Doc. Number: 300.1.1

Cyprus Agency of Quality Assurance and Accreditation in Higher Education

Republic of Cyprus

External Evaluation Report

Program of Study

Institution: University of Cyprus

District: Nicosia

Name of the Program of Study in Greek: Μεταπτυχιακο στη Μαθηση Στις Φυσικες Επιστημες και το Περιβαλλον

Name of the Program of Study in English: Master in Learning in Natural Sciences and Environment

Department: Education

Language/s of instruction: Greek

Faculty: Social Sciences and Education

Program Status (check √ where applicable):

- New Program of Study:
- Currently operation Program of Study: √
  - Registered but not evaluated √
  - Evaluated and accredited by SEKAP
  - Evaluated by the Cy.Q.A.A. and did not get accreditation

<u>Program Category</u> (check √ where applicable):

- Conventional √
- Distance Learning
- Inter-university (Name of collaborating university/ies)

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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 AND RANK	UNIVERSITY / INSTITUTION
Marios Argyrides	Student	Cyprus University of Technology
Peter Higgins	Professor	University of Edinburgh
Ismo Koponen	Professor	University of Helsinki
Michael Reiss	Professor	University College London
Arjen Wals	Professor	University of Wageningen

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.

Before meeting in Cyprus, members of the Committee individually read through the documentation that we had been sent. On the day of the visit to the Institution, the Committee first met with a representative of the Agency to discuss the scope of the review and its procedures and then conducted a whole-day, on-site visit at the University of Cyprus. Here, meetings were held with the rector and other senior staff and then a series of separate meetings were held with academic staff on the Program, administrative staff on the Program, and one current student. We also visited both campuses of the University, offices of academic staff, the central library of the University and the laboratory facilities used by the Program.

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.

We received exhaustive documentation in the application submitted by the Institution, which must have taken a very considerable amount of time to compile. Although possible more extensive than was needed, it proved extremely valuable in providing very detailed information prior to our visit and in assisting us in writing this Evaluation report. We are particularly grateful to all members of staff and the student in very helpfully giving of their time to assist us in undertaking this evaluation.

FINDINGS:

1. EFFECTIVENESS OF TEACHING WORK – AVAILABLE RESOURCES

- **Organization of Teaching Work**

Overall the teaching work has been very effective when considering the high graduation rates. Almost all students entering the program finish the program within the time allocated and no drop-outs have been reported. This is a remarkable achievement. In terms of effectiveness in preparing students for their future careers by providing them with the capacities they need to succeed, anecdotal evidence suggests that graduates of the program are in high demand and function well.

The organization of the teaching work seems both effective and efficient through the utilization of Post-Docs and teaching assistants, combined with the utilization of highly experienced teaching staff.

The teaching methods used are diverse and appropriate, varying from lectures to group assignments, learning labs, individual writing assignments, small group work and self-study. Students develop learning portfolios and are frequently assessed in various ways. The new specialization in Environmental and Sustainability Education, given its inclusion of non-formal learning settings, might benefit from excursions and Environmental and Sustainability Education design work in close cooperation with practice (Environmental Education Centers, Zoos, Botanical Gardens, Museums, etc.). There was some discussion about the place of learning in practice within the program. On the one hand, exposure to practice and the designing, implementing and evaluating of educational activities in situ can enhance students' motivation and learning tremendously; on the other; it does require a lot of organizing and effective support mechanisms which might negatively affect program effectiveness. The Committee only encourages the teaching staff to reflect on this question to determine whether a closer connection of the Master's to practice is desirable or not. Within the Learning in Natural Sciences specialization, a similar conversation might take place.

Although the resources available, both human and material, are spread across the city in three different places, they are available and of high quality. Some of the laboratories are in need of expansion and improvement but this is being addressed. The need to consolidate the resources in one place on the new campus, sooner rather than later, needs flagging. Should this not happen within the next few years, it might negatively affect efficiency and create frustration and continued uncertainty, which ultimately undermines program effectiveness as well.

The Committee finds it difficult to assess how the new specialization in Environmental and Sustainability Education might impact the effectiveness of the program. As we discuss later in the report, the new specialization will benefit from a more distributed expertise and shared responsibility in this area among the teaching staff so that there is less dependency on the associate professor

who is leading the specialization and on the hiring of visiting professors. Furthermore, considering the student numbers and the workload of staff, it might be more effective in the future to expand the core joint program of the Master's by reducing the number of elective courses by integrating some of the content of the specialized elective courses in the core and merging some of the elective courses. This would increase the student numbers in the remaining elective courses and reduce the workload of teaching staff.

- **Teaching**

The teaching in the program is organized thoughtfully and effectively: course structure is organized so that courses support each other and there is learning progression built into the curriculum. Courses have no unnecessary overlap or repetition. The yearly alternation in how courses are offered is tuned to the teaching resources. Teaching load appears to be well balanced. The teaching load, however, is very high which may hinder development of new types of courses with new content. The heavy teaching load may also have led to a situation that too many courses have similar structure and assessment methods (though, of course, different content). This naturally increases the effectiveness of teaching but taxes innovativeness in developing the courses. Moreover, the current situation may not be as beneficial for students in education as it would be if courses themselves provided examples of different ways to realize teaching and assessment. Adjusting the overall workload would give better opportunities to develop and implement new, innovative courses which have more diverse ways to promote learning and which use more diverse assessment methods. The teaching staff are clearly capable and motivated to do this if they are given enough time. Our understanding is that measurements of teaching load do not include supervisions, which risks leading to some members of teaching staff having excessive commitments.

Development and planning of teaching, and the curriculum in general, their goals and content, appears to be organized and conducted mostly by teaching staff. It could be beneficial if students' participation in planning courses and the curriculum could be more active than presently. Also, practices about how students are and can participate should be more transparent and based securely on organizational structure and practices.

- **Teaching personnel**

The teaching personnel are highly qualified and their academic credentials are outstanding. The academic record of the personnel shows active collaboration with foreign researchers and foreign academic institutions. Many staff have made important and lasting contributions to their research fields and have produced research outputs which have had significant impacts (not only bibliometric but also practical in improving teaching and learning). The internal, Department-level collaboration of the teaching staff is also remarkably active and productive. The overall appearance is that teaching staff are acting and

collaborating very effectively at the departmental, national and international level, not only in research but in developing teaching and learning in general.

As is the case in many universities around the world, there is always the downside of having to use junior staff who can only be offered short-term contracts where the prospects of obtaining permanent positions are often very limited. Early career academic staff on temporary contracts are likely to look for permanent positions elsewhere which might lead to discontinuities in the program which could hamper effectiveness. However, so far this does not seem to have affected the program.

The risk contained in the current situation is that the teaching staff, who are very capable and motivated, are working at their limit, because of a heavy teaching load and intensive research activity, and will have not the time needed to review and innovate new teaching developments.

A well-planned recruitment strategy is needed to secure the future development potential of the current teaching and research group. Strategic plans regarding how competent researchers and teachers can advance in their careers are urgently needed.

2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS

- **Purpose and Objectives and learning outcomes of the Program of Study**

The overall purpose of the Master's as a whole has not been specified but the aims of its two specializations (the current 'Learning in Natural Sciences' and the proposed 'Environmental and Sustainability Education') are clear. If there is an overall purpose to be distilled from the two specializations it is that the Master's seeks to develop the capacities of teachers in formal and non-formal settings to engage learners in concepts, issues and practices requiring an understanding of natural science, sustainability and the environment in a variety of contexts (e.g. primary and secondary education, museums, zoos, botanical gardens, outdoor and environmental education centers). The program organizers might want to consider whether it is needed to formulate an overall purpose of the Master's as a whole or not. The Master's as a whole does not specify overall learning objectives but each of the specializations has well-delineated, comprehensive and feasible objectives.

- **Structure and Content of the Program of studies**

The program of studies consists of core courses that students of both specializations have to follow (with a possibility to choose between two options in Semester II), compulsory courses (one to choose out of two options in Semester II, and one required for all students in Semester IV), elective courses for each of the specializations where there is a choice between two courses, and a Master's thesis possibility for those students choosing to do a thesis. It seems surprising to us that a university in Cyprus that sees itself as international and research-based allows Master's students to graduate without having undertaken a thesis, other than in exceptional circumstances.

The content offered by the courses offered is quite comprehensive for both specializations. The structure of the program might be clearer when represented graphically in an overview figure detailing the building blocks within a timetable. The committee appreciates the choice of options that students have but at the same time recognizes that it is important to have the right number of students for each course to allow for good interaction and group work. Should student numbers be on the low side, then it might be worth considering expanding the common core of the Master's and reducing the number of courses offered by integrating some of their content into the expanded core. This would not only reduce the number of courses and teaching 'load' of staff and increase the number of students, it would also help students get to know the different topics and orientations that characterize the two specializations, before choosing one.

- **Quality Assurance of the Program of studies**

The quality of the program seems to be in the able hands of academic and administrative staff who are highly competent and committed. Senior academic

staff excel in research in their areas of expertise. All are achieving international standards in terms of their research publications and their participation in professional networks, editorial boards and international research programs. The academic staff are well aware of and connected to the latest developments in both science education and environmental and sustainability education. All course materials are up-to-date. The support staff (e.g. IT-support, planning support, student progress monitoring) are highly experienced. The quality and availability of the laboratories and access to the newest, top-notch infrastructure on the new campus will need to improve in the future as at the moment the facilities are being renovated and the program is physically spread over three different physical spaces (the staff offices, the old campus and the new campus) which does pose a risk to quality. Online support facilities, such as Blackboard and Next Lab, as well as access to a range of software packages supporting research and design, is freely available.

There are mechanisms in place to monitor the quality of the program, aside from national periodic reviews of which this evaluation is one, including course evaluations.

- **Management of the Program of Study**

The program management processes are competent and highly effective. Communication between staff appears to be open in a collegial atmosphere. The support staff are consulted in the program management as are student representatives. It was noted that the office of the Program Director is too small adequately to host staff meetings. The workload of staff is high and the hiring of new staff takes a lot of time and is dependent on decision making at the central level. This poses challenges for program management.

The innovative Environmental and Sustainability Education specialization is highly dependent on one staff member and on visiting professors which makes the specialization vulnerable. It would be good to have more staff members teach within the new specialization. Some of these might come from other departments, specifically to teach parts of courses on the new specialization.

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

Teaching staff are well connected in the international educational research world, especially within science education and, albeit to a lesser degree, within environmental and sustainability education. The literature in the courses is English-based and comes from international researchers. Students indicated that many students participate in Erasmus programs and travel abroad to spend time at other European universities. Equally, students from elsewhere frequently visit the Department and participate in some of the courses. It might prove helpful to have some courses taught in English, to attract non-Greek-speaking students. This should also be of benefit to native Greek/Cypriot speakers.

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

  The connection between the Learning in Natural Sciences specialization and the labor market and society is quite strong as graduates will find work or already work in schools and/or educational policy. For the Environmental and Sustainability Education specialization, the link is less clear, in part because the specialization still has to be implemented and there are no alumni. Although worldwide there is a growing interest in reorienting education towards sustainability challenges, the Committee was unable to gauge whether the Cypriot education system is supporting such a reorientation or not. If it is, then the future career prospects for Environmental and Sustainability Education graduates will likely be good, but it is not, this remains to be seen. Some research-oriented graduates of the Master's program who go on to do a PhD will obtain post-doctoral positions and/or have a career outside of Cyprus (some at prestigious international universities). It might be worthwhile to invite people from society and the labor market to join periodically in a program management meetings, to assess whether the program still adequately prepares students for their future careers, and to gather feedback regarding trends and concerns, and to discuss possible implications for the design of the program. This would make the program responsive to societal changes.

3. RESEARCH WORK AND SYNERGIES WITH TEACHING

- **Research Teaching Synergies**

Teaching personnel have very strong research records and both quality of research and international reputations are high. The research areas followed by staff align closely with the orientation of the Department (Learning in the Natural Sciences) and related areas, and these are directly connected to the goals of the teaching program. It is evident that the research conducted by the teaching staff directly supports the teaching program and its development in learning sciences.

The research of some members of the teaching staff places considerable emphasis on conceptual learning, conceptual change and computer-supported learning. The research done in these areas is currently used to support the development of teaching on the degree programs and, in future, there may be further benefits by implementing the findings of the research in computer-supported learning. However, the main obstacle now hindering such development is that the facilities (e.g. computers, MBL equipment and applications) do not allow the implementation of such approaches at full scale. Also, the structure of teaching spaces does not allow the implementation of innovative ideas of computer-supported collaborative learning.

One considerable and advantageous feature of the staff research orientation and work is that the synergy between research and teaching is bi-directional: research affects and improves teaching; teaching affects research. This is a great strength of the group and suggests that with proper resource and infrastructure the program may become regarded as internationally outstanding.

The research focus of the teaching staff is primarily in three core areas: Learning in Science; Science and Technology Education; Environmental and Sustainability Education. There is already now synergy between groups working in these areas, but a strategic plan to increase this in research, and between research and teaching, would be beneficial in both conceptual development and instrumental terms.

At present, the synergy between research and teaching is very good, and would be excellent if the teaching program had access to better laboratory resources and computer facilities equipped with modern visualization applications (e.g. wide touchscreen for collaborative work). Also, the renovation of teaching spaces and laboratories is necessary to allow the development of teaching, so that the research-based knowledge produced by the teaching staff can be utilized to best effect. Such developments would be equitable and in line with the investment in facilities for other departments on the new campus.

Some of the teaching staff already take advantage of the opportunity to visit foreign universities and education institutions. However, the relatively extensive teaching and other responsibilities may make it difficult for the staff to find time

for visits of longer duration, which may be beneficial in the development of teaching skills and approaches.

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

- **Administrative Mechanisms**

  Administrative support structures seem strong and fit for purpose. This seems to be due to clear and robust internal structures and the competence and commitment of the administrative staff. Whilst the staff complement, which also includes a learning technology specialist, seem to manage their roles admirably, this should not be taken for granted. All are clearly under considerable time pressure, feel they are constantly 'on-call', and frequently work over their contractual hours. Some felt that specific times – 'office hours' – when they could be contacted by staff and students (for routine matters rather than emergencies) would be beneficial for all concerned.

  With the introduction of the new Master's specialization in Environmental and Sustainability Education there is likely to be an increase in a range of administrative tasks, from the application stage through to graduation, and it is not clear that this has been taken into consideration in planning roles, responsibilities and workloads.

- **Infrastructures / Support**

  Teaching laboratories are an important part of the infrastructure vital to the program. In learning science, such teaching laboratories should be equipped with modern and fast computers (movable), portable and modern measurement technology (also suitable for fieldwork), visualization and modelling software and suitable displays which support collaborative learning. Because teaching and research are connected, and there is already good synergy, teaching laboratories should also be equipped with facilities which allow flexible monitoring of learning and learning groups. At present, the infrastructure does not adequately support realization of the best and most novel ideas the teaching staff have produced through research.

  The fact that teaching takes place in two separate campus areas is also problematic and causes difficulties in coordinating teaching activities and also apparently results in significant time-related constraints. To allow the Master's program to fully benefit from the competence of teaching staff, the infrastructure needs to be improved so that main activities are located on one campus, and in modern facilities appropriate for teaching and research.

- **Financial Resources**

  The Department is in the fortunate position that staff salaries are not taken into consideration in relation to recruitment and teaching responsibilities. Hence, in terms of financial resources (as opposed to funding for facilities) there is a clear

budget identifying income from student fees and allocated expenditure. The budgets presented indicate that the expenditure on the existing Master's program is approximately half the fee income. Presumably this model will be mirrored with the advent of the new Master's program, and hence we have no concerns about the adequacy if funding. However, this does raise questions concerning the surplus. Is this simply allocated to the University's running costs for facilities etc.? The situation with the Doctoral program is the converse, with the running costs being significantly more than the income. The question that arises here is where does this subsidy come from? Bringing these two points together forces us to ask if the Master's program is in effect subsidising the PhD program, and if so what the rationale for this might be.

5. DISTANCE LEARNING PROGRAMS

Not applicable.

6. DOCTORAL PROGRAMS OF STUDY

Not applicable.

CONCLUSIONS AND SUGGESTIONS OF THE EXTERNAL EVALUATION COMMITTEE[1]

- 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.

The Education Department in the University of Cyprus is presently the largest Department in the university in terms of the number of staff and students. It has been a Department since the University's establishment and enjoys an international reputation. It is ranked as being in the top 150 University Education Departments in the world and members of its academic staff enjoy world-leading reputations in a number of areas within Education. They also play important roles nationally in regards to the Ministry of Education, the private sector and NGOs and such matters as the reform of the national curriculum.

The Learning in Natural Sciences and Environment Program within the Department itself enjoys an international reputation. Its staff produce outputs that are highly regarded, they serve as editors or sit as members of editorial boards of leading journals and participate in leading conferences; they have been successful in attracting large amounts of external funding and this in turn supports a large community of doctoral students and post-docs.

The staff who teach on the Learning in Natural Sciences and Environment Program are clearly committed to their teaching. There is a high level of both academic and pastoral support given to students.

At the same time, there are a number of areas where we believe that improvements can be made:

1. Inevitably, the fact that the University of Cyprus is moving to a new campus causes problems for Departments that have not yet moved. These problems are exacerbated in the case of Education for a number of reasons. First, learning on the Natural Sciences and Environment Programs requires modern, high-quality and well-resources laboratories. At present these are not available. The existing laboratories and cramped, do not facilitate group discussions and collaborative practical work and the equipment is not consistent with the quality of the Department as a whole. We realize that this situation will improve substantially once the move to the new campus is made but there are two points we would stress. First, it is important that this move is made soon, not many years from now.

[1] 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.

Secondly, it is important that the new laboratories are fitted out in a way that encourages a learning environment in which students learn best, making full use both of advances in digital technologies and of new ideas in laboratory layout. To give just one example, we would hope that issues of natural lighting and spaces for group work could be given the same thought that they are in the impressive new University library.

2. Although the Education Department is a large one in the University in terms of the number of staff, it is not large by international standards and the number of staff working on the Natural Sciences and Environment Programs is relatively small. In particular, if the new, intended specialization on Environmental and Sustainability Education goes ahead, which we very much support, there is a risk that it is too dependent on one member of staff. We understand that it takes very considerable negotiation and a long period of time for a Department to receive authorization to appoint new staff. We would urge that a second member of staff is appointed who is able to teach, at least in part, on this new specialization. The addition of a new member of staff on the Program would have a number of other advantages. Such a person would be bound to bring in new ideas as to how Master's students might be taught and assessed, would help attract more external funding and would provide additional expertise for PhD supervision and such things as continuing professional development for schools.

3. It might prove helpful to have some courses taught in English, to attract non-Greek-speaking students. This should also be of benefit to native Greek/Cypriot speakers.

4. More consideration should be given to the implications of the new specialization on Environmental and Sustainability Education on the existing specialization: Learning in Natural Sciences. We recommend that some of the courses presently envisaged as lying within the two specializations are instead made core courses within the program. This will help students to decide which of the two specializations they wish to choose. In addition, it will mean that they have a more balanced set of courses whichever specialization they choose. Finally, it should lead to slightly larger class sizes in the core courses which is good for students' learning experiences and should reduce the number of hours of teaching for staff.

5. At present it is not intended that either specialization will have any field work. We consider this to be a mistake for a number of reasons. First, it simply does not make sense for a Master's course with a specialization on

Environmental and Sustainability Education not to have a mandatory field trip. Secondly, not all students taking the Learning in Natural Sciences specialization will have undertaken fieldwork at undergraduate level.

6. The program could benefit from a fresh look at the assessment arrangements. To what extent are examinations necessary at Master's level? How can assessment be introduced that is assessment *for* learning? Can the assessment tasks be ordered so that they help student build up their expertise from the beginning of the course right through to when they are completing their theses? Can there be greater variety in the structure of thesis? For instance, is it necessary for all thesis to have a formal set of research questions arrived at after an initial literature review?

7. It might be good to invite people from society and the labor market to join periodically in a program management meeting to assess whether the program still adequately prepares students for their future careers and to get feedback from society and the world of work regarding trends and concerns and to discuss possible implications for the design of the program. This would make the program responsive to societal changes.

8. To implement the above recommendations about strengthening the Master's Program, we would encourage a culture in which study leave is used by staff for learning from excellent practice in other universities about Program structure, assessment and pedagogy. This should be entirely possible given the present provision for regular study leave. For new specializations it is particularly important to make links with other universities that have a track record in this area.

9. Despite the great success of the Department, it might benefit from drawing up a five-year strategic plan, if such a plan does not already exist. Such a plan could discuss how the Department wants to be seen internationally. Are there areas of research not currently undertaken that should be and, conversely, are there areas of research from which the Department might withdraw?

10. Across the University, we suggest that some sort of workload management system is introduced that gives fair consideration to the relative time requirements of teaching (including supervision), research and management. The intention here is simply to enable certain aspects of work that are not presently fully recognized, for instance doctoral supervision, to be recognized and to help ensure that the inevitable differences that exist between individuals in their workloads are known by managers and not too great.

Doc. Number: 300.1

Quality Standards and Indicators

External Evaluation of a Program of Study

Institution: University of Cyprus
Program of Study: Master in Learning in Natural Sciences and Environment
Duration of the Program of Study: 18 – 48 months
Evaluation Date: 23-25 January 2019

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. Poor
2. To an unsatisfactory degree
3. To a satisfactory degree
4. Best practice
5. Excellent

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

NAME	TITLE AND RANK	UNIVERSITY / INSTITUTION
Marios Argyrides	Student	Cyprus University of Technology
Peter Higgins	Professor	University of Edinburgh
Ismo Koponen	Professor	University of Helsinki
Michael Reiss	Professor	University College London
Arjen Wals	Professor	University of Wageningen

Date and Time of the On-Site Visit: 23 January 2019, 0915-1745

Duration of the On-Site Visit: Eight hours, 30 minutes

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:					x	
	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	Not known				
	1.1.3.4	The procedures for the fulfillment of undergraduate and 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:				x		
	1.1.4.1	facilities		x			
	1.1.4.2	library					x
	1.1.4.3	infrastructure		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 undergraduate and postgraduate programs and are taken into consideration for the calculation of academic work load.				x		
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.

We have responded positively to most items. However, we have concerns in several areas.

1.1.2. Our comment here is not that numbers are too high, but potentially the converse. The minimum number stated for a given course was five students, and more typically 7 to 10. However, in our view low numbers should generally be avoided as this reduces opportunities for group work, project work and student:student learning.

1.1.3.6 It was not clear to us that students had sufficient opportunities for 'participation in the procedures for improvement of the educational process'. The students we spoke to made reference to Program Representatives but it was not clear if there were formal and informal processes in place to support their involvement and evidence of their contributions. Further, the rationale for the choice of students for us to speak to was not clear, and notably one was a Post-Doctoral student employed in the Department. Conventionally, the Program Representatives would have been selected (with others) to meet an Evaluation Panel.

1.1.4.1 The existing laboratory teaching facilities are limited and generally dated which is in stark contrast to the new facilities in developments on the new campus.

1.1.4.3 In terms of infrastructure, our concerns relate to the need for students to commute between three locations, taking time and limiting the potential of the development of a sense of learning community.

1.1.10 Whilst we gained the impression that good mentoring processes are in place, this appeared not to be 'taken into consideration for the calculation of academic workload'. Indeed, it did not seem to be the case that there was any standard rubric for calculating workload, leaving us with concerns that there were limited opportunities to consider what an appropriate and equitable workload might be. Plainly, all staff were working far more than their contractual hours.

Note, additionally:

α) the expected number of Cypriot and International Students in the program of study.
- Enrolment on the Masters in Natural Sciences – annually, 20 students.
- Planned enrolment on the Masters in Environmental and Sustainability Education – annually, 20 students.

β) the countries of origin of the majority of students.
- Most of the International Students are from Greece. No other demographic information was provided.

γ) the maximum planned number of students per class-section.
- This was stated as 20.

1.2	**Teaching**	**1**	**2**	**3**	**4**	**5**
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

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

1.2.1 and 1.2.2. Whilst the methodology seems to be generally suitable, there does seem to be a generally conventional and homogenous approach taken across courses. All seemed to be written to a standard structure and mostly with a similar assessment mix.

1.2.4. As above, this appears to be clear and known to the students. However, the assessment mix is limited and heavily examination-focused, leading us to wonder first about the use of formative feedback processes, and secondly about the lack of acknowledgement that (a) examinations favor certain learners above others, and (b) that this may not be developing and testing skills needed for employment.

1.3	**Teaching Personnel**		**1**	**2**	**3**	**4**	**5**
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:						x
	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.						x
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.						x

1.3.5	In every program of study the Special Teaching Personnel does not exceed 30% of the Teaching Research Personnel.	As far as we are aware				
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.					x
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.					x
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.

1.3.9. We feel we must note that this is a normative question with which we must take issue. The wording suggests that teaching is of secondary importance to research, something which we expect would surprise and disappoint students. Indeed, the term 'teaching load' suggests this. However, as noted above, total academic workload is undesirably high, and it is probable that this may contribute to a lack of innovation in teaching practices and alternative forms of assessment. A related factor is that the students are, in our experience, over-assessed and a reduction in this should have a positive impact on staff workload.

1.3.10. We have no information on which to base a judgement. However, it is clear that (a) the staff complement has been stable for some years, (b) certain courses, and the proposed new specialization in Environmental and Sustainability Education, depend on few or even a single member of staff. This is not a robust model. We urge consideration of some form of succession planning, which might potentially include the employment of a new lecturer to ease some of the workload issues noted above.

2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS						
2.1	**Purpose and Objectives and learning outcomes of the Program of Study**	**1**	**2**	**3**	**4**	**5**
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.	Not applicable				
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
Justify the answer you have provided and note the additional comments you may have on each standard / indicator. **2.1.4**. As above – see Section 1.2.						
2.2	**Structure and Content of the Program of Study**	**1**	**2**	**3**	**4**	**5**
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

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

2.2.5. and 2.2.7. Whilst the core and option courses seem appropriate, the latter are within a narrow band of education relating to the natural sciences. This is of course in turn narrow with regard to broader educational theory. Although this is the case for the existing Master's program, this is likely to be a more significant issue for the proposed new specialization in Environmental and Sustainability Education, which conventionally would draw on a broader base in the social sciences as well as the natural sciences.

2.2.5. We regard the opportunities for academic development to be high – especially concerning knowledge and a range of academic and core cognitive skills. However, in considering the potential career options for graduates, few of

whom will become academics, we concluded that providing a greater range of practical learning opportunities would be of great value.

We do note the policy and strategic orientation of the program, but have also been made aware that the future career destinations of students include teaching (in schools, environmental centres and charities). However, the lack of practice elements and teaching-related opportunities is striking. In our view it is not adequate to assume that even if a graduate has a teaching degree, they would not profit from such experiences. Perhaps, more significantly, as students from non-teaching backgrounds are recruited, practice-based experiences should be essential for their development.

Further, with regard to the proposed Master's in Environmental and Sustainability Education, some practical environmental education opportunities would provide opportunities for skill development and an understanding of the field, its culture and practises. Such opportunities might be developed through a course or courses (carrying academic credits) and/or support for placements or practicums. Outdoor pedagogies are barely mentioned in the course descriptors, and yet these require skills at least as subtle and complex as for teaching in a classroom, and are a facet of education increasingly recognised and researched internationally for its significance student learning. Given the focus of the proposed new specialization in particular, this seems like a significant omission.

Note the expected number of students who will be studying simultaneously at another academic institution, based on your experience so far, regarding students who study simultaneously in the programs of your institution.

- No information provided.

2.3	**Quality Assurance of the Program of Study**		**1**	**2**	**3**	**4**	**5**
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						x
	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

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

2.3.2.3. As above (see e.g. Section 1.1), the students seemed unsure of these arrangements.

2.4	**Management of the Program of Study**	**1**	**2**	**3**	**4**	**5**
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:					x
	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.

2.4.7. As above in Sections 1.1, 2.3 etc.

In the case of practical training, note:
- The number of credit units for courses and the number of credits for practical training
- In which semester does practical training takes place?
- Note if practical training is taking place in a country other than the home country of the institution which awards the higher education qualification

  - No information provided.

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.

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.

- The programs are of high quality internationally.

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. **2.6.2.** As this refers to a 'Feasibility Study', we conclude this is with regard to the proposed specialization in Environmental and Sustainability Education. Given the global significance of the issues that this relates to, there should be a growing labor market. However, this seems to be developing rather slowly, and so we encourage staff to prepare graduates for a broad range of potential employment opportunities, as noted above in Section 2.2.5.						

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 of study, which are available and accessible to the personnel and the students.			x		
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
Justify the answer you have provided and note the additional comments you may have on each standard / indicator. **3.1.3.** The laboratories we visited were (as indicated above) less good than we had expected and at odds with the high reputation of the program and staff. We do realize that two of the present laboratories are in the process of being refurbished.						
4. ADMINISTRATION SERVICES, STUDENT WELFARE AND SUPPORT OF TEACHING WORK						
4.1	**Administrative Mechanisms**	**1**	**2**	**3**	**4**	**5**
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.					x
Justify the answer you have provided and note the additional comments you may have on each standard / indicator.						
4.2	**Infrastructure / Support**	**1**	**2**	**3**	**4**	**5**
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.					x
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.

4.2.3 and 4.2.4. See comments in Sections 1.1 and 3.1.

4.2.5 and 4.2.6. Whilst we have noted that these are excellent, we wish to point out that the focus on English language-based texts and materials brings limitations, both in terms of failing to acknowledge the growing body of high-quality work in the Greek language and its influence on the perceptions of students (which suggest that all such work is indeed in English and predominantly from English-speaking nations). A determined policy to acquire and promote work in the Greek language would begin to address this.

4.3	**Financial Resources**	**1**	**2**	**3**	**4**	**5**
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.	Not known				
4.3.4	Student tuition and fees are consistent to the tuition and fees of other respective institutions.					x

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

4.3.1. Funding of the program seems adequate. However, we have concerns that the income from the existing Master's program (according to the fee structure) is approximately half the expenditure. Conversely, the running costs of the PhD program are significantly more than the income. Consequently, we have concerns that the Master's program is in effect subsidising the PhD program.

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

5.	**DISTANCE LEARNING PROGRAMS**	**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.	Not applicable				
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%.	

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

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:

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.	

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.	

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.	Not applicable				
6.2	The structure and the content of a doctoral program of study are satisfactory and they ensure the quality provision of doctoral studies.					
6.3	The number of academic personnel, which is going to support the doctoral program of study, is adequate.					
6.4	The doctoral studies' supervisors have the necessary academic qualifications and experience for the supervision of the specific dissertations.					
6.5	The degree of accessibility of all interested parties to the Doctoral Studies Regulations is satisfactory.					
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.					
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.					

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.

Not applicable.

FINAL REMARKS – SUGGESTIONS
Please note your final remarks and suggestions for the program of study and/or regarding particular aspects of the program. Please see our Conclusions and numbered suggestions above.

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

Name:	**Signature:**
Marios Argyrides	
Peter Higgins	
Ismo Koponen	
Michael Reiss	
Arjen Wals	

Date: 25 January 2019