



**ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ**  
HELLENIC REPUBLIC



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Ανώτατης Εκπαίδευσης**  
Hellenic Authority  
for Higher Education

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# Accreditation Report for the Postgraduate Study Programme of:

**Analytical Chemistry – Quality Assurance**

**Department: Chemistry**

**Institution: National and Kapodistrian University of Athens**

**28 October 2023**



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 HAHE to undertake the review of the Postgraduate Study Programme of **Analytical Chemistry – Quality Assurance** of the **National and Kapodistrian University of Athens** for the purposes of granting accreditation

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

### **I. The External Evaluation & Accreditation Panel**

The Panel responsible for the Accreditation Review of the postgraduate study programme (PSP) of **Analytical Chemistry – Quality Assurance** of the **National and Kapodistrian University of Athens** comprised the following four (4) members, drawn from the Hellenic Authority for Higher Education (HAHE) Register of Experts, in accordance with Laws 4009/2011 & 4653/2020:

- 1. Professor Emeritus Spyros Pavlostathis (Chair)**  
Georgia Institute of Technology, Atlanta, GA, USA
  
- 2. Professor Nikolaos Dimakis**  
University of Texas Rio Grande Value, Edinburg and Brownsville, TX, USA
  
- 3. Professor Constantinos Varotsis**  
Cyprus University of Technology, Limassol, Cyprus
  
- 4. Ms. Zoi-Lina Koutsogianni**  
PhD Candidate, Aristotle University of Thessaloniki, Thessaloniki, Greece

## II. Review Procedure and Documentation

In preparation for the review and assessment of the PSP, the External Evaluation & Accreditation Panel (EEA Panel) reviewed multitude of material provided by the Hellenic Authority of Higher Education (HAHE), which included background information and guidance on the review and accreditation process, detailed material and data related to the programme under evaluation, such as the programme accreditation proposal and associated appendices.

The programme review was conducted via teleconference, organized and coordinated by HAHE and the National and Kapodistrian University of Athens (NKUA). The schedule and agenda of the review were as stated below.

### Monday, 16/10/2023:

- a) Preliminary private meeting of the EEA Panel. Discussion of the programme under review; assignment of writing parts of the accreditation report draft to the members of the EEA Panel.
- b) Welcome meeting and short overview of the two postgraduate study programmes (PSP) with the Head of the Department of Chemistry Prof. E. Lianidou, the Director of the PSP Analytical Chemistry – Quality Assurance (PSP1) Prof. N. Thomaidis, the Director of the PSP Food Chemistry (PSP2) Prof. Ch. Proestos, the Secretary of the Quality Assurance Unit (MODIP) of the NKUA Mr. K. Bourletidis, MODIP member Mr. Th. Chajitheodorou, members of the PSP1 Steering Committee Profs. A. Economou, E. Gikas, E. Bakeas, and Ch. Kokkinos, members of the PSP2 Steering Committee Profs. V. Valdramidis, Th. Mavromoustakos and M. Dasenaki, and PSP1 & PSP2 OMEA member Prof. D. Tzeli: presentations and discussion of PSP1 and PSP2 history, academic profile, current status and future developments, strengths and areas of concern, degree compliance to the quality standards for accreditation, internal procedures, course examinations, review of students' progress, course/instructor evaluations, etc.
- c) Meeting with the Head of the Department of Chemistry, PSP1 & PSP2 faculty, and Ms. G. Satratzemi, Secretary of the Department of Chemistry, as well as Mrs. A. Gkika, PSP1 Secretary: Discussion of facilities and learning resources.
- d) Private debriefing meeting (EEA Panel members only).

### Tuesday, 17/10/2023:

- a) Meeting and discussion with PSP1 Analytical Chemistry – Quality Assurance Didactics teaching faculty Profs. M. Koupparis, M. Dasenaki, M. Mikros, E. Panderi, G. Dotsikas, N. Nasikas, and researchers Drs. M. Kostakis and N. Maragkou.
- b) Meeting and discussion with nine (9) current PSP1 students.
- c) Meeting and discussion with ten (10) recent PSP1 graduates.
- d) Meeting and discussion with employers and PSP1 social partners: V. Borova, ELPEN SA; O. Dritsa, RAFARM SA; P. Nisianakis, Analytical Labs; E. Lampi, National Chemical Science Lab; A. Pavlidou, Hellenic Center for Marine Research; D. Ladikos, GIOTIS SA; N. Defteraios, EYDAP; K. Kousoulos, QUALIMETRIX.
- e) Private debriefing meeting (EEA Panel members only): discussion of the outcomes and findings of the virtual visit; preparation of oral report.
- f) Closure meeting with the Head of the Department of Chemistry, PSP1 Director and steering committee faculty, MODIP secretary and member: informal, oral presentation of the EEA Panel key findings, and clarifications.

### Wednesday, 18/10/2023:

Draft report writing.

Thursday 19/10/2023 to Saturday 28/10/2023:

Draft report writing. EEA Panel virtual meetings. Review and finalization of draft report.

Throughout the review and evaluation process, the EEA Panel was in close communication with the PSP1 administration and University MODIP, which were very accommodating in providing additional information requested by the EEA Panel. The EEA Panel found that the PSP1 administration and MODIP representatives, as well as the faculty, staff, current students, and recent graduates interviewed were eager and helpful in our discussions, providing valuable additional information.

### III. Postgraduate Study Programme Profile

The postgraduate study programme (PSP) Analytical Chemistry – Quality Assurance is organized and offered by the Department of Chemistry of the National and Kapodistrian University of Athens (NKUA). The programme was initially established in 1994 as a PSP “Analytical Chemistry” in the Department of Chemistry, NKUA (Government Gazette 511/4-7-1994). In 2003 the interinstitutional PSP “Chemical Analysis – Quality Control” was established by the Departments of Chemistry, NKUA and Chemistry, Aristotle University of Thessaloniki (Government Gazette 1694 τ.Β' /19-11-2003). The current PSP was reformed in 2018 and operates with new approval (Government Gazette 3555 τ.Γ'/22-8-2018 and 974/20-07-2020) by the Department of Chemistry, NKUA.

The objectives of the PSP are the promotion of scientific knowledge and the application of new knowledge and technology and the specialization of scientists with emphasis on chemical analysis, assurance and quality control, establishment and management of quality systems, as well as the creation of executives capable of adopting and using new analytical technology, quality assurance systems, quality control and in general market control, thus contributing to the economic and social development of the country.

Teaching in the PSP is realized by faculty of the Department of Chemistry, NKUA, faculty of other Departments, as well as external collaborators from academic and research Institutions. Instruction is in-person or remotely under special circumstances, but attendance is mandatory. Special technical staff and administrative staff assist the PSP.

The programme has set at 20 the maximum number of admitted students per academic year. In the academic year 2022-2023, the number of admitted students was 19, while the number of graduates was 14. The total number of PSP graduates since its initial establishment in 2003 is 295. Most of the postgraduate students the EEA Panel interviewed stated that the PSP Analytical Chemistry – Quality Assurance of the National and Kapodistrian University of Athens was among their first choice based on the curriculum, methodologies used, and reputation.

The PSP is a minimum of four (4) academic semesters study resulting in a Diploma of Postgraduate Studies. To graduate, the student must have successfully completed a total of 120 European Credit Transfer System (ECTS) credits (90 ECTS for coursework and laboratory exercises and 30 ECTS for the preparation and successful completion of a postgraduate thesis). Practical training (Laboratory Practice in Analytical Chemistry) is completed during the third semester of study in the laboratories of the Department of Chemistry, NKUA, and/or in other academic and research Institutions. The EEA Panel found that the number of courses offered and the practical training cover advanced as well as new topics and technologies in Analytical Chemistry – Quality Assurance.

The PSP prepares graduates for careers in both the private and public sector of the economy, such as pharmaceutical industry, food industry, quality control laboratories, research and development (R&D) departments, health services, public bodies, as well as research Centers. In addition, a number of graduates continue with doctoral studies. There are strong links to the society, which is key priority of the PSP Analytical Chemistry – Quality Assurance, the Department of Chemistry, and the Institution.

The Department of Chemistry participates in other interdepartmental and interinstitutional postgraduate programmes and supports doctoral studies.

## PART B: COMPLIANCE WITH THE PRINCIPLES

### PRINCIPLE 1: QUALITY ASSURANCE POLICY AND QUALITY GOAL SETTING FOR THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT

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 THE POSTGRADUATE STUDY PROGRAMMES OF THE INSTITUTION AND THE ACADEMIC UNIT. THIS POLICY SHOULD BE PUBLISHED AND IMPLEMENTED BY ALL STAKEHOLDERS.

*The quality assurance policy of the academic unit should be in line with the quality assurance policy of the Institution and must be formulated in the form of a public statement, which is implemented by all stakeholders. It focuses on the achievement of special goals related to the quality assurance of the study programmes offered by the academic unit.*

*Indicatively, 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 postgraduate study programme (PSP), its purpose and field of study; it will realise the programme's goals and it will determine the means and ways for attaining them; it will implement appropriate quality procedures, aiming at the programme's improvement.*

*In particular, in order to implement this policy, the academic unit commits itself to put into practice quality procedures that will demonstrate:*

- a) the suitability of the structure and organisation of postgraduate study programmes*
- b) the pursuit of learning outcomes and qualifications in accordance with the European and National Qualifications Framework for Higher Education - level 7*
- c) the promotion of the quality and effectiveness of teaching at the PSP*
- d) the appropriateness of the qualifications of the teaching staff for the PSP*
- e) the drafting, implementation, and review of specific annual quality goals for the improvement of the PSP*
- f) the level of demand for the graduates' qualifications in the labour market*
- g) the quality of support services, such as the administrative services, the libraries and the student welfare office for the PSP*
- h) the efficient utilisation of the financial resources of the PSP that may be drawn from tuition fees*
- i) the conduct of an annual review and audit of the quality assurance system of the PSP through the cooperation of the Internal Evaluation Group (IEG) with the Institution's Quality Assurance Unit (QAU)*

#### **Documentation**

- *Quality Assurance Policy of the PSP*
- *Quality goal setting of the PSP*

#### **Study Programme Compliance**

##### **I. Findings**

The Institution has developed and implemented its Quality Assurance Policy as part of its broader strategy

(<https://en.uoa.gr/about-us/mission-policies-and-publications/quality-assurance-policy/>).

The Department of Chemistry, in collaboration with the Quality Assurance Unit (MODIP) of the



University and Department Internal Evaluation Group (OMEA), has harmonized the quality policy of the PSP Analytical Chemistry – Quality Assurance with that of the University, accompanied by annual quality assurance targets for the continuous development and improvement of the PSP, as well as that of the academic unit and other educational programmes.

The Quality Assurance Policy of the PSP, which is publicly accessible from the PSP website ([https://acqa.chem.uoa.gr/?page\\_id=6878](https://acqa.chem.uoa.gr/?page_id=6878)), includes adequate reference to the delivery of the new PSP, including commitments to satisfy requirements and strive for continuous improvement. In addition to OMEA, a departmental Coordinating/Steering Committee further aids in the overall quality assurance of the PSP and the Department.

The processes and procedures used for the monitoring and continuous improvement of the quality of the PSP are as follows: a) The strict implementation of the PSP Policy for Quality Assurance; b) The optimal disposition and management of the PSP resources; c) The establishment of Quality Assurance objectives of the PSP on an annual basis; d) The periodic internal evaluation and monitoring of the PSP on an annual basis; e) The collection of Quality Data, quantitation, analysis and improvement of the PSP; f) The disclosure and publication of all information related to the PSP made publicly accessible; g) The periodic external evaluation and certification following established procedures by HAHE.

## **II. Analysis**

The Quality Assurance Policy is sufficiently communicated to all parties involved. The PSP has set specific, measurable, achievable, relevant and timely goals regarding the new postgraduate programme. According to Quality Targets, the PSP is at a satisfactory point in terms of achieving set targets. Based on the data provided to the EEA Panel, the targets are also paired with suitable key performance indicators (KPIs). Goals are monitored, updated, and communicated, according to the Quality Assurance Policy implemented by the Institution and the PSP. The quality assurance system is reviewed on an annual basis by the OMEA and results communicated to the University MODIP, which issues an annual report.

The structure and organization of the PSP is well thought out and in line with the overall goal of the programme. The advanced material covered along with the study of new technologies in the area of Analytical Chemistry – Quality Assurance result in learning outcomes and qualifications of the postgraduate students consistent with Level 7 of the European and National Qualifications Framework for Higher Education. It is noteworthy that a number of postgraduate students of the programme have continued doctoral studies.

## **III. Conclusions**

The Department has established a Quality Assurance Policy that is appropriate for the PSP. It includes a commitment for its implementation and continuous improvement. The metrics that have been established by the PSP and the institution are adequate in tracking and documenting the quality of the programme. The findings are supported by the documents provided to the EEA Panel by the PSP and Institution, the interviews with the teaching, support staff and alumni of the programme. Overall it is a well-organized PSP focusing on the quality of the offered knowledge and skills.

## Panel Judgement

<b>Principle 1: Quality assurance policy and quality goal setting for the postgraduate study programmes of the institution and the academic unit</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

To further enhance adherence to Principle 1, the EEA Panel recommends the following:

- Major improvements made as a result of course/instructor evaluations should be documented, communicated to all involved, and published on the PSP website.
- Interactions with alumni upon their graduation should be exploited as a potential means of informing the decision-making process regarding future directions of the programme.
- Establishment of a formal External Advisory Board should be considered, which will guide the continuous review, revision, and further development of the curriculum.

## PRINCIPLE 2: DESIGN AND APPROVAL OF POSTGRADUATE STUDY PROGRAMMES

INSTITUTIONS SHOULD DEVELOP THEIR POSTGRADUATE STUDY PROGRAMMES FOLLOWING A DEFINED WRITTEN PROCESS WHICH WILL INVOLVE THE PARTICIPANTS, INFORMATION SOURCES AND THE APPROVAL COMMITTEES FOR THE POSTGRADUATE STUDY PROGRAMMES. THE OBJECTIVES, THE EXPECTED LEARNING OUTCOMES AND THE EMPLOYMENT PROSPECTS ARE SET OUT IN THE PROGRAMME DESIGN. DURING THE IMPLEMENTATION OF THE POSTGRADUATE STUDY PROGRAMMES, THE DEGREE OF ACHIEVEMENT OF THE LEARNING OUTCOMES SHOULD BE ASSESSED. THE ABOVE DETAILS, AS WELL AS INFORMATION ON THE PROGRAMME'S STRUCTURE ARE PUBLISHED IN THE STUDENT GUIDE.

*The academic units develop their postgraduate study programmes following a well-defined procedure. The academic profile and orientation of the programme, the research character, the scientific objectives, the specific subject areas, and specialisations are described at this stage.*

*The structure, content and organisation of courses and teaching methods should be oriented towards deepening knowledge and acquiring the corresponding skills to apply the said knowledge (e.g. course on research methodology, participation in research projects, thesis with a research component).*

*The expected learning outcomes must be determined based on the European and National Qualifications Framework (EQF, NQF), and the Dublin Descriptors for level 7. During the implementation of the programme, the degree of achievement of the expected learning outcomes and the feedback of the learning process must be assessed with the appropriate tools. For each learning outcome that is designed and made public, it is necessary that its evaluation criteria are also designed and made public.*

*In addition, the design of PSP must consider:*

- *the Institutional strategy*
- *the active involvement of students*
- *the experience of external stakeholders from the labour market*
- *the anticipated student workload according to the European Credit Transfer and Accumulation System (ECTS) for level 7*
- *the option of providing work experience to students*
- *the linking of teaching and research*
- *the relevant regulatory framework and the official procedure for the approval of the PSP by the Institution*

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

### **Documentation**

- *Senate decision for the establishment of the PSP*
- *PSP curriculum structure: courses, course categories, ECTS awarded, expected learning outcomes according to the EQF, internship, mobility opportunities*
- *Labour market data regarding the employment of graduates, international experience in a relevant scientific field*
- *PSP Student Guide*
- *Course and thesis outlines*
- *Teaching staff (name list including of areas of specialisation, its relation to the courses taught, employment relationship, and teaching assignment in hours as well as other teaching commitments in hours)*

## **Study Programme Compliance**

### **I. Findings**

The programme was established by Government Gazette 3071/31-7-2019 and runs in four semesters following the European Credit Transfer System (ECTS). The programme consists of 120 ECTs. In the first two semesters the students take courses (30 ECTS each semester) whereas in the third perform bibliography search. In the fourth semester the students are engaged in with their MS thesis. The objectives of the programme are in very good level in both teaching the science by the faculty and learning the subjects by the students.

In terms of the programme of study, the students have the flexibility to choose from a variety of courses after their first semester of study. The combination of compulsory and elective courses forms the basis for the development of the specialization areas. It should be noted that while that means that they must complete the compulsory courses of the chosen area, their elective courses are not restricted to those that fall within that area, providing additional flexibility.

As such the training of PSP students produces chemists who adequately meet the needs of Greek academic Institutions and Chemical industry. The curriculum is compared with appropriate, universally accepted standards for the specific area of study. The structure of the curriculum rationale is clearly articulated as shown by the orderly operation of the classroom and laboratory instruction and availability of study guides, based on syllabus. The curriculum is coherent and functional. The material for each course is appropriate. The Department has the necessary resources and appropriately qualified and trained staff to implement the curriculum. A group of exceptional instructors that supervise the laboratories have been in the Department for many years, enjoy their duties and are very effective. This is apparent in their popularity to the students and faculty.

The programme has been designed based on appropriate standards.

### **II. Analysis**

Course evaluations, in the form of questionnaires, are conducted at the end of the semester for all courses. The questionnaires include mostly general satisfaction questions, as well as open-ended questions for the students to make suggestions on. Statistics from these evaluations are generally considered by the Internal Evaluation Unit (OMEA). Also, the statistics and the comments are available to each instructor so as to better understand the improvements that are needed in the teaching process. Student participation is very high, verifiable by the fact that the student questionnaires are being completed in the last weeks of the semester where attendance presumably reaches its lowest point. A reasonable assumption that can be made is that those questionnaires are being filled by students with a better understanding of each course, and thus the results are quite reliable. Course assessment criteria are made available to all students at the start of each semester and are available in each course's webpage ("course outline") as well as in the study guide.

### **III. Conclusions**

The programme should consider further improvements (see recommendations below).

## Panel Judgement

<b>Principle 2: Design and approval of postgraduate study programmes</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

## Panel Recommendations

To further enhance adherence to Principle 2, the EEA Panel recommends the following:

- The graduate students are encouraged to participate in technical training in industry. This practice has been successful and should continue. It connects the younger chemists with the realistic association of their chosen science to society and allows for their employers to evaluate their future potential employment.
- The practical training in industry should be made mandatory.
- The interactions with alumni should be exploited as a potential means of informing the decision-making process regarding future directions.
- A dedicated alumni portal may be developed to promote post-graduation interactions. This community may contribute to the Department's financial support and could facilitate important networking interactions among graduates.
- An additional way that the Department can improve its student-centred learning approach is to establish procedures for graduates' input through satisfaction surveys.

### **PRINCIPLE 3: STUDENT-CENTRED LEARNING, TEACHING, AND ASSESSMENT**

**INSTITUTIONS SHOULD ENSURE THAT POSTGRADUATE STUDY PROGRAMMES PROVIDE THE NECESSARY CONDITIONS TO ENCOURAGE STUDENTS TO TAKE AN ACTIVE ROLE IN THE LEARNING PROCESS. THE ASSESSMENT METHODS SHOULD REFLECT THIS APPROACH.**

*Student-centred learning and teaching plays an important role in enhancing students' motivation, their self-evaluation, and their active participation 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 by adopting 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*
- *strengthens 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 the students' complaints*
- *provides counselling and guidance for the preparation of the thesis*

*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.*
- *Assessment is consistent, fairly applied to all students and conducted in accordance with the stated procedures.*
- *A formal procedure for student appeals is in place.*
- *The function of the academic advisor runs smoothly.*

#### **Documentation**

- *Sample of a fully completed questionnaire for the evaluation of the PSP by the students*
- *Regulations for dealing with students' complaints and appeals*
- *Regulation for the function of academic advisor*
- *Reference to the teaching modes and assessment methods*

#### **Study Programme Compliance**

##### **I. Findings**

The PSP Analytical Chemistry is a four-academic semesters programme. It addresses mainly graduates of chemistry, pharmaceutical, or other related departments. To be awarded the diploma, successful completion of five (5) courses reflecting a wide range of subdisciplines is

required, while during the second-year students work on their thesis. The courses are conducted mostly through theoretical lectures, and the thesis is research oriented.

The study programme adopts a student-centered approach, fostering a culture of mutual respect. It effectively supports incoming students and cultivates a warm and engaging learning environment. Current students and recent graduates have expressed their satisfaction with the high-quality training they have received. The EEA Panel is pleased to observe a dynamic and mutually beneficial relationship between students and teaching faculty members.

NKUA provides students with an evaluation system at the end of each academic semester in the form of a questionnaire, where students can rate the courses, lecturers, lecture content, etc. The same platform provides an opportunity for students to express any complaints, dissatisfaction, harassment, or suggest improvements. In addition to this, faculty members provide questionnaires in case participation of students in online questionnaires is insufficient. The majority of the lectures and their content are quite understandable to the students. However, in some cases the teaching staff does not consider the diversity of the PSP students, who come from different departments and have different knowledge backgrounds.

The faculty demonstrates a strong commitment and enthusiasm towards the educational process, maintaining close contact with students at all academic levels throughout the entire programme's duration. The "open door" policy is noteworthy and should be applauded. Overall, students interviewed by the EEA Panel expressed a high degree of satisfaction with their academic pursuits.

## **II. Analysis**

The PSP curriculum includes a wide range of courses covering current and topical issues in the field of Analytical Chemistry. The theoretical training of the students at the end of the PSP degree is quite satisfactory as they will have expanded and specialised their knowledge in this field. As for the acquisition of practical experience, the curriculum includes laboratory exercises in the context of specific courses, and one-semester thesis project which is an acceptable long period for students to get practical laboratory experience.

It is worth noting that academic staff was aware of the progress of the whole PSP, and this was also communicated to the EEA Panel members during the on-line meetings with current and recent graduates.

Students were satisfied by the variety of different lectures organized by the PSP; however, the organization of a site visit to industry or research Institutes, or one-day workshop, in order to get a better understanding of their future potential working environment and its requirements, would further improve the PSP curriculum.

It is also worth noting that extroversion and connections of academic staff of NKUA set the basis and encourage students to participate in exchange programmes (e.g., Erasmus+). During the on-line meeting with the social partners of the PSP, they expressed their satisfaction and enthusiasm about the scientific knowledge and practical experience that students earn through their studies. Finally, the courses' and instructors' evaluation systems are widespread among students. On the other hand, the participation of the students in the internal evaluation process of the PSP is not consistent during the academic semesters.

### III. Conclusions

The PSP curriculum is mostly in line with the standards of the HAHE, as it is of high quality. Graduates are provided with strong knowledge and experience in both the professional and research fields. In general, the EEA Panel finds that the programme is fully compliant with Principle 3.

#### Panel Judgement

<b>Principle 3: Student-centred learning, teaching, and assessment</b>	
Fully compliant	X
Substantially compliant	
Partially compliant	
Non-compliant	

#### Panel Recommendations

To further enhance adherence to Principle 3, the EEA Panel recommends the following:

- In addition to courses offered by the academic staff, seminars by external partners (e.g., industry, research Institutes) could be organized on a structured basis. This would allow students to learn about new advances, current needs and requirements in their areas of study.
- The PSP staff could implement strategies towards increasing students' participation in course evaluations; each instructor should communicate the importance of participation in the evaluation process in the context of quality assurance and continuous improvement of the programme.



## **PRINCIPLE 4: STUDENT ADMISSION, PROGRESSION, RECOGNITION OF POSTGRADUATE STUDIES, AND CERTIFICATION**

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

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

- *the student admission procedures and the required supporting documents*
- *student rights and obligations, and monitoring of student progression*
- *internship issues, if applicable, and granting of scholarships*
- *the procedures and terms for the drafting of assignments and the thesis*
- *the procedure of award and recognition of degrees, the duration of studies, the conditions for progression and for the assurance of the progress of students in their studies*
- *the terms and conditions for enhancing student mobility*

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

### **Documentation**

- *Internal regulation for the operation of the Postgraduate Study Programme*
- *Research Ethics Regulation*
- *Regulation of studies, internship, mobility, and student assignments*
- *Degree certificate template*

### **Study Programme Compliance**

#### **I. Findings**

Student admission to the PSP is restricted to 20 per academic year and eligible for admission are graduates of Chemistry, Pharmacology, etc. Students' number is restricted upon a selection procedure based mostly on their score of admission exam (60%), on the studies scores, scientific activity, knowledge of foreign languages (English), followed by candidates' interviews by an already established academic committee. The majority of applicants to the PSP is from Chemistry departments. The ratio of women/men appears not unbalanced. The proportion of graduates is very good.

All procedures for student selection are clearly described in the required supporting documents. Documents also contain information for the student rights and obligations, and ways allowing to monitor their studies progression. Research ethics regulation, regulation of studies, mobility and student assignments are also provided.

The duration of the PSP is four semesters. For the graduation, courses (in the form of lecture) and practical laboratory/research exercise are required along with the completion of the thesis. To date, all courses are given in Greek, while the choice of language of the thesis is up to the student. Literature-based knowledge is acquired, and practical training modules are available.

Faculty of the PSP show understanding and flexibility for students that are working or having specific needs (e.g., military service, health problems). The PSP diploma successfully allows the students to get a job with specific requirements mostly in the private domain (mostly to the

pharmaceutical companies and some research institutes or private laboratories) or to further develop by acquiring a PhD degree.

The communication between the students and the faculty members of the PSP is excellent. Faculty are constantly available in helping the students and provide all necessary information. Progress of the PSP students is followed closely by the faculty and the programme secretariat.

The meeting of the EEA Panel with current students and recent graduates of the PSP left a very positive impression of the utility of this PSP. All of them were very enthusiastic and positive concerning their experience and knowledge received. Several past students are excelling in the Pharma or Food industry and indicated the great importance of this PSP. However, current students, graduates and stakeholders requested additional courses in the form of workshop or site-visits, linking new developments and needs in industry (i.e., pharma) with analytical chemistry. Concerning the quality and number of courses, students pointed out that most of the courses are well-structured and easy to follow. The mobility of the students through Erasmus+ and CIVIS is quite satisfactory.

## **II. Analysis**

The PSP provides an important and interesting basis for further studies in the field and fulfils an important need for further education and training in Analytical Chemistry. The EEA Panel believes that the length of studies (4 semesters) of the PSP is appropriate.

The EEA Panel estimates that although students' mobility is satisfactory, there should be an effort to use the Erasmus+ platform or other opportunities (pharmaceutical industries) of student mobility and exchange within Greece or abroad. PSP faculty is aware of this and work towards this direction.

The EEA Panel, but also the students and stakeholders, believe that this PSP could become even more international by delivering all courses and seminars in English and encouraging the students to write their Thesis in English. This will offer more opportunities for international exchanges and will increase the chance of students to find a job in the field or continue for a PhD degree in Greece or abroad.

## **III. Conclusions**

The PSP fully complies with the requirements of Principle 4.

## Panel Judgement

<b>Principle 4: Student admission, progression, recognition of postgraduate studies and certification</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

To further enhance adherence to Principle 4, the EEA Panel recommends the following:

- Organisation of a job fair/workshop, where the various stakeholders could explain possibilities of mobility, job opportunities, etc., could be considered.
- There should be an effort by teaching staff to give lectures in English. Similarly, students could be encouraged to present and defend their theses in English.

## **PRINCIPLE 5: TEACHING STAFF OF POSTGRADUATE STUDY PROGRAMMES**

**INSTITUTIONS SHOULD ASSURE THEMSELVES OF THE LEVEL OF KNOWLEDGE AND SKILLS OF THEIR TEACHING STAFF, AND APPLY FAIR AND TRANSPARENT PROCESSES FOR THEIR RECRUITMENT, TRAINING AND FURTHER DEVELOPMENT.**

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

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

### **Documentation**

- *Procedures and criteria for teaching staff recruitment*
- *Employment regulations or contracts, and obligations of the teaching staff*
- *Policy for staff support and development*
- *Individual performance of the teaching staff in scientific-research and teaching work, based on internationally recognised systems of scientific evaluation (e.g. Google Scholar, Scopus, etc.)*
- *List of teaching staff including subject areas, employment relationship, Institution of origin, Department of origin*

### **Study Programme Compliance**

#### **I. Findings**

The Department has adopted a series of well-defined procedures as imposed by state law to recruit and hire qualified teaching staff. The processes used are transparent. One needs to take into account that the competitive and cutting-edge nature of any Department in the realm of research and teaching is developed by fostering and recruiting excellence that does not always necessarily reside within the Department. The procedures for the recruitment of academic faculty are dictated by relevant laws and, as such, Departments are mandated to comply. The academic competence of the faculty is considered satisfactory, as reflected by the high h-indexes and number of citations (*Google Scholar, Scopus*). However, there is no formal established opportunity for development and further improvement of the teaching competence of the faculty. Staff mobility is encouraged and the actual use of such opportunity is partially satisfied. The teaching workload is appropriate and it allows engagement in a lot of research activities. The linking of education with research is a well-embedded culture within the Department, as reflected by the wide participation of students in the research projects of faculty members.

## II. Analysis

There is a systematic course/instructor evaluation by the students through questionnaires. However, the response rate is very low and as such the student's participation in the future restructuring of the PSP is questionable. Furthermore, even though the research productivity of the faculty members is satisfactory, nevertheless, there is no defined research strategy that focuses on specific scientific areas. The metrics of the research output are not on par with other Chemistry Departments in Greece. In the last 4 years, no original papers in Analytical Chemistry seem to have been published in main stream journals like JACS and Analytical Chemistry.

## III. Conclusions

The level of knowledge of the teaching staff, as reflected also by their research productivity is very satisfactory. A formal policy ensuring further development of their teaching capacity has not been established, yet.

### Panel Judgement

<b>Principle 5: Teaching staff of postgraduate study programmes</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

### Panel Recommendations

To further enhance adherence to Principle 5, the EEA Panel recommends the following:

- The interaction between the PSP students and faculty with industry and other external stakeholders should be enhanced.
- The PSP faculty should increase their efforts to publish in top-tier journals related to Analytical Chemistry.

## **PRINCIPLE 6: LEARNING RESOURCES AND STUDENT SUPPORT**

**INSTITUTIONS SHOULD HAVE ADEQUATE FUNDING TO COVER THE TEACHING AND LEARNING NEEDS OF THE POSTGRADUATE STUDY PROGRAMME. 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, NETWORKS, CAREER AND SOCIAL POLICY SERVICES ETC.).**

*Institutions and their academic units must have sufficient resources and means, on a planned and long-term basis, to support learning and academic activity in general, so as to offer PSP students the best possible level of studies. The above means include facilities such as the necessary general and more specialised libraries and possibilities for access to electronic databases, study rooms, educational and scientific equipment, IT and communication services, support and counselling services.*

*When allocating the available resources, the needs of all students must be taken into consideration (e.g. whether they are full-time or part-time students, employed students, students with disabilities), in addition to the shift towards student-centred learning and the adoption of flexible modes of learning and teaching. Support activities and facilities may be organised in various ways, depending on the institutional context. However, the internal quality assurance proves -on the one hand- the quantity and quality of the available facilities and services, and -on the other hand- that students are aware of all available services.*

*In delivering support services, the role of support and administration staff is crucial and therefore this segment of staff needs to be qualified and have opportunities to develop its competences.*

### **Documentation**

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

### **Study Programme Compliance**

#### **I. Findings**

The PSP has dedicated infrastructure for the education of a maximum of 20 students per academic year that includes classrooms and laboratory rooms, all equipped with free Wi-Fi and all necessary equipment for the purpose of the lectures (e.g., PCs, projectors, etc.). In addition, there is students' access to two multi-media facilities, one offered by the University within the campus and one by the Department.

There are several facilities, within walking distance, dedicated to the well-being of students, such as restaurant, gym, swimming pool, student residences, and other facilities for exercise and socializing.

All class and laboratory material (notes, reports, exercises, PowerPoint presentations) are uploaded onto the web and are readily available to all enrolled students. An online platform is used by the students for delivering their weekly/monthly assignments (e-Class).

In several classes and laboratories, the education is interactive and actively engages the students in the learning process. In several advanced classes, teaching is based on scientific analysis of recently published research papers (mostly during the 3<sup>rd</sup> semester).

## **II. Analysis**

Despite the evidently insufficient funding from the Ministry of Education, the Department makes honest efforts to update laboratory instruments and provide needed consumables for all postgraduate students, thus ensuring and enhancing the quality of education.

The programme offers opportunities for student exchange programmes (e.g., ERASMUS, CIVIS) that encourage mobility, networking and developing potentially new skills. Also, academic teaching staff seems to be particularly interested in the student's opinion and satisfaction about the quantity and quality of lectures/laboratories.

During their thesis project, students have the opportunity to conduct high quality research within the University; moreover, they are often given the opportunity to collaborate with local companies and research laboratories, thus strengthening their technical skills and expanding their network.

## **III. Conclusions**

As an integral component of a major University in Greece, the PSP Analytical Chemistry – Quality Control offers a comprehensive range of resources and services to support learning, research, and academic endeavours. These resources, encompassing human expertise, infrastructure, and support services, are deemed sufficient and conducive to creating an excellent educational environment. Despite facing financial constraints, the PSP effectively manages the allocation of funds to meet the diverse requirements of both students and faculty, thereby guaranteeing the success and ongoing expansion of the PSP.

## Panel Judgement

<b>Principle 6: Learning resources and student support</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

To further enhance adherence to Principle 6, the EEA Panel recommends the following:

- There is a need for a multi-faceted approach to augment the PSP budget, which may include external funding sources, industrial projects, and service-related activities.
- The PSP should enhance its effort to increase the participation of students to the programme mentoring activities.
- The Department should enhance the engagement between students and the local/international industry by encouraging participation of its alumni and other experts in various relevant activities.



## **PRINCIPLE 7: INFORMATION MANAGEMENT**

**INSTITUTIONS BEAR FULL RESPONSIBILITY FOR COLLECTING, ANALYSING AND USING INFORMATION, AIMED AT THE EFFICIENT MANAGEMENT OF POSTGRADUATE STUDY PROGRAMMES 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.*

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

*The information collected 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 programmes*
- *availability of learning resources and student support*

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

### **Documentation**

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

## **Study Programme Compliance**

### **I. Findings**

The programme has developed an information system to manage the Quality Assurance process. The key performances including the collection of all results and data from the student satisfaction and course evaluation surveys have been established. The evaluation of the courses is performed at the end of each semester for all courses and faculty. Student progression, success, and drop-out rates are carefully monitored.

Information and data on the performance of the faculty members of the programme, the administrative support is also under regular monitoring. The Internal Evaluation Unit (OMEA) and MODIP are mainly responsible for the operation of the QA associated systems.

Key performance indicators (KPIs), such as career paths, student retention/progression, completion rates, etc. are satisfied.

## II. Analysis

Sufficient information for the needs of the National Information System for Quality Assurance in Higher Education (NISQA) based on the data is available.

The Department maintains sufficient processes for the analysis and evaluation of data related to the availability and accessibility of resources (equipment, social services, IT facilities, etc.), as these are defined at Institutional level.

## III. Conclusions

Overall, the Department collects and analyses all data related to Quality Assurance. The Department performs analysis of the collected course evaluation forms at instructors' level only, and has not yet documented processes to identify potential areas of improvement.

### Panel Judgement

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

### Panel Recommendations

To further enhance adherence to Principle 7, the EEA Panel recommends the following:

The Department may further enhance the analysis of data from student and staff surveys towards continuous improvement and further raise their contribution to the quality assurance process.

## **PRINCIPLE 8: PUBLIC INFORMATION CONCERNING THE POSTGRADUATE STUDY PROGRAMMES**

**INSTITUTIONS SHOULD PUBLISH INFORMATION ABOUT THEIR TEACHING AND ACADEMIC ACTIVITIES RELATED TO THE POSTGRADUATE STUDY PROGRAMMES IN A DIRECT AND READILY ACCESSIBLE WAY. THE RELEVANT INFORMATION SHOULD BE UP-TO-DATE, OBJECTIVE AND CLEAR.**

*Information on the Institutions' activities is useful for prospective and current students, graduates, other stakeholders, and the public.*

*Therefore, Institutions and their academic units must provide information about their activities, including the PSP they offer, the intended learning outcomes, the degrees awarded, the teaching, learning and assessment procedures applied, the pass rates, and the learning opportunities available to their students. Information is also provided on the employment perspectives of PSP graduates.*

### **Documentation**

- *Dedicated segment on the website of the department for the promotion of the PSP*
- *Bilingual version of the PSP website with complete, clear and objective information*
- *Provision for website maintenance and updating*

## **Study Programme Compliance**

### **I. Findings**

The Department of Chemistry and the PSP website are only available in Greek, whereas the English versions only exist as placeholders.

The Greek version of the PSP website is very user-friendly highlighting the overall number of graduates and their percent founding jobs related to the field. It contains a news and announcement section, a link for prospective PSP applicants, the PSP director and faculty with up-to-date CVs, the study guide, information on the entrance exams, a copy of the law regarding the PSP regulations, study regulations, the code of good practice for research purposes, regulations on selecting an academic advisor, regulations on student grievances and complaints, and a copy of the diploma supplement. There is also a link to the PSP quality assurance and contact information for further assistance about the PSP.

### **II. Analysis**

The PSP posts extensive information to its website, which is only available in Greek. Therefore, PSP does not fully satisfy Principle 8 due to not having a bilingual (English) version of its website. The omission of an English version of the PSP website could cause a hurdle for potential Erasmus+ students.

The faculty CVs are complete and contain their research areas of expertise, as well as their teaching and past teaching activities. This will facilitate students selecting their research advisor for completing their thesis. Although the PSP includes an indicative programme of study in the study guide, the potential course instructor information is missing. Moreover, there is no information on the weights of individual examinations used towards the student final course grade for all listed courses.

The study guide and the study regulations documents contain duplicate information, such as the programme of study.

### III. Conclusions

The PSP does not fully satisfy Principle 8 due to the omission of its English website.

#### Panel Judgement

<b>Principle 8: Public information concerning the postgraduate study programmes</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

#### Panel Recommendations

To further enhance adherence to Principle 8, the EEA Panel recommends the following:

- The PSP should develop an English version of its website, which should contain the same information as the Greek counterpart.
- The study guide should be updated, including details on the weights of individual examinations used towards the student's final course grade for all listed courses.
- The PSP should provide a programme of study with a list of potential instructor(s) per course offered.

## **PRINCIPLE 9: ON-GOING MONITORING AND PERIODIC INTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES**

**INSTITUTIONS AND ACADEMIC UNITS SHOULD HAVE IN PLACE AN INTERNAL QUALITY ASSURANCE SYSTEM FOR THE AUDIT AND ANNUAL INTERNAL REVIEW OF THEIR POSTGRADUATE STUDY PROGRAMMES, SO AS TO ACHIEVE THE OBJECTIVES SET FOR THEM, THROUGH MONITORING AND POSSIBLE AMENDMENTS, WITH A VIEW TO CONTINUOUS IMPROVEMENT. ANY ACTIONS TAKEN IN THE ABOVE CONTEXT SHOULD BE COMMUNICATED TO ALL PARTIES CONCERNED.**

*The regular monitoring, review, and revision of postgraduate study programmes aim at maintaining the level of educational provision and creating a supportive and effective learning environment for students.*

*The above comprise the evaluation of:*

- a) the content of the programme in the light of the latest research in the given discipline, thus ensuring that the PSP is up to date*
- b) the changing needs of society*
- c) the students' workload, progression and completion of the postgraduate studies*
- d) the effectiveness of the procedures for the assessment of students*
- e) the students' expectations, needs and satisfaction in relation to the programme*
- f) the learning environment, support services, and their fitness for purpose for the PSP in question*

*Postgraduate study 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.*

### **Documentation**

- *Procedure for the re-evaluation, redefinition and updating of the PSP curriculum*
- *Procedure for mitigating weaknesses and upgrading the structure of the PSP and the learning process*
- *Feedback processes concerning the strategy and quality goal setting of the PSP and relevant decision-making processes (students, external stakeholders)*
- *Results of the annual internal evaluation of the PSP by the Quality Assurance Unit (QAU), and the relevant minutes*

### **Study Programme Compliance**

#### **I. Findings**

The PSP self-assessment procedure takes place annually, with the support of the University quality assurance unit (MODIP). The quality assurance targets are set annually for all postgraduate programmes of the Department of Chemistry. The findings of the PSP self-assessment are shared within the academic unit. The PSP is evaluated using student evaluations surveys. The EEA Panel found no information on surveys from the PSP graduates and the social partners' feedback.

The PSP is in line with the current research in the field. This is verified by the programme course descriptions, the faculty publications, as well as the expressed employer's satisfaction. Copies of student dissertations are not publicly available. However, upon the request of the EEA Panel, several theses were made available.

## II. Analysis

The PSP collects data, which is used for its improvements. The student evaluation surveys serve as an indirect assessment method for the PSP. The lack of satisfaction surveys from the PSP graduates and its social partners hampers the PSP assessment. Students, graduates, and other stakeholders do not appear to have been directly involved in the decision-making processes towards curriculum improvement.

The fraction of students participating in the course evaluations is 77% for the academic year 2021-22, which is considered high. This figure is slightly higher than the one reported to HAHE, which is 75%. The student survey results showed that the PSP students are very satisfied from the programme, especially in terms of the faculty appropriateness for the programme and the transparency in the course evaluations.

## III. Conclusions

The PSP is assessed predominantly through student surveys. However, it does not fully satisfy Principle 9 due to the lack of a feedback mechanism from its graduates and social partners and the absence of the engagement of students, graduates, and social partners in its improvements.

### Panel Judgement

<b>Principle 9: On-going monitoring and periodic internal evaluation of postgraduate study programmes</b>	
Fully compliant	
Substantially compliant	<b>X</b>
Partially compliant	
Non-compliant	

### Panel Recommendations

To further enhance adherence to Principle 9, the EEA Panel recommends the following:

- The PSP should develop satisfaction surveys for its graduates and for the social partners involved with the programme.
- The PSP should develop procedures, which will actively engage students, graduates, and social partners in its improvements.
- The PSP should establish a formal External Advisory Board, with faculty, students, graduates, and social partners to actively assist in the programme improvements.

## **PRINCIPLE 10: REGULAR EXTERNAL EVALUATION OF POSTGRADUATE STUDY PROGRAMMES**

**THE POSTGRADUATE STUDY PROGRAMMES SHOULD REGULARLY UNDERGO EVALUATION BY PANELS OF EXTERNAL EXPERTS SET BY HAHE, AIMING AT ACCREDITATION. THE TERM OF VALIDITY OF THE ACCREDITATION IS DETERMINED BY HAHE.**

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

### **Documentation**

- *Progress report of the PSP in question, on the results from the utilisation of possible recommendations included in the External Evaluation Report of the Institution, and in the IQAS Accreditation Report, with relation to the postgraduate study programmes*

### **Study Programme Compliance**

#### **I. Findings**

The PSP has not been previously subjected to an external evaluation for accreditation purposes. However, the National and Kapodistrian University of Athens has been externally evaluated on November 7, 2015. The PSP provides a progress report to parts of the Institution accreditation pertained to the programme.

#### **II. Analysis**

The current evaluation is the PSP's first external accreditation review. Some recommendations from the 2015 review are also applicable to the Department's postgraduate programmes. Since then, several changes were implemented to the PSP towards its improvement following the Institution's review. The panel found that the PSP faculty and supporting staff were very helpful in answering the EEA Panel's questions during the current review. Moreover, they showed that they understand the importance of the accreditation process and the EEA Panel's recommendations. The PSP follows a commonly used procedure for the utilization of the outcomes of the external evaluation. These outcomes are shared utilized with the PSP organizing committee, the Department quality assurance team (OMEA), the Chemistry Department Chair, and the University quality assurance unit (MODIP).

#### **III. Conclusions**

The PSP has not been evaluated before by an external committee for accreditation purposes. However, several recommendations from the 2015 Institution external review have been implemented to the PSP. The PSP is in full compliance with Principle 10.

## Panel Judgement

<b>Principle 10: Regular external evaluation of postgraduate study programmes</b>	
Fully compliant	<b>X</b>
Substantially compliant	
Partially compliant	
Non-compliant	

## Panel Recommendations

None



## **PART C: CONCLUSIONS**

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

- The University has implemented compliant, efficient mechanisms for monitoring and ensuring high quality education and services relative to the PSP. The existing quality assurance and continuous improvement policy and practices followed by the PSP align with the strategic objectives of the Department and the University.
- The faculty and staff are enthusiastic and dedicated to their mission.
- The students' overall experience is very positive. The enthusiasm of current students, recent graduates, employers, and other stakeholders was evident.
- In-person instruction and hands-on laboratory training of students.
- Employment of the postgraduate studies programme graduates in public and/or private positions is very high.
- Employers and social partners praised the postgraduate studies programme and believe there is a clear need for such graduates.

### **II. Areas of Weakness**

- The existing programme website in Greek needs improvement, whereas there is no English version.
- There is no well-defined process for students, graduates and external stakeholders' in the PSP improvement.
- There is no evidence for faculty publications in top-tier journals related to Analytical Chemistry.
- The PSP study guide lacks details as to how the final course grade is calculated and listing potential instructor(s) for each course offered.
- Student participation in practical training in industry is very limited.
- There are limited interactions with alumni after graduation.
- There is no formal External Advisory Board.

### **III. Recommendations for Follow-up Actions**

- Establish a formal process for the active participation of students, graduates, external stakeholders in the curriculum development and study programme revisions.
- Enhance and update regularly the website of the programme, including the complete development of a version in English.
- Consider increasing the number of seminars delivered by external partners (e.g., industry, research Institutes, etc.), which would allow students to learn about new advances, current needs and requirements in their areas of study.

- The practical training in industry should be made mandatory.
- Consider organizing job fairs/workshops with potential employers and stakeholders for students to learn about job opportunities.
- The programme study guide should be updated, including details on the weights of individual examinations used towards the student final course grade for all listed courses, as well as providing a list of potential instructor(s) for each course offered.
- Faculty should increase their efforts of publishing in top-tier journals related to Analytical Chemistry.
- Establish a formal External Advisory Board comprised of faculty, graduates, and social partners to actively assist and guide the continuous review, revision, and further development of the PSP curriculum, enhance the entire programme, as well as attract resources.

#### IV. Summary & Overall Assessment

The Principles where full compliance has been achieved are: **1, 3, 4, 6, 7, and 10.**

The Principles where substantial compliance has been achieved are: **2, 5, 8 and 9.**

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	

## The members of the External Evaluation & Accreditation Panel

Name and Surname

Signature

- 1. Professor Emeritus Spyros Pavlostathis (Chair)**  
Georgia Institute of Technology, Atlanta, GA, USA
- 2. Professor Nikolaos Dimakis**  
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