ΔΙΠΑΕ CYQAA

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

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Doc. 300.1.2

Higher Education Institution's Response

Date: Date.

- **Higher Education Institution:**

  Open University of Cyprus and University of Cyprus

- **Town:** Nicosia

- **Programme of study**
  Name (Duration, ECTS, Cycle)

  In Greek:

  N/A

  In English:

  Joint MSc in Cognitive Systems (COS), 120 ECTS,

  Postgraduate programme (2nd cycle)

- **Language(s) of instruction: English**

- **Programme's status: Re-Evaluation**

- **Concentrations (if any): N/A**

  In Greek: Concentrations
  In English: Concentrations

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 300.1.1/1 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. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*

- *In particular, under each assessment area and by using the 2nd column of each table, the HEI must respond on the following:*

    - *the areas of improvement and recommendations of the EEC*
    - *the conclusions and final remarks noted by the EEC*

- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report **without any interference** in the content.*

- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in *.pdf format and named as annex1, annex2, etc.*

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

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
We recommend significantly reducing the number of learning outcomes per course. One would normally expect 3-5 per course. They can be understood as a type of contract defining the core skills that a student will acquire upon successful completion of the course, not a full description of every aspect touched upon in each lecture.	We have adopted the committee's recommendation and reduced the number of the program's learning objectives in the application form to 6 (**Appendix 1**). After appointment of the course coordinators, and prior to the beginning of the Fall 2024-25 semester, we will ask them to adjust their course's LOs to 3-5 in the Study Guide of each course.	Choose level of compliance:
We recommend that the programme produces clear **assessment matrices,** which detail: ○ How assessments and learning outcomes relate to each other in each course, that is to say, indicate what learning outcome is covered by what assessment ○ How the learning outcomes of each goal map onto the overall learning outcomes of the programme	We agree with the committee's recommendation. We will revise the assessment matrices to match the new learning outcomes of each course and the correspondence to the overall learning outcomes will made clearer. We will start implementing this recommendation in the summer of 2024, to be ready for the Fall 2024-25 semester. Given that a substantial amount of our courses are conducted by teaching associates, this preparation will begin as soon as the hiring of new adjunct faculty for that semester is finalized.	Choose level of compliance:
Following the production of such assessment matrices, we recommend that the programme reconsiders what courses it considers compulsory and what courses can be electives. The committee has no requirements it wishes to impose on any specific course, but it does note	This is an issue that has been discussed thoroughly by the Academic Programme Committee and decisions have been made to modify the list of compulsory and elective courses. We have discussed making COS623 - "Cognitive Systems Design" a compulsory course that will be offered during the first semester of	Choose level of compliance:

that the programme is in Cognitive Systems and would benefit from compulsory content directly relevant to the topic. In particular, it should be ensured that, no matter what specific path a student takes with respect to elective choices, they will necessarily meet all LOs of the programme as a whole.	studies. We have also discussed the possibility of later turning COS512 - "Introduction to AI" into a course on symbolic and neural-symbolic AI, by making at the same time the necessary changes to COS513 (Computational Intelligent Systems). We have also agreed to emphasize generative AI in the syllabus of the course COS513 (Computational Intelligent Systems), as well as to introduce a new course on AI Ethics. Importantly, we have also decided to include an induction course (that is already offered by our partner institution - the University of Cyprus) on the basics of Python, which will be the main programming language used throughout the Programme. As suggested by the committee, we will gradually implement these changes, following updates in the learning goals, and their matching to the overall goals of the programme.

In addition to the significant effort required for the changes, the ongoing evaluation for the hiring of new adjunct instructors at OUC, the need to hire new instructors for new courses to be offered for the first time due to the restructuring, and the joint nature of the Programme that requires approval from internal bodies of the two Universities, we believe that, realistically, these changes could be implemented with effect for the academic year 2025-2026. We will submit the changes for review by CYQAA as soon as the updated structure of the program is ready. | |
| Similarly, we recommend a review of the course contents and ensuring that it remains up | We agree with the committee. Some of the changes regarding restructuring and creation of a new | Choose level of compliance: |

to date and relevant. While some courses provide excellent current content relevant to cognitive systems (COS623 and COS513 for example), some timely topics are currently not reflected in the course, notably recent advances in generative AI along with modern ethical and societal implications that the development of intelligent technology entails.	course described above cover this point.	
We recommend that all software currently used in the programme is inventoried and measures undertaken to reduce the diversity, for example, by settling on one programming language and one statistical language for the entirety of the programme.	We agree with the recommendation. We have decided to set Python as the main programming language of the programme and R & SPSS as the tools for statistical analyses. Please note that, upon request, OUC provides activation codes for up-to-date versions of SPSS to students or faculty who need it. R is freely available.	Choose level of compliance:
We recommend producing study guides for the course codes associated with the thesis and similar documentation for the placement course. Although it is understood that the programme merely implements University policy on the matter, this should be documented in the programme itself, including the intended learning outcomes.	The university-wide placement course study guide exists and has already been shared with CYQAA. It is written in Greek and in English (**Appendix 2**). The guides for the two Master's Thesis courses are also **attached** (**Appendix 3**).	

2. Student – centred learning, teaching and assessment
(ESG 1.3)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Synchronous lectures should be offered not too often to place more emphasis on asynchronous delivery (e.g. asynchronous discussions in Moodle or professionally recorded video lectures) to provide flexible learning opportunities independent of time and space for distance learners.	Initially, the Programme was established around a cycle of lectures/assignments that took place every 2 weeks. However, following the instructions by CYQAA, we restructured the programme to include 12 interactive assignments and weekly synchronous meetings. These meetings are recorded and students can watch the videos at their own pace. Moreover, we encourage instructors to pre-record lectures or create short videos with concepts relevant to the lectures, and use brief weekly meetings for additional insights of the material, logistics, practical aspects of weekly activities or assignments, etc. Also, we encourage them to keep these weekly meetings short. Following this practice, the majority of the lectures is asynchronous, whereas brief weekly meetings help students keep on track and follow the pace of the course. Moreover, weekly activities include a combination of good practices for asynchronous engagement, including asynchronous forum discussions and other interactive assignments suggested by the committee.

We agree with the recommendation of the committee that too many synchronous meetings also have disadvantages. Adopting the recommendation, we will revert to the initial format of fewer weekly synchronous meetings that prioritizes asynchronous delivery. | Choose level of compliance: |

One possibility, for example, would be to offer only 4 to 6 two-hour synchronous sessions per module, for which the students prepare themselves with a professionally recorded video lecture. The valuable synchronous time with the lecturers can then be used for more intensive discussion and especially for collaborative learning opportunities.	We agree with this recommendation, which we will implement during the restructuring of the programme. Short bi-weekly meetings (i.e. 6 sessions) is the format that we used to follow. We think that this will be good both for the percentage of students typically not present in synchronous meetings for various reasons (work, family obligations, different time zones, etc) who have a stronger preference for the asynchronous format, and the percentage typically present with a preference for more synchronous formats. Our experience suggests this is a balanced approach for the needs of all our students.	Choose level of compliance:
The accessibility of learning materials and information for students with impairments should be increased. Ensure that all content is easily readable on different devices.	This is an important matter that concerns the Open University as a whole. For the time being, the mandatory bibliography is provided in accessible PDFs, which work with assistive technology software and devices for people with low vision and blind people. Moreover, OUC is using Moodle as its eLearning Platform, which supports extensive accessibility tools (e.g. screen readers, videos, subtitling, etc.). As program administrators, we make sure that instructors take accessibility issues into account when updating course material.	Choose level of compliance:
Opportunities for internationalization "at home" could be used by inviting international speakers to synchronous online conferences.	We agree with this suggestion. We have successfully implemented this approach in the past. For example, COS, like many OUC programs, has hosted invited teachers through the Erasmus+ Programme. We still feel that we can focus more on increasing the opportunities we provide to our students to attend presentations by invited speakers. Invited talks will be held online or in	Choose level of compliance:

	a hybrid format. We will expand existing synergies and collaborate closely with the University of Cyprus and the CYENS Centre of Excellence to organize joint events that can benefit our students.	
A policy on the ethical use of AI applications, especially generative AI applications for text creation, should be developed and adopted - not only with regard to the assessment of assignments and the prevention of plagiarism but also with regard to the use of such tools to support learning and teaching.	This is an important matter that has now been addressed. The Open University has established a policy on the use of AI that covers matters on the use of generative AI by educators, students, administrative personnel and researchers (available in Greek and in English on OUC's website). The University has also established a standing Senate Committee on AI to monitor the implementation of the policy. Finally, starting from summer 2024, the University will offer additional seminars and workshops to students addressing generic skills needed for their studies, including guidance on the ethical use of AI as learning tools.	Choose level of compliance:
The programme should consider the use of more open educational resources (OER) and open textbooks.	We agree with the recommendation. All instructors are encouraged to use open material wherever appropriate. Moreover, please note that through our agreement with OSDEL, the University is allowed by Greek publishers to digitize and upload a percentage of the total number of pages (a maximum of 15%) from numerous textbooks, and this way we can provide our students free access to pay-walled teaching resources. These resources are duly selected by instructors.	

3. Teaching staff
(ESG 1.5)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Staff are not routinely trained in general or e-learning pedagogy or tools. Although teaching is currently to a high standard, we recommend that relevant training become mandatory in order to assure standards going forward.	Through institutionalised procedures, **appropriate training, guidance and support is provided to teachers**, so that they can effectively support the educational process. Especially for the new Adjunct Faculty (AF) members and the coordinators of courses, online training is <u>mandatory</u> and is provided by the E-Learning and Digital Content Management Sector and the Laboratory of Educational Material and Methodology of OUC, in the technological tools and Distance Education tools used in its Program of Study. The Library also provides online training in the use of its electronic resources and other tools. It is a requirement for new instructors (Faculty and AF) to complete this training within their first semester of teaching, otherwise they cannot be re-selected as instructors in upcoming semesters.

The **training programs** that have been designed and offered for the training of the academic staff in matters of distance teaching and appropriate utilization of the possibilities of the educational technologies are the following: | Choose level of compliance: |

1. **Title: Teaching Staff Training**

Type of training program: Topic with asynchronous content, but with availability for support through alternative channels (forum, email, telephone, teleconference)

Duration: The whole Academic Year.

Recipients: All Instructors (Faculty / AF) of the current Academic Year.

Means: It is offered as a Thematic Unit in the eClass e-Learning Platform by the Unit of Informatics, Technologies and Library (Department of E-learning and Digital Content Management).

Content: Educational material in various forms, regarding the services offered to teaching staff (Asynchronous Platform, Synchronous Platform, Video Platform, Plagiarism Detection Service), which aims at the optimal utilization of the services of the Distance Learning Platform.

2. **Title: Introduction to distance learning, learning and assessment**

Objective: The purpose of this training is, on one hand, to inform the academic and

teaching staff of OUC about the modern methodologies and practices related to teaching, learning and evaluation in distance learning programs. At the same time, through the practical activities of the courses, the gradual familiarization of the academic staff with the available tools provided by the eClass Learning Platform as well as with the procedures of planning and development of distance activities and audiovisual material is sought.

Duration: 12 weeks.

Recipients: All Educators (AP / AFT)

Means: It is offered as a Thematic Unit on the E-Learning Platform by the Laboratory of Educational Material & Methodology.

Content: Section 1 presents theoretical adult learning models and design methodologies for measurable expected learning outcomes. Section 2 analyzes distance learning activities, while Section 3 presents the steps of the basic process followed to create successful video lectures. Section 4 examines ways to promote the active involvement of students in online learning and finally, Section 5 analyzes key strategies for effective assessment and feedback on the learning process.

4. Student admission, progression, recognition and certification
(ESG 1.4)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
The initial induction course could be improved by including some content in regards the programme so that students begin to understand, at an earlier stage of the programme, of the required work that the programme will demand from each of them, as well as give them a better understanding of the content of the module.	There is a University-wide induction course for all incoming students. It informs them about the educational methodology of the Open University of Cyprus, which is specialised in open and distance education, the eLearning Platform, and the teaching and learning tools that we use in the COS program also. Moreover, it introduces students to the support provided by the academic and professional staff. There are also Modules and Webinars for the use of the Library, eClass, etc. Regarding COS, students are introduced into each course by their tutors at the beginning of each Semester. New students are especially encouraged to asynchronously review the information on the overall structure and specifics of COS provided in our website. Finally, in the spirit of customization of induction procedures, we have created a thematic unit for each of the three Faculties in the OUC. This is mainly addressed to new students, as it includes useful information regarding all programs of each faculty, but it is useful for old students as well. All students of the Faculty of Pure and Applied Sciences (PAS), where COS belongs, are registered in this thematic unit by default. Apart from information of interest for all PAS programs, there is a section with specialized information within the thematic unit. Following the suggestion of	Choose level of compliance:

	the committee, we will include some course-relevant information for new students in that area by the end of the next academic year (2024-25).	
We recommend considering drawing up guidelines to describe the required standard for each grading level while allowing flexibility in the content of the content and demands of the module. This would help in establishing consistency when new tutors are hired for the programme.	We agree with this suggestion. We will prepare the guidelines along with the assessment matrices, upon the completion of the hiring of the new adjunct instructors, by September 2024.	Choose level of compliance:
Given the focus on machine learning and AI methodologies of this programme, it is paramount that services providing computational power are made mandatory for students. By ensuring that these essential resources are in place, students are afforded the opportunity to experiment with a diverse range of models without constraints. Having access to such computational services will pave the way for faster training procedures, allowing students to maximise their learning experience.	We are currently in contact with the University of Cyprus to discuss various options that will allow our students full access to the computational resources that are available there. This will take some time to be implemented, because any decision needs to be approved and validated following the appropriate procedures in the two institutions. Moreover, OUC is a member of the National (Cypriot) Assembly of PRACE (Partnership for Advanced Computing in Europe), along with ten other research and higher education institutions in Cyprus. PRACE is a panEuropean initiative with the purpose of providing computational resources to the local scientific community for research purposes. During a recent local meeting of the National Assembly, our representative has proposed expanding this service to also include access by students for educational purposes, and support such educational needs as well. The	Choose level of compliance:

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	members of the National Assembly in Cyprus, including the Cyprus Institute, the coordinating organization for Cyprus, had a very positive reaction to this proposal. We therefore expect this to be a possibility for our students soon.	

5. Learning resources and student support
(ESG 1.6)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Although the current small teams of the LEMM and the Information Technology Services are providing good services, it is highly recommended to increase the staff.	The University has advertised a new administrative position for the Laboratory of Educational Methodology and Materials. The deadline for applications was April 24, 2024, and the examinations took place in June 2024. Hence, after this recruitment, the LEMM will be staffed with 4 people.	Choose level of compliance:
Given the growing significance of distance learning programmes, it is essential to address the latest trends in educational technology and online learning in a professional manner to remain competitive. This includes developing open educational resources, utilizing learning analytics, and incorporating artificial intelligence applications such as chatbots for academic guidance and student counseling. Priority should be given to revising learning materials to improve accessibility. In view of this wide range of tasks, an increase in staff seems to be essential.	We thank the Committee for their recommendations. Indeed, we are aware of the current trends in educational technology, and we are constantly upgrading our eLearning tools and methods to improve student learning experiences. In fact, between 2019 and 2022, the Open University of Cyprus has received 3 golden and 1 silver award in the Cyprus Educational Leaders Awards for such eLearning innovations. We are pushing things forward, and as per the previous comment, the increase in staff is currently under development. It should be noted however that new administrative positions need to be approved by the Government, since the OUC is a public university.	Choose level of compliance:
The faculty training provided by LEMM should be compulsory for all new permanent and adjunct faculty members.	Since the academic year 2023-24, the training provided by the University by LEMM and the eLearning and Content Management team are compulsory for all new faculty and adjunct faculty members.	Choose level of compliance:

6. Additional for doctoral programmes
(ALL ESG)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
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7. Eligibility (Joint programme)
(ALL ESG)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Resources available at UCY, for example computational resources, appear under-utilised to us. We recommend that the Universities reconsider the resources they may be able to offer to the programme, including to support the implementation of some of the recommendations in this report.	This section is Not Applicable (NA) for COS. The response to this comment is included in the final remarks section.	Choose level of compliance:

B. Conclusions and final remarks

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
Many of the issues we identified with the programme stem from the always-difficult problem of collating a series of courses run by individual academics into a coherent whole. In particular we noted that many modules had many learning outcomes, which could not be readily mapped on to the proposed assessments. We also noted that there was no central view of the (hardware and software) course requirements, such that students could be required to use R, python, MATLAB, prolog, and several cognitive systems architectures, sometimes in exercises which would require high-powered or even multiple-GPU computers. We recommend that a programme review urgently addresses both of these issues. The review may help to identify needs which UCY can help with, such as access to computer servers, experimental facilities, or proprietary software.	The issue regarding multiple resources used has been thoroughly discussed by the programme's academic committee. As described above, we have made decisions to streamline the use of programming and statistical tools and we have initiated a discussion with the University of Cyprus that will make it easier for our students to utilise computational resources. We will also encourage instructors to provide more guidance to students on the use of available resources. Overall, we agree with all these recommendations and, as described above, we have already started implementing changes and exploring different options to address the issues raised by the committee.	Choose level of compliance:
The documentation should also be revised to include details of (or pointers to documentation of) the MSc Thesis and the placement course. We note that the reported length of the Thesis document produced (at 50–100 pages) is long by European standards, and suggest that this is something the academic committee may wish to discuss.	The short study guides for the two COS Master's Theses (I and II) are attached. Similarly, the study guide for the optional placement course, with the details requested by the committee, is available in Greek and in English (**attached**). Given the interdisciplinary nature of our program, the different requirements in various research areas / themes, and the variability of potential thesis types (literature review, experimental, program development, applied, etc…), we avoid setting strict standards in terms of referencing style, length	Choose level of compliance:

	etc. Different students, working in different areas (e.g. Informatics or Cognitive Psychology) can have very different needs that cannot abide by a one-fits-all approach. As with referencing styles, the ideal length of the dissertation may vary. Nevertheless, we are happy to adopt the suggestion of the committee and reduce the requirements of the thesis in terms of length (40-50 pages as a general guideline), in order to better align with current European standards.	
We felt that the online provision was good and that academics were well-supported by the e-learning teams. However these teams are undermanned and it is clear that more technical and pedagogical support is needed (not least, because the online materials don't currently meet accessibility guidelines and there is no capacity to support changing this). We strongly recommend hiring additional distance education support staff. Additionally, we feel that training for academics in best e-learning practice (tools and pedagogy) should be mandatory. We also recommend a restructuring of courses to place more emphasis on high-quality video lectures (not static slides) and less frequent synchronous online sessions, to improve the student experience and provide scalability, in line with the University's ambitions for expansion.	We will adopt the committee's suggestion to restructure the courses in order to emphasize asynchronous delivery and encourage instructors to use video lectures. It is worth noting that there is ongoing discussion and efforts on behalf of the University administration and relevant services to secure the funds necessary to restructure and update teaching materials, enhance accessibility and overall improve the resources used in all courses and all programs. We again point out though that any additional funding needs governmental approval. We have nevertheless communicated to the administration of the Open University the committee's concern about the need for more technical and pedagogical support. The immediate step that we plan to undertake is making use of horizontal transfer of best practices. As we have many experienced faculty and adjunct faculty using these best practices that you suggest (e.g. production of high-	Choose level of compliance:

	quality video lectures, interactive weekly activities, etc.), we will promote collaboration by pairing them with less experienced or new faculty, to encourage them to also use such approaches.	
Finally, we note that an MSc in Cognitive Systems will quickly lose relevance if it is not able to cover modern topics (we note also that some existing modules could be updated). In particular we recommend that the academic committee urgently consider creating modules in AI and Data Ethics, and in Generative AI. We appreciate that additional faculty will be required to teach these courses and suggest that the costs of hiring them will be partly met by the popularity of a more-relevant MSc Programme.	We fully agree with the recommendation and the rationale of the committee. As described above, we have started to redesign the programme and the content of its courses to ensure that they remain timely and relevant.	Choose level of compliance:
We realise that not all of these changes can be made at once, but we think that it is important that they are seriously considered. We observed a high-quality programme with impressive (in some cases exceptional) teaching staff, but the programme will need to move with the times, in structure, content, and delivery, to remain relevant in an increasingly crowded market.	We thank the committee for the nice words. We will make every effort to implement all the recommendations made, which we're sure will benefit our programme and ensure its continued success.	Choose level of compliance:

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C. Higher Education Institution academic representatives

Name	Position	Signature
Prof. Marios Avraamides	Programme Director	
Professor Vayos Liapis	Vice Rector, Chairman of the Internal Quality Committee (IQC)	
Associate Professor Vayia Karaiskou	Representative of the Faculty of Humanities and Social Sciences, Member of the IQC	
Professor Ioannis Manolopoulos	Representative of the Faculty of Pure and Applied Sciences, Member of the IQC	
Assistant Professor Antonios Kafa	Representative of the Faculty of Economics and Management, Member of the IQC	
Mrs. Elena Gregoriou	Head of the Academic Affairs and Student Welfare Services, Member of the IQC	
Mrs. Erato Ioanna Sarri	Coordinating Officer of Rectorate, Member of the IQC	

Date: 23/07/2024