ΑΕ ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

CYQAA CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION

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Doc. 300.1.2

Higher Education Institution's

Response

(E-learning programme of study)

Date: 7/05/2021



- Town: Larnaca
- Programme of study Name (Duration, ECTS, Cycle)

Higher Education Institution:

In Greek:

Ασφάλεια Κυβερνοχώρου (1 έτος, 90 ECTS,

Μεταπτυχιακό MSc)

In English:

MSc Cybersecurity (1 year, 90 ECTS, Master MSc)

- Language(s) of instruction: English
- Programme's status: Currently Operating

KYΠPIAKH ΔΗΜΟΚΡΑΤΙΑ REPUBLIC OF CYPRUS



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) 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, <u>without changing</u> <u>the format of the report</u>:
 - the findings, strengths, areas of improvement and recommendations of the EEC
 - the deficiencies noted under the quality indicators (criteria)
 - 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).
- In case of annexes, those should be attached and sent on a separate document.



UCLAN CYPRUS

The School of Sciences and the MSc Cybersecurity team would like to express their sincere appreciation to the External Evaluation Committee (EEC) members for their well-targeted, comprehensive and valuable comments and recommendations towards enhancing our MSc Cybersecurity DL programme. We appreciate all the positive comments noted on the EEC's report, which inspire us to continue and strengthen our programme and current practices. We also appreciate the EEC's recommendations for improvement, which allowed us to further refine our programme and its market competitiveness.

We have considered and addressed all the EEC's recommendations for improvement, and in what follows, we provide our response to them along with any relevant information and actions taken.



1. Study programme and study programme's design and development

(ESG 1.1, 1.2, 1.8, 1.9)

EEC REPORT Findings

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The University and the School advocate student-centred learning and the evaluated program has a relatively small number of students resulting in a favourable student-teacher ratio. The students appear to enjoy solid tutoring and mentoring in the course. The small numbers engender familiarity with the staff and render them more accessible and potentially more approachable. There would seem to be a significant emphasis upon student learning support and the students themselves seem to both recognize and value such.

As a private university, there is a focus on education with an emphasis on degree programs that are selfsustaining in terms of finances. Therefore, the workload profile of the staff is teaching-oriented; however, research is an integral part of the strategy and the aspirations of the university, and while this is clearly evident an environment needs to be maintained that fully recognizes, measures and rewards research endeavour.

UCLan Cyprus has a very strong engagement and linkage with UCLan UK at Preston. Joint planning of education appears to work very well. It is important that UCLan Cyprus continues to leverage resources and skills at UCLan Preston and conversely that UCLan Preston leverages emerging expertise at UCLan Cyprus. This relationship can prove mutually beneficial.

Strengths

The School is well-managed and the small size of the faculty supports the joint planning and delivery of education. The team spirit appears to be very good with a palpable sense of collegiality. Overall morale and collegiality seem to be high which results in a collective direction of travel for the School.

Areas of improvement and recommendations

As the expansion of the School continues so the challenge of retaining the effective communication with both students and faculty will grow. Growth management needs to be mirrored with resource expansion and scalable communication protocols.

UCLAN CYPRUS RESPONSE

Effective communication at all levels is an important aspect for the efficient operations of the School as well as for the learning experience of our students. We agree with the EEC that as the School grows maintaining effective communication will be challenging and as a result, our existing related procedures should be strengthen and enhanced, in line with the Cyprus Agency of Quality Assurance and Accreditation in Higher Education regulations of 2020. As with all other areas of the University's operations, such procedures are continuously monitored, evaluated and revised to ensure effectiveness and efficiency. Necessary resources are also considered on an annual basis at the programme, School and University level, and relevant budget provisions are made to address any new needs as they arise.



2. Teaching, learning and student assessment (ESG 1.3)

EEC REPORT

Findings

The MSc program results in a degree from UCLan Cyprus and a degree from UCLan UK, accredited by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (DIPAE) and respectively by the Quality Assurance Agency UK, respectively. Thus, the planning, implementation, and quality assurance of the MSc is synchronized between Cyprus and UK committees and boards drawing from best practices in the two countries.

The nature of the programme is compatible with distance learning delivery and the methodology provided is appropriate for the particular programme of study.

The University's learning management system supports online teaching, learning and administrative processes. This is a Blackboard installation with all the basic online services available. The platform usage is combined with MS Teams to specifically provide both synchronous and asynchronous tools to support the interaction needs of students with the lecturers, the other students and with the materials. The platform also provides e-assessment procedures through quizzes with automatic feedback in order to assess students' knowledge. The provision of more complex forms of e- assessment to assess competences and skills, such as critical thinking, communication and teamwork, was not shown.

The proposed courses have a complete syllabus plus a weekly study guide that includes relevant information: learning objectives and outcomes, learning and teaching strategy, assessment procedures, module pass requirements, material to use, activities to perform, lab-supported practical tasks, self-assessment exercises, primary and complementary bibliographic references and recommended study time. Each course has an adequate number of hours of synchronous communication between teacher and students.

Formative assessment of the courses is based on submitted reports with provision of feedback during the course counting up to 50% of the final grade while summative assessment is based on a mandatory final onsite exam counting up to 50% of the final grade. Assessment procedure is completed with a number of online quiz-based assignments during the course. Optional formative (self-assessment) activities are included in the weekly study guides in order to self-evaluate student knowledge and skills of the course.

Collaboration among teachers and students (and among students) is conducted through the online forums of the subject and other forums that can be created ad-hoc for facing special needs. In addition, collaboration among students is promoted by collaborative activities during live lectures and in virtual laboratories.

Strengths

The MSc emphasizes real-life relevance and graduate employment situations as well as industry requirements and needs are routinely monitored.

The staff are well aware of the quality assurance policy and it is an *integral* part of the everyday operations.

The students benefit from a very good student-teacher ratio and student feedback is very positive. It was clear that staff were going above and beyond what could be reasonably be expected in answering queries and being responsive in a timely manner.



The assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. The number of students in the teaching rooms is suitable for theoretical, practical and laboratory lessons.

Student workload is designed for and a regime is agreed before the start of academic terms. Movement of coursework deadlines is discouraged in order to maintain a workload balance for students and avoid coursework clustering. This is managed effectively and communicated clearly with staff and students.

The EEC considers the weekly study guides a best practice to determine the work to be done every week for the students.

The EEC recognizes the many benefits of collaboration among students promoted by collaborative activities organized in online teams, though it was not detailed the procedure, assessment and specific support available for these activities.

Areas of improvement and recommendations

The EEC believes that onsite final exams may not be in line with the learning style of online students, and learning models based on continuous assessment during the course could be reinforced instead. In addition, the use of peer- assessment as well as gamification strategies are encouraged to increase the student levels of motivation and engagement with the e-assessment process.

From the documentation provided and the information gathered from the meeting, it was not clear if formative assessment provides feedback based on rubrics, nor whether these rubrics are shared with students. In addition, more sophisticated forms of feedback based on intelligent tutoring systems and conversational pedagogical agents could be considered to support immediate and automatic feedback to students and self-evaluate their advances.

The university' learning management system provides learning analytics tools for monitoring student performance based on collecting information from the student with lower grades, poor participation or with undelivered activities. However, the EEC believes that more sophisticated forms of learning analytics mechanisms based on AI and specifically machine learning could be used to monitor and predict student performance and dropout in order to be able to provide timely corrective measures. This is strongly recommended in the case of the University's expansion plans through increasing the academic portfolio and student ratio per virtual classroom.

The EEC notes the desire to facilitate synchronous learning and indeed acknowledges the benefits that can derive from such.

While the EEC recognises the benefits of any form of collaboration among students, the online synchronous collaboration among students was perceived as problematic if the program is open internationally and attended by students from different time zones. It was not clear how the university would support this type of collaboration from the coordination perspective.

UCLAN CYPRUS RESPONSE

"The EEC believes that onsite final exams may not be in line with the learning style of online students, and learning models based on continuous assessment during the course could be reinforced instead."

We are in agreement with the EEC's recommendation. Although the programme includes various continuous assessment methods, onsite final exams cannot be replaced by any other method of assessment. The implementation of onsite final exams as assessment methodology for distance learning programmes is



required by the CyQAA (see https://dipae.ac.cy/index.php/el/nea-ekdiloseis/anakoinoseis-el/166-2018-07-13-exetaseis-ex-apostaseos-programmatapspoudon).

"In addition, the use of peer- assessment as well as gamification strategies are encouraged to increase the student levels of motivation and engagement with the e-assessment process."

The teaching and learning strategy of the MSc Cybersecurity programme already includes aspects of gamification through the utilisation of the virtual cybersecurity laboratories, where the students can work on technical challenges of different levels of difficulty, retrieve tips in case they need more feedback to complete a task, track their progress across activities, etc. Also, the students are encouraged to provide their feedback to peers through forums and online class activities. We would like to assure the committee that motivating/engaging the students in the learning process is a priority for the MSc Cybersecurity team. The team is regularly updating the teaching and learning approach to include engaging activities and maintain the students' motivation in the learning process.

"From the documentation provided and the information gathered from the meeting, it was not clear if formative assessment provides feedback based on rubrics, nor whether these rubrics are shared with students."

As indicated by the EEC, "The teaching staff seems to have regular and effective communication with their students and provide timely and effective feedback to their students. Students were very complimentary of access to staff and appreciate the criteria and the method of assessment as well as the criteria for marking being published in advance. The learning process is properly designed to achieve the expected learning outcomes." (EEC report, page 20). In general, for all assessments within the programme, students receive an assessment brief, which provides a description of the assessment, the targeted assessment learning outcomes, the assessment guidelines, and more importantly, the marking criteria (rubric) for the specific assessment.

With regards to formative assessment, students receive feedback based on three key rubrics: 1) applied learning, 2) critical thinking and 3) research skills. In formative assessments students need to demonstrate that they can apply their knowledge to work on practical activities, which often entails conducting further research/investigation to address the requirements of the assessment and report their findings, while demonstrating critical thinking. These rubrics are discussed with the students so that they are aware of the expected learning outcomes and how their performance will be assessed.

"In addition, more sophisticated forms of feedback based on intelligent tutoring systems and conversational pedagogical agents could be considered to support immediate and automatic feedback to students and self-evaluate their advances."

As observed by the EEC, the current learning management system (LMS) used by the programme (Blackboard) allows for real-time automatic feedback to be provided to students for different type of assessments (e.g. formative, self-evaluation). "*The platform also provides e-assessment procedures through quizzes and automatic feedback in order to assess students' knowledge*" (EEC report, page 15). Given the small number of students on the programme, currently, the team is able to provide students with personalised mentoring and tutoring as well as feedback on their performance with specific assessments, modules and the overall programme; something that it is highly valued by our students. As indicated by the



EEC, "The University and the School advocate student-centred learning and the evaluated program has a relatively small number of students resulting in a favourable student-teacher ratio. The students appear to enjoy solid tutoring and mentoring in the course. The small numbers engender familiarity with the staff and render them more accessible and potentially more approachable. There would seem to be a significant emphasis upon student learning support and the students themselves seem to both recognize and value such." (EEC report, page 10).

We agree with the EEC's recommendation that as the programme grows, especially in terms of student numbers, it will be beneficial to have access to a more sophisticated intelligent tutoring system. This will allow the programme team to balance their workload for providing support and feedback to large cohorts of students. To this end, the University is committed to monitor the student recruitment and investigate more advanced on-line systems to complement our existing LMS (Blackboard).

"The university' learning management system provides learning analytics tools for monitoring student performance based on collecting information from the student with lower grades, poor participation or with undelivered activities. However, the EEC believes that more sophisticated forms of learning analytics mechanisms based on AI and specifically machine learning could be used to monitor and predict student performance and dropout in order to be able to provide timely corrective measures. This is strongly recommended in the case of the University's expansion plans through increasing the academic portfolio and student ratio per virtual classroom."

As part of its student-centred approach, the University has a Students Attendance and Engagement Monitoring process for monitoring student attendance and performance for each programme of study and take actions accordingly. As part of the process, the University has an electronic attendance monitoring system, which identifies students with low participation. For distance learning programmes, the attendance monitoring is done through our LMS (Blackboard), which provides reports and analytics on students' access to the system, specific module material and specific module activities. Additionally, academics identify any students who may be facing difficulties with their studies or they may not have a satisfactory engagement with their studies. The Student Support office collects further information on these students, and then the School SEAM Board (Student Engagement and Attendance Monitoring Board) convenes to evaluate each case and propose a plan of action to support the students. Although this process has shown to be very effective given the small number of students for the MSc Cybersecurity DL programme, we acknowledge and agree with the recommendation of the EEC that if our numbers increase significantly, the process followed for the programme will need to be enhanced and supplemented by a more sophisticated electronic tool based on AI, which can provide further student monitoring analytics. Student support and retention is one of the main priorities for the University, and as such, the University is committed to continue monitoring the student recruitment as well as investigate more sophisticated tools for student performance and take any necessary actions accordingly.

"The EEC notes the desire to facilitate synchronous learning and indeed acknowledges the benefits that can derive from such.

While the EEC recognises the benefits of any form of collaboration among students, the online synchronous collaboration among students was perceived as problematic if the program is open internationally and attended by students from different time zones. It was not clear how the university would support this type of collaboration from the coordination perspective."

The MSc Cybersecurity DL teaching strategy mainly follows a synchronous approach, while there are also asynchronous learning activities embedded in the programme. Student collaboration is one of the programme activities that is primarily done asynchronously. The main reason for having student



collaboration asynchronously is exactly the one that EEC identified, i.e. it is difficult to have students from different time zones collaborating together. Although we plan for asynchronous collaborative student activities, until now, the students recruited in the programme were from similar time-zones (+/- 3 hours) and as a result, we adjusted some of these activities to run synchronously (e.g. live classroom discussions and breakout rooms, student group meetings, etc.). It should be noted though that this is an exception due to the existing student composition, and not the standard practice for a more diverse student audience. For example, synchronous classroom discussions and breakout rooms are scheduled as asynchronous activities through Blackboard discussion board and closed groups. Through the discussion board, students have the opportunity to introduce themselves, share information and network with each other. They are also able to provide answers on the discussion board to questions posted and the instructor can monitor certain discussion boards to provide further feedback. The classroom discussions, breakout rooms, forums, chat rooms, etc. are also available to those students who cannot attend a synchronous session and allow them to initiate any further discussion or to contribute with their own perspective of the topic.

3. Teaching Staff

(ESG 1.5)

EEC REPORT

<u>Findings</u>

There is evidence of an appreciation of high-quality research.

Staff seem generally motivated to engage in research and would appear to have an ambition to produce high quality and impactful research.

The university provides certificated training programs to faculty members in the form of professional development workshops, seminars relevant to distance learning.

Strengths

The teaching staff seems to have regular and effective communication with their students and provide timely and effective feedback to their students. Students were very complimentary of access to staff and appreciate the criteria and the method of assessment as well as the criteria for marking being published in advance. The learning process is properly designed to achieve the expected learning outcomes.

Staff seem aware of the need for adherence to research ethics, FAIR principles, and GDPR compliance. Overall, staff seems to understand research ethics.

Areas of improvement and recommendations

The EEC recommends that research activities be supported and facilitated and that this is accommodated explicitly as case studies, use cases and experiential pieces within teaching particularly taught postgraduate programmes.

It was unclear to the EEC as to why National restrictions (30?) by the AQAA would be placed on student programme cohorts. This was deemed particularly confusing when the programme was delivered through distance learning. The EEC would invite reflection upon this as this could unfairly disadvantage UCLan Cyprus in attracting overseas students.

Enhanced engagement and patronage with industry is encouraged. Industry should be encouraged to for example:

• Provide guest lectures;



- Sponsor dissertation prizes;
- Sponsor research travel bursaries;

It is noted that the School engages with joint shared dissertation topics. However, the benefits generally from engagement overall must be mutually beneficial.

UCLAN CYPRUS RESPONSE

"The EEC recommends that research activities be supported and facilitated and that this is accommodated explicitly as case studies, use cases and experiential pieces within teaching particularly taught postgraduate programmes."

The MSc Cybersecurity curriculum is both research and industry informed. Academics do a regular research and technology scouting, alongside their own research activities, integrating research and industrial project outcomes into the delivery of the curriculum. Although the overall programme curriculum delivery is updated yearly, on many occasions, specific learning material is updated during the academic year to cope with the dynamic nature of the threat landscape and relevant research and technological advances. For example, learning material was recently enhanced with legal and ethical use case scenarios from the EU funded CANVAS project, with outcomes from the Mitre ATT&CK project related to Advanced Persistent Threats activity, etc.

Furthermore, we would like to emphasize that MSc Cybersecurity students have the opportunity to conduct applied research in the context of their Master's Project (thesis), working on real world problems and contributing innovative solutions. Evidence of the quality of research work conducted by the students is the scientific publications that resulted from their thesis work. Latest student-led research papers include the following (student names are underlined):

- <u>Chatzis, P.</u>, Stavrou, E. Cyber-Threats to Border Control Infrastructures, Computers & Security, Elsevier Journal, (under submission).
- <u>Pierre, J.</u>, Stavrou, E. Towards Designing Advanced Password Cracking Toolkits: Optimizing the password cracking process, in Proceedings of ACM UMAP (User Modelling, Adaptation and Personalization), Adaptive and Personalized Privacy and Security Workshop, June 2019.

Moreover, students who are conducting applied research are working towards the design and development of innovative open-source cybersecurity applications, which are shared on GitHub. The applications were demonstrated in 4 invited training sessions with participants from the industry and academia.

We would like to ensure the EEC that we greatly value research informed and industry informed teaching and we will continue working in this context, strengthening even further the research component in the MSc Cybersecurity.

"It was unclear to the EEC as to why National restrictions (30?) by the AQAA would be placed on student programme cohorts. This was deemed particularly confusing when the programme was delivered through distance learning. The EEC would invite reflection upon this as this could unfairly disadvantage UCLan Cyprus in attracting overseas students."

We would like to thank the EEC for the recommendation. As indicated, the size of the student programme cohorts/audiences is regulated by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CyQAA) regulations of 2020, article 24.2d ("για τα εξ αποστάσεως προγράμματα σπουδών ο αριθμός φοιτητών τόσο σε πτυχιακά όσο και σε μεταπτυχιακά προγράμματα σπουδών επιπέδου Μάστερ δεν υπερβαίνει τους τριάντα (30) ανά ακροατήριο"). Following the EEC's recommendation, we can open a dialogue with the CyQAA regarding this matter and discuss the issue further.



"Enhanced engagement and patronage with industry is encouraged. Industry should be encouraged to for example:

- Provide guest lectures;
- Sponsor dissertation prizes;
- Sponsor research travel bursaries;

It is noted that the School engages with joint shared dissertation topics. However, the benefits generally from engagement overall must be mutually beneficial."

The MSc Cybersecurity DL team considers it vital to build and sustain a strong network of partners and longterm collaborations with depth and breadth. Since its development, the programme developed a large network of national and international collaborators, especially industry partners, which have been informally engaging with the programme, in terms of providing advice on curriculum development, industry knowledge/skill needs and student employability aspects. Moreover, our industry partners have been engaging in other educational activities, such as guest lectures, real case studies, real life student projects, student internships, student competitions, student awards and many more. We welcome the EEC's constructive recommendation to enhance our engagement with industry and we acknowledge the substantial benefit and value this can offer to the programme as well as our partners. We will continue strengthening our industry partnerships and collaborations.



4. Students

(ESG 1.4, 1.6, 1.7)

EEC REPORT

Finding:

The students benefit from a very good student-teacher ratio and student feedback is very positive.

Strengths:

Modules have been aligned with professional certification. The EEC noted that there had been regularisation of entry requirements across masters programmes. The EEC also noted the desire to deliver synchronous learning and embrace active learning. Furthermore, the panel welcomed the desire to build an inclusive and integrated *learning community*.

It was also noted that real world relevant examples were incorporated into the curriculum.

Further strengths were noted around the very low drop out rate (reported at 4%). In addition, student feedback was actively sought at module end and on an on-going basis throughout module delivery.

Areas of improvement and recommendations

The EEC noted that some information critical to students was dispersed throughout the university website. Perhaps someone could conduct a trial student registration and follow the pathways that a 'real' student would face to ascertain the completeness of induction material supplied.

UCLAN CYPRUS RESPONSE

We thank the EEC for the recommendation. We have requested a review of the information available on our website, and specifically a thorough evaluation of the online student registration process and guidelines available. In addition to the information available on the University website, it is worth mentioning that all UCLan Cyprus students have access to a very detailed and well organised intranet service through their MyUCLan accounts where all procedures, guidelines and training recordings are available for all the students, DL students not being an exception.



5. Resources

(ESG 1.6)

EEC REPORT

<u>Findings</u>

Overall, the programs receive feedback from the industry and the graduating students appear to have excellent career prospects in the industry. One student is using the course as a stepping stone to a PhD. The interviewed students emphasized the value of the course in their career progression.

Students are given sufficient registration guidelines.

The University has a distance learning unit responsible for providing pedagogical and technical support for designing, creating, implementing and evaluating online courses. The unit addresses the requirements for study materials, interactive activities and formative and summative assessment in accordance with international standards.

The University also provides a handbook with academic regulations underpinned by the university procedures and policies with guidelines for the development and delivery of learning in general and distance learning in particular that establishes the main characteristics a distance learning course should have. It is a good reference that guarantees the quality and homogeneity of the distance learning course.

The EEC noted the provision of E3HUB as a distance learning portal. This seemed to provide the appropriate support for students registered on this programme.

Strengths

The building facilities that were assessed based on the provided videos appear to be excellent and remote education is implemented following good practices. The laboratories and IT infrastructure support studies and research activities. There is adequate capacity for students.

Procedures are revised regularly. A case in point is the categorisation of plagiarism cases. Students are made aware of resources through induction training. Procedures are in place for receipt of coursework.

The distance learning unit, even if not shown in detail during the meeting, is considered a best practice, due to its potential structure, resources, infrastructures and services devoted to enhanced distance learning. The EEC believes that it can be a powerful support for guaranteeing and maintaining the quality of the provided teaching while providing a good ground to faculty members to face distance learning.

The University's handbook is a useful resource that guarantees the quality and homogeneity of the distance learning courses and provides a good ground to faculty members to face distance learning. The EEC also believes that continually evaluating the quality assurance of distance learning by non-mandatory external accreditation organizations is a good practice.

When delivering programmes through distance learning, effective access to learning resources is critical. Remote access to library and learning resources was facilitated effectively. The EEC note the provision of online videos to support remote library resource access through the Athens login. Furthermore, online resource training through How To? videos and remote team meeting support are provided.

Areas of improvement and recommendations

Even though the online courses include a good variety of learning materials (videos, papers, e-books, etc.) which is good for distance learning, the EEC believes that some considerations should be taken into account for the video lectures and video materials to be more usable and accessible for students:



make them shorter, include the teacher in all the videos to provide non-verbal communication, and add subtitles for accessibility questions.

UCLAN CYPRUS RESPONSE

We thank the EEC for the constructive recommendation. The MSc Cybersecurity DL team acknowledges the importance of the recommendation and will work towards enhancing the programme's video material.



6. Additional for distance learning programmes (ALL ESG)

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7. Additional for doctoral programmes (ALL ESG)

Not applicable



8. Additional for joint programmes (ALL ESG)

Not applicable



B. Conclusions and final remarks

EEC REPORT

The EEC evaluated the M.Sc. in Cybersecurity based on the provided accreditation reports and the remote site visit.

The School and the program were found to have high standards and meet the quality expectations. Based on the materials and the site visit, the EEC has identified a number of areas in which the School and the MSc can make improvements to strengthening their profile and increasing impact.

The program provides practice and industry-oriented cybersecurity education that is aligned with professional requirements. The program structure is versatile and involves the necessary laboratory and cloud-based experiments to promote an empirical understanding of cybersecurity topics. The modules and their key focus areas are relevant and interesting including IoT, industrial systems, ethical hacking, and information warfare. The program receives feedback from the industry regarding the topics.

UCLAN CYPRUS RESPONSE

The School of Sciences and the MSc Cybersecurity DL team would like to thank the EEC members for their valuable feedback towards enhancing our MSc Cybersecurity DL programme. The constructive discussions with the EEC members during the evaluation visit as well as the comments provided on the EEC report enabled our team to reflect on our existing practices and identify opportunities to strengthen them. We have addressed the EEC's recommendations, which we believe have significantly enriched our programme and improved its market appeal and we will continue applying the best practices as identified by the EEC.



C. Higher Education Institution academic representatives

Name	Position	Signature
Prof. Irene Polycarpou	Head of School of Sciences, Chair of School of Sciences Academic Standards and Quality Assurance Committee	thefingens
Dr Eliana Stavrou	Course Leader of MSc Cybersecurity DL programme	Toppe
Dr Nearchos Paspallis	Deputy Head of School of Sciences, Chair of the Teaching and Learning Enhancement Committee, Member of School of Sciences Academic Standards and Quality Assurance Committee	Moght
Dr Kalypso lordanou	Deputy Head of School of Sciences, Member of School of Sciences Academic Standards and Quality Assurance Committee	Xly5a
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