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Doc. 300.1.1/4

Date: 27 October 2023

External Evaluation

Report

(Joint - E-learning programme of study)

• Higher Education Institution:

Open University of Cyprus (OUCY)

• Collaborative Institution(s):

University of Cyprus (UCY)

- Town: Nicosia / Λευκωσία
- School/Faculty (if applicable): School of Pure and Applied Sciences (OUC) / Departments of Psychology and Computer Science (UCY)
- Department/ Sector: n/a
- Programme of study- Name (Duration, ECTS, Cycle)

In Greek:

ΓΝΩΣΤΙΚΑ ΣΥΣΤΗΜΑΤΑ, 120 ECTS, Διιδρυματικό Μεταπτυχιακό πρόγραμμα) In English:

MAGISTER SCIENTIAE "COGNITIVE SYSTEMS"

• Language(s) of instruction: English

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ REPUBLIC OF CYPRUS



• Programme's status: Currently Operating

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 2021 [L.136(I)/2015 – L.132(I)/2021].

• Concentrations (if any):

In Greek: n/a In English: n/a





A. Introduction

This part includes basic information regarding the onsite visit.

The committee met on 26 and 27 October 2023.

On 26 October the ECC members conducted a site visit, in which they spoke to

- University management and the internal review committee
- Department heads and programme coordinators
- Staff of the E-Learning Unit
- Teaching Staff Associated with the Programme
- Representative students and graduates
- Programme Administrators

The presentation took place at Open University of Cyprus (OUCY) and the panel were presented with an overview of the University, and of the School of Pure and Applied Sciences, which, from OUCY's perspective, "owns" the joint programme. Later presentations were made of each relevant University of Cyprus (UCY) department (Computer Science; Psychology); of the Programme's structure; and of the OUCY e-learning infrastructure and support. One additional presentation was made of some research strands with high relevance to the Programme. Presentations were well-constructed and contained much of relevance to the accreditation. One minor issue was that only three students (two graduates; one current) were able to attend the meeting; these students had very helpful things to say, but we have taken care not to give their opinions too much weight.

Fruitful discussions were held throughout. They centred on the student experience (how well students were supported; how their hardware and software needs on a technical Masters programme were supported), on the course content (how learning outcomes were used; what additional topics might need to be covered; how learning outcomes were used), and on delivery (how e-learning was used and supported). We detail our findings from the conversations held and from the accompanying documentation below. Here, we wish to thank those involved with the visit, as organisers, presenters, and discussants. We were cordially received, and the discussions felt collaborative and constructive throughout.



B. External Evaluation Committee (EEC)

Name	Position	University
Arun Bokde	Professor	Trinity College Dublin
Martin Corley	Professor (Chair)	University of Edinburgh
Serge Thill	Professor	Radboud University Nijmegen
Olaf Zawacki-Richter	Professor (DL Expert)	University of Oldenburg
Krinos Vasiliou	Student Member	Cyprus University of Technology
Name	Position	University



C. Guidelines on content and structure of the report

- The external evaluation report follows the structure of assessment areas.
- At the beginning of each assessment area there is a box presenting: (a) sub-areas
 - (b) standards which are relevant to the European Standards and Guidelines (ESG)
 - (c) some questions that EEC may find useful.
- The questions aim at facilitating the understanding of each assessment area and at illustrating the range of topics covered by the standards.
- Under each assessment area, it is important to provide information regarding the compliance with the requirements of each sub-area. In particular, the following must be included:

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- The EEC should state the compliance for each sub-area (Non-compliant, Partially compliant, Compliant), which must be in agreement with everything stated in the report. It is pointed out that, in the case of standards that cannot be applied due to the status of the HEI and/or of the programme of study, N/A (= Not Applicable) should be noted.
- The EEC should state the conclusions and final remarks regarding the programme of study as a whole.
- The report may also address other issues which the EEC finds relevant.





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

<u>Sub-areas</u>

- **1.1 Policy for quality assurance**
- **1.2** Design, approval, on-going monitoring and review
- **1.3 Public information**
- 1.4 Information management

1.1 Policy for quality assurance

<u>Standards</u>

- Policy for quality assurance of the programme of study:
 - o has a formal status and is publicly available
 - o supports the organisation of the quality assurance system through appropriate structures, regulations and processes
 - o supports teaching, administrative staff and students to take on their responsibilities in quality assurance
 - o ensures academic integrity and freedom and is vigilant against academic fraud
 - o guards against intolerance of any kind or discrimination against the students or staff
 - o supports the involvement of external stakeholders

1.2 Design, approval, on-going monitoring and review

<u>Standards</u>

- The programme of study:
 - o is designed with overall programme objectives that are in line with the institutional strategy and have explicit intended learning outcomes
 - o is designed by involving students and other stakeholders
 - o benefits from external expertise
 - o reflects the four purposes of higher education of the Council of Europe (preparation for sustainable employment, personal development, preparation for life as active citizens in democratic societies, the development and maintenance, through teaching, learning and research, of a broad, advanced knowledge base)
 - o is designed so that it enables smooth student progression
 - o is designed so that the exams' and assignments' content corresponds to the level of the programme and the number of ECTS





- o defines the expected student workload in ECTS
- o includes well-structured placement opportunities where appropriate
- o is subject to a formal institutional approval process
- o results in a qualification that is clearly specified and communicated, and refers to the correct level of the National Qualifications Framework for Higher Education and, consequently, to the Framework for Qualifications of the European Higher Education Area
- o is regularly monitored in the light of the latest research in the given discipline, thus ensuring that the programme is up-to-date
- o is periodically reviewed so that it takes into account the changing needs of society, the students' workload, progression and completion, the effectiveness of procedures for assessment of students, student expectations, needs and satisfaction in relation to the programme
- o is reviewed and revised regularly involving students and other stakeholders

1.3 Public information

Standards

- Regarding the programme of study, clear, accurate, up-to date and readily accessible information is published about:
 - o selection criteria
 - o intended learning outcomes
 - o qualification awarded
 - o teaching, learning and assessment procedures
 - o pass rates
 - o learning opportunities available to the students
 - o graduate employment information

1.4 Information management

<u>Standards</u>

- Information for the effective management of the programme of study is collected, monitored and analysed:
 - o key performance indicators
 - o profile of the student population
 - o student progression, success and drop-out rates
 - o students' satisfaction with their programmes
 - o learning resources and student support available
 - o career paths of graduates



ο φορεάς διασφαλίσης και πιστοποίησης της ποιότητας της ανωτέρης εκπαιδεύσης

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• Students and staff are involved in providing and analysing information and planning follow-up activities.

You may also consider the following questions:

- What is the procedure for quality assurance of the programme and who is involved?
- Who is involved in the study programme's design and development (launching, changing, internal evaluation) and what is taken into account (strategies, the needs of society, etc.)?
- How/to what extent are students themselves involved in the development of the content of their studies?
- Please evaluate a) whether the study programme remains current and consistent with developments in society (labour market, digital technologies, etc.), and b) whether the content and objectives of the study programme are in accordance with each other?
- Do the content and the delivery of the programme correspond to the European Qualifications Framework (EQF)?
- How is coherence of the study programme ensured, i.e., logical sequence and coherence of courses? How are substantial overlaps between courses avoided? How is it ensured that the teaching staff is aware of the content and outputs of their colleagues' work within the same study programme?
- How does the study programme support development of the learners' general competencies (including digital literacy, foreign language skills, entrepreneurship, communication and teamwork skills)?
- What are the scope and objectives of the foundation courses in the study programme (where appropriate)? What are the pass rates?
- How long does it take a student on average to graduate? Is the graduation rate for the study programme analogous to other European programmes with similar content? What is the pass rate per course/semester?
- How is it ensured that the actual student workload is in accordance with the workload expressed by ECTS?
- What are the opportunities for international students to participate in the study programme (courses/modules taught in a foreign language)?
- Is information related to the programme of study publicly available?
- How is the HEI evaluating the success of its graduates in the labor market? What is the feedback from graduates of the study programme on their employment and/or continuation of studies?





- Have the results of student feedback been analysed and taken into account, and how (e.g., when planning in-service training for the teaching staff)?
- What are the reasons for dropping out (voluntary withdrawal)? What has been done to reduce the number of such students?

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

- There is at present an excessive number of learning outcomes (LOs) associated with each course. These effectively function as a course outline, often detailing the main topics of each lecture. This leads to difficulties in demonstrating how summative assessments cover all the required LOs and how courses map onto the overall LOs of the programme. It also limits the ability of new faculty covering existing courses to update the content, since the existing LOs need to be met. This can lead to the preservation of historically salient topics over newly relevant areas (such as cognitive robotics).
- There is an opportunity for the programme to cover more recent developments, in particular with respect to generative AI and the related developments in ethics of AI. Students also commented on this.
- Students are required to take two mandatory courses, and to choose either seven or ten electives (from a list of 12). The two mandatory courses cover introductory matters in Psychology and Artificial Intelligence but it is not fully clear in what way they prepare the students for a programme in cognitive systems specifically.
- Diverse software and programming language requirements throughout the programme place an unnecessary burden on students with respect to learning and to the amount of software they may need to install. Some suggested software is proprietary, which may cause additional issues.
- The distribution of ECTS is uniform across courses, and their contents in general found to be appropriate in that context.
- We found very little documentation regarding the requirements and contents of the thesis, also an elective. During the onsite visit, it was clarified that the programme follows University guidelines in these respects and that, although the thesis is an elective, most students choose to produce one.
- Similarly, few details with respect to the placement course were given, again for the reason that University guidelines are simply followed.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

 Although there are caveats (see below), the choice of a large number of elective courses provides students with a lot of flexibility to tailor a programme to their needs. In particular, this arrangement takes into account that students participate in the course at a distance and most students do have other daily obligations, greatly helping a smooth student progression.





- The programme covers cognitive systems from psychological and computational viewpoints, which helps to distinguish it from offerings that are purely in artificial intelligence. Some courses stand out with well-designed content that is directly relevant for such a programme, for example COS623 and COS513.
- We are, in general, impressed with the expertise of the faculty involved in the programme and their relevance to the topic.
- The programme has a low drop-out rate of around 30%, which is good for a distance education course.
- Student feedback is regularly collected for individual courses and the programme provided statistics that allow the monitoring of the quality of the programme.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- 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 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
- 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 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.
- Similarly, we recommend a **review of the course contents and ensuring that it remains up to date and relevant**. While some courses provide excellent current content relevant to cognitive systems (COS623 and COS513for 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.
- 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 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.





Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
1	Policy for quality assurance	Compliant
1.2	Design, approval, on-going monitoring and review	Partially Compliant
1.3	Public information	Compliant
1.4	Information management	Compliant





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

<u>Sub-areas</u>

- 2.1 Process of teaching and learning and student-centred teaching methodology
- 2.2 Practical training
- 2.3 Student assessment
- 2.4 Study guides structure, content and interactive activities

2.1 Process of teaching and learning and student-centred teaching methodology

<u>Standards</u>

- The e-learning methodology is appropriate for the particular programme of study.
- Expected teleconferences for presentations, discussion and question-answer sessions, and guidance are set.
- A specific plan is developed to safeguard and assess the interaction:
 - o among students
 - o between students and teaching staff
 - o between students and study guides/material of study
- Training, guidance and support are provided to the students focusing on interaction and the specificities of e-learning.
- The process of teaching and learning supports students' individual and social development.
- The process of teaching and learning is flexible, considers different modes of e-learning delivery, where appropriate, uses a variety of pedagogical methods and facilitates the achievement of planned learning outcomes.
- Students are encouraged to take an active role in creating the e-learning process.
- The implementation of student-centered learning and teaching encourages a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher.
- Teaching methods, tools and material used in teaching are modern, effective, support the use of modern educational technologies and are regularly updated.
- Mutual respect within the learner-teacher relationship is promoted.
- The implementation of student-centred learning and teaching respects and attends to the diversity of students and their needs, enabling flexible learning paths.
- Appropriate procedures for dealing with students' complaints regarding the process of teaching and learning are set.

2.2 Practical training

<u>Standards</u>





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- Practical and theoretical studies are interconnected.
- The organisation and the content of practical training, if applicable, support achievement of planned learning outcomes and meet the needs of the stakeholders.

2.3 Student assessment

Standards

- A complete assessment framework is designed, focusing on e-learning methodology, including clearly defined evaluation criteria for student assignments and the final examination.
- Assessment is consistent, fairly applied to all students and carried out in accordance with the stated procedures.
- Assessment is appropriate, transparent, objective and supports the development of the learner.
- The criteria for the method of assessment, as well as criteria for marking, are published in advance.
- Assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved. Students are given feedback, which, if necessary, is linked to advice on the e-learning process.
- Assessment, where possible, is carried out by more than one examiner.
- A formal procedure for student appeals is in place.
- Assessors are familiar with existing testing and examination methods and receive support in developing their own skills in this field.
- The regulations for assessment take into account mitigating circumstances.

2.4 Study guides structure, content and interactive activities

Standards

- A study guide for each course, fully aligned with e-learning philosophy and methodology and the need for student interaction with the material is developed. The study guide should include, for each course week / module, the following:
 - o Clearly defined objectives and expected learning outcomes of the programme, of the modules and activities in an organised and coherent manner
 - o Presentation of course material, and students' activities on a weekly basis, in a variety of ways and means (e.g. printed material, electronic material, *teleconferencing, multimedia)*
 - o Weekly schedule of interactive activities and exercises (i.e. simulations, problem solving, scenarios, argumentation)
 - o Clear instructions for creating posts, discussion, and feedback
 - Self-assessment exercises and self-correction guide





- o Bibliographic references and suggestions for further study
- o Number of assignments/papers and their topics, along with instructions and additional study material
- o Synopsis
- Study guides, material and activities are appropriate for the level of the programme according to the EQF.

You may also consider the following questions:

- Is the nature of the programme compatible with e-learning delivery?
- How do the programme, the material, the facilities, and the guidelines safeguard the interaction between students, students and teaching staff, students and the material?
- How many students upload their work and discuss it in the platform during the semester?
- How is it monitored that the teaching staff base their teaching and assessment methods on objectives and intended learning outcomes? Provide samples of examination papers (if available).
- How are students' different abilities, learning needs and learning opportunities taken into consideration when conducting educational activities?
- How is the development of students' general competencies (including digital skills) supported in educational activities?
- How is it ensured that innovative teaching methods, learning environments and learning aids that support learning are diverse and used in educational activities?
- Is the teaching staff using new technology in order to make the teaching process more effective?
- How is it ensured that theory and practice are interconnected in teaching and learning?
- How is practical training organised (finding practical training positions, guidelines for practical training, supervision, reporting, feedback, etc.)? What role does practical training have in achieving the objectives of the study programme? What is student feedback on the content and arrangement of practical training?
- Are students actively involved in research? How is student involvement in research set up?
- How is supervision of student research papers (seminar papers, projects, theses, etc.) organised?
- Do students' assessments correspond to the European Qualifications Framework (EQF)?
- How are the assessment methods chosen and to what extent do students get supportive feedback on their academic progress during their studies?
- How is the objectivity and relevance of student assessment ensured (assessment of the degree of achievement of the intended learning outcomes)?

<u>Findings</u>





A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

All modules in the program are offered online via virtual learning and teaching environment eClass (based on Moodle) without any mandatory face-to-face sessions.

eClass integrates various tools to present information and course content, to facilitate asynchronous and synchronous interaction and communication (Blackboard Collaborate), to create video content (lecture capture), to support student assessment and to offer all kinds of administrative student support and counselling services.

According to the guidelines of the CYQAA, the number of students in each class should not exceed 30, in order to facilitate personal student support and communication between students and instructors as well as among students. Faculty members and tutors are expected to respond to students' questions and postings within 48 hours (two working days), and reportedly do some often within a few hours and also over the weekend.

The course modules in eClass have a weekly study guide that includes relevant information: a summary and synopsis, goals, and objectives, intended learning outcomes, a bibliography, supplemental resources, self-assessment exercises and activities, and self-evaluation exercises. In addition to weekly learning activities and assignments, instructors offer at least a one-hour synchronous session per week that is mainly used for lectures that are recorded so that students who cannot participate can watch them at a later stage. Students interviewed during the onsite visit reported that the weekly synchronous sessions are rarely used for group work.

The accessibility of learning materials is limited. Videos have no subtitles, most course information is displayed PDF format, which makes it difficult to view on different mobile devices.

Each course is completed with a final exam that the students take in person on campus. Non-resident students can take exams at embassies or consulates in collaboration with the Ministry of Foreign Affairs. The result counts 50 % towards the final grade, and another 50 % is awarded on weekly learning activities (assignments, online participation, study groups) and a student term project. Rubrics are available for all graded assignments. Plagiarism is checked through the software Urkund. Students take the final exam online through the use of a designated proctoring tool.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- A suitable distance education infrastructure and an adequate instructional methodology are put in place.
- The e-learning infrastructure runs stably and robustly. If technical problems occur, they can be quickly resolved.
- The weekly study guides used in the courses is good practice in the context of distance learning.





- The availability of synchronous and asynchronous activities enhances student engagement with the program and supports working DL students.
- Students who were interviewed reported that they appreciated the friendly and proactive support provided by the instructors. Questions to the tutors are answered quickly.
- The program documentation points to a well-structured curriculum with adequate detail and planning in place. The students are aware of the outcome of the program in advance.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- 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.
- 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.
- The accessibility of learning materials and information for students with impairments should be increased. Ensure that all content is easily readable on different devices.
- Opportunities for internationalization "at home" could be used by inviting international speakers to synchronous online conferences.
- 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.
- The programme should consider the use of more open educational resources (OER) and open textbooks.

Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
2	Process of teaching and learning and student-centred teaching methodology	Compliant
2.2	Practical training	Compliant



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2.3	Student assessment	Compliant
2.4	Study guides structure, content and interactive activities	Partially Compliant





3. Teaching staff (ESG 1.5)

Sub-areas

3.1 Teaching staff recruitment and development 3.2 Teaching staff number and status 3.3 Synergies of teaching and research

3.1 Teaching staff recruitment and development

<u>Standards</u>

- Institutions ensure the competence of their teaching staff.
- Fair, transparent and clear processes for the recruitment and development of the teaching staff are set up.
- Teaching staff qualifications are adequate to achieve the objectives and planned learning outcomes of the study programme, and to ensure quality and sustainability of the teaching and learning.
- The teaching staff is regularly engaged in professional and teaching-skills training and development.
- Training, guidance and support are provided to the teaching staff focusing on interaction and the specificities of e-learning.
- Promotion of the teaching staff takes into account the quality of their teaching, their research activity, the development of their teaching skills and their mobility.
- Innovation in teaching methods and the use of new technologies is encouraged.
- Conditions of employment that recognise the importance of teaching are followed.
- Recognised visiting teaching staff participates in teaching the study programme.

3.2 Teaching staff number and status

<u>Standards</u>

- The number of the teaching staff is adequate to support the programme of study.
- The teaching staff status (rank, full/part time) is appropriate to offer a quality programme of study.
- Visiting staff number does not exceed the number of the permanent staff.

3.3 Synergies of teaching and research

<u>Standards</u>





- The teaching staff collaborate in the fields of teaching and research within the HEI and with partners outside (practitioners in their fields, employers, and staff members at other HEIs in Cyprus or abroad).
- Scholarly activity to strengthen the link between education and research is encouraged.
- The teaching staff publications are within the discipline.
- Teaching staff studies and publications are closely related to the programme's courses.
- The allocation of teaching hours compared to the time for research activity is appropriate.

You may also consider the following questions:

- Is the teaching staff qualified to teach in the e-learning programme of study?
- How are the members of the teaching staff supported with regard to the development of their teaching skills? How is feedback given to members of the teaching staff regarding their teaching results and teaching skills?
- How is the teaching performance assessed? How does their teaching performance affect their remuneration, evaluation and/or selection?
- Is teaching connected with research?
- Does the HEI involve visiting teaching staff from other HEIs in Cyprus and abroad?
- What is the number, workload, qualifications and status of the teaching staff (rank, full/part timers)?
- Is student evaluation conducted on the teaching staff? If yes, have the results of student feedback been analysed and taken into account, and how (e.g., when planning in-service training for the teaching staff)?

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

The programme is delivered by permanent faculty in UCY (4) and OUCY (2), together with adjunct faculty (8, numbers based on submitted documentation but may have changed). All instructors have PhDs in relevant areas, and all appear to be research active. It is our understanding that adjunct faculty are hired on standard OUCY contracts, which last 3 years. Staff are regularly evaluated: Evaluations pass to the bi-University academic committee which controls the Programme, and hence to the relevant employer.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

The committee were impressed by the calibre of teaching staff on this MSc. Given that OUCY relies heavily on adjunct faculty, they have managed to attract and retain a group of talented





academics. Their practice of awarding three-year contracts, and their evaluation processes, appear to ensure high standards.

We were particularly impressed by (at least) one staff member who obtained weekly evaluations of their teaching; we recommend this form of regular light-touch "closed-loop" feedback (i.e., a conversation directly between students and teachers, not overseen by management) as good academic practice and a good way to keep teachers and students engaged in quality teaching.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

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.

Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
3	Teaching staff recruitment and development	Compliant
3.2	Teaching staff number and status	Compliant
3.3	Synergies of teaching and research	Compliant





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

<u>Sub-areas</u>

- 4.1 Student admission, processes and criteria
- 4.2 Student progression
- 4.3 Student recognition
- 4.4 Student certification

4.1Student admission, processes and criteria

<u>Standards</u>

- Pre-defined and published regulations regarding student admission are in place.
- Access policies, admission processes and criteria are implemented consistently and in a transparent manner.

4.2 Student progression

Standards

- Pre-defined and published regulations regarding student progression are in place.
- Processes and tools to collect, monitor and act on information on student progression, are in place.

4.3 Student recognition

<u>Standards</u>

- Pre-defined and published regulations regarding student recognition are in place.
- Fair recognition of higher education qualifications, periods of study and prior learning, including the recognition of non-formal and informal learning, are essential components for ensuring the students' progress in their studies, while promoting mobility.
- Appropriate recognition procedures are in place that rely on:
 - o institutional practice for recognition being in line with the principles of the Lisbon Recognition Convention
 - cooperation with other institutions, quality assurance agencies and the national ENIC/NARIC centre with a view to ensuring coherent recognition across the country



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4.4 Student certification

<u>Standards</u>

- Pre-defined and published regulations regarding student certification are in place.
- Students receive certification explaining the qualification gained, including achieved learning outcomes and the context, level, content and status of the studies that were pursued and successfully completed.

You may also consider the following questions:

- Are the admission requirements for the study programme appropriate? How is the students' prior preparation/education assessed (including the level of international students, for example)?
- How is the procedure of recognition for prior learning and work experience ensured, including recognition of study results acquired at foreign higher education institutions?
- Is the certification of the HEI accompanied by a diploma supplement, which is in line with European and international standards?

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

The admissions process is clear and transparent to the prospective students, with clear information about the academic requirements for entry into the programme, as well as the requirements for progression and completion of the MSc programme. The programme is orientated towards students with a STEM or psychology background, but is open to students with other scientific/social sciences backgrounds if they are able to demonstrate the required technical skills. There is considerable flexibility in how the technical requirements may be demonstrated, either by documenting acquiring the skills through MOOC or other online or in-person learning channels, as well as through non-formal learning (such as work experience).

The clarity in communicating the required skills to prospective students has the positive impact that the drop-out rate for the programme is relatively low compared to other distance learning programmes. Prospective students seem to understand what is necessary before registering for the MSc.

The admission requirements are flexible and pragmatic, so that students with a range of academic backgrounds may enter the programme. This breadth of existing knowledge and skills has the potential to enrich the programme.





Students are expected to attend an induction module, in order to familiarise themselves with the distance learning platform. In addition, tutors provide on-going support to students with the online platform when necessary (in addition to the help resources available through the distance learning unit at OUC).

The programme structure was clearly described in the documentation and at the meeting. The structure of each module, in terms of delivery and assessment, is consistent across the programme.

When students fail modules, they receive advice on what needs to be improved, and there is the opportunity to re-take the module.

There are existing processes to monitor and act on information regarding student progression across modules and the overall programme. The tutors and module coordinator monitor and support students' progress in a module, and both are in communication with the Academic Coordinator so that if any issues arise, there can be immediate response to developing issues with a student. The eLearning platform also provides information to teaching staff so that they may monitor the progression of a student in a module. The tutors are accessible through the forum, as well as office hours, providing students various channels of communication in regards work required in a module.

There is an established process in regards if a student complains about mark received for an assignment; the work would be marked by a second person,

Proper regulations and detailed criteria have been meticulously established for both certifications and recognition processes. These guidelines ensure that the standards are upheld and maintained consistently across the board. Every certification awarded is accompanied by a diploma supplement. This supplement offers an in-depth explanation of the certification, ensuring a clear understanding of its value and content.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- The admissions criteria for entry into the programme are clear and transparent.
- The programme is pragmatic in reviewing and accepting documentation of the required skills if obtained outside academic setting (non-formal learning).
- There is consistent structure in assignments and summary assessments across the programme, and the marking for the weekly work is simple and clear.
- Students may see the work submitted by the other students (without the marks) providing an outstanding opportunity for students to learn from the class setting, as well as an opportunity to encourage discussion of submitted work.

Areas of improvement and recommendations



A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- 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.
- •
- 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.

Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
4	Student admission, processes and criteria	Compliant
4.2	Student progression	Compliant
4.3	Student recognition	Compliant
4.4	Student certification	Compliant





5. Learning resources and student support (ESG 1.6)

<u>Sub-areas</u>

- 5.1 Teaching and Learning resources
- 5.2 Physical resources
- 5.3 Human support resources

5.4 Student support

5.1 Teaching and Learning resources

<u>Standards</u>

- Weekly interactive activities per each course are set.
- The e-learning material and activities take advantage of the capabilities offered by the virtual and audio-visual environment and the following are applied:
 - o Simulations in virtual environments
 - o Problem solving scenarios
 - o Interactive learning and formative assessment games
 - Interactive weekly activities with image, sound and unlimited possibilities for reality reconstruction and further processing based on hypotheses
 - o They have the ability to transfer students to real-life situations, make decisions, and study the consequences of their decisions
 - o They help in building skills both in experiences and attitudes like in real life and also in experiencing - not just memorizing knowledge
- A pedagogical planning unit for e-learning, which is responsible for the support of the e-learning unit and addresses the requirements for study materials, interactive activities and formative assessment in accordance to international standards, is established.
- Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).
- All resources are fit for purpose.
- Student-centred learning and flexible modes of e-learning and teaching, are taken into account when allocating, planning and providing the learning resources.

5.2 Physical resources

<u>Standards</u>

• Physical resources, i.e. premises, libraries, study facilities, IT infrastructure, are adequate to support the study programme.





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- Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).
- All resources are fit for purpose and students are informed about the services available to them.

5.3 Human support resources

<u>Standards</u>

- Human support resources, i.e. tutors/mentors, counsellors, other advisers, qualified administrative staff, are adequate to support the study programme.
- Adequacy of resources is ensured for changing circumstances (change in student numbers, etc.).
- All resources are fit for purpose and students are informed about the services available to them.

5.4 Student support

<u>Standards</u>

- Student support is provided covering the needs of a diverse student population, such as mature, part-time, employed and international students and students with special needs.
- Students are informed about the services available to them.
- Student-centred learning and flexible modes of learning and teaching, are taken into account when allocating, planning and providing student support.
- Students' mobility within and across higher education systems is encouraged and supported.

You may also consider the following questions:

- Evaluate the supply of teaching materials and equipment (including teaching labs, expendable materials, etc.), the condition of classrooms, adequacy of financial resources to conduct the study programme and achieve its objectives. What needs to be supplemented/ improved?
- What is the feedback from the teaching staff on the availability of teaching materials, classrooms, etc.?
- Are the resources in accordance with actual (changing) needs and contemporary requirements? How is the effectiveness of using resources ensured?
- What are the resource-related trends and future risks (risks arising from changing numbers of students, obsolescence of teaching equipment, etc.)? How are these trends taken into account and how are the risks mitigated?





- Evaluate student feedback on support services. Based on student feedback, which support services (including information flow, counselling) need further development?
- How is student learning within the standard period of study supported (student counselling, flexibility of the study programme, etc.)?
- How students' special needs are considered (different capabilities, different levels of academic preparation, special needs due to physical disabilities, etc.)?
- How is student mobility being supported?

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.

The programme is supported by adequate learning, innovative applications and human resources. Students are satisfied with the online services used for distance learning (eClass platform). Faculty members and support staff are equally satisfied with the resources available and they are highly motivated and committed to provide the best possible learning experience for the students. There are support mechanisms put in place for the wellbeing of the students, in the form of a psychologist, group support sessions, and services for students with disabilities or health issues are also in place.

As mentioned above, a great variety of educational media and learning materials is used in the course modules. Faculty members are supported in the course and learning material development process by a central service unit, the Educational Methodology & Educational Material Lab (LEMM). With only three staff members at the LEMM, who have to provide services for the entire university, the resources are very limited here. That being said, the staff members are well qualified to carry out their services, and the faculty members reported that they are satisfied with the support they receive from the LEMM.

LEMM also provides professional development training courses, one course on the distance education teaching methodology and another more technical course on how to use the various tools and features of the eClass environment.

The learning management system eClass is maintained by a team of three staff members (Information Technology Services). Again, the staffing is low as the team is not only maintaining the e-learning infrastructure but also responsible for OUC's website, and many other technical support issues.

The eClass platform is tracking student's login information that is reported to the instructors, who may promptly get in touch with no-showing students. However, a systematic learning analytics system is currently not implemented.

One faculty member or tutor is responsible for supporting one cohort or class section of students with a maximum number of 30 participants which is appropriate to facilitate an interactive and personal relationship between the instructors and students as well as among the students.

The students enrolled in the program represent a typical student profile of an open and distance teaching university: the majority of the students in the programme are currently employed and can bring in their





professional experience. With about 30 %, the drop-out rate is relatively low for a distance learning program.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

- Students reported that they feel very well supported and are satisfied with the institutional academic and administrative student support services. The organisational and technical support infrastructure operates in a professional way.
- The EEC was satisfied with the preparatory information provided and the meeting with staff with regards to library, internal communication and administrative support for the programme. The material provided to the EEC shows that the resources required by the program are of a very good standard and should be capable of supporting the expected number of students.
- There is a good working relationship among faculty members, administrative staff, and students which contributes to the efficient delivery of the program. Tutors and the staff are friendly, helpful, as students mentioned and are always willing to provide support to their students and personal virtual or physical meetings.
- LEMM provides faculty training not only in terms of the technical use of the e-learning platform and tools, but also in terms of facilitating online teaching and learning.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

- 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.
- 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.
- The faculty training provided by LEMM should be compulsory for all new permanent and adjunct faculty members.
- 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.





Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
5	Teaching and Learning resources	Compliant
5.2	Physical resources	Compliant
5.3	Human support resources	Partially Compliant
5.4	Student support	Compliant





6. Eligibility (ALL ESG)

<u>Sub-areas</u>

- 6.1 Legal framework and cooperation agreement
- 6.2 The joint programme
- 6.3 Added value of the joint programme

6.1 Legal framework and cooperation agreement

Standards

- The joint programme is offered in accordance with legal frameworks of the relevant national higher education systems.
- The terms and conditions of the joint programme are laid down in a cooperation agreement. The agreement in particular covers the following issues:
 - **o** Denomination of the degree(s) awarded in the programme
 - Coordination and responsibilities of the partners involved regarding management and financial organisation, including funding, sharing of costs and income, resources for mobility of staff and students
 - o Admission and selection procedures for students
 - o Mobility of students and teaching staff
 - Examination regulations, student assessment methods, recognition of credits and degree awarding procedures
 - o Handling of different semester periods, if existent

6.2 The joint programme

<u>Standards</u>

- The partner universities apply joint internal quality assurance processes.
- The joint programme is offered jointly, involving all cooperating universities in the design, delivery and further development of the programme.
- Aims and learning outcomes are clearly stated, including a joint syllabus, language policy, as well as an account of the intended added value of the programme.
- Study counselling and mobility plans are efficient and take into account the needs of different kinds of students.

6.3 Added value of the joint programme

<u>Standards</u>

The joint programme leads to the following added values:





- Increases internationalisation at the institutions.
- Stimulates multinational collaboration on teaching at a high level and makes cooperation binding.
- Increases transparency between educational systems.
- Develops study and research alternatives in accordance with emerging needs.
- Improves educational and research collaboration.
- Offers students an expanded and innovative arena for learning.
- Increases highly educated candidates' employability and motivation for mobility in a global labour market.
- Increases European and non-European students' interest in the educational programme.
- Increases competence at partner institutions through cooperation and implementation of a best practice system.
- Increases the institution's ability to change in step with emerging needs.
- Contributes to tearing down cultural barriers, both personal and institutional.

You may also consider the following questions:

- Does the joint study programme conform to the requirements of a study programme offered at the specific level?
- Is there a system that assures the quality of joint provision and guarantees that the aims of the programme are met?
- Do the mechanisms for ensuring the quality of the joint study programme take into consideration the European Standards and Guidelines (ESG)? Are they adopted by all the universities involved?
- Is the division of responsibilities in ensuring quality clearly defined among the partner universities?
- Is relevant information about the programme, e.g. admission requirements and procedures, course catalogue, examination and assessment procedures, well documented and published by taking into account the specific needs of students?
- What is the added value of the programme of study?
- Is there a sustainable funding strategy among the partner universities? Explain.

<u>Findings</u>

A short description of the situation in the Higher Education Institution (HEI), based on elements from the application for external evaluation and on findings from the onsite visit.



The joint degree is given by OUCY and UCY. It benefits from the expertise of faculty at both Universities and resources of both Universities are available to students. It appears that OUCY carries a larger administrative burden and that there may be opportunities for the programme to better utilise resources UCY has to offer. In general though, this is a well-designed joint programme that strengthens mutual collaborations, leverages expertise at both partners, and is well delivered. Legal and administrative issues are well covered in the agreement between the partners and we find ourselves convinced of the competence in delivering the degree.

<u>Strengths</u>

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

• This is a strong joint degree that benefits both OUCY and UCY and would not be possible without the contributions of either partner.

Areas of improvement and recommendations

A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

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.

Please select what is appropriate for each of the following sub-areas:

Sub-a	area	Non-compliant/ Partially Compliant/Compliant
6	Legal framework and cooperation agreement	Compliant
6.2	The joint programme	Compliant
6.3	Added value of the joint programme	Compliant





D. Conclusions and final remarks

Please provide constructive conclusions and final remarks which may form the basis upon which improvements of the quality of the programme of study under review may be achieved, with emphasis on the correspondence with the EQF (Consider also the added value of the joint programme).

This programme makes good use of the strengths in cognition, computation, and AI offered by the University of Cyprus (UCY) and the Open University of Cyprus (OUCY). The students we met spoke highly of the course, and the dropout rate (at 30%) is low for a fully distance learning programme, speaking to the commitment of staff to their students. The programme is governed by a joint academic committee, and both Universities contribute strongly to the academic content of the programme. The administrative burden seems to fall mostly to OUCY, who are responsible for student management, maintenance of the E-learning system, and recruitment of Tutors (adjunct faculty). However UCY has resources to offer, including compute servers and experimental facilities, and we comment on these below. Taken as a whole, this looks like a coherent programme which could not exist at either University in isolation, and which should flourish in the future, with careful management.

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 compute servers, experimental facilities, or proprietary software.

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.

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.

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 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.

E. Signatures of the EEC

Name	Signature
Arun Bokde	
Martin Corley	
Serge Thill	
Olaf Zawacki-Richter	Ø
Krinos Vasileiou	





Date: 27 Oct 2023

