



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

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ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΣΤΗΝ ΑΝΩΤΑΤΗ ΕΚΠΑΙΔΕΥΣΗ

HELLENIC REPUBLIC

H Q A

HELLENIC QUALITY ASSURANCE
AND ACCREDITATION AGENCY

Accreditation Report for the Undergraduate Study Programme of:

Chemical Engineering
Institution: University of Patras
Date: December 18, 2018

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



Report of the Panel appointed by the HQA to undertake the review of the Undergraduate Study Programme of **Chemical 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 of the Higher Education Institution named: **Chemical Engineering, University of Patras** comprised the following four (4) members, drawn from the HQA Register, in accordance with the Law 4009/2011:

1. Professor Georges J. Kipouros (Chair)
University of Saskatchewan, Canada

2. Professor Ioannis Androulakis
Rutgers University, USA

3. Professor John Tsibouklis
University of Portsmouth, UK

4. Dr. Olga Vizika
IFP Energies Nouvelles (IFPEN), France

II. Review Procedure and Documentation

- Dates and people met are provided in the attached schedule
- The documents provided to the committee are
 - University of Patras presentation
 - Internal Quality Control Evaluation and Accreditation (MODIP) report
 - Description of the undergraduate programme
 - Information system of quality assessment
 - Brief presentation of the Department of Chemical Engineering
 - Internal quality assessment group (OMEA) report
 - Samples of final exams, and project design for the years (2014, 2016, 2017)
 - Samples of finals exams with answer key for all 10 semesters (2015 and 2016)
 - Samples of Diploma Theses (2014, 2016, 2018)
 - Samples of Project Design final reports (2015)
 - Departmental curriculum
 - 2013 External Evaluation Report
 - Programme Guide, Department of Chemical Engineering

The preparation of the panel for the accreditation of the Chemical Engineering undergraduate programme of the University of Patras followed the general presentation of the ADIP personnel which was done the first day of the visit. The panel requested from the University of Patras, through the personnel of ADIP, additional information regarding the level of the examinations, and the performance of the students on Project Design final reports. The request was also presented by the panel upon its arrival the evening before the day of the visit.

The rationale of the request is based on the recognition that the Chemical Engineering undergraduate programme leads to a professional degree and as such the accreditation needs, in addition to quality assessment, quantified verification of the knowledge of the students upon graduation.

As a result of the request by the panel the university provided: Samples of final exams, and project design for the years (2014, 2016, 2017), Samples of finals exams with answer key for all 10 semesters (2015 and 2016), Samples of Diploma Theses (2014, 2016, 2018) and Samples of Project Design final reports (2015).

In all meetings with the groups which were included in the schedule the panel questioned the educational personnel, the students and the industry representatives to ascertain the level of difficulty the education of the students reached.

III. Study Programme Profile

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

The Department was established in 1977. It is housed over two buildings located at the University of Patras Campus. The programme graduates chemical engineers educated in methods in: the production of industrial products; materials technology; energy production; and, environmental protection. The duration of the studies is 10 semesters. The mission of the Department is to educate students from undergraduate to advanced postgraduate level. The educational objectives of the undergraduate programme are: to provide students with a strong background in mathematics, the physical sciences and chemical engineering science. Also, to train students in engineering design through education and practical experience involving data collection, critical evaluation, analysis and synthesis; to instill to graduates the idea of life-long learning and continuing professional development; to prepare the next generation of professionals and leaders in the field; to use tools and methodologies of relevance to chemical engineering; to advance chemical engineering knowledge through fundamental and applied research; to promote inter- and multi-disciplinary research strategies; to contribute to the development and economic growth of the region and the country; and, to work in collaboration with local organizations and enterprises within the framework of research excellence and innovation. Teaching and research in the Department are conducted according to international quality standards and have yielded notable distinctions for the Department, faculty and alumni. Since 2017 the Diploma awarded is equivalent to Level 7 Master degree qualification (Integrated Master of Engineering, IChemE). The Department has 18 Full, 4 Associate, 3 Assistant Professors and 2 Lecturers. The present student population is 868 (n+3) undergraduates, 40 MSc and 74 PhD and 23 post-doctoral researchers.

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 PROGRAMME. 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 Programme 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 Proposal for Accreditation submitted by the Department describes in detail the quality assurance policy procedures. During the visit the Panel confirmed the accuracy of the statements. The Department has also established procedures for ensuring a continuous improvement of the programme. The Department utilizes metrics to monitor student satisfaction and to assess learning outcomes at specified intervals. KPIs have been defined and appropriately paired with pragmatic goals. It appears that all goals are monitored, updated and communicated to stakeholders. Discussions with all stakeholders during the visit confirmed to the Panel that all information is readily available.

Panel judgement

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

Panel Recommendations

The Appendix «Στοχοθεσια και προγραμματισμος δρασεων» describing desired Programme goals needs to be formalized. It would be appropriate to include a Gantt chart. Similarly, the goal-setting procedures should be formalized.

Principle 2: Design and Approval of Programme

INSTITUTIONS SHOULD DEVELOP THEIR UNDERGRADUATE PROGRAMME 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 Programme 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 Programme 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

Commendably, since 2017, the Diploma awarded is an Integrated Master of Engineering, MEng, at Level 7 of the European Qualifications Framework as specified by IChemE.

The international certification of the programme assures adherence to international standards.

The programme of study is well constructed and rationalized according to the needs of the broadly educated chemical engineering graduate.

Evidence is provided in the Proposal for Accreditation that the Department has developed appropriate procedures for the periodic evaluation and revision of the programme.

The curriculum revision process involves active participation from all stakeholders, i.e. students, faculty, alumni, employers.

The information is presented in a manner that is accessible and exhibits good logical development.

Panel judgement

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

Panel Recommendations

Principle 3: Student-centred Learning, Teaching and Assessment

INSTITUTIONS SHOULD ENSURE THAT THE UNDERGRADUATE PROGRAMME 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 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-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

Faculty adapt their teaching practices according to student needs and feedback. Each student is assigned a faculty mentor, who provides individualized mentoring to students.

Students are also encouraged to select thesis topics, research projects and elective courses. Students and faculty maintain open communication channels, with many staff members operating an open-door policy.

The interviewed sample of the student population communicated to the Panel the existence of a "family" atmosphere within the Department.

Information on assessment methods is provided in the module description of the curriculum. However, in places the assessment methods are diffuse and not always comprehensive.

All courses are evaluated at the end of each semester, the information is assessed by the relevant committee and archived for future reference.

An informal appeal process exists that may be escalated to a formal stage, which is conducted in accordance with University rules.

During the student interview process evidence has surfaced that there is a climate of mutual respect between the students, the faculty and other staff. Students felt sufficiently comfortable to express both positive and critical comments.

Panel judgement

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

Panel Recommendations

Assessment should be clearly articulated at the beginning of the teaching period of the course. The description of assessment type and grading should be standardized.

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

The Department provides information sessions and activities, including a two-day induction program for incoming students. The programme also assigns a mentor to each student. The curriculum is designed in a manner that allows each student to reach the same academic level within the first semester of the programme.

Student progression is monitored by the faculty mentors at the individual level. To maintain a reasonable workload, the number of courses allowed to be taken by each student is restricted.

The Department participates in the Erasmus programme, and the information is readily available to the students.

In accordance with European standards, the curriculum applies ECTS at a maximum of 30 credits per semester.

The Diploma thesis is a mandatory requirement. The Student Guide provides a comprehensive description of the quality requirements for the implementation of a thesis. The requirements are presented on the Departmental website. The thesis corresponds to 36 ECTS from the 300 ECTS required for the award of the degree.

The Department offers also opportunities for practical training, and is developing strategies to encourage the growth of the programme by strengthening and expanding relationships with industry and public sector institutions.

The value of the practical training has been communicated to the Panel by members of the student cohort and by faculty, who provided to the Panel examples of its beneficial nature.

On graduation, all students receive the Diploma Supplement.

Panel judgement

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

Panel Recommendations

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 encourages the faculty members to take advantage of the available European programmes for professional development. However, there are no Department-specific opportunities. The culture of sabbatical leave is also promoted.

The typical faculty teaching load is 6 hours per week, which is commensurate with international practice. However, the teaching load is often well in excess of the stated minimum.

The faculty actively integrates state-of-the-art research developments into their teaching. Each member of teaching staff specializes in an area of research; sampled outputs are of internationally competitive standard. Future hiring is aligned to the scientific evolution of the Department.

Teaching staff assessment is informed by student feedback through course evaluations that are conducted at the end of each semester.

Panel judgement

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

Panel Recommendations

The Department to: investigate options for the establishment of new professional development opportunities; and, establish a system whereby students assess and recognize the relative contributions of staff.

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

All facilities (classrooms, laboratories, IT infrastructure) are available for the efficient teaching of each course. However, these are over utilized and dated –there is an urgent need for the upgrading of all laboratory facilities. Laboratory work is supported by a dedicated team of technical staff. Facilities are distributed fairly and in accordance with the needs of each course. Auxiliary facilities are also available and accessible to students. Students are well informed and have access to all services. The Department is well supported by dedicated administrative staff.

Panel judgement

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

Panel Recommendations

There is an urgent need to upgrade facilities in all laboratories. A priority list should be drafted and presented to the relevant authorities. It is important that the academic to technical staff ratio is maintained at the current level.

Principle 7: Information Management

INSTITUTIONS BEAR FULL RESPONSIBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF UNDERGRADUATE PROGRAMME 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 Programme 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 Department utilizes questionnaires to collect data about student progression, graduation and employability. A comprehensive electronic library of transcripts dating to the inception of the Department is readily accessible to interested parties.

For the collection of data the Department uses a system developed by the University of Patras (Ψηφιακό Άλμα).

As far as student and staff satisfaction surveys, the Department presents to ΜΟΔΙΠ data, which are analyzed and returned to the Department annually. The analyzed data inform the continuous improvement process.

Is information obtained from the satisfaction surveys systematically analysed, appropriately communicated and used towards improvement? Resources are utilized fully and in accordance with the demands of cohort size. The student timetable is designed according to the available space and equipment. For example, there are 40 personal computers, 10 of which are not operational.

The unit assesses resources annually and the findings are reported by ΜΟΔΙΠ, which provides statistical data. A full record of analyzed data has been presented to the accreditation Panel. The quality of the analyzed data meets the internationally accepted standards.

Until recently the career paths of the graduates were not systematically followed. A major effort started at the end of 2017 to create an active community of the school graduates. The existence of this community, which organized its first meeting in June 2018, will allow the school to easily follow the careers of the graduates. In addition, this community could contribute to the school's financial support and could constitute a network able to help new graduates enter the professional life.

Panel judgement

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

Panel Recommendations

All personal computers that are accessible to students must be upgraded.

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 Programme 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 departmental web site is well developed and provides a comprehensive list of the criteria for assessment, degree-award data and teaching-staff profiles.

All course outlines and course-related material are available at the dedicated web site (*eclass*) of the University of Patras.

Documents for Quality Assurance Policy are available from www.icheme.org

The last update reflects data for the academic year 2018-2019.

Panel judgement

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

Panel Recommendations

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

INSTITUTIONS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR PROGRAMME, 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 Programme 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*

Programme 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

Internal evaluations have been performed annually since 2008, and the reports are available from the Departmental web site.

The outcomes of the self-assessment are submitted to ΜΟΔΙΠ and all findings are shared with the OMEA team.

Self-assessment data are thoroughly analyzed and result in specified actions. The procedure is described in the Proposal for Accreditation.

Relevant actions have resulted from the analysis of the self-assessment findings and include, among others: changes to the design course, introduction of a course on safety, introduction of courses on Microbiology and Biochemical Processes and introduction of a Matlab course. Consequent to the action plan, team projects are utilized more extensively.

Panel judgement

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

Panel Recommendations

Principle 10: Regular External Evaluation of Undergraduate Programme

PROGRAMME 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 Programme, with a specific term of validity, following to which revision is required. The accreditation of the quality of the Programme 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 first external evaluation of the study programme was conducted in 2013.

In 2017 the programme received IChemE accreditation.

All members of staff contributed to the review processes and evidence has been provided that they appreciate the importance of both professional body accreditation and HQA peer review.

The Panel drew evidence from representatives of all stakeholders (students, faculty, alumni and employers). The follow-up actions recommended by the 2013 external evaluation committee have been implemented within the constraints of the Department. The stakeholders have expressed their willingness to contribute to the programme in any way possible, especially as regards the upgrade of teaching facilities.

Panel judgement

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

Panel Recommendations

Concluding remarks

Following the procedure described in the “Review Procedure and Documentation” the panel was able to examine the adherence of the Chemical Engineering undergraduate programme of the University of Patras to each of the ten principles as presented above. It is evident that the Chemical Engineering undergraduate programme of the University of Patras fulfills all the principles to the highest degree.

The fact that the panel had access to all the Diploma Theses (2014, 2016, 2018) and of Project Design final reports (2015) which involve academic supervising, students and industry participation gave an opportunity, when meeting the relevant groups, to assess the impact the education the students receive is of high quality and that the students impact to the society upon graduation will be remarkable.

Thus, given that the full compliant to all ten principles and the demonstration of responsible contribution through their theses the panel recommends to ADIP that the Chemical Engineering undergraduate programme of the University of Patras be given the highest level of accreditation under their rules.

PART C: CONCLUSIONS

I. Features of Good Practice

- *Dedicated teaching and auxiliary staff.*
- *IChemE accreditation.*
- *Sound procedures.*
- *Congenial relationships between staff and students.*
- *Large campus.*
- *Promotion of a culture of excellence.*
- *Student volunteering network.*

II. Areas of Weakness

No significant weaknesses were identified. However, areas for improvement are to:

- *Update infrastructure.*
- *Upgrade laboratory facilities and equipment.*
- *Redesign laboratory space according to the size of the student body.*
- *Adopt and strictly apply the standards of the European Agency for Safety and Health at Work.*

III. Recommendations for Follow-up Actions

- *Invest in the upgrade of instrumentation.*
- *Investigate options for the establishment of new professional development opportunities for faculty and other staff.*
- *Establish a system that allows students to assess and recognize the relative contributions of faculty and other staff.*
- *Improve the quality of the work environment, both internally and externally.*
- *Formalize the goal-setting procedures.*
- *Standardize the description of assessment type and grading.*

IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: 1,2,3,4,5,6,7,8,9,10

The Principles where substantial compliance has been achieved are: none

The Principles where partial compliance has been achieved are: none

The Principles where failure of compliance was identified are: none

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

**The members of the Accreditation Panel
for the UGP Chemical Engineering
of the University of Patras**

Name and Surname

Signature

Prof emeritus Georges Kipouros

University of Saskatchewan, Canada

Prof Ioannis Androulakis

Rutgers University, USA

Prof John Tsibouklis

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Dr Olga Vizika

IFP Energies nouvelles (IFPEN),

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