

Doc. 300.1.2

Date: 08/07/2019

Higher Education Institution's response

- **Higher education institution:**
Neapolis University
- **Town:** Paphos
- **Programme of study (Name, ECTS, duration, cycle)**
In Greek: Πληροφοριακά Συστήματα και Ψηφιακή Καινοτομία – Εξ' Αποστάσεως
In English: MSc in Information Systems and Digital Innovation (90 ECTS, Postgraduate, 2/3 academic semesters) – Distance Learning
- **Language of instruction:** Greek/English
- **Programme's status**
New programme: ✓
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 and 2016” [N. 136 (I)/2015 and N. 47(I)/2016].

A. Guidelines on content and structure of the report

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

Let us first express our satisfaction for the very positive comments of the EEC as well as the productive suggestions and recommendations. Though we, of course, recognize the fact that the ultimate decision is always taken by the CYQAA Board we nevertheless emphasize the overall EEC's approach to have the program accredited by stating at the Conclusions:

“The study programme is innovative and up-to-date with an effort to combine multiple disciplines, including computer science and information systems, as well as management and innovation. The development and management of the programme, and in this case its deployment, seems to be guaranteed by an enthusiastic and skilled team and a supportive management. There is a student-centred approach that could potentially enhance self-regulated learning and the guidance and support from the tutor seems to be adequate. Good induction approaches and materials, particularly the online ones to allow students to acquire the skills and competencies they need to succeed. The technical capability within the University is impressive in relation to adapting and customizing the online learning environment.”

Additionally, the EEC states:

- *“The study programme is innovative and up-to-date. The mixing disruptive technologies knowledge with digital innovation skills seems to be a strong educational offer. The development and management of the programme, and in this case its deployment, seems to be guaranteed by an enthusiastic and skilled team and a supportive management.”*, p. 5
- *“Teaching staff do collaborate in the fields of teaching and research within the HEI and with partners outside. They noted particularly strong links with industrial partners through an advisory board and strong dyadic relationships with particular companies underpinned by formal agreements to support collaboration. They described fair, transparent and clear processes for the recruitment and development of the teaching staff. The University provides a conventional professional skills programme for staff and has developed online resources to train staff in the use of particular tools to support teaching and learning. New posts are openly advertised on the University website and in other for fora.”*, p.9
- *“The committee was impressed with the counseling support provided to students (e.g. SKEPSIS). The Committee were impressed with the technical capability within the University available to adapt and customize the on-line learning environment.”*, p. 12.
- *“The online environment and linked resources are adequate”*, p.14

We are also glad that the Distance Learning component has also been earmarked by the EEC as being **“compatible with distance learning delivery”** while **“The Distance Learning unit at NUP addresses the requirements for study materials, interactive activities and formative assessment in accordance to international standards.”**

Since it is our firm belief and principle that there is always room of improving the quality of the University and the said program, we hereby enclose our response to FULLY satisfy the EEC suggestions and recommendations, which we found very useful and productive.

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

Findings

1.2 There's no evidence of provision of the adequate information and data for the support and management of the programme.

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.

Answer: See below Answer 1 in Areas of improvement and recommendations section

1.3.1 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.

Answer: See below Answer 2 in Areas of improvement and recommendations section

1.5.7 The programme doesn't provide a separate training course in research methods. The team indicated that this would be done in the dissertation. The dissertation handbook provided described a traditional quantitative approach and did not provide appropriate support for students undertaking a project rather than a research dissertation. We noted that the 30 ECTS seems too short for including both research methods training and the dissertation project itself.

Answer: See below Answer 3 in Areas of improvement and recommendations section

1.7 The documentation provided did not make evident that the teaching and learning process is adequate and effective for the achievement of the expected learning outcomes. The information is provided on teaching methods in the study guides, however, the needed to have been a lot more specific. The oral presentation, however, reassured the Committee that this had been considered and was adequate and effective.

Answer: See below Answer 4 in Areas of improvement and recommendations section

Strengths

The study programme is innovative and up-to-date. The mixing disruptive technologies knowledge with digital innovation skills seems to be a strong educational offer.

The development and management of the programme, and in this case its deployment, seems to be guaranteed by an enthusiastic and skilled team and a supportive management.

Areas of improvement and recommendations

Comment/Recommendation: Documentation on Quality procedures should be organized and easily accessed. A Quality Manual should be put in place.

Answer 1: Done. See attached **Annex 1 for the Quality Management Unit Handbook.**

Comment/Recommendation: Courses syllabus should be available for prospective students.

Answer 2: Upon CYQAA accreditation final approval we are not permitted to advertise or publish any document related to the programme including the courses syllabus. Of course, the courses syllabus will be available for the prospective students under NUP website after we receive the programme accreditation from CYQAA.

Comment/Recommendation: The programme should train the students on basic research methods. A core module on this should be offered in the programme.

Answer 3: Done. We have updated the programme by adding a compulsory course named “Research Methodology” in 1st semester. See attached “**Annex 2 - Updated Program Guide**” for the updated Study Handbook, “**Annex 3 - Updated/New Study Guides**” for Research Methodology Study Guide and “**Annex 4 – Syllabi**” for the course syllabus.

Comment/Recommendation: The study guides should be updated to detail the teaching methods adequate to each course. Project based learning, active learning, case studies analysis, research paper analysis and discussion, etc. should be used appropriately.

Answer 4: Done. We have updated the Study Guides including the suggested teaching methods. Indicatively, changes have been done to:

1. Information Security Study Guide: week 4, week 5 and week 8
2. Big Data and Analytics: week 1, week 5 and week 9
3. Digital Innovation and Entrepreneurship: week 6, week 9 and week 11
4. Disruptive Technologies: week 4, week 7 and week 10
5. Mobile Application Development: week 7 and week 12

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

Findings

The committee noted a number of areas of good practice including a strong approach to induction of students. While the committee agreed that it was substantially compliant we also agreed that there were a number of areas which need to be developed (as outlined below).

Answer: See below Answers in Areas of improvement and recommendations section

Strengths

- A blended learning approach (using a variety of learning technologies) has been implemented that allows for flexible delivery and integrates the face to face and the online environment.
- The individual needs of the students are met by having a commendable staff to student ratio (based on the projected figures that the course team used in their presentation).
- There is a student-centred approach that could potentially enhance self-regulated learning and the guidance and support from the tutor seems to be adequate.
- Good induction approaches and materials, particularly the online ones to allow students to acquire the skills and competencies they need to succeed.

Areas of improvement and recommendations

Comment/Recommendation: A more explicit link between the learning outcomes and the assessment methods (constructive alignment) would ensure that learning outcomes are directly linked to the assessment methods used in the programme. This is not typically achieved in conventional lectures, tutorials and seminars and exams. The formative assessment methods that were presented to the Committee should play an important role in this. Good practice dictates that learning outcomes are explicitly mentioned ahead of every activity, assessment task. E.g. ‘Next activity will help you to achieve learning outcome X.’

Answer: Done. The courses study guides and syllabus have been updated accordingly. “Annex 3 - Updated/New Study Guides” and “Annex 4 – Syllabi” include the updated documents. More specifically, in each course syllabus we have added a table that indicates the mapping between the assessment methods and the course learning outcomes. Furthermore, in the different types of activities (case studies, projects, research papers), as presented in the study guides, we explicitly mention the learning outcomes that the specific activity contributes. Finally, in the Program Study Guide we have included a mapping between the Course Learning Outcomes (CLOs) and the Program Learning Outcomes (PLOs).

Comment/Recommendation: The use of case studies to enrich learning and teaching materials would ensure practical and theoretical studies are interconnected. There was

no clear evidence from the materials and presentations to the Committee that there was strong connection between the two.

Answer: Done. Study Guides have been updated by including in each course case studies and their mapping with learning outcomes (kindly refer to **Annex 3 - Updated/New Study Guides**).

Comment/Recommendation: NUP has policies in place to address students' different abilities and needs. It is recommended that the programme team makes sure these are implemented in design of the online resources and environment rather than by exception (e.g. video transcripts, web page design for students with visual or other impairments, etc.)

Answer: Done. NUP uses Moodle as the online environment to support teaching. Moodle is designed to provide equal functionality and information to all people. This means that there should be no barriers for people regardless of disabilities, assistive technologies that are used, different screen sizes and different input devices (e.g. mouse, keyboard and touchscreen). More information about Moodle accessibility functionalities can be found in the following link:

<https://docs.moodle.org/dev/Accessibility>

Comment/Recommendation: There is no evidence that students are actively involved in research, before the dissertation module.

Answer: Done. To this direction, we have added a new course, as mentioned previously, named "Research Methodology". In addition, the Neapolis Research Notes has been introduced to enhance research opportunities for students, under the guidance and the support of the academic staff, engage students in primary research, enhance staff-student engagement:

<https://www.nup.ac.cy/gr/neapolis-research-notes-nrp/>

Finally, research papers and case studies have been added to study guides. (**Annex 3 - Updated/New Study Guides**). Indicatively, research-oriented activities can be found to:

1. Information Security Study Guide: week 4, week 5 and week 8
2. Big Data and Analytics: week 1, week 5 and week 9
3. Digital Innovation and Entrepreneurship: week 6, week 9 and week 11
4. Disruptive Technologies: week 4, week 7 and week 10
5. Mobile Application Development: week 7 and week 12

Comment/Recommendation: Deficiencies in the research training process are noted in the previous section.

Answer: Done. Actions have been taken to help students actively involved in research, as described previously. Examples of actions are the new course "Research Methodology" and the Neapolis Research Notes.

3. Teaching Staff (ESG 1.5)

Findings

Overall, the programme was judged to be substantially compliant. The committee, however, identified a number of areas which need addressing as detailed below.

Answer: See below Answers in Areas of improvement and recommendations section

Strengths

The programme has been developed and delivered by an enthusiastic and informed team within the University.

Teaching staff do collaborate in the fields of teaching and research within the HEI and with partners outside. They noted particularly strong links with industrial partners through an advisory board and strong dyadic relationships with particular companies underpinned by formal agreements to support collaboration.

They described fair, transparent and clear processes for the recruitment and development of the teaching staff. The University provides a conventional professional skills programme for staff and has developed online resources to train staff in the use of particular tools to support teaching and learning. New posts are openly advertised on the University website and in other for fora.

Areas of improvement and recommendations

Comment/Recommendation: The teaching staff were all qualified to doctoral level and had the knowledge, skills and expertise to achieve the objectives and planned learning outcomes of the study programme, and to ensure quality and sustainability of the teaching and learning. While the Committee judged that the staff had the relevant formal and fundamental qualifications to teach on the course they also noted the need for staff with additional skills and knowledge. The University has also recognized the need to recruit additional staff with a specific expertise in Information Systems and is in the process of recruiting one additional member of staff. This is a critically important position as, with the core staff undertake research and publish in the allied fields of computer science and informatics not within the field of information systems research or digital innovation. We would have expected to see staff, for example who published in the Association of Information Systems Senior Scholars' Basket of Journals or associated conferences or on topics which could be published in these outlets. The biographical details provided to us indicated that only Dr Masouras fits within this profile.

The University has a Research Policy which facilitates staff accessing scientific leave and staff described the amount of time provided to support research as being adequate. The Committee noted that the normal workload of staff provides only a relatively limited amount of time to support research activities. It is to their credit that staff have been able to continue to publish work with this workload.

Special teaching staff support one eighth of content and did not exceed 30% of the permanent teaching staff.

Answer: The University has already recruited a new member staff, Dr. Nikolaos Apostolopoulos, with expertise in Entrepreneurship and Innovation. The full CV of Dr. Nikolaos Apostolopoulos is attached in “**Annex 6 - CV of Nikolas Apostolopoulos**”

<https://www.nup.ac.cy/nikolaos-apostolopoulos/>). In addition, as the EEC mentioned, the University has already initiated the process of recruiting one additional member of staff in the field of Management of Information Systems (<https://www.nup.ac.cy/wp-content/uploads/2019/07/Lecturer-in-Computer-Science-and-or-Digital-Innovation.pdf>). Finally, two more Lecturers positions have been approved and advertised in the field of Financial Technology (<https://www.nup.ac.cy/wp-content/uploads/2019/04/Lecturers-in-Strategy-Marketing-Management-and-Finance-1.pdf>)

In regards to the research activities, our staff is active as shown below:

1. Dr. Savvas Chatzichristofis, Citations:2493, Google Scholar link:
<https://scholar.google.gr/citations?user=n3DR7UEAAAAJ&hl=el&oi=ao>
2. Dr. Zinon Zinonos, Citations:320, Google Scholar link:
<https://scholar.google.gr/citations?hl=el&user=UOQ-3SkAAAAJ>
3. Dr. Konstantinos Zagoris, Citations:663, Google Scholar link:
<https://scholar.google.gr/citations?hl=el&user=GDAL3kUAAAAJ>
4. Organize the 1st International Workshop on Intelligent Systems for the Internet of Things (<https://sites.google.com/view/ISIoT2019>)

Moreover, we attached the updated Research Policy and the Research Policy Implementation procedures in **Annex 5 - Research Policy**.

4. Students (ESG 1.4, 1.6, 1.7)

Findings

The two students interviewed during the onsite visit indicated that they were very satisfied with the student support provided by the University.

Students felt that the University was responsive to their concerns and that staff provided feedback.

Students noted a propensity to use external social media (Facebook and Whatsapp) to communicate with peers rather than the tools provided by the University (Moodle).

Strengths

The student representatives recognized that the University had a psychological and counselling service, however, also indicated that they would be willing to approach their Personal Advisor or other members of staff.

It was noted that students have the ability to have a one-to-one meeting with academic staff 1-2 times per week.

While the material is challenging the pacing of the material is such that the students indicated it was easily accessible.

The students noted that pastoral support was provide as needed and they felt able to access this support.

Students are encouraged to participate in the Erasmus programme.

Areas of improvement and recommendations

Comment/Recommendation: Students indicated a difficulty in balancing full time work and a full time course. The Committee were unsure about the extent to which this issue was one experienced by only these students or more generally across the potential cohort. We would recommend that, following market research, the University considers more flexible approaches to delivery to support students that work full-time.

Answer: In order to support students that work full-time the University has a specific policy. We attached the policy in **Annex 8 - Working Students**.

5. Resources (ESG 1.6)

Findings

The committee has found resources (teaching and learning environments, teaching materials, teaching aids and equipment, financial, physical and human support resources) to be adequate and readily accessible to students in support of the objectives in the study programme. When asked about access to information systems journals, the library personnel assured us that the list of AIS (Association of Information Systems) journals is accessible to students. These resources seem to be adequate for potential change in circumstances (e.g. change in student numbers).

Strengths

The committee was impressed with the counseling support provided to students (e.g. SKEPSIS).

The Committee were impressed with the technical capability within the University available to adapt and customize the on-line learning environment.

Areas of improvement and recommendations

Comment/Recommendation: We noted that whilst relevant materials are available for teaching the ones that students are directed towards in the study guides were not mainstream information systems or management. We recommend, therefore, that students are signposted to a wider range of up- to-date books and other materials in the field of Information Systems and Digital Innovation within the study guides.

Answer: Done. We have updated the study guides and included new books and other material in the field of Information Systems and Digital Innovation. More specifically, we have added the following:

1. Kenneth C. Laudon, Jane P. Laudon, *Management of Information Systems: Managing the Digital Firm*, 16th Edition, Pearson, 2019 in course **Information Systems Analysis and Design**
2. Norman M. Scarborough, Jeffrey R. Cornwall, *Essentials of Entrepreneurship and Small Business Management*, 9th Edition, 2019 in course **Digital Innovation and Entrepreneurship**
3. David Rogers, *The Digital Transformation Playbook: Rethink Your Business for the Digital Age*, Columbia University Press, 2016 in course **Digital Innovation and Entrepreneurship**
4. David Kim, Michael G. Solomon, *Fundamentals of Information Systems Security*, 3rd Edition, Jones & Bartlett Learning, 2018 in course **Information Security**
5. Leonard M. Lodish, Howard L. Morgan, Shellye Archambeau, Jeffrey Babin, *Marketing That Works: How Entrepreneurial Marketing Can Add Sustainable Value to Any Sized Company*, 2nd Edition, Pearson FT Press, 2016 in course **Digital Marketing**
6. Müller, Oliver and Junglas, Iris and Brocke, Jan vom and Debortoli, Stefan, *Utilizing big data analytics for information systems research: challenges, promises and guidelines*, European Journal of Information Systems, 2016 in course **Big Data and Analytics**

6. Additional for distance learning programmes (ALL ESG)

Findings

NUP have established a range of resources to support distance learning delivery of the programme. The online environment and linked resources are adequate. We have provided some recommendations for further improvement of the distance learning mode of the programme.

Answer: See below Answers in Areas of improvement and recommendations section

Strengths

The nature of the programme is compatible with distance learning delivery.

The Distance Learning unit at NUP addresses the requirements for study materials, interactive activities and formative assessment in accordance to international standards. Teacher training programmes focusing on interaction and the specificities of distance learning are offered.

There are in place policies to establish the job description of an academic personal advisor for Distance Learning students and training is offered which is focused on interaction and requirements for teaching a distance learning cohort.

The establishment of Online Societies is commendable and their relation to online welfare, however the programme team would need to articulate how the programme, materials, facilities, and guidelines safeguard the interaction between students, students and teaching staff, students and the material.

Areas of improvement and recommendations

Comment/Recommendation: There needs to be greater consistency between the distance learning and conventional delivery of the programme:

(1) Assessment approaches in the distance learning mode include the use of formative tasks that complement the student support aspect of the programme. The panel has seen two module study guides that implement this approach.

Answer: No response is required

(2) There seem to be two different approaches in providing student support for the conventional course (Quizzes, Project-assignment and oral presentation) and the distance learning mode (discussion boards, group projects, peer assessment and oral presentations). While the use of peer assessment is commendable in the distance learning delivery, there is no justification for this approach to ensure that distance learning students are not disadvantaged.

Answer: Done. Both conventional and distance learning courses have now the same assessment practices. The courses syllabi have been updated accordingly, as shown in “Annex 4 – Syllabi”.

- (3) Re: assessment, there is a need to establish a consistent approach across the programme. Is it 30% for assignments and 70% for exams or 40% for assignments and 60% for exams?

Answer: Done. Both conventional and distance learning have the same assessment approach: 40% for assignments and 60% for exams.

- (4) The establishment of Online Societies is commendable and their relation to online welfare, however the programme team would need to how the programme, materials, facilities, and guidelines safeguard the interaction between students, students and teaching staff, students and the material.

Answer: Done. In “**Annex 7 - Interaction Guide**” we attached a guide about the interaction between students, students and teaching staff, students and the material. Furthermore, we have created two new Training manuals, one for students and one for teachers (kindly refer to **Annex 9 – Training Manuals**)

- (5) The panel has not seen examples of final exam papers (the programme is new).

Answer: As mentioned by the EEC, the program is new therefore no final exams papers are available.

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

8. Additional for joint programmes *(ALL ESG)*

B. Conclusions and final remarks

Strengths

The study programme is innovative and up-to-date with an effort to combine multiple disciplines, including computer science and information systems, as well as management and innovation. The development and management of the programme, and in this case its deployment, seems to be guaranteed by an enthusiastic and skilled team and a supportive management.

A blended learning approach (using a variety of learning technologies) has been implemented that allows for flexible delivery and integrates the face to face and the online environment. There is a student-centred approach that could potentially enhance self-regulated learning and the guidance and support from the tutor seems to be adequate. Good induction approaches and materials, particularly the online ones to allow students to acquire the skills and competencies they need to succeed.

The technical capability within the University is impressive in relation to adapting and customizing the online learning environment.

Areas of Improvement

There is a challenge in understanding the profile of incoming students and how the programme will be able to adapt to different educational and skills backgrounds. Attracting potential candidates from both business and computer science requires a better understanding of the market potential of the program in relation to employability prospects for the students.

The programme structure and content is sufficiently compliant, but the committee recommends that the program should provide options for diverse students. Options could be considered in the form of electives, but also pathways towards either more business or technology skills that could be supported by different types of dissertation projects.

Attracting staff from information systems that span both computer science and management disciplines would go a long way in ensuring that the program meets its multidisciplinary objectives.

In relation to this, there should be a separate research methods module that covers both qualitative and quantitative skills and which prepares students to take on different dissertation projects. This should also give students the skills to better understand innovation processes and apply their knowledge beyond the program.

The program should make an effort to embrace diverse types of teaching methods such as, project based learning, active learning, case studies analysis, research paper analysis and discussion. A more explicit link between the learning outcomes and the assessment methods (constructive alignment) would ensure that learning outcomes are directly linked to the assessment methods used in the programme.

In relation to the distance learning delivery, the panel recommends a greater consistency between the distance learning and conventional delivery of the programme to ensure that the distance learning students are not disadvantaged. This applies to assessment approaches (formative and summative), student support and engagement, distribution of marks across the

various assessment tasks and online safeguarding of students. In addition, the programme team should consider a more flexible approach to delivery to support students taking the course while in full employment.

Answer:

We thank the EEA for the positive conclusions and the constructive remarks and recommendations for improvement which have been incorporated accordingly.

Below, we summarize the actions taken in order to meet suggestions and recommendations of the committee:

1. A new compulsory course “Research Methodology” has been added.
2. The programme was restructured and the students have the option of electives courses.
3. Study Guides have been updated to support teaching methods like project-based learning, active learning, case studies analysis, research paper analysis and discussion.
4. A mapping between the Course Learning Outcomes (CLOs) and the Program Learning Outcomes (PLOs) has been included in the Program Study Guide.
5. A mapping between the assessment methods and the course learning outcomes have been added in the syllabus of each course.
6. Learning activities (case studies, research papers, projects, etc) have been correlated to CLOs.
7. Research oriented activities have been added to study guides.
8. We have included in the study guides up-to-date books and other materials in the field of Information Systems and Digital Innovation.
9. We established a consistent assessment approach across the programme.
10. Students are involved to research via the research-oriented activities added to courses, via the new course “Research Methodology”, and via the Neapolis Research Notes.
11. New or updated documents have been included in Annexes section:
 - a. Research Policy
 - b. Quality Manual
 - c. Interaction Guide
 - d. Training manuals
 - e. Working Students

The necessary supporting documentation is attached in Annexes section.

Annexes:

- Annex 1 - Quality Manual
- Annex 2 - Updated Program Guide
- Annex 3 - Updated/New Study Guides
- Annex 4 – Syllabi
- Annex 5 - Research Policy
- Annex 6 - CV of Nikolas Apostolopoulos
- Annex 7 - Interaction Guide
- Annex 8 - Working Students
- Annex 9 – Training Manuals

C. Higher Education Institution academic representatives

| <i>Name</i> | <i>Position</i> | <i>Signature</i> |
|-------------------------|--------------------------------------|------------------|
| Pantelis Sklias | Rector | |
| Georgia Christou | Head of Quality Assurance Department | |
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Date: 08/07/2019