Greek universities.

Although the department has not undergone any other external review since 2014, all the members of the academic staff are very much aware of the importance of the external review and its contribution to the improvement of both teaching and research activities.

The department's response to the recommendations of the external review of 2014 was found to be consistent and quite successful in a relevant short period of time, confirming the committee's comment about the faculty, facilities, scientific output and research record, most of which still remain at a similar level of excellence, despite the fact that most of the world-renowned faculty members retired in recent years.

The discussions the Panel had, during its first day of visit, with the OMEA evaluation committee representatives, the 9 members of the academic staff and the 15 undergraduate students confirmed the widespread trust and belief of all parties on the importance of the external evaluation procedure.

Although the Panel acknowledges the fact that the economic crisis lead to the lack of funding, we strongly believe that both the university and the department must find ways to secure funding, especially for teaching assistants.

Furthermore, it's the Panel's belief, as it was concluded throughout the meeting held with employers and social partners, that the faculty members can contribute more to the student internship opportunities provided to students, by setting higher goals in their communication with the industry, employers and social partners.

### Panel Judgement

<b>Principle 10: Regular External Evaluation of Undergraduate Programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## **PART C: CONCLUSIONS**

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

- The department has set very detailed, appropriate, measurable, achievable and timely goals and objectives for quality assurance of its undergraduate (integrated MSc) program.
- The department has already established a process to rigorously check whether its goals and objectives for quality assurance are met.
- The department has already started a process to identify goals and objectives that are not fully met and subsequently improve them.
- The teaching staff is highly qualified to teach the program's courses. The students appear to be mostly satisfied from the quality of teaching.
- The department has wholeheartedly embraced the concept and culture of Quality Assurance. The department's OMEA produces detailed annual internal reports related to quality assurance. The OMEA's collaboration with the university's MODIP and Vice Rector appears to be excellent.
- The administrative services provided by the department to the students are excellent.
- The department's program has been designed using appropriate and well-accepted standards. Multiple stakeholders have been consulted during its structuring.
- The department's program is using the appropriate balance between basic science courses, applied science and engineering courses, and civil engineering focused courses. The balance between required and elective courses is also appropriate.
- There is an active process in place to revise the undergraduate program on an annual basis.
- The department's faculty is highly productive in research with a solid number of externally funded grants, dedicated to teaching, and eager to address students' concerns.
- The department (through the university) has a strong program for development of faculty in the early stages of their careers.
- The department should be commended for establishing the successful practical training program for its students.
- The faculty and undergraduate students should preserve their already strong academic relationship.

### **II. Areas of Weakness (and corresponding recommendations)**

- There is an urgent need to hire new faculty in order to maintain the quality of the undergraduate program and the department's scholarly reputation as multiple faculty have retired/passed away without replacement in recent years.
- There is a strong need to hire permanent technical staff for the laboratories in the department. Such permanent technical staff are critical for the support of both teaching and research.

- The number of undergraduate students admitted in the department is significantly higher than what the number of faculty and permanent laboratory staff can reasonably handle. The number of admitted students has to be reduced.
- The department should consider additional measures beyond exit surveys of graduating students for the quality assurance of their undergraduate program.
- The department should work on increasing the involvement of students during the first two to three years of their studies through the existing concept of the academic advisor.
- The department should consider putting additional emphasis on developing the oral communication skills of its students.
- The successful program providing work experiences to students in the industry and government agencies should become more flexible and less bureaucratic.
- The strong program for faculty development of Assistant Professors needs to be disseminated in a more effective way to junior faculty.
- There is need to introduce additional development opportunities for faculty at the mid-career stage.
- There is strong need to establish procedures to incentivize faculty with poor teaching evaluations to improve. There is a feeling among students that faculty with poor teaching records simply disregard teaching evaluations and do nothing to improve.
- The system of teaching evaluations needs improvement with regards to the response rates, as well as the mechanisms through which the feedback obtained through these surveys can be better utilized.
- Consider inviting as external speakers practicing engineers working on high-profile and/or unique projects to motivate students.
- Consider providing an explicit mapping of grades to their corresponding level of achievement for each one of the assessment criteria of the thesis.
- The page listing student support services ([http://www.upatras.gr/el/student\\_care](http://www.upatras.gr/el/student_care)) should contain an obvious link to the web page of the Social Care Office (<http://eko.upatras.gr/>)
- The department could consider developing a system for the collection of information related to infrastructure, equipment, and IT facilities.
- Support staff (i.e. technicians, laboratory assistants, administrative personnel) satisfaction recording mechanisms should be put into place and properly monitored and documented.
- Data collected through the various procedures should be more clearly analyzed and presented (with the use of graphs and tables to present findings being an imperative). Publication of these results in the website would be useful.
- Some important information (e.g. course outlines) should also be provided in English.
- Provide key information such as academic staff CVs, course outlines, program guides in a uniform manner, including everyone teaching in the department.
- The research projects/activity webpage on the department's website needs to be regularly updated. It is also recommended to provide links to currently-running research programs maintaining their own websites.

- The Department (or the University) may choose to implement a procedure that allows the evaluation of the quality of its website.
- Information and documents / forms of interest to faculty members, including available resources (e.g. Educational Center for Life-Long Learning) and procedures, could be made available through the Department’s website.
- The engagement of alumni and stakeholders in the development and implementation of the Quality Assurance system could be strengthened.

### III. Recommendations for Follow-up Actions

- Check whether the department has completed the process to identify goals and objectives that are not fully met and subsequently improve them by:
  - ✓ Establishing specific connections of exit survey questions to the department’s goals and objectives (i.e. through a matrix)
  - ✓ Establishing a set of specific measures to improve departmental goals and objectives that are deemed unsatisfactory from the results of the exit surveys
  - ✓ Monitoring whether aforementioned measures were effective in improving low-rated goals and objectives from subsequent years’ results
- All course outlines should include details of the assessment methods and criteria employed.

### IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: Principles 1,2,3,4,5,6,8,9,10

The Principles where substantial compliance has been achieved are: Principle 7

The Principles where partial compliance has been achieved are: None

The Principles where failure of compliance was identified are: None

Overall Judgement	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

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

## The Members of the Accreditation Panel for the UGP (Integrated Master)

**Name and Surname**

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