

Doc. 300.1.2

Date: 13/09/2023

Higher Education Institution's Response

- **Higher Education Institution:** University of Nicosia
- **Town:** Nicosia
- **Programme of study Name (Duration, ECTS, Cycle)**
In Greek:
Πληροφορική (1.5 χρόνια, 90 ECTS, Μεταπτυχιακό, Εξ Αποστάσεως)
In English:
Computer Science (1.5 years, 90 ECTS, Master of Science degree, E-Learning)
- **Language(s) of instruction:** English
- **Programme's status:** Currently Operating
- **Concentrations (if any):**
In Greek: (α) Ασφάλεια Κυβερνοχώρου, (β) Κινητά Συστήματα, και (γ) Τεχνολογίες Blockchain- Εξ Αποστάσεως
In English: (a) Cyber Security, (b) Mobile Systems and (c) Blockchain Technologies- E-Learning



ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION



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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 2019” [N. 136 (I)/2015 to N. 35(I)/2019].

A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area.*
- *In particular, under each assessment area, the HEI must respond on, without changing the format of the report:*
 - *the findings, strengths, areas of improvement and recommendations of the EEC*
 - *the conclusions and final remarks noted by the EEC*
- *The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4).*
- *In case of annexes, those should be attached and sent on a separate document.*

0. Introduction

We would like to thank the External Evaluation Committee (EEC) for their professional and thorough work during the on-site evaluation of the MSc Computer Science (Distance Learning) programme on June 14, 2023. We would also like to express our appreciation for the collegial and constructive approach with which they conducted their evaluation. During the visit, the EEC met the faculty supporting the MSc Computer Science programme, and had separate meetings with current students and alumni of the program.

We would like to note that the report of the committee is **extremely positive** with 18 out of 20 quality indicators receiving the top rating of “*Compliant*” (amongst the choices of: Compliant/partially compliant/non-compliant) and two indicators receiving the rating of “partially-compliant”.

More specifically, the EEC states, amongst other:

- ***“The programme also prepares the students to be active citizens by learning cutting-edge technologies that can shape future societies. Opportunities are given for personal development and training, e.g., emphasis on critical thinking, studying scientific articles, employing scientific and ethical research methods, and engaging with presentation of research results. The students also have the chance to develop additional skills in entrepreneurship.”***
- ***“The Head and Faculty of the programme take into consideration the latest research developments in computer science, cybersecurity, mobile systems, and blockchain regularly to update the study programme.”***
- ***“There is a well designed infrastructure that supports the design and implementations of online learning programmes at the University.”***
- ***“All students were happy with the course and satisfied with the level of support they received (administrative and academic) in all courses, including the thesis”***
- ***“The study guides were well written and had the appropriate level of detail, providing a week-by-week description of content and activities, including formative and summative assessments. The learning outcomes were appropriate and corresponding to the postgraduate level of study, following current thinking about criticality and active learning approaches to designing course materials.”***
- ***“The existing staff's CVs demonstrate good evidence of appointed academic staff having prior and relevant teaching and research experience in higher education institutions and are members of professional organizations. Research expertise and publication records are relevant and consistent to the programmes of study.”***
- ***“The placement rate of alumni of the programme in the labor market is excellent.”***



We do appreciate the committee's recommendations for improvement, which will enhance the quality of our program and we will be addressing those in the corresponding section of this response.

1. Study programme and study programme’s design and development (ESG 1.1, 1.2, 1.7, 1.8, 1.9)

We appreciate the EEC’s assessment of this area. We note that **all quality indicators/criteria were assessed as “Compliant”** (amongst the choices of: Compliant/partially compliant/non-compliant).

Positive comments made by the EEC:

- *“Transparent quality assessment processes”*
- *“Selection criteria are transparent”*
- *“Transparent learning objective for the programme and the concentrations”*
- *“Regular course evaluation processes are in place”*
- *“The programme team faculty members regularly receive feedback from the industry about skills that are required. Society’s digitalization needs are also considered in the programme’s design and update”*
- *“Plenty of job opportunities for the alumni of the programme in the labor market”*
- *“The placement rate of alumni of the programme in the labor market is excellent.”*

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
<p>1.1 <i>“The student population of students in this programme is low (less than ten), which raises questions about the long term sustainability of the programme. It is recommended that the programme launches a campaign to attract students. The programme team might want to consider any of the following approaches:</i></p> <p><i>1. One option could be to offer a MSc in computer science to professionals of companies in Cyprus and abroad in the areas of cybersecurity, mobile systems, and blockchain and fintech companies.</i></p>	<p>The under re-accreditation MSc Computer Science - Distance Learning program has the potential of attracting many more students. We are witnessing a turn towards the Distance Learning mode of delivery in the post-COVID era, which we believe will cause an increase in our student numbers of this program. However, we do appreciate the EEC suggestions above for increasing student numbers. In particular, we are pursuing point (1) which is to offer the program to professionals in companies in Cyprus and abroad who are interested in advancing their career or specializing further in Computer Science. We plan on making this offer even more</p>	<p>Choose level of compliance:</p>

<p>2. Another option is to admit students with a STEM background.</p> <p>3. A third option is to merge the computer science MSc's programme with the Data Science programme. The merged programme may have the same core courses in the first year, and then students can choose their concentration."</p>	<p>attractive by offering specific scholarships to these professionals. Regarding points (2) and (3), unfortunately these are not feasible due to the design of the program and the setting of the admission requirements to be Computer Science/Computer Engineering majors. However, students with STEM background can follow the MSc in Data Science.</p> <p>In addition to point (1) above, we have further actions that can help increase the student numbers and are already in place for the next academic year such as:</p> <ul style="list-style-type: none"> •Organizing hackathons and other competitions that promote the Computer Science field. We are currently collaborating with the Bank of Cyprus for a Fintech Hackathon set for October 2023. A past example is the University sponsoring the 4th Cyprus Cyber Security Challenge (CCSC) organized by the Cyprus Computer Society in April 2021. •Delivery of webinars by faculty with active participation from current students and alumni. The webinars are live-streamed on YouTube and are open to all. These webinars take many forms: a) They present the Department and its programs, b) they talk about Computer Science/Data Science jobs and career prospects, c) they present a particular subject or project with participation from students (current and past). We have a long list of webinars given by the Department in the last 2-3 years. Two of these webinars involved students: One seminar on hacking was delivered by an MSc CS Alumni and the other seminar on Data Science was delivered by two current BSc CS students along with their professor, who presented their term project on 	
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	<p>the Data Science course. More webinars are planned in the next couple of years.</p> <ul style="list-style-type: none">• We also plan to offer a number of scholarships per program. The University is already offering scholarships based on merit and financial needs. In addition, the Department's collaboration with the Bank of Cyprus enables existing students of all our programs to apply for the Bank of Cyprus scholarships.	
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2. Student – centred learning, teaching and assessment (ESG 1.3)

We appreciate the EEC’s assessment of this area with **2 out of 4 quality indicators/criteria assessed as “Compliant”** (amongst the choices of: Compliant/ partially compliant/ non-compliant). The “partially compliant” assessment of criteria 2.1 and 2.4 is clarified in this section, under areas of improvement, points 2.3 and 2.4 below (matching the order of mention in the EEC list of suggestions/recommendations).

Positive comments made by the EEC:

- *“There is a well designed infrastructure that supports the design and implementations of online learning programmes at the University”*
- *“The study guides were well written and had the appropriate level of detail, providing a week-by-week description of content and activities, including formative and summative assessments. The learning outcomes were appropriate and corresponding to the postgraduate level of study, following current thinking about criticality and active learning approaches to designing course materials.”*
- *“All students were happy with the course and satisfied with the level of support they received (administrative and academic) in all courses, including the thesis.”*
- *“Support infrastructure for distance learning students in the programme and via the university support services, inc. those students with special needs.”*
- *“Adequate training and induction opportunities in e-learning for students and staff. Such activities support learning and help students to develop digital literacies and related skills.”*
- *“Internship opportunities were discussed by the programme team and this is a positive aspect of the programme, considering that the University has an excellent network of partnerships.”*

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
2.1 “Thesis is optional in this program. This seems to reflect approaches in similar computing programmes in Cyprus. However, it contradicts established attitudes in	We would like to stress that the MSc in Computer Science puts particular emphasis on developing the students’ research skills. Specifically, the compulsory Project courses (in	Choose level of compliance:

<p>HE toward the compulsory inclusion of a thesis in postgraduate programmes. The university should consider directing a bigger number of students towards the uptake of a thesis as they can benefit from the research experience of the members of the programme team and develop valuable professional skills.”</p>	<p>the respective concentration or general) in combination with the compulsory course “COMP-500DL Research Seminars and Methodology”, are designed to cultivate the research skills of the students. Regarding the optional thesis, we highlight the EEC comment: “This seems to reflect approaches in similar computing programmes in Cyprus”. Indeed this is the case and the practice adopted by Cypriot Universities. We feel that having the thesis obligatory will make the program less flexible especially for those students who would like to broaden their knowledge in the CS field with courses beyond their area of concentration. An obligatory thesis, limits the students in not taking any elective courses. We should stress however, that in practice, the programme committee and the faculty advisors are encouraging students who wish to follow an academic career or work in R&D to opt for the thesis option.</p>	
<p>2.2 “Internship opportunities should be publicised widely and linked to career advice the university provides. “</p>	<p>The Department provides multiple ways by which the students become aware of Internship opportunities. This is achieved through a close collaboration with a dedicated office within the University of Nicosia, the Career Success Center, which collects and circulates all available internship opportunities for students. This office is also responsible for career advice, help with CV writing, interview practice, to enable our students to secure internships or any other job position. In addition, IT job fairs which happen at least twice a year, and where companies advertise job/internship vacancies, are widely publicised events promoted by the Career Success Center as well as the faculty of the Department through class</p>	<p>Choose level of compliance:</p>

	<p>announcements. Moreover, internships, job postings and events are announced and are available through the student portal. The effective communication of these events is evident by the significant student turnout in these events.</p>	
<p>2.3 “Establishing a student community would enhance the student experience and potentially have a positive impact on recruitment. The programme team should consider approaches and strategies in doing this, e.g. by engaging further students in events providing opportunities for social interaction. This led to partial compliance for 2.1.”</p>	<p>The program already has in place several activities that promote social interaction, such as the online seminar series which are part of the program curriculum and the industry/career events held online particularly for DL students (these events were presented during the visit). We will further promote the use of forums and wikis (see 2.4 below) that will also increase student-to-student interactivity and, in the long run, the sense of community. Furthermore, we will be using Discord (through a dedicated server) to facilitate and promote real-time student interactions.</p>	<p>Choose level of compliance:</p>
<p>2.4 “A bigger push on encouraging students to use interactive tools such as forums and wikis (in the VLE) and outside the VLE, e.g. including simulations, serious games etc. and (1) linking them to summative assessment and (2) structuring related activities to increase clarity about what students are expected to do and when. This resulted into partial compliance for 2.4.”</p>	<p>It should be noted that some courses include simulations, for example in the course COMP-513 Cyber-Physical Systems and the Internet of Things students are using NS-3 IoT extension packages where they create the IoT network, simulate and analyze the performance of IoT and Cyber-Physical Systems. In addition, we will make sure that all forums and wikis are connected to weekly summative assessments, thus encouraging their further and more systematic use. Regarding the second comment on increasing “clarity about what students are expected to do and when”, it should be noted that this is clearly outlined in the Course Assessment Guide which is posted and available for all courses of the program. We will make sure that the students are aware of this Guide and use it properly. The dates/actions in the</p>	<p>Choose level of compliance:</p>



	course assessment guide will also be populated in the Moodle calendar at the start of the semester.	
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3. Teaching staff (ESG 1.5)

We appreciate the EEC’s assessment of this area. We note that **all quality indicators/criteria were assessed as “Compliant”** (amongst the choices of: Compliant/partially compliant/non-compliant).

Positive comments made by the EEC:

- *“The existing staff's CVs demonstrate good evidence of appointed academic staff having prior and relevant teaching and research experience in higher education institutions and are members of professional organizations. Research expertise and publication records are relevant and consistent to the programmes of study.”*

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
3.1 “The EEC recommends the development of systematic central support with regards to staff induction and staff development.”	<p>The University has established a Faculty Training and Development Unit whose role is to:</p> <ul style="list-style-type: none"> a) Draft the university’s plan and strategy on faculty training and development b) Identify faculty training and development needs necessary for fulfilling their job requirements c) Make available to faculty relevant training and development opportunities that can be linked to educational research and development, curriculum leadership, and educational scholarship d) Coordinate the training and development practices offered by the various training centres/units and evaluate their impacts on the careers of the participants and the institutional environment. <p>The Unit brings under its umbrella, through a coordinating role, other University Units such as the PSU (Pedagogical Support Unit), the ePSU (e-Learning Pedagogical Support</p>	Choose level of compliance:

	<p>Unit), the TELC (Technology Enhanced Learning Centre), the DL-LMS (Distance Learning - Learning Management Systems Unit) and the RIO (Research and Innovation Office).</p> <p>It should be noted that the faculty members teaching in the programme have undergone a 12-week 36-hour training and development Seminar on “Teaching and Learning Theory and Practice,” consisting of twelve 3-hour workshops (as also acknowledged by the EEC in section 1 of this report). The faculty have been awarded the Teaching and Learning Theory and Practice Certificate for the successful completion of the workshop series. The workshops cover a variety of areas such as, designing effective learning environments with 21st century skills and competencies in mind, critical and creative thinking, adult education, project and problem-based learning, inclusion of students with diverse needs, designing online courses using interactive and collaborative multimedia tools, effective use of e-learning and other educational resources etc.</p> <p>In addition, there is a Research Skills Development Programme in which various workshops/webinars are developed by the office of the VRFR to promote research and support mentoring to new faculty and PhD students.</p> <p>Regarding staff induction, the University’s Department of Human Resources organizes a faculty induction week, every year, at the beginning of September. The induction week includes presentations on the various academic policies and administration procedures which are</p>	
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	<p>delivered by the Academic Affairs and Human Resource offices respectively, as well as presentations from the following: Research and Innovation Office, Library, Health and Safety, Erasmus, Student Affairs, amongst others. In addition, a comprehensive Faculty Manual is given to all faculty, which provides them with information about the University, its policies and procedures, and any other information they will need during their employment.</p>	
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4. Student admission, progression, recognition and certification (ESG 1.4)

We appreciate the EEC's assessment of this area. We note that **all quality indicators/criteria were assessed as "Compliant"** (amongst the choices of: Compliant/partially compliant/non-compliant).

Positive comments made by the EEC:

- *"All the admission, progression, recognition and certification procedures are clearly articulated and communicated to the students in the student guide and on the Master course Website."*
- *"The strict admission requirements generate a uniform student class, by giving the possibility to focus only on advanced concepts and technologies that are part of this MSc programme."*
- *"In addition to the formal procedure for student progression, which is clearly indicated, the MSc programme has put in place appropriate procedures for academic advising. For example, students are contacted when they are inactive for a sufficiently long period of time, in order to stimulate their active participation in the Master activities and to encourage their progression. This is particularly important for Distance Learning programmes like this."*

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
4.1 "The programme team should consider an enhancement of the current student recruitment strategy to attract more students in the programme. See specific recommendation in section 1."	This has been addressed in section 1 above, under the point 1.1 of areas of improvement and recommendations.	Choose level of compliance:

5. Learning resources and student support (ESG 1.6)

We appreciate the EEC’s assessment of this area. We note that **all quality indicators/criteria were assessed as “Compliant”** (amongst the choices of: Compliant/partially compliant/non-compliant).

Positive comments made by the EEC:

- *“The University of Nicosia has a well-placed, efficient, and reliable infrastructure when it comes to providing learning tools and support services to students.”*
- *“The University offers learning resources and support services to enable students to succeed academically and have a good student journey. During the onsite visit, the University staff demonstrated access to those systems (for example, the University’s VLE, Moodle and the specifics of a course on the VLE). Also, students have confirmed their positive experience with the University’s systems and available resources.”*
- *“There is an excellent infrastructure and well equipped labs on campus that could also be accessed by e-learning students.”*
- *“Staff have explained processes and available infrastructure to support students with special needs, including those in the e-learning cohort.”*
- *“Latest technology systems include programmable robots, and in house developed technologies and well-equipped labs with equipment relevant to the course focus.....“*
- *“Utilisation of industry experts as guest speakers to enhance the learning experience. Facilitation of a positive community culture among students and teaching staff.”*

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
5.1 “Student communities are organised and run by the students themselves. It would be good to see the utilisation of technologies and initiatives catered by the university to enable communication and knowledge transfer among students. Moodle plugins on the upcoming new version that the university will adopt in the near future could be utilised to this purpose.”	In addition to our suggested actions in 2.3 above which are relevant to this point as well, the University will consider the suggestion by the EEC and will look into the possibility of adopting such technologies (i.e. Moodle Plugins) in the newer version of Moodle to further enable communication and knowledge transfer among students.	Choose level of compliance:



6. Additional for doctoral programmes
(ALL ESG)

N/A



7. Eligibility (Joint programme) (ALL ESG)

N/A

B. Conclusions and final remarks

We would like to thank the External Evaluation Committee (EEC) for their professional and thorough work during the on-site evaluation of the MSc Computer Science (Distance Learning) programme on June 14, 2023. We would also like to express our appreciation for the collegial and constructive approach with which they conducted their evaluation.

We welcome the EEC’s positive evaluation of our MSc Computer Science – Distance Learning program and the final conclusion which states: ***“The EEC is overall satisfied with the programme organisation and implementation. The distance learning platforms in place and support are efficient. Quality assurance and student progression procedures are in place. Teaching staff and students are satisfied with their teaching positions and learning experience, respectively.”***

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
1) EEC remark on program sustainability: “The student population of students in this programme is low (less than ten), which raises questions about the long term sustainability of the programme. The programme team should consider an enhancement of the current student recruitment strategy to attract more students in the programme. The programme team might want to consider any of the following approaches: 1. One option could be to offer a MSc in computer science to professionals of companies in Cyprus and abroad in the areas of cybersecurity, mobile systems, and blockchain and fintech companies. 2. Another option is to admit students with a STEM background. 3. A third option is to merge the computer science MSc's programme with the Data Science programme. The merged programme may have the same core courses in the first year, and then students can choose their concentration.”	This remark was raised in Section 1 and our response is given in point 1.1 above.	Choose level of compliance:
2) EEC remark on Learning, teaching, assessment, and student experience: “●Thesis is optional in this program. This seems to reflect approaches in similar computing programmes in	These remarks were raised and addressed under 2.1, 2.2, 2.3, 2.4 (section 2) and 5.1 (section 5), respectively.	Choose level of compliance:



<p>Cyprus. However, it contradicts established attitudes in HE toward the compulsory inclusion of a thesis in postgraduate programmes. The university should consider directing a bigger number of students towards the uptake of a thesis as they can benefit from the research experience of the members of the programme team and develop valuable professional skills.</p> <ul style="list-style-type: none"> ● Internship opportunities should be publicised widely and linked to career advice the university provides. ● Establishing a student community would enhance the student experience and potentially have a positive impact on recruitment. The programme team should consider approaches and strategies in doing this, e.g. by engaging further students in events providing opportunities for social interaction. ● A bigger push on encouraging students to use interactive tools such as forums and wikis (in the VLE) and outside the VLE, e.g. simulations, serious games etc., e.g. by linking them to summative assessment and by structuring related activities to increase clarity about what students are expected to do and when. ● Student communities are organised and run by the students themselves. It would be good to see the utilisation of technologies and initiatives catered by the university to enable communication and knowledge transfer among students. Moodle plugins on the upcoming new version that the university will adopt in the near future could be utilised to this purpose.” 		
<p>3)EEC remark on Teaching staff: “The EEC recommends the development of systematic central support with</p>	<p>This remark was raised in Section 3 and our response is given in point 3.1 above.</p>	<p>Choose level of compliance:</p>



regards to staff induction and development.”		
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Concluding, we would like to thank once more the External Evaluation Committee for their valuable feedback and their **extremely positive** evaluation of the MSc Computer Science programme.

C. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
George Gregoriou	Dean, School of Sciences & Engineering	
Athena Stassopoulou	Head of Computer Science Department Program Coordinator	
Click to enter Name	Click to enter Position	
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Click to enter Name	Click to enter Position	
Click to enter Name	Click to enter Position	

Date: 13/09/2023

