

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

Republic of Cyprus

**External Evaluation Report
Program of Study**

Institution:

University of Cyprus

Department of Electrical and Computer Engineering

Program of Study:

Master of Science in Intelligent Critical Infrastructure Systems

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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
Vassilios G. Agelidis	Professor, Chair	Technical University of Denmark
Geert Deconinck	Professor	K.U. Leuven, Belgium
Ioannis Lygeros	Professor	ETH Zurich
Stylios Stratis	Mr.	Cyprus University of Technology

INTRODUCTION:

I. The External Evaluation procedure

Prior to the visit the EEC was provided with:

- Document 200.1, the application for evaluation submitted by the program of studies, including CVs of all the involved personnel.

During the site visit the EEC additionally received:

- Slides of the presentations given during the evaluation meeting.
- Professional brochures of the university.
- An updated version of the program description, objectives, and individual course outlines.

During the site visit the EEC was impressed by how well prepared the visit was, the high quality and engagement of the people involved and by the facilities that will be made available to the program. The EEC experienced first hand the catalytic role of the KIOS center in providing a creative outlet for talented researchers and students and the outstanding research and educational effort taking place there.

At the end of the visit the EEC received:

- A further update of the course descriptions.

II. The Internal Evaluation procedure

The EEC noted the high quality and completeness of the application submitted by the institution and the presentations given during the evaluation. The EEC members were impressed by the commitment of the program organizers and university staff to quality assurance and student support.

FINDINGS:

1. EFFECTIVENESS OF TEACHING WORK – AVAILABLE RESOURCES

Overall the EEC was very impressed with the quality of the program, its organization, and structure. All aspects of the curriculum have been thoroughly thought out and the program procedures adopted are up to international standards. The organization of the program, teaching plans and personnel are excellent. The procedures adopted are based on the standards set by the University of Cyprus. These already appear to be comparable with international standards. Some of the material for the program is naturally in the process of being developed (specific academic calendar, web-pages, etc.). The provisional material provided, however, is mature and the EEC is confident that the necessary actions will be completed in a timely and thorough manner.

Regarding practical training, the EEC has seen demonstrations of diverse and very impressive experimental and software platforms that can be used to support students in their learning during their M.Sc. studies. It was, however, unclear how exactly these platforms will be integrated in the teaching. The EEC suggests to the program organizers to consider how this can be accomplished, not only through M.Sc. theses, but also possibly through the application-based courses.

Regarding assessment, the EEC suggests to the organizers to consider flexible forms of assessment throughout the studies. This would facilitate the integration of students with diverse backgrounds into the program.

Even though a discussion of innovative teaching methods (such as flipped classroom or blended learning) did not take place during the site visit, the EEC feels that such an innovative program of study deserves the adoption of state of the art teaching methods. Moreover, the EEC is confident that the personnel involved will be able to integrate such methods as needed in the program.

The ambition to make courses available on-line later in the implementation of the program were noted and positively commented on. This would be a benefit for the program (given that the teaching personnel comes from two different institutions) as well as the international community in this area.

The teaching personnel are exceptionally qualified. They all have strong research backgrounds ideally suited to the program, and are committed. The Program Coordinator is highly qualified and the EEC appreciated the overwhelming effort required in putting the program together.

2. PROGRAM OF STUDY AND HIGHER EDUCATION QUALIFICATIONS

The EEC was impressed by the overall vision of the KIOS center, as well as the positioning of the center in the national and international research and education landscape. The proposed M.Sc. program supports and enhances this wider vision; this and the success of KIOS to-date provides confidence for the success of the program.

Overall the program of studies is of very high quality. The content and coverage of the individual courses and their integration into a coherent program is well thought out. The EEC suggests that the program organizers make an effort to streamline and unify the presentation of the different course outlines, in terms of pre-requisites, modes of assessment, etc. This is especially important as students from diverse backgrounds (not just electrical and computer engineering) are expected to attend the program.

The EEC positively noted the extensive discussions that the program organizers already had regarding the introduction of elective courses. While this is not foreseen at this stage, it could be something to consider in the future, again with a view towards the diverse backgrounds and interests of the students.

The plans to include seminars on social topics (engineering ethics, social acceptance, etc.), research methodology and technical writing were also positively received. The program could benefit from setting a specific number of seminars dedicated to such topics.

All quality assurance processes have been put in place according to international standards.

The international positioning of the program is outstanding as it is based on teaming from two outstanding institutions from Cyprus and the U.K.. The international dimension is enhanced further by plans to include individual lectures from international experts as part of the envisioned seminar series. The program organizers can consider also inviting leaders from industry as part of this effort. This would also enhance further the emphasis that the program already places on entrepreneurial aspects and industrial relevance.

This is a timely program in a socially important topic. The program will provide the opportunity for bright local and international students to engage in this topic, hence further develop the talent pool of the country and the region at large in this area.

During the discussions the EEC brought up the issue of the ownership of intellectual property generated by the students during their M.Sc. studies. The EEC feels that a clear policy regarding IP rights and ownership should be communicated to the students. This is particularly important given the emphasis that the program places on research, entrepreneurship and industrial contacts.

3. RESEARCH WORK AND SYNERGIES WITH TEACHING

KIOS is an outstanding center of excellence in this field, with an impressive track record in securing third party funding, fundamental and applied research contributions, and coupling these to education.

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

The program will benefit from administrative mechanisms, student and instructor support services already in place at the University of Cyprus; these are of the highest quality. The proposed program is self-financed. The financial plan is credible and in line with the University practices.

5. DISTANCE LEARNING PROGRAMS

N/A

6. DOCTORAL PROGRAMS OF STUDY

N/A

CONCLUSIONS AND SUGGESTIONS OF THE EXTERNAL EVALUATION COMMITTEE¹

In summary the proposed program will make an outstanding addition to the educational landscape in Cyprus and internationally. The academic team is excellent, the program of studies is well developed and the provisions for attracting and supporting students are all in place. Suggestions for minor improvements and topics to consider at a later stage are provided under the detailed comments below. The overall vision of the KIOS center, as well as the positioning of the center in the national and international research and education landscape are impressive.

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.

Doc. Number: 300.1

Quality Standards and Indicators

External Evaluation of a Program of Study

Institution: University of Cyprus, Dept. of Electrical and Computer Engineering

Program of Study: M.Sc. in Intelligent Infrastructure Systems

Duration of the Program of Study: 3 Semesters, maximum 8 semesters

Evaluation Date: March 26-27, 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

NAME	TITLE	UNIVERSITY / INSTITUTION
Vassilios G. Agelidis	Professor (Chair)	Technical University of Denmark
Geert Deconinck	Professor	K.U. Leuven, Belgium
Ioannis Lygeros	Professor	ETH Zurich
Stylianos Stratis	Mr.	Cyprus University of Technology

Date and Time of the On-Site Visit: 26 March, 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					N/A
	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:					
	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.

The procedures adopted for many of the items listed above (conflict resolution, evaluations, etc.) are based on the standards set by the University of Cyprus. These already appear to be comparable with international standards and the EEC sees no reason to comment on these further.

Some of the items listed above are understandably in the process of being developed (specific academic calendar, web-pages, etc.). The provisional material provided is mature, and the EEC is confident that the necessary actions will be completed in a timely and thorough manner.

Regarding practical training, the EEC has seen demonstrations of diverse and very impressive experimental and software platforms that can be used to support students in their learning during their M.Sc. studies. It was, however, unclear how exactly these platforms will be integrated in the teaching. The EEC suggests to the program organizers to consider how this can be accomplished, not only through M.Sc. theses, but also possibly through the application-based courses. In this respect, the program can also clarify better how hardware-level topics such as SCADA, PLC, FPGA,

communication busses, etc. will be covered in the program (for example, as part of the pre-requisites, the application courses, through the M.Sc. projects).

The successful integration of students with diverse backgrounds into the program could be facilitated through flexible forms of assessment throughout the studies.

Overall the EEC was very impressed with the quality of the program, its organization, and structure. All aspects of the curriculum have been thoroughly thought out and the procedures adopted are up to international standards.

Note, additionally:

α) the expected number of Cypriot and International Students in the program of study.

N/A

β) the countries of origin of the majority of students.

N/A

γ) the maximum planned number of students per class-section.

The current plan to admit up to 25 students per year will provide a good number, to allow for diversity, but also coherence in the student cohort.

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
<p><i>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</i></p> <p>Overall the teaching plans and program of study meet very high standards.</p> <p>Even though a discussion of innovative teaching methods (such as flipped classroom or blended learning) did not take place during the site visit, the EEC feels that such an innovative program of study deserves the adoption of state of the art teaching methods. Moreover, the EEC is confident that the personnel involved will be able to integrate such methods as needed.</p> <p>The ambition to make courses available on-line later in the implementation of the program were noted and positively commented on: This would be a benefit for the program (given that the teaching personnel comes from two different institutions) as well as the international community in this area.</p>						
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:					
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.					X

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.					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.					N/A
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.

The teaching personnel are highly qualified. They all have backgrounds ideally suited to the program given that they are world-class researchers, and are committed to the program. The Program Coordinator is highly qualified and the EEC appreciated the overwhelming effort required in putting the program together.

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.					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><i>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</i></p> <p>The EEC was impressed by the overall vision of the KIOS center, as well as the positioning of the center in the national and international research and education landscape. The proposed program supports and enhances the Center's wider vision; this and the overall success of KIOS to-date provides confidence in the success of the program.</p>						
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				X	

	approaches and the method of assessing student performance.					
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.

Overall the program of studies is of very high quality. The content and coverage of the individual courses and their integration into a coherent program is well thought out.

The EEC suggests that the program organizers make an effort to streamline and unify the presentation of the different courses, in terms of pre-requisites, modes of assessment, etc. This is especially important as students from diverse backgrounds (not just electrical and computer engineering) are expected to attend the program.

The EEC positively noted the extensive discussions that the program organizers

already had regarding the introduction of elective courses. While this is not foreseen at this stage, it could be something to consider in the future, again with a view towards the diverse backgrounds and interests of the students.

The plans to include seminars on social topics (engineering ethics, social acceptance, etc.), research methodology and technical writing were also positively received. The program could benefit from setting a minimum number of seminars dedicated to such topics.

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.

N/A

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					
	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.

All quality assurance processes have been put in place according to international standards.

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					X

	within the specified timeframe.						
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 comments in Section 2.2, regarding streamlining course descriptions before making them publicly available.

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 homecountry of the institution which awards the higher education qualification*

The EEC positively noted plans to include elements of practical training in the program through applied courses and projects, but understands there is no practical training in the form of internship required for the completion of the degree. While the committee was impressed with the platforms being demonstrated during the site visit, such research and educational platforms could benefit by being integrated with each other to investigate interdependencies among more complex infrastructures; for example, integrating simulated attacks on real PLCs and the effect this might have on the power systems platform that includes inverter connected solar panels. Another example may include drone data collected to enhance traffic management systems.

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.

The international positioning of the program is outstanding as it is based on teaming from two outstanding institutions from Cyprus and the U.K.. The international dimension is enhanced further by plans to include individual lectures from international experts as part of the envisioned seminar series. The program organizers can consider also inviting leaders from industry as part of this effort. This would also enhance further the emphasis that the program already places on entrepreneurial aspects.

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 program is leading the educational developments in Cyprus and is setting new standards for the M.Sc. education in the country.

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
<p><i>Justify the answer you have provided and note the additional comments you may have on each standard / indicator.</i></p> <p>This is a timely program in a socially important topic. The program will provide the opportunity for bright local and international students to engage in this topic, hence further develop the talent pool of the country and the region in this area.</p> <p>During the discussions the EEC brought up the issue of the ownership of intellectual property generated by the students during their M.Sc. studies. The EEC feels that a clear policy regarding IP rights and ownership should be communicated to the students. This is particularly important given the emphasis that the program places on research, entrepreneurship and industrial contacts.</p>						

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.

KIOS is an outstanding center of excellence in this field, with an impressive track record in securing third party funding, fundamental and applied research contributions, and coupling these to education. The program can only benefit by including the latest research trends, for example in the area of data driven control, into the teaching curriculum.

The facilities made available for the program are already excellent, and with the move to the new engineering building will become impressive.

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.

Mechanisms for all these aspects of the program organization are already in place at the University of Cyprus and are of the highest quality.

4.2	Infrastructure / Support	1	2	3	4	5
4.2.1	There are suitable books and reputable journals supporting					X

	the program.					
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.					N/A
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.

Mechanisms for all these aspects of the program organization are already in place at the University of Cyprus and are of the highest quality. Regarding facilities please see comment under item 3.1 above.

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.					X
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.

The proposed program is self-financed. Financial plan is credible and in line with the University practices.

The organizers can also consider making the courses of the program available on an individual basis. This would allow additional local students to benefit from the new courses on offer and could also help attract additional participants (and income) from abroad (especially for the intensive “block” courses) and from industry (in the form of continuing education).

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.					
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.

N/A

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 While 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.					
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.

N/A

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.

FINAL REMARKS – SUGGESTIONS

In summary the proposed program will make an outstanding addition to the educational landscape in Cyprus and internationally. The academic team is excellent, the program of studies is well developed and the provisions for attracting and supporting students are all in place. Suggestions for minor improvements and topics to consider at a later stage are provided under the detailed comments above.

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

Name:	Signature:
Vassilios G. Agelidis (Chair)	
Geert Deconinck	
Ioannis Lygeros	
Stylianos Stratis	

Date: 27 March, 2018