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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External Evaluation Report

(Conventional-face-to-face programme of study)

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ
REPUBLIC OF CYPRUS

- **Higher Education Institution:** Neapolos University of Pafos
- **Town:** Pafos
- **School/Faculty (if applicable):** Economics, Business, and Computer Science
- **Department/ Sector:** Computer Science
- **Programme of study- Name (Duration, ECTS, Cycle)**

  In Greek:

  Μεταπτυχιακό στα Πληροφοριακά Συστήματα και Ψηφιακή Καινοτομία

  In English:

  MSc in Information Systems and Digital Innovation
- **Language(s) of instruction:** Greek and English
- **Programme's status:** Currently Operating
- **Concentrations (if any):**

  In Greek: Concentrations
  In English: Concentrations

A. Introduction

The evaluation panel visited Neapolis University Pafos to conduct assessment activities on the 4th of April 2024. The visit was efficiently organized and facilitated by the Cyprus Quality Assurance and Accreditation Agency (CyQAA), who we wish to thank for their assistance and professionalism through the process. During the visit, we met staff from all levels of authority across the university, all of whom we found to be helpful and forthcoming with regard to our programme evaluation activities, including various requests for additional information.

The programme evaluation committee consisted of five individuals: three professors with expertise in research and teaching concordant with the different courses offered as part of the programme, a professor with expertise in best practice of distance learning and educational technologies, and a student member who was able to offer specific insights into the nature of the Cypriot context of education. Three of the team had previous expertise in programme evaluation for the CyQAA. The team has introductory/briefing meetings with the representative of the CyQAA online, before arrival in Cyprus. Members of the team also met for planning and orientation purposes several times before the site visit.

A comprehensive agenda was offered for the site visit. Given that numerous of the planned activities involved presentations and a recorded lecture that could be gleaned by the panel from online materials, several of these were compressed, or not required, to allow a greater period of time for targeted questions.

Key aspects of the site visit included:

- Presentation by the Rector and discussion with the rector and vice-rector about the university, department and strategic issues. The external member of the QA committee did not attend. The coordinator of the degree attended this session.
- Short presentations by the vice-rector (head of department) and programme coordinators and targeted questions regarding the programme. One other staff member attending this meeting.
- A summary meeting and presentation regarding e-learning aspects of the distance learning programme with relevant members of staff.
- A hybrid meeting with teaching staff on the programme (some were online, some in person).
- An online meeting with four students that had completed the programme (one did not attend). All students completed the distance learning programme; there were no students of the physical programme option.
- A meeting with administrative staff representing campus director, student affairs, the registry office, international office, and Erasmus office. The head of the library did not attend.
- A tour of the campus and its facilities by the campus director.
- A final series of questions, fielded by the vice-rector (also, head of the CS department) and programme coordinator.

Throughout the day, additional material were requested by the panel to supplement assessment, including the quality assurance manual (which was mentioned in the report and the response for the last assessment of the programme, but not provided), PhD co-supervisions, employability data, QA self-assessment report, student evaluation questionnaire format and data for several courses, a sample of dissertations, information on staff workloads and calculations, a missing CV, some presentations, and admissions data. This information would have been helpful to have been received prior to the site visit, as part of the document provided by the institution.

B. External Evaluation Committee (EEC)

Name	*Position*	*University*
Stuart J. Barnes	(Chair) Professor	Newcastle University, UK
Mauro Cherubini	(Member) Professor	University of Lausanne, Switzerland
Thomas Heide Clausen	(Member) Professor	Ecole Polytechnique, France
Olaf Zawacki-Richter	(Member) Professor	University of Oldenburg, Germany
Marilena Lemonari	(Student Member) Mrs	University of Cyprus

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:*

Findings

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)

Sub-areas

1. **Policy for quality assurance**
2. **Design, approval, on-going monitoring and review**
3. **Public information**
4. **Information management**

1.1 Policy for quality assurance

Standards

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

2. Design, approval, on-going monitoring and review

Standards

- *The programme of study:*
  - *is designed with overall programme objectives that are in line with the institutional strategy and have explicit intended learning outcomes*
  - *is designed by involving students and other stakeholders*
  - *benefits from external expertise*
  - *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)*
  - *is designed so that it enables smooth student progression*
  - *is designed so that the exams' and assignments' content corresponds to the level of the programme and the number of ECTS*
  - *defines the expected student workload in ECTS*
  - *includes well-structured placement opportunities where appropriate*
  - *is subject to a formal institutional approval process*
  - *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*
  - *is regularly monitored in the light of the latest research in the given discipline, thus ensuring that the programme is up-to-date*
  - *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*
  - *is reviewed and revised regularly involving students and other stakeholders*

3. Public information

Findings

The assessed study programme on “Information Systems and Digital Innovation” exhibits an important ambition: enabling its graduates to efficiently exploit the opportunities that exist in the gap between the “business” and the “digital” world.

The report for the previous accreditation round noted that:

> *“Quality procedures seem to be documented and in place, however, the Committee was unable to gain a holistic view of the processes or of information and data to support the management of the programme through, for example, a Quality Manual”*

The quality assurance process was presented during the site-visit, and — ***upon request*** — the Quality Manual was provided to the committee. As such, the EEC finds that the quality assurance process is appropriate for this study programme involving also external stakeholders.

The “Information Systems and Digital Innovation” programme was initially accredited in 2019. Its duration is 18 months comprising 90 ECTS in conformity with the Bologna process. The 90 ECTS credits of the programme are made up of:

- 7 mandatory courses, each nominally of 7.5 ECTS, covering digital innovation, entrepreneurship, project management, disruptive technologies, research methods, programming, information systems, and data analysis.

- 1 elective course, nominally of 7.5 ECTS, selected from among “digital marketing”, “information security”, “blockchain”, and “decision making and modern technology”.
- A dissertation, of 30 ECTS — presented during the site-visit to typically be on a topic proposed by an industrial partner, formalised by a faculty member, and assigned to a student.

Information about the structure of the programme was clear and communicated to prospective students — however, the details of each course (detailed lesson plan/syllabus, or even an abstract beyond the course title) is not publicly available on-line.

Courses are assessed according to performance in assignments (20% of the grade), interactive activities (20% of the grade) and final exam (60% of the grade), with a minimum score required in each of these to validate a course. Each course has a mid-term assessment, typically a project. This is communicated to the students. Further, well-formulated grade appeals processes are in place, and an information system tracking student performance, satisfaction, and periodically analysing these, is in place - used both for programme quality assurance, and instructor evaluation/progression purposes.

Only e-learning students/alumni were present during the site visit, but as the e-learning and the conventional programmes are identical in content, their feedback is included here.

Students expressed general satisfaction with their instructors, who were described as enthusiastic and charismatic. The quality of the instruction was also applauded. Students also appreciated the intentions of the programme, as well as the breath that it offered — and, thereby, the "keywords" that it allowed them to put on their CVs.

Students expressed frustration that while the courses were interesting, it was mostly an "ideas programme" that allowed them to have "intelligent conversations with people who apply the different topics. However, they did not feel that any course went into sufficient depth to allow them to "master", or be "operational", within the topic.

The EEC's examination of the curriculum concurs with the students, in their evaluation of the curriculum construction.

In particular, the EEC finds several of the individual courses provide an "enumeration of a set of technologies", without providing methodologies and architectural frameworks. Such is the case, for example, with "Information security", which is presented as a catalogue of "hot topics" (attack keywords, countermeasures) that one might see in the press — but, which does not cover (for example) the requirements (regulatory or otherwise), and the design patterns, within which one would deploy the countermeasures effectively.

Other courses are presented as exclusively focused on "specific technologies" and not on general methodologies and architectures. A consequence of that is, that they seem to be *"preaching for a specific technology or methodology"* (Agile, Blockchain, …) and do not provide the background to allow, or training in, *critical analysis* of an area, and an understanding of where different techniques and choices are appropriate — as well as what alternatives exist, and where those would be appropriate. For example, while Agile project management may be appropriate in some contexts, in others (for example, aerospace) it's not — and, even in contexts where Agile may be appropriate, it is not the only methodology deployed (and, therefore, should not be the only methodology known by graduates).

The EEC requested and was able to consult two recently completed master's dissertations - one in Greek, and one in English. For both, the EEC found that while they successfully **"**produced an artefact" or **"** accumulated descriptive data", the *application of critical analysis* was wanting. For example, one of the master's theses did not enunciate a hypothesis for which a rigorous statistical analysis would be possible. When an artefact was produced, no hypothesis was enunciated that the artefact would contribute to affirm or invalidate. In both cases, the use of, and *critical positioning of*, obtained results with respect to prior work and the state of knowledge in the field of work was not demonstrated.

Considering comparable international programmes, and in view of the stated ambitions for the programme, the EEC finds it surprising that there are no courses covering the new ***business models*** that digital innovation brings, and the transformation that existing companies may need to undergo to remain competitive. For example, historically the business model of a company would be to sell either *widgets* or a *service* to its clients. Increased digitisation means that when a company, sells widgets or services, today, that may largely be so as to get access to *data* from the users of these widgets or services — and, with the data being the company's main product, and the clients of the company being the consumers of these data. The organisation of new companies, and the re-orientation of existing companies to be competitive within this reality would seem to be at the heart of a programme entitled **"**Information Systems and *Digital Innovation*", and thus merit being covered by the programme. (See also Section 3, below)

The students interviewed indicated that they all had been able to maintain full-time employment, in parallel with following the programme. Some, even, were also parents to young children. Despite those things providing a time-constrained context, the student indicated that they:

- Would appreciate to be more challenged, intellectually, to go in-depth with the different topics that they were studying.

- Would appreciate more contact-time with their teachers, than the 2h every 2 weeks per course that they had had.
- Outside of "contact hours" estimated that they spent — on average — from 6 to 10 hours / week of their time studying.

During the on-site visit, it was confirmed that over the duration of the programme, only 2 students had needed to extend the duration of the study by an extra semester.

For e-learning students, each course comprises 6 synchronous sessions, each which with a duration of 2h. With 4 courses per semester, this means that each semester contains 48 contact-hours over 12 weeks. Adding the 10h/week of "outside contact hours" study time indicated by the students, this makes for **a total of 168h of "student-work-hours" per semester**.

The EEC notes that the coursework of the programme consists of 60 ECTS, — which corresponds to 1620 student-work-hours — spread over 2 semesters, for **a total of 810 student-work-hours per semester**.

While the conversion of ECTS credits to student work-hours is subject to some degree of subjectivity, in this case the difference is a factor of 4.8 — which the EEC finds significant.

The programme, explicitly, states to encourage heterogeneous recruitment and to bridge the gap between "digital" and "business". The recruitment into the program reflects that, with students

having completed undergraduate degrees in fields from economics through engineering and to computer science.

This heterogeneity notwithstanding, all students follow the same path through the programme: the same courses, in the same order (modulo the single elective course, and their dissertation topic). For example, all students have a course called “Problem Solving Programming” — likely to be challenging to students from an Economics undergraduate programme, but to be trivial to someone with a computer science background.

The site-visit comprised a presentation of an “Adaptive Learning” initiative, seeking to adapt — within each course — the learning progression to each student. The EEC finds this initiative to be commendable, but regrets that it is not extended to capture the heterogeneity of students also “between courses”, and present differentiated courses to accommodate the heterogeneity in student backgrounds.

The EEC inquired about the careers of graduates from the programme - but got only very partial information, making it difficult assess the societal success of the programme.

Strengths

- Highly dynamic, motivated, and energetic teaching staff. The staff were cohesive as a team and appeared to enjoy their working environment.
- Student satisfaction with the quality of instructors. There appears to be a good working relationship between students and staff.

Areas of improvement and recommendations

General:

- Make the Quality Manual publicly available on-line.
- Make the on-line program description provide links to detailed course syllabus and descriptions.
- Establish a formalised system for tracking and recording careers of graduates of the program.
- Ensure that the training -- both through each individual course, through dedicated methodology courses, and through the dissertation (i) enables the students to develop critical analysis/thinking, (ii) enables the students to develop critical analysis of their own work, and (iii) enables assessment of these skills, to a level in conformance with the QF-EHEA ”Second Cycle” and EQF ”Level 7” standards. Please see further recommendations for actions detailed below.

Dissertation:

- Increase student engagement in the formulation of their dissertation project, to enable that they develop intellectual independence through this process (e.g., take the initiative and prepare proposals, under the guidance of their supervisors).
- As a particularly important part of the above point, deploy metrics that allow the dissertation to validate that the criteria of the QF-EHEA standards for "Second Cycle" qualifications are fully satisfied – notably with respect to "*originality in developing and/or applying ideas, often within a research context".*

Courses:

- Revise the individual courses to provide less of a "catalogue" of currently hot buzz-words, but to instead provide abstraction, methodology, and emphasis on critical reflection/evaluation of the topics taught and their applicability.
- Revise and extend the "Research methodologies" module to provide a complete view of systematic and scientific approaches that are used to conduct research, investigate problems, and gather data (quantitative, qualitative, mixed-methods, case-studies, surveys, experimental ...) -- including how to formulate scientific hypothesis, and how to properly select, and deploy the techniques and procedures used to identify, collect, analyse, and interpret data, to ultimately affirm or invalidate the postulated hypothesis. This includes the teaching of basic statistical methods to analyse data such as ANOVA and regression. It is noted that one of the dissertations that we were provided with used very basic descriptive statistics that did not reflect well for Level-7 educational outcomes.
- Revise the course offering to provide more in-depth study — to the point of attaining mastery of — the different topics taught in each course, in place of an introduction and overview.
- Introduce a course on "digitally-enabled business models" - both for ex-nihilo business creation, and for business transformation.
- Calibrate the course load to approximate the expected 810 student-workhours per semester, as is expected for a full semester (30 ECTS), in place of the present 186 student-workhours.
- Extend the Adaptive Learning initiative from "within a course" to "between courses" to accommodate student background heterogeneity. For example, a student with an economics undergraduate degree may benefit from an "Introduction to problem solving programming" course — which would bore a CS undergraduate, who instead might benefit from a module on "Econometrics".

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***
1.1	Policy for quality assurance	Compliant
1.2	Design, approval, on-going monitoring and review	Non-Compliant
1.3	Public information	Partially Compliant

1.4	Information management	Partially Compliant

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

Sub-areas
1. **Process of teaching and learning and student-centred teaching methodology** 2. **Practical training** 3. **Student assessment**

1. *Process of teaching and learning and student-centred teaching methodology*

Standards

- *The process of teaching and learning supports students' individual and social development.*
- *The process of teaching and learning is flexible, considers different modes of 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 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. *Practical training*

Standards

- *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.*

3. *Student assessment*

Standards

- *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 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.*

You may also consider the following questions:

Findings

The education methodology aims to engage students in authentic and self-regulated learning activities using problem-based learning scenarios, case studies, simulations, and deep interaction with other students and teachers using asynchronous and synchronous information and communication technologies. The pedagogical approach is based on constructivist assumptions that put the students in the center of knowledge construction. Communication and collaboration are constituted elements of constructivist learning environments.

The theory is put into practice using a blended, flipped classroom approach, i.e., an asynchronous online pre-class self-study phase is followed by online mentoring to prepare students for the synchronous session (interactive lectures that encourage discussion, collaboration, and application of knowledge on real-life problems and challenges). According to the study guides, the courses run over 13 weeks during the semester with a maximum of 30 students that are taught by one faculty member. The Learning Management System (LMS) is the open-source system Moodle. Microsoft Teams is used for synchronous video-conferencing.

The expected learning outcomes, course goals and objectives, assignments, information on assessment, a bibliography, a weekly schedule, introduction to the course content supplemental resources, and self-assessment exercises and activities, and self-evaluation exercises are clearly described in a comprehensive study guide available in Moodle, also presented as a “learning path” that guides the students through the process.

Feedback on graded weekly learning activities is provided on a regular basis during the courses using the communication tools in Moodle. Faculty members are expected to respond to student's questions and postings within 48 hours.

Each course is completed with a final exam. The result counts 60 % towards the final grade, another 40 % is graded based on four further interactive learning activities (20 %) and the mid-term assessment (20 %, student project).

The grading scale ranges from 85-100 % (excellent), 65-84 % (very good), 50-64 % (good), 0-49% (fail).

Strengths

Learning activities, exercises, and projects are designed to promote collaboration among students in which they apply their knowledge to solve complex problems. A variety of digital tools are used to support collaborative online learning, asynchronously and synchronously. Using weekly topics and assignments in the courses is a good practice i. The pedagogical concept for online distance learning is based on solid and well-established theoretical foundations.

The small class sizes allow the instructors to work in close contact with the students providing the guidance and encouragement needed.

The students available in the interview appreciated the friendly and proactive support and guidance provided by the faculty members.

Areas of improvement and recommendations

1. The programme could consider utilizing better the university’s external network of partners in the design and execution of its programmes.

2. The course appears to have a limited amount practical lab content, which in the view of the panel limits the ability to provide solid, in-depth practical training. We recommend extending the depth of practical content on the programme.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***
2.1	Process of teaching and learning and student-centred teaching methodology	Compliant
2.2	Practical training	Partially compliant
2.3	Student assessment	Compliant

3. Teaching staff *(ESG 1.5)*

Sub-areas

1. **Teaching staff recruitment and development**
2. **Teaching staff number and status**
3. **Synergies of teaching and research**

1. Teaching staff recruitment and development

Standards

- *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.*
- *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.*

2. Teaching staff number and status

Standards

- *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. Synergies of teaching and research

Standards

- *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*

Findings

In terms of recruitment of teaching staff, the HEI is substantially compliant with standard recruitment practices. Open positions were advertised through standard communication channels, social networks, and specialised websites.

For what concerns teacher development, the EEC specifically probed staff around the opportunities available to them for upskilling and updating their knowledge and competences. Staff confirmed that the HEI provides many opportunities for professional growth. Each faculty member receives a personal budget that can be spent on professional development, including paying for online courses, and covering fees for participation in international conferences and symposia. In addition, the pedagogical learning unit at the HEI offers several courses for improving teaching skills and adapting to contemporary challenges posed by technological advancements (e.g., ChatGPT). All new professors are encouraged to participate in an induction week where teaching technologies and platforms are presented.

The EEC noted that the normal workload of staff, which includes 6 hours of teaching per week per teaching semester, and a consistent percentage of time devoted to service activities -- at all rank levels -- does not leave adequate time to support research activities. This is a key point for staff development and career progression. This specific point was also noted in the previous accreditation report of 2019.

The EEC probed the staff around the criteria for promotion. Despite several questions, the committee could not obtain consistent and clear answers concerning the specific criteria for promotion from one job level to the next. For instance, while the promotion process reported in the report states that “valid international journals” and “independent scientific studies in books” are accepted, the lecturer and assistant professors provided generic answers pointing to “a number“ of publications that must have been produced to apply for promotion, without specifying the exact type and number of publications, and finally the department director, who specified that only publications in outlets which are ranked in SCOPUS were considered for promotion. Furthermore, we requested a copy of NUP procedure 06.120, which was provided to the EEC. Unfortunately, this procedure specifies the procedure for promotion but does not list explicitly the criteria for promotion.

Aside from publication criteria, which were unclear, the EEC found agreement on other factors that are taken into account for promotion: quality of their teaching and participation in service activities, which could include dissemination activities in schools and at public events. None of the staff members, mentioned mobility as a criterion for promotion.

In terms of mobility of instructors, while the commission found a general agreement that ERASMUS+ is somewhat used to support networking and professional development of the teaching staff, the academic provision of sabbatical leave has never been used by any department member.

The EEC found that the qualifications of the teaching staff are not adequate to teach the courses which are currently listed in the programme. One of the core courses of the programme, namely the “Digital Innovation and Entrepreneurship” is taught by a visiting lecturer, which endangers the sustainability of the programme. More importantly, this instructor has not received formal training in digital innovation and his background is in a completely different discipline.

The commission also noted that the programme currently does not provide courses focusing specifically on the *design* of information systems. Rather, this core competence is taught as part of other courses. For instance, *design thinking* is not listed as a PLO for this programme. This specific point was also listed as part of the previous accreditation report in 2019. Specifically, the previous commission noted the need for more staff in the specific field

of Information Systems, and whose publications should have been within the discipline. Unfortunately, the EEC notes that this weakness of the current team has not been amended. Most staff members undertake research and publish in Computer Science but not within the field of information systems research and outlets, journals and conferences typically referred to by the information systems community (e.g., AIS or CABS information systems journals).

The number of teaching staff has been found to be adequate to support the current list of courses in the programme. However, the EEC noted that the majority of the teaching staff is currently employed at rank lecturer or visiting professor, which could impact the ability to develop this programme in the long term. The number of visiting staff does not exceed the number of the permanent staff.

The EEC has collected anecdotal evidence of cross-pollination between research and teaching.

Direction and coordination of a multi-disciplinary programme, with a mixture of local and remote instructional staff, is a complicated and time-consuming activity for the faculty member in charge. The EEC observes that the current coordinator of the programme is a junior faculty member, of a rank not commensurate with these responsibilities - and the EEC is concerned if these administrative duties will impede on her research-productivity – and, in turn, her promotability.

Strengths

The EEC found that the teaching staff were enthusiastic about developing and delivering the programme. They were also enthusiastic about the working conditions and working with their teammates.

Department members the EEC interacted with described collaborations within the HEI and with partners outside. The director of the programme noted strong links with industrial partners with which the department has established formal agreements to support research and development.

Staff members described a fair, transparent and clear processes for the recruitment and development of the teaching staff. Particularly, they indicated that adequate financial resources are made available for the development of staff and for conducting research.

The HEI is interested in further developing this MSc programme and the department of Computer Science, as demonstrated by the investment they are also making in improving facilities available to students and to personnel. The EEC visited new lab space and auditoriums which should soon made available to students.

Areas of improvement and recommendations

The EEC indicates four areas for improvement that the HEI should consider to the betterment of the programme. We list these four areas in decreasing order of importance and impact.

1. There is a persistent need to hire additional staff with specific expertise in Information Systems. Concretely, there are core learning objectives that are available in similar programmes in Europe which are currently not sufficiently developed in the programme under evaluation. Specifically, the EEC recommends considering adding courses around design thinking, and (digital) business model design. Related to this, the EEC recommends assigning the course of Digital Innovation and Entrepreneurship to an instructor with formal training in the subject matter.

2. The EEC recommends redefining the workload of the staff to accommodate more time for research. Generally speaking, the majority of time should be spent on research, especially for younger staff members (i.e., lecturers, assistant professors). For younger staff members, a reasonable split would be to allow 50% of the time dedicated to research activities throughout the year, and even during teaching semesters.

3. The EEC recommends encouraging staff mobility at all levels. Mobility is a fundamental activity for staff to create opportunities for scientific collaboration, to further the professional network and for professional development. Specifically, the HEI should clearly indicate that mobility is a favourable point for promotion and should encourage staff members to take leave (short-term and through the academic sabbatical) to spend time in other institutions and to collaborate with other colleagues.

4. The EEC recommends the HEI to clarify the promotion criteria through quantitative markers. The number of publications and the outlet considered valid for publication should be made clear in the promotion procedure to enable better progress through each level of the job ladder.

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

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

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

Sub-areas

1. **Student admission, processes and criteria**
2. **Student progression**
3. **Student recognition**

5.4 Student certification

4.1 *Student admission, processes and criteria*

Standards

- *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

Standards

- *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:*
    - *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*

4.4 Student certification

Standards

- *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)?*

Findings

The programme is positioned as a catch-all that is open to students from a broad range of backgrounds, including humanities, social sciences, computer science, and so on. This means that it attempts to be both a conversion programme for non-technical students and a specialist programme for computer science students.

The HEI admits candidates after considering their academic background, English language skills, and overall ability to successfully complete the programme. The admission process requires, apart from the Application Form, the relevant certificates of previous studies and English language qualification, two recommendation letters and a statement of personal interest. Prospective students should have a minimum grade 2:2 (or equivalent) in their undergraduate degree and can come from any discipline; if the grade requirement is not met, students can still be admitted to the programme if they showcase competency e.g., prior work experience. However, no information was provided on the parity/equivalence of degrees from international institutions for prospective students. There is a minimum mark for English language knowledge, e.g., IELTS 6.0, GCSE grade C, etc., for both the Greek and English taught versions of the course. Processes regarding the admissions appeal process and assessment of applications from students with special needs/disabilities are in place. Financial assistance (including fees and maintenance in some cases) is available for students from lesser developed countries (who are also given priority entry) or with financial difficulty.

Students that are close to meeting admission requirements are required to attend a remedial two-hour session on the basics of computer science. This is not a coding-heavy master's and so there are no prerequisites. There is no recognition of working experience in the admission process. During admissions, the HEI considers students for Accreditation of Prior Learning (APL) if they have noted this desire on their application. Credit is considered given appropriate previous studies, qualifications, or experience. The panel requested information on admission numbers and characteristics, but none were provided by the university, except that approximately two-thirds of students were studying for the DL programme. The applicants for the programme reside in an impressive range of countries (according to programme presentation), including many classed as lesser developed countries by the World Bank. It is also noted that, although the titles of the courses of the programme are made available to prospective students on the website, it is not possible to drill-down to find out the content of the courses. This was also a point raised by the panel in the last (initial) assessment of the programme.

Information regarding student progression includes students' rights and obligations, e.g., with regards to course attendance (>60%), suspension/terminations/withdrawal of studies, and student re-enrolment. There was confusion over the drop-out rate with figures of 1% and 4% provided. Discussion with eLearning students reveal that there are no attendance requirements for distance learning students. Important aspects of progression such as assessment, i.e., methods and the grading system are established. The programme employs an impressive variety of modes of assessment, e.g., peer assessment, multimedia material, and enables interactive initiatives. Part of collecting information and monitoring student progression is the completion of student questionnaires that give feedback on the quality of teaching/learning and the academic personnel. To further monitor and act on students' progress, each student is assigned an Academic Advisor with whom they meet at least once per semester. Class tutors and lecturers provide additional academic support, if needed. A presentation of staff research interests is made before the dissertation topics are created. Students can choose from suggested topics or discuss ideas with their supervisor. Some dissertation topics are in collaboration with the industry in the sense that the proposed topics tackle targeted

problems that are of interest to respective companies. The dissertation evaluation committee consists of three members of the department.

After discussion with students (we spoke to four DL students; no campus-based students were provided), we note that most of them have continued their employment in the same sector and the same positions that they were involved in prior to studying this master's. This raises the question of value-added from the programme, although it is likely to early to make an assessment for recent graduates of the programme. Some students from non-technical backgrounds initially found the courses challenging, but participating in lectures, assignments, and engaging in group conversations helped them to succeed in their final assessments. The graduate students (eLearning) that we spoke to completed the programme whilst working full-time and, for some, also being parents. They suggested that the programme could be more challenging and should have more contact time.

Completion of this programme implies the realisation of the clearly stated intended learning outcomes and results in a Higher Education Qualification i.e., MSc in Information Systems and Digital Innovation. We requested information on employment of alumni and received a table with 21 students' current positions; this is quite small considered the large size of the student population. However, they demonstrate some good final employment positions.

Strengths

The assessment methods for the taught modules are impressively diverse, e.g., exams, interactive activities, assignments, reports, group activities, and so on. The peer assessment approach, in particular, seems innovative and beneficial to students.

The programme attracts a very diverse range of applicants from 14 countries plus Cyprus. The success of this diverse recruitment is testament to the university's collaborations with other institutes, revealing the potential of reaching a more diverse pool of applicants.

Areas of improvement and recommendations

1. The course attempts to be catch-all for students from technical and non-technical backgrounds. This means that there is an inappropriate level of challenge for some students that may have previously covered content in their first degrees. It also creates issues in pitching the delivery of the courses when there are students with different levels of ability, with some students finding courses easy compared with others. It is recommended that there is a limited on the number of cognate credits previously studied during the admissions process (say 2 modules).

2. Greater transparency of data is needed (ESG 1.4). Provide more complete a detailed raw data on admissions. Provide more complete and detailed raw data on student outcomes (including employment). Provide grade classifications for the programme over the last five years.

3. Including alumni testimonials as part of the early first-semester programme may help current students identify their direction and aspirations -- for example, in terms of electives, dissertation topic, advisor or career outcomes.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***
4.1	Student admission, processes and criteria	Partially 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)*

Sub-areas

1. **Teaching and Learning resources**
2. **Physical resources**
3. **Human support resources**
4. **Student support**

5.1 Teaching and Learning resources

Standards

- *Adequate and readily accessible teaching and learning resources (teaching and learning environments, materials, aids and equipment) are provided to students and support the achievement of objectives in the study programme.*
- *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 learning and teaching, are taken into account when allocating, planning and providing the learning resources.*

5.2 Physical resources

Standards

- *Physical resources, i.e. premises, libraries, study facilities, IT infrastructure, 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.*

5.3 Human support resources

Standards

- *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

Standards

- *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*

Findings

Established in 2010, Neapolis University Pafos (NUP) is a young, private University with around 3.330 students.

The learning management system is the open-source software Moodle. This programme utilizes Moodle for a variety of activities including providing the relevant lecture material, e.g., lecture notes, feedback, discussion forums, and so on. Moodle is also used for online submission of assignments, quizzes, and questionnaires.

Microsoft Teams is used for synchronous teleconferences. The weekly learning path is described in the study guide and presented in Moodle (see Section 2). An academic tutor is available for communication via e-mail or forums. Tutors are expected to respond to student questions within 48 hours.

In this program, the department is experimenting with adaptive learning, using smart books purchased from McGrawHill. The HEI also offers a variety of relevant software programs e.g., python, MATLAB, etc.

Apart from the necessary teaching material and software, students gain access to the Neapolis University Pafos Library resources containing a plethora of books and publications (printed and online versions), electronic databases, and other useful tools like Mendeley. Notwithstanding, the students are directed towards the most relevant/useful learning material for each module directly, e.g., important bibliographies, lecture notes, educational videos, and so on.

The University has modern classrooms and computer rooms (with c. 30 desktop computers), auditoriums, and meeting rooms. The facilities are equipped with interactive whiteboards and are accessible. Library working hours are extended during exam periods. In addition, the University is in the process of equipping new computer labs that would serve more students, with working hours to be decided by the Department.

Furthermore, student support is provided covering the needs of a diverse student population, such as mature, employed and international students and students with special needs. Students are informed about the services available to them. In addition to the more generic services, like IT support, library services, etc., they include a counselling service (Counseling Center for Research and Psychological Services). Each student has a mentor who helps them to acquire knowledge, understanding and skills that foster learning, engagement and constructive social relationships. Other centres like the Student Affairs office, the Student Associations, Student Accommodation office, and Mobility office provide extra support on specific topics, e.g., social life, further assisting with students' wellbeing during their studies. There are opportunities to receive help either financial or practical, e.g., visa issues, from the University staff.

The University has made accommodations to attract a diverse student population e.g., students with disabilities, and international students via the Mobility office activity, e.g., Erasmus from teaching staff and students, eMERGE initiative, and of course offering the Distance Learning option.

Overall, the resources seem adequate for potential change in student numbers.

Strengths

Students reported that they feel very well supported and are very satisfied with the institutional academic and administrative student support services. The organizational and technical support infrastructure operates professionally.

The infrastructure provided by the university in terms of physical resources (ICT facilities, library services), educational technology infrastructure, and student support services are strong and meet international distance education standards. It is positive that the standards for students with disabilities are respected in the development of learning materials and the overall design of the online learning environment.

Students seem very inspired with the activity of the teaching staff.

Areas of improvement and recommendations

There are no serious issues related to the overall course development and student support systems. Here are just a few general recommendations:

1. The university should explore methods of learning analytics in a more systematic way to develop an early warning system to identify underperforming students at risk of failure or drop-out.

2. More activities could be organised to further accommodate international students.

3. The elevator is small to comfortably accommodate wheelchair access, but we are told that in that case students are assigned to classrooms on the ground floor. The new computer lab does not have wheelchair access as of the date of the visit, but we were assured that there are plans to install a ramp.

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

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

6. **Additional for doctoral programmes** *(ALL ESG)*

Sub-areas
6.1 Selection criteria and requirements **6.2 Proposal and dissertation** **6.3 Supervision and committees**

6.1 Selection criteria and requirements

Standards

- *Specific criteria that the potential students need to meet for admission in the programme, as well as how the selection procedures are made, are defined.*
- *The following requirements of the doctoral degree programme are analysed and published:*
  - *the stages of completion*
  - *the minimum and maximum time of completing the programme*
  - *the examinations*
  - *the procedures for supporting and accepting the student's proposal*
  - *the criteria for obtaining the Ph.D. degree*

6.2 Proposal and dissertation

Standards

- *Specific and clear guidelines for the writing of the proposal and the dissertation are set regarding:*
  - *the chapters that are contained*
  - *the system used for the presentation of each chapter, sub-chapters and bibliography*
  - *the minimum word limit*
  - *the binding, the cover page and the prologue pages, including the pages supporting the authenticity, originality and importance of the dissertation, as well as the reference to the committee for the final evaluation*
- *There is a plagiarism check system. Information is provided on the detection of plagiarism and the consequences in case of such misconduct.*
- *The process of submitting the dissertation to the university library is set.*

6.3 Supervision and committees

Standards

- *The composition, the procedure and the criteria for the formation of the advisory committee (to whom the doctoral student submits the research proposal) are determined.*
- *The composition, the procedure and the criteria for the formation of the examining committee (to whom the doctoral student defends his/her dissertation), are determined.*
- *The duties of the supervisor-chairperson and the other members of the advisory committee towards the student are determined and include:*
  - *regular meetings*
  - *reports per semester and feedback from supervisors*
  - *support for writing research papers*
  - *participation in conferences*
- *The number of doctoral students that each chairperson supervises at the same time are determined.*

NOT APPLICABLE

Findings

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.

Click or tap here to enter text.

Strengths

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

Click or tap here to enter text.

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.

Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***
6.1	Selection criteria and requirements	N/A
6.2	Proposal and dissertation	N/A
6.3	Supervision and committees	N/A

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.

The External Evaluation Committee (EEC) can confirm that all the information needed the EEC to measure the quality of the programme in terms of infrastructure, contents, delivery, assessment methods and students support, have been provided. Overall, the visit confirmed that the University is in a phase of growth — both in terms of physical infrastructure (instructional & student facilities), and in terms of academics (establishment of scientific departments - e.g., the CS department was created within the past 2 years, creation of a doctoral school, etc).

That notwithstanding, the ECC recommends the following actions for improvement of the programme, all of which detailed in the previous sections and summarised in the following:

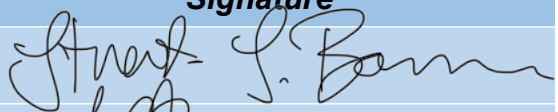
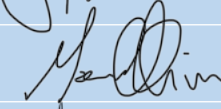
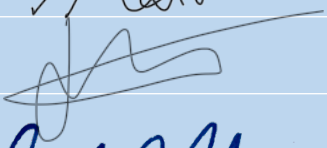
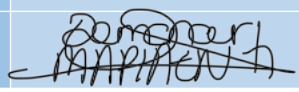
Non-compliant areas of assessment

- Redesign the programme, to be in better compliance with European standards and comparable programmes internationally - both in terms of volume (student work-hours), content (course selection) and level (notably, knowledge, skills, and autonomy at EQF Level-7 for each course).
- Hiring teaching staff with formal education in Information Systems could really help the programme in strengthening the link between Computer Science and Management disciplines. This would align the learning objectives of the programme with the learning objectives of similar programs in Europe and beyond.

Partially-compliant areas of assessment

- As for the previous committee, in 2019, this EEC regrets that (direct quote from the 2019 report): *"the programme curricula and their implementation (of running programmes) are disclosed to the current students through the institutional LMS (Moodle). However, prospective students seem unable to examine the courses' syllabus"* -- and would strongly recommend that in 2024, this recommendation be reflected.
- Admissions. Greater transparency is required in the assessment procedure. It is noted that data was requested but not supplied in this area. Furthermore, the mixed nature of the admissions cohort is problematic for delivery of the programme; a fixed number of credits of previous learning should be allowed during the admissions process (two courses maximum suggested).
- Enriching some courses' content with lab activities to help students gain hands-on, practical experience.
- Younger teaching staff have been found responsible for significant functions of programme coordination and delivery. This poses a burden on these faculty members which could impede their ability to progress through the job ladder. The recommendation of the EEC is twofold: a) assign the program coordination responsibility to a more senior department member, and b) create conditions that could allow staff members to progress through the job ladder (e.g., allowing more time for research).

E. Signatures of the EEC

Name	*Signature*
Professor Stuart Barnes (Chair)	
Professor Mauro Cherubini (Member)	
Professor Thomas Heide Clausen (Member)	
Professor Olaf Zawacki-Richter (Member)	
Mrs Marilena Lemonari (Student Member)	

Date: 5th of April, 2024