



**Cyprus Agency of Quality Assurance and Accreditation in  
Higher Education**

**Republic of Cyprus**

**External Evaluation Report  
Program of Study**

**Institution: University of Cyprus  
Program of Study: PhD in Chemistry**



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## **INSTRUCTIONS:**

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2016” [N. 136 (I)/2015].

**The document is duly completed by the External Evaluation Committee for each program of study. The ANNEX (Doc. Number 300.1) constitutes an integral part of the external evaluation report for the external evaluation accreditation of a program of study.**

### EXTERNAL EVALUATION COMMITTEE:

NAME	TITLE	UNIVERSITY / INSTITUTION
Timothy Gallagher	Professor	University of Bristol
Anastasia Panteli	Ms (Student member)	Cyprus University of Technology
Sophia Yaliraki	Professor	Imperial College London
Furio Cora	Professor	University College London

### INTRODUCTION:

#### I. The External Evaluation procedure

- Short description of the documents that have been studied, of the on site visit meetings, and of the on site visit to the infrastructures.

#### II. The Internal Evaluation procedure

- Comments concerning the quality and the completeness of the application submitted by the institution of higher education (Doc. Number 200.1), as well as concerning the overall acceptance of and participation in the quality assurance procedures, by the institution in general and by the program of study under evaluation in particular.

(I) We received the ***Application for Evaluation – Accreditation*** document for the program, together with associated instructions. These were all received well in advance and allowed us to gain an insight into the issues that we wished to focus some attention on during the on-site visit.

We had two presentations during the on-site visit - and were provided with copies of the slides used – which were very helpful in providing a clear and consistent context around the program and the broader issues involved. One of these was a University-level perspective and the other was from the Department.

We found it very helpful to meet the Rector and Vice-rector for Academic Affairs and gained a clear impression of a fully engaged institution. The Vice-dean of the graduate school and administrator also provided a clear view of the university-level involvement in the graduate program.

During the initial meeting, we also met the Department Chair and vice-chair as well as other senior colleagues, who made us feel very welcome. We would compliment the University and department for how this initial, and clearly important meeting was organized and run. This set us up very well for the rest of the day.

We were provided with access to exemplar PhD/MSc theses, full course details, including exams.

Overall, we had the impression of a transparent, well-organized and supportive process that has enabled us to understand and comment constructively on the program as we were asked to do.

We would, lastly but by no means least, thank Eleni Deligianni and Anthi Prokopa of the CYQAA for all of their help in organizing our visit.

(II) The Application was a very helpful and detailed document. We found the first 40-50 pages directly relevant to our planning but the rest was important as a reference source which we used as and when required. We appreciated being provided with a full copy of this document on our arrival. We also found the Department's webpages to be clear, concise and very informative around course structures. This was important because this is what the students will read. The Department's presentation document also provided up to date statistics and additional contextual information around the Application document.

Preparing a document of this level of detail requires a lot of work but offers also an important opportunity for a department to reflect upon the case that they are making around the programme structure and content.

We have drawn our conclusions and offered recommendations based on the detail in this Application and the discussions we had with the different groupings of staff and students.

Generally, here within Document 300.1.1, we have provided overarching comments followed by our recommendations. We appreciate that there is (inevitably) some level of overlap between the different assessment categories but we have tried, where possible, to follow those categories.

On occasion, we have inserted comments that may not rigorously follow the criteria order but where it made more sense to do that within the context of our comments.

Document 300.1 offers an opportunity to assess quite specific items and we have added more focused comments in the justification box beneath each questionnaire section, as appropriate.

## **FINDINGS:**

### **1. EFFECTIVENESS OF TEACHING WORK – AVAILABLE RESOURCES**

#### **- Organization of Teaching Work /Teaching /Teaching personnel**

We see these as inter-related issues which we address together below.

The course structure, including admissions criteria, is very clear. The offering is balanced across the different areas of Chemistry. The department recognises the variation in demand and we support a flexible approach rather than a rigid one to timetabling of courses. We also recognise where courses are common across PhD and MSc programmes, that this flexibility may not be appropriate.

The assessment of the programme is very clear. The use of student-based evaluation is good practice as is the introduction of the formal training programme for new academics that is being introduced by the University. There is an issue associated with particularly small class sizes which we will comment on below.

The taught component of the PhD comprises of two literature reviews and presentations. This is good practice and valued by the students. The first presentation is not project-based and is open to all students, and we have some recommendations that we hope would extract even more value for the students.

Our understanding is that the majority of courses are taught in Greek (page 9 of accreditation document) and that the University is very actively considering a much wider adoption of courses taught in English. Chemistry is a truly international science where English is the recognised language and this has influenced our recommendations in this area.

We have also assessed the training around transferable skills and continuing professional development. We believe that these are increasingly important to ensure the national and international competitiveness of the graduates. An issue raised by the students was that, while the University does provide central transferable skills training, because many students necessarily have outside jobs, this makes these valuable courses much less accessible to this cohort.

We view the teaching personnel (academic/technical/support) as highly qualified and motivated.

What is very clear is that this is a highly cohesive department across these different staff cohorts. This is a major asset in any department. We do recognise that there has been no academic appointment since 2014. We understand the drivers behind this but we feel that there are opportunities to be exploited here.

#### **Recommendations:**

- We are aware that the university has a minimum attendance of 5 students which for a high-level postgraduate programme may represent a challenge and more

flexibility is needed here. The departments offers a choice of four out of 16 courses. Given these constraints, the offer could be seen as fragmented and attendance numbers vary widely across the options. Consequently, there is an opportunity to review both the structure and the content of individual courses and consider to consolidate in a fewer number of courses with broader remit, potentially team-taught. We have drawn these conclusions from the course uptake data provided by the department, where this issue is particularly noticeable within physical chemistry.

- Relating to the literature review, we think it is very important to engage the student cohort more fully. The department might explore ways to do this e.g. offer a prize for the best student questions and/or use peer-marking and feedback). This will help build confidence and a more critical ability amongst the students which should translate in a more engaged and active participation in, for example, departmental seminars.
- We have reflected on the extent to which English could be adopted more widely as the language of teaching. The University clearly has aspirations in this area as part of its internationalisation strategy and we would encourage Chemistry to take a leading role in this area. We recommend that the department offers all of its post-graduate courses in English; that these are assessed in English and this includes the literature reviews, reports, presentations and dissertations. We think this would enhance the employability of students by strengthening their transferable skills and has the added benefit that the work produced such as the dissertations become fully accessible to the international scientific community.
- Reflecting on transferable skills training, we recommend that the department develops a strategy to i) support the participation of postgraduate students in courses provided centrally ii) incorporate such courses and related continuing professional development as part of their training programme.
- The University has an opportunity to consider investment in staff positions within Chemistry. The department anticipates several retirements in the relatively near future and there is an opportunity to recruit excellent people in anticipation of these retirements now rather than reacting to them at some future point. This approach would give an opportunity for young academics to establish their research programme from the outset before undertaking (and phasing in) what we recognise as a demanding teaching load. The Chair of the department, who clearly provides excellent leadership, can build on the cohesive and collegiate culture of the department to deliver this aspiration. We see this as a way to strengthen the research culture which the department can exploit in terms of future postgraduate student recruitment.

## 2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS

We have already commented on the taught component of the Program of Study in Section 1, including the structure, range and content of the taught programme.

- **Purpose and Objectives and learning outcomes of the Program of Study**  
We have used Annex 2 of the Accreditation document where course purpose, learning outcomes, and details on the teaching methodologies used as well as the assessment are very clearly stated. In terms of the non-taught component (research), again the purposes and objectives are clearly stated in terms of what is required to reach the final dissertation submission. This programme of study all ties very well together.
- **Structure and Content of the Program of studies**  
The programme of study has a multicomponent curricula and rigorous and transparent assessment structure that gives us a high level of confidence in terms of its international recognition. The department is to be congratulated on maintaining and developing such a high standard given the challenges that the University and country has faced over the last years. This reflects very positively on the quality and depth of leadership within the University and department.

We recognize that there are two formal assessment stages; the Comprehensive Examination, followed by the Doctoral Thesis Proposal. This is very good practice and adheres to international standards. We note, however at this point, that the research supervisor has a formal role in all aspects of research assessment and student progression. It is clearly important that the supervisor contributes to the decisions, but this is not necessarily the same as being present in the examination. Our experience suggests that there is better practice available (see Recommendations).

- **Quality Assurance of the Program of studies**  
We have had the opportunity to inspect copies of recent thesis submissions which we found to conform to international standards in terms of quality of presentation and content.

We commend the department for aiming to produce published outputs for each thesis submitted. This exceeds the requirements set by most internationally recognized universities where the standard focuses more on the publishable nature of the research presented rather than the actual publications. We also recognize the quality assurance associated with the five-membered evaluation committee. This brings in two externals (who provide preliminary reports) and provides a rigorous mechanism for the final assessment. This also impacts on the international dimension of the programme which we discuss below.

We understand that the decision to submit the dissertation requires the written permission of the supervisor. There does not, however, appear to be a mechanism to appeal or circumvent the supervisor's veto, which is not in line with the practice of many EU universities. We do recognize and value the quality assurance aspect associated with the two external examiners reading and writing a report on the thesis prior to the defense.

- **Management of the Program of Study**

We recognize that this a well-run programme with an identified director and a supporting University-level infrastructure. We also recognize the challenges that both the department and postgraduate students face around recruitment and funding and we will comment on this elsewhere.

- **International Dimension of the Program of Study**

Overall, the ambition of the programme compares favourably with international standards. As we have said, we were impressed by the quality of the theses that we examined. We were also very impressed with the quality of the staff and the students with whom we engaged. Additionally, the ability to recruit overseas external examiners is a real strength and an asset to the department in terms of leveraging and developing its international profile. This is to be encouraged as a means of supporting the wider university agenda around internationalization. We do see opportunities to strengthen international links associated with the research base by encouraging more outward visits by staff and students.

- **Connection with the labor market and the society**

We recognize that even if there isn't a comprehensive chemical industry in Cyprus, it is essential that the University provides a high quality chemistry degree. Chemistry is an enabling discipline for several new and emerging high-tech industries. It also provides graduates and postgraduates with a unique skill-set that a wide range of employers value. The issue of employability was highlighted within the Accreditation document and during our visit. We recognize the challenge of educating both employers and prospective students as to the value of the training associated with a Chemistry degree. We also recognize the ambitions of the University to promote and foster inter and multi-disciplinary programmes within which we see a key role for Chemistry. As a consequence, providing a supply of high-quality Chemistry graduates regardless of level will underpin critical aspects of this University ambition.

**Recommendations:**

- We recommend that the department and the University review the role of the supervisor in the formal research-focused examinations. Good practice would suggest that at least one of these, preferably the Comprehensive Examination, is carried out in the absence of the supervisor, but we do recommend that the supervisor makes a written assessment to the Panel. We feel that this allows the panel to focus in a more independent and objective way on the progress and contributions of the student. We also did not see a clear opportunity within the current programme structure for the student to express concerns around their progress. Our experience is that that issue, if needed, is more readily handled by a fully independent grouping.
- We also recommend that the timing of the Comprehensive Examination is reviewed. Currently this may be taken as late as the 5<sup>th</sup> semester, which we

feel makes addressing any significant issues with research progress untimely. We suggest that all students are assessed within 18 months (3<sup>rd</sup> semester).

- Our expectation is that best practice is for the student and supervisor to agree on the timing of thesis submission. Our experience is that in the vast majority of cases this is what happens. However, should there be a disagreement, it is important that the University offers an alternative mechanism to enable thesis submission. Our recommendation is that this aspect of the PhD regulations is reviewed. For example, in our institutions, students can submit without their supervisor's consent, but this fact is then made known to the assessment panel.
- To strengthen international links, we recommend encouraging more outward visits by students, for example through the Erasmus programme. We do however recognize the constraints associated with the other pressures that postgraduate students may face and we would encourage the University to explore ways to ameliorate those issues with a funding stream to enable short term research exchanges.
- We would encourage the department to develop links with the employer community and not to limit this in any sense to the "chemical" sector. It is important to appreciate the range of careers available to these students and to provide them with the opportunity to engage with the full range of potential employers. The department should consider focused career events, and consider how some form of an external advisory grouping drawing on potential employers could assist in designing of new and more broadly based-courses that will appeal to a wider recruitment pool. The department may wish to explore opportunities for placements and internships for postgraduate students and this may, in addition, facilitate new opportunities for research.
- We also recognize the need to educate future generations of prospective students as to the value and employability associated with a Chemistry degree. We would recommend that the department consider what can be done here but we also feel that an external advisory grouping could play a very supporting role in for examples, schools-based activities and public engagement.

### **3. RESEARCH WORK AND SYNERGIES WITH TEACHING**

#### **- Research Teaching Synergies**

We see strong synergies in research and teaching in the department and the evidence for this is the breadth of engagement of staff across both of these activities.

The topics of the taught courses map directly on the research activities of the department and are specifically tailored to the requirements of the groupings. We support the aspiration of the department to broaden the scope of courses that each student takes in addition to our earlier recommendation to consider the consolidation of courses. We have suggested that the department (as is common practice elsewhere) regularly reviews and revises courses and course content as appropriate.

We recognise the range of interdisciplinary activities that the University is promoting and that Chemistry, both in teaching and research, could play a key role in both advancing these research centres and creating new opportunities. We also appreciate that the high demand placed on staff does limit the opportunity of developing new research programmes.

It is clear that the postgraduates play an integral role in the delivery of undergraduate teaching, which we commend. This is both a contribution to the department and the experience the undergraduates have but is also particularly relevant to the postgraduates themselves as a training development opportunity. We appreciate that the numbers of TA positions are limited so it is important to make full use of this opportunity. This links to the training that TAs are given and we have made recommendations here.

### **Recommendations:**

- To support the evolution and broadening of the current research programme, the University should give serious consideration to some form of sabbatical leave for staff. For example, this may involve enable time to initiate a new research activity or collaboration, or to prepare a major external proposal.
- To maximise the value of proposals for research funding, while recognising the inherently competitive nature of funding, we would encourage the department to develop a peer-feedback system for grant applications. Our experience is that this will drive better proposals leading to more successful (i.e. funded) bids.
- We recommend that the training of TAs is reviewed so that students are well prepared to undertake and gain from the experience that they accrue in delivering teaching. Formal recognition of high quality teaching by postgraduate students is valued in many institutions (e.g. in the form of an annual award).

## **4. ADMINISTRATION SERVICES, STUDENT WELFARE AND SUPPORT OF TEACHING WORK**

### **- Administrative Mechanisms**

The department enjoys a highly committed and motivated technical and administrative team who clearly deliver an outstanding service. This again reflects the highly cohesive nature of the department where the size plays a key role and this enables a culture of mutual support to be enjoyed across all groupings.

There is perhaps a need for wider recognition of the extent to which the administrative and technical staff provide pastoral support to the postgraduate community. A strength of this is that it complements the support they receive from their academic supervisors and University provision. The demand for such support may grow as the internationalisation programme unfolds, a consequence of which is that any current informal and ad hoc arrangements may not be sustainable.

### - **Infrastructures / Support**

The undergraduate laboratories have strong technical support around IT and electronics. However, there is a lack of technical support within the research laboratories which means that students are required to fulfil a research study obligation as well as provide their own technical support. We recognise the excellent support provided for instrumentation and IT but we see this as separate to the support needed within the research laboratory environment because each PhD programme relies on the availability of specific equipment.

A key issue within the research environment is the quality and availability of underpinning instrument infrastructure. We were impressed by the scope of instruments available and the accessibility that the students have to these. Looking ahead and given the size of the investment given and timing, it is essential that the department and the University develop a medium term plan for maintenance and replacement.

We were impressed by what we saw in terms of the safety and safety culture operating within the department. In particular, we saw tidy labs with excellent levels of fume cupboard provision for those activities that require this. This stands out as better than many other Chemistry departments. We did note that there was a lack of writing-up/office space for the postgraduate students.

### - **Financial Resources**

We recognise the financial constraints within the department, the University and within Cyprus generally. Clearly, the last few years have been a very challenging time and we can only admire how well the department and the University have weathered this period. We also recognise the resourcefulness of the department in maximising the value that is extracted from every euro.

Looking ahead we see two issues. Firstly, the funding of the PhD students, as opposed to the Masters where we do understand a limited number of scholarships are available (IKYK).

The PhD, however, represents a very considerable investment of time and energy and the system as it currently operates, frequently requires students to seek employment in parallel to their studies. In effect and in terms of the perspective we have, the PhD cohort are doing what appears to be a “part-time” PhD. Within Chemistry as a discipline, the norm across Europe and the USA is for PhD students to receive a stipend and fees are covered by another mechanism. This may involve required teaching duties but the students can dedicate all of their remaining time to their research project. We can’t suggest an immediate solution but we observed understandable (but contrasting) frustration from academics and PhD students around the expectations of the duration of the PhD degree. Students want to finish within four years but the “part-time” nature of their PhD makes this unrealistic.

Secondly, there is lack of transparency around the actual costs to the department of the PhD programme. Our concern here relates to the funding of the research itself and whether there is appropriate support available to realise the research objectives. We recognise that different types of research demand different levels of funding, which is

likely a wider issue across the university. However it is essential that appropriate levels of support for research are made available.

### **Recommendations:**

- In terms of the administrative and technical team, and while we appreciate that this is not directly related to the programme evaluation, we did pick up on frustration around the lack of career progression. While the staff did feel highly appreciated by both academics and students, some mechanism for rewarding a job very well done and exceeding expectations is standard in many universities. These staff fulfil a number of critical roles and without them the department would not function effectively. We acknowledge that we do not know the detail of any employee-focused reward mechanism used by the University of Cyprus.
- We recommend to the University to consider a further investment in technical staff to service the research laboratories and equipment to enable research to progress more efficiently and quickly. Currently, a large proportion of students' time is taken up by work that would be more appropriate to a dedicated member of technical staff. This would also relieve some pressure around the time available for productive research.
- We recommend that the department draws up an inventory of major equipment with a view to developing a roadmap for maintenance and replacement. In this way, the University and the department together can plan and budget for the investments that will inevitably be needed in due course.
- Our recommendation is to continue what we saw as the development of a very positive and constructive approach to managing laboratory health and safety.
- We would ask the university to evaluate the opportunities around creating more office space dedicated to postgraduate use.
- We recommend that the department assesses the actual costs incurred in the types of research programmes being pursued. At that point and given that Chemistry is universally recognised as a necessarily expensive discipline, there can be a discussion with the University around the level of support provided.

## **5. DISTANCE LEARNING PROGRAMS**

**Not applicable to this evaluation**

## **6. DOCTORAL PROGRAMS OF STUDY**

We have read the Postgraduate Studies Rules from the UCY Graduate School. These are comprehensive regulations which allow a degree of autonomy to individual

departments and all that we have experienced in the Chemistry department is consistent with the flexibility allowed in these rules. We would simply point out that the requirement for one accepted paper and that the supervisor is involved in the Comprehensive Examination are “local” Chemistry requirements but these are consistent with the flexibility allowed.

There is also the issue of the requirement for the supervisor to give written permission prior to submission of the thesis. We cannot find that requirement within the Rules but equally it is not clear that is contravening University regulations. We would suggest that this issue be clarified within the Rules and consideration be given to standardisation of practice.

The number and, especially the qualifications and experience of the academic personnel are “appropriate to the provision of a quality programme” that merits international recognition. We recognise the strength of the department’s academic cohort.

The staff/student ratio is appropriate for effective supervision. A key issue within a relatively small programme is ensuring that there is critical mass (number of students in a group) to ensure continuity and peer support within a research area.

The research areas of academic supervisors span an appropriate breadth of chemistry.

## **CONCLUSIONS AND SUGGESTIONS OF THE EXTERNAL EVALUATION COMMITTEE<sup>1</sup>**

- The present situation of the program, good practices, weaknesses that have been detected during the external evaluation procedure by the external evaluation committee, suggestions for improvement.

Our starting point is to recognize a strong and well run postgraduate programme underpinned by a group of highly experienced, well-qualified and committed academic and support staff. The programme produces well-trained, well-prepared graduates, whose

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<sup>1</sup> It is highlighted, at this point, that the External Evaluation Committee is expected to justify its findings and its suggestions on the basis of the Document num.: 300.1. The External Evaluation Committee is not expected to submit a suggestion for the approval or the rejection of the program of study under evaluation. This decision falls under the competencies of the Council of the Agency of Quality Assurance and Accreditation of higher education.

research work meets international standards both in terms of the theses produced and the papers published.

We also recognize the very major challenges that the department, the University and the Republic of Cyprus have faced (and overcome) in recent years, and commend all involved, especially the leadership, for what has now been achieved.

Our focus has been to provide a set of recommendations that may assist the department and the University to enhance the offering that is made available to postgraduate students. Chemistry offers an exceptional and very broadly-based training that will bring benefit to wider society. Appreciating the range of opportunities that are open to chemistry graduates is key to realizing that potential.

We also appreciate the research aspirations of the University and see many opportunities for the Department of Chemistry to engage in that wider agenda through its PhD programme. That will require investment in people as well as infrastructure, and a more explicit appreciation of the core role that PhD students play in delivering research. These people are also invaluable in enabling new collaborations and new ventures to be initiated.

This requires recognition by the University as to the inherently “high cost” nature of chemistry as a discipline. This is, however, a fact of life across the world but “full service” universities like UCY have a lot to gain with the investment that they make in this field.

This will also present challenges and opportunities to the Department of Chemistry and to individuals. Those opportunities must be grasped and that requires strong and effective leadership. Our impression is very clearly that the Department has that leadership in place.

**Doc. Number: 300.1**

## **Quality Standards and Indicators**

### **External Evaluation of a Program of Study**

Institution: University of Cyprus

Program of Study: PhD in Chemistry

Duration of the Program of Study: 8 semesters

Evaluation Date: 26 June 2018

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of

Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2016”.

The document describes the quality standards and indicators, which will be applied for the external evaluation of programs of study of institutions of higher education, by the External Evaluation Committee.

**DIRECTIONS:** Note what is applicable for each quality standard/indicator.

1. Applicable to a minimum degree
2. Applicable to a non satisfactory degree
3. Applicable to a satisfactory degree
4. Applicable to a very satisfactory degree
5. It applies and it constitutes a good practice

**It is pointed out that, in the case of standards and indicators that cannot be applied due to the status of the institution and/or of the program of study, N/A (= Not Applicable) should be noted and a detailed explanation should be provided on the institution’s corresponding policy regarding the specific quality standard or indicator.**

#### **Members of the External Evaluation Committee**

<b>NAME</b>	<b>TITLE</b>	<b>UNIVERSITY / INSTITUTION</b>
Timothy Gallagher	Professor	University of Bristol
Anastasia Panteli	Ms (Student member)	Cyprus University of Technology
Sophia Yaliraki	Professor	Imperial College London
Furio Cora	Professor	University College London

**Date and Time of the On-Site Visit: 25 June 2018**

**Duration of the On-Site Visit: one day**

1. EFFECTIVENESS OF TEACHING WORK – AVAILABLE RESOURCES						
1.1	Organization of teaching work	1	2	3	4	5
1.1.1	The student admission requirements to the program of study, are based on specific regulations which are adhered to in a consistent manner.					X
1.1.2	The number of students in each class allows for constructive teaching and communication, and it compares positively to the current international standards and/or practices.				X	
1.1.3	The organization of the educational process safeguards the quality implementation of the program's purpose and objectives and the achievement of the learning outcomes. Particularly, the following are taken into consideration:					
	1.1.3.1 The implementation of a specific academic calendar and its timely publication.					X
	1.1.3.2 The disclosure of the program's curricula to the students, and their implementation by the teaching personnel				X	
	1.1.3.3 The course web-pages, updated with the relevant supplementary material					X
	1.1.3.4 The procedures for the fulfillment of postgraduate assignments / practical training					X
	1.1.3.5 The procedures for the conduct and the format of the examinations and for student assessment			X		
	1.1.3.6 The effective provision of information to the students and the enhancement of their participation in the procedures for the improvement of the educational process.			X		
1.1.4	Adequate and modern learning resources, are available to the students, including the following:					
	1.1.4.1 facilities (e.g. labs and instruments)					X
	1.1.4.2 library					X

	1.1.4.3	Infrastructure (e.g. office and related space)				X	
	1.1.4.4	student welfare			X		
	1.1.4.5	academic mentoring					X
1.1.5	A policy for regular and effective communication, between the teaching personnel and the students, is applied.					X	
1.1.6	The teaching personnel, for each course, provide timely and effective feedback to the students.					X	
1.1.7	Statutory mechanisms, for the support of students and the communication with the teaching personnel, are effective.					X	
1.1.8	Control mechanisms for student performance are effective.					X	
1.1.9	Support mechanisms for students with problematic academic performance are effective.					X	
1.1.10	Academic mentoring processes are transparent and effective for postgraduate programs and are taken into consideration for the calculation of academic work load.		See text below				
1.1.11	The program of study applies an effective policy for the prevention and detection of plagiarism.					X	
1.1.12	The program of study provides satisfactory mechanisms for complaint management and for dispute resolution.				X		

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

The majority of students are from Cyprus and the issue is more around the minimum number of students than the maximum.

We found the majority of these aspects at least **very satisfactory** with the following few exceptions.

Our concerns here (see main text) relate to the supervisor's involvement in ALL aspects of assessment. This then links to complaint management which we see as a coupled issue.

We did not discuss explicitly academic workload allocation so we cannot comment on this specific point. We do note that there is not a mechanism available for an annual staff review (as opposed to the three-year promotion cycle) and this could be considered by the department and university as good practice.

We have commented on student welfare where we recognize the role of the admin and technical staff. This is not a reflection on the academic role being played but it is important that the department recognizes that there may be more demand in this area than is currently appreciated.

<b>1.2</b>	<b>Teaching</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.2.1	The methodology utilized in each course is suitable for achieving the course's purpose and objectives and those of the individual modules.					X
1.2.2	The methodology of each course is suitable for adults.					X
1.2.3	Continuous-formative assessment and feedback are provided to the students regularly.				X	
1.2.4	The assessment system and criteria regarding student course performance, are clear, adequate, and known to the students.					X
1.2.5	Educational activities which encourage students' active participation in the learning process, are implemented.				X	
1.2.6	Teaching incorporates the use of modern educational technologies that are consistent with international standards, including a platform for the electronic support of learning.					X
1.2.7	Teaching materials (books, manuals, journals, databases, and teaching notes) meet the requirements set by the methodology of the program's individual courses, and are updated regularly.					X
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>The only issue we would flag is to encourage strongly more student participation in student presentations by asking questions, being involved in peer assessment and providing feedback. We appreciate, as is the case elsewhere, that there is a cultural barrier to overcome but where this works, everyone benefits.</p>						
<b>1.3</b>	<b>Teaching Personnel</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.3.1	The number of full-time academic personnel, occupied exclusively at the institution, and their fields of expertise, adequately support the program of study.					X
1.3.2	The members of teaching personnel for each course have the relevant formal and fundamental qualifications for teaching the course, as described by the legislation, including the following:					

	1.3.2.1	Subject specialization, preferably with a doctorate, in the discipline.					X
	1.3.2.2	Publications within the discipline.					X
1.3.3	The specializations of Visiting Professors adequately support the program of study.		Not applicable				
1.3.4	Special Teaching Personnel and Special Scientists have the necessary qualifications, adequate work experience and specialization to teach a limited number of courses in the program of study.		Our understanding is that the one special teacher operates at UG level				
1.3.5	In every program of study the Special Teaching Personnel does not exceed 30% of the Teaching Research Personnel.		N/A				
1.3.6	The teaching personnel of each private institution of tertiary education, to a percentage of at least 70%, has recognized academic qualification, by one level higher than that of the program of study in which he/she teaches.		N/A				
1.3.7	In the program of study, the ratio of the number of courses taught by full-time personnel, occupied exclusively at the institution, to the number of courses taught by part-time personnel, ensures the quality of the program of study.		N/A				
1.3.8	The ratio of the number of students to the total number of teaching personnel is adequate for the support and safeguarding of the program's quality.						X
1.3.9	The academic personnel's teaching load does not limit the conduct of research, writing, and contribution to the society.				X		
1.3.10	Future redundancies / retirements, expected recruitment and promotions of academic personnel safeguard the unimpeded implementation of the program of study within a five-year span.					X	
1.3.11	The program's Coordinator has the qualifications and experience to efficiently coordinate the program of study.						X
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.							

We have recommended that the department and University consider a mechanism for providing time to develop major research bids via some form of sabbatical system.

We have also made recommendations around future retirements and how this might be managed positively to create some headroom to allow the department to explore new research avenues.

<b>2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS</b>						
<b>2.1</b>	<b>Purpose and Objectives and learning outcomes of the Program of Study</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2.1.1	The purpose and objectives of the program of study are formulated in terms of expected learning outcomes and are consistent with the mission and the strategy of the institution.					X
2.1.2	The purpose and objectives of the program and the learning outcomes are utilized as a guide for the design of the program of study.					X
2.1.3	The higher education qualification and the program of study, conform to the provisions of their corresponding Professional and Vocational Bodies for the purpose of registration to these bodies.	N/A				
2.1.4	The program's content, the methods of assessment, the teaching materials and the equipment, lead to the achievement of the program's purpose and objectives and ensure the expected learning outcomes.					X
2.1.5	The expected learning outcomes of the program are known to the students and to the members of the academic and teaching personnel.					X
2.1.6	The learning process is properly designed to achieve the expected learning outcomes.					X
2.1.7	The higher education qualification awarded to the students, corresponds to the purpose and objectives and the learning outcomes of the program.					X
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>The issue of accreditation via the Royal Society of Chemistry was discussed and has been explored. It is not, however, currently an option (nor is it essential) for international recognition.</p>						
<b>2.2</b>	<b>Structure and Content of the Program of Study</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2.2.1	The course curricula clearly define the expected learning outcomes, the content, the teaching and learning approaches and the method of assessing student performance.					X

2.2.2	The European Credit Transfer System (ECTS) is applied and there is true correspondence between credits and workload per course and per semester for the student either he / she studies in a specific program or he/she is registered and studies simultaneously in additional programs of studies according to the European practice in higher education institutions.					X
2.2.3	The program of study is structured in a consistent manner and in sequence, so that concepts operating as preconditions precede the teaching of other, more complex and cognitively more demanding, concepts.					X
2.2.4	The higher education qualification awarded, the learning outcomes and the content of the program are consistent.					X
2.2.5	The program, in addition to the courses focusing on the specific discipline, includes an adequate number of general education courses.			X		
2.2.6	The content of courses and modules, and the corresponding educational activities are suitable for achieving the desired learning outcomes with regards to the knowledge, skills, and abilities which should be acquired by students.					X
2.2.7	The number and the content of the program's courses are sufficient for the achievement of learning outcomes.					X
2.2.8	The content of the program's courses reflects the latest achievements / developments in science, arts, research and technology.				X	
2.2.9	Flexible options / adaptable to the personal needs or to the needs of students with special needs, are provided.			X		
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>We raised the issue of the accessibility to postgraduate students of University-run courses associated with transferable skills and ask that additional provision, given the other demands on the time of these students, is made. This also links to more flexible options catering to the needs of these students.</p>						
<b>2.3</b>	<b>Quality Assurance of the Program of Study</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2.3.1	The arrangements regarding the program's quality assurance define clear competencies and procedures.					X

2.3.2	Participation in the processes of the system of quality assurance of the program, is ensured for						
	2.3.2.1	the members of the academic personnel					X
	2.3.2.2	the members of the administrative personnel					X
	2.3.2.3	the students.					X
2.3.3	The guide and / or the regulations for quality assurance, provide detailed information and data for the support and management of the program of study.						X
2.3.4	The quality assurance process constitutes an academic process and it is not restricted by non-academic factors.						X
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>No further comments here.</p>							
<b>2.4</b>	<b>Management of the Program of Study</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
2.4.1	Effective management of the program of study with regard to its design, its approval, its monitoring and its review, is in place.					X	
2.4.2	It is ensured that learning outcomes may be achieved within the specified timeframe.				X		
2.4.3	It is ensured that the program's management and development process is an academic process which operates without any non-academic interventions.						X
2.4.4	The academic hierarchy of the institution, (Rector, Vice-Rectors, Deans, Chairs and Programs' Coordinators, academic personnel) have the sole responsibility for academic excellence and the development of the programs of study.						X
2.4.5	Information relating to the program of study are posted publicly and include:						
	2.4.5.1	The provisions regarding unit credits					X
	2.4.5.2	The expected learning outcomes					X
	2.4.5.3	The methodology					X
	2.4.5.4	Course descriptions					X
	2.4.5.5	The program's structure					X

	2.4.5.6	The admission requirements						X
	2.4.5.7	The format and the procedures for student assessment						X
2.4.6	The award of the higher education qualification is accompanied by the Diploma Supplement which is in line with the European and international standards.							X
2.4.7	The effectiveness of the program's evaluation mechanism, by the students, is ensured.							X
2.4.8	The recognition and transfer of credit units from previous studies is regulated by procedures and regulations which ensure that the majority of credit units is awarded by the institution which awards the higher education qualification.							X

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

Please see our earlier comments relating to the external pressures (associated with funding) on students who need to also work and how they then must manage their research studies. The tensions around this issue were a significant aspect of the discussions we had with staff and students, much of which related to the duration of the PhD programme.

2.5	International Dimension of the Program of Study	1	2	3	4	5
2.5.1	The program's collaborations with other institutions are compared positively with corresponding collaborations of other departments / programs of study in Europe and internationally.				X	
2.5.2	The program attracts Visiting professors of recognized academic standing.					X
2.5.3	Students participate in exchange programs.			X		
2.5.4	The academic profile of the program of study is compatible with corresponding programs of study in Cyprus and internationally.					X

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

We have encouraged the department to explore the scope for increased student exchange with other universities.

Also, comment on the degree the program compares positively with corresponding programs operating in Cyprus and abroad in higher education institutions of the same rank.

This is the ONLY Chemistry department in Cyprus and it is critical that this is maintained and supported at an appropriate level.

2.6	Connection with the labor market and the society	1	2	3	4	5
2.6.1	The procedures applied, so that the program conforms to the scientific and professional activities of the graduates, are adequate and effective.			X		
2.6.2	According to the feasibility study, indicators for the employability of graduates are satisfactory.					X
2.6.3	Benefits, for the society, deriving from the program are significant.					X

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

We have commented extensively on the value of chemistry graduates to the broader society but recognize that this may not be fully appreciated within the wider community. We do recommend that the department is proactive in promoting the training that a Chemistry graduate receives and, in this way, “educates” the employer pool. We also suggest that the department recruits an external advisory grouping as one way to engage with the employer base and to work further with schools to promote the science and the opportunities that a Chemistry degree can enable.

3. RESEARCH WORK AND SYNERGIES WITH TEACHING						
3.1	Research - Teaching Synergies	1	2	3	4	5
3.1.1	It is ensured that teaching and learning have been adequately enlightened by research.					X
3.1.2	New research results are embodied in the content of the program of study.					X
3.1.3	Adequate and sufficient facilities and equipment are provided to support the research component of the program					X

	of study, which are available and accessible to the personnel and the students.					
3.1.4	The results of the academic personnel's research activity are published in international journals with the peer-reviewing system, in international conferences, conference minutes, publications etc.					X
3.1.5	External, non-governmental, funding for the academic personnel's research activities, is compared positively to the funding of other institutions in Cyprus and abroad.				X	
3.1.6	Internal funding, of the academic personnel's research activities, is compared positively to the funding of other institutions in Cyprus and abroad.				X	
3.1.7	The policy for, indirect or direct, internal funding of the academic personnel's research activity is satisfactory.				X	
3.1.8	The participation of students, academic, teaching and administrative personnel of the program in research activities and projects is satisfactory.					X
3.1.9	Student training in the research process is sufficient.					X
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>We have flagged the need to address future equipment needs by planning now. We have also suggested that there is a need to understand more fully the costs of a PhD research program and addressing the training needs of TAs.</p>						
<b>4. ADMINISTRATION SERVICES, STUDENT WELFARE AND SUPPORT OF TEACHING WORK</b>						
<b>4.1</b>	<b>Administrative Mechanisms</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4.1.1	There is a Student Welfare Service that supports students with regards to academic and personal problems and difficulties.					X
4.1.2	Statutory administrative mechanisms for monitoring and supporting students are sufficient.				X	
4.1.3	The efficiency of these mechanisms is assessed on the basis of specific criteria.					
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p>						

We cannot assess 4.1.3.  
We commend the University for providing a formal student well-being support structure.

<b>4.2</b>	<b>Infrastructure / Support</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4.2.1	There are suitable books and reputable journals supporting the program.					x
4.2.2	There is a supportive internal communication platform.					x
4.2.3	The facilities are adequate in number and size.					x
4.2.4	The equipment used in teaching and learning (laboratory and electronic equipment, consumables etc) are quantitatively and qualitatively adequate.					x
4.2.5	Teaching materials (books, manuals, scientific journals, databases) are adequate and accessible to students.					x
4.2.6	Teaching materials (books, manuals, scientific journals, databases) are updated regularly with the most recent publications.					
4.2.7	The teaching personnel are provided with training opportunities in teaching method, in adult education, and in new technologies on the basis of a structured learning framework.				x	

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

We commend the formal internatraining programme for new academic staff and would hope that, in time, this is offered more widely to other (including established) staff. There is also an opportunity to provide a more comprehensive, formal training to TAs.

<b>4.3</b>	<b>Financial Resources</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
4.3.1	The management and allocation of the financial resources of the program of study, allow for the development of the program and of the academic / teaching personnel.			x		
4.3.2	The allocation of financial resources as regards to academic matters, is the responsibility of the relevant academic departments.			x		

4.3.3	The remuneration of academic and other personnel is analogous to the remuneration of academic and other personnel of the respective institutions in Cyprus.	N/A				
4.3.4	Student tuition and fees are consistent to the tuition and fees of other respective institutions.					x
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>We have already commented on the costs of the programme and the need to assess these further. Consideration needs to be given to recognizing and meeting the actual costs of the research at the appropriate level.</p>						

**The following criterion applies additionally for distance learning programs of study.**

**NOT APPLICABLE**

5.	<b>DISTANCE LEARNING PROGRAMS</b>	1	2	3	4	5
5.1	Feedback processes for teaching personnel with regards to the evaluation of their teaching work, by the students, are satisfactory.					
5.2	The process and the conditions for the recruitment of academic / teaching personnel, ensure that candidates have the necessary skills and experience for long distance education.					
5.3	Through established procedures, appropriate training, guidance and support, are provided to teaching personnel, to enable it to efficiently support the educational process.					
5.4	Student performance monitoring mechanisms are satisfactory.					
5.5	Adequate mentoring by the teaching personnel, is provided to students, through established procedures.					
5.6	The unimpeded long distance communication between the teaching personnel and the students, is ensured to a satisfactory degree.					
5.7	Assessment consistency, its equivalent application to all students, and the compliance with predefined procedures, are ensured.					

5.8	Teaching materials (books, manuals, scientific journals, databases) comply with the requirements provided by the long distance education methodology and are updated regularly.										
5.9	The program of study has the appropriate and adequate infrastructure for the support of learning.										
5.10	The supporting infrastructures are easily accessible.										
5.11	Students are informed and trained with regards to the available educational infrastructure.										
5.12	The procedures for systematic control and improvement of the supportive services are regular and effective.										
5.13	Infrastructure for distance education is comparable to university infrastructure in the European Union and internationally.										
5.14	Electronic library services are provided according to international practice in order to support the needs of the students and of the teaching personnel.										
5.15	The students and the teaching personnel have access to the necessary electronic sources of information, relevant to the program, the level, and the method of teaching.										
5.16	The percentage of teaching personnel who holds a doctorate, in a program of study which is offered long distance, is not less than 75%.										
<p>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</p> <p>If the following apply, note “√” in the appropriate space next to each statement. In case the following statements do not apply, note what is applicable:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 80%;">The maximum number of students per class-section, should not exceed 30 students.</td> <td style="width: 20%;"></td> </tr> <tr> <td>The conduct of written examinations with the physical presence of the students, under the supervision of the institution or under the supervision of reliable agencies which operate in the countries of the students, is compulsory.</td> <td></td> </tr> </tbody> </table>								The maximum number of students per class-section, should not exceed 30 students.		The conduct of written examinations with the physical presence of the students, under the supervision of the institution or under the supervision of reliable agencies which operate in the countries of the students, is compulsory.	
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The number of long distance classes taught by the academic personnel does not exceed the number of courses taught by the teaching personnel in conventional programs of study.	
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**The following criterion applies additionally for doctoral programs of study.**

6.	DOCTORAL PROGRAMS OF STUDY	1	2	3	4	5
6.1	The provision of quality doctoral studies is ensured through Doctoral Studies Regulations.					X
6.2	The structure and the content of a doctoral program of study are satisfactory and they ensure the quality provision of doctoral studies.					X
6.3	The number of academic personnel, which is going to support the doctoral program of study, is adequate.					X
6.4	The doctoral studies' supervisors have the necessary academic qualifications and experience for the supervision of the specific dissertations.					X
6.5	The degree of accessibility of all interested parties to the Doctoral Studies Regulations is satisfactory.					X
6.6	The number of doctoral students, under the supervision of a member of the academic personnel, is apt for the continuous and effective feedback provided to the students and it complies with the European and international standards.				X	
6.7	The research interests of academic advisors and supervisors are satisfactory and they adequately cover the thematic areas of research conducted by the doctoral students of the program.					X

Justify the answer you have provided and note the additional comments you may have on each standard / indicator.

Note the number of doctoral students under the supervision of each member of the academic personnel of the program and the academic rank of the supervisor.

The staff student ratio is appropriate but a key issue for a small programme is to ensure that there is critical mass to allow for continuity and peer support.

### FINAL REMARKS – SUGGESTIONS

Please note your final remarks and suggestions for the program of study and/or regarding particular aspects of the program.

We have provided a summary earlier in the document, with many detailed recommendations which we won't reiterate here.

We have all enjoyed the experience we have had and the opportunity to meet all of the people within the Department. The challenges we have highlighted are similar to those we all face within our own institutions but we have every confidence in the Department and its leadership to recognize and respond to the opportunities that present themselves.

#### Names and Signatures of the Chair and the Members of the External Evaluation Committee:

Name:	Signature:
Timothy Gallagher	
Anastasia Panteli	
Sophia Yaliraki	
Furio Cora	

Date: 27 June 2018