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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)

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

In Greek:

Programme Name

In English:

**Computer Science and Artificial Intelligence
(4 Academic Years, 240 ECTS, Bachelor (BSc))**

- **Language(s) of instruction:** English
- **Programme's status:** New
- **Concentrations (if any):**

In Greek: Concentrations



The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws” of 2015 to 2021 [L.136(I)/2015 – L.132(I)/2021].

In English: Concentrations



A. Introduction

This part includes basic information regarding the onsite visit.

Following an invitation by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA), the External Evaluation Committee (EEC) had the opportunity to evaluate the BSc Programme in Computer Science and Artificial Intelligence offered by Neapolis University Pafos (Cyprus). The evaluation of the programme took place physically on site on 30 January 2024. Prior to the visit, the EEC was supplied with relevant documentation. On the day of the visit, the EEC met with the senior management team and academic faculty responsible for delivering the BSc programme, as well as with administrative and other support staff, students and graduates from other programmes in the same department (the program under assessment has not run yet). The EEC had the opportunity to ask questions and request further information.

The meetings and provision of all material under assessment were facilitated by Mrs Natasa Kazakaiou from CYQAA. The EEC wrote this report on 31 January 2024.

This report contains the findings of the visit and the resultant evaluation of the EEC. Based on the examination and evaluation of the accreditation material and the visit, the EEC concludes that some required standards are met, and others are partially met. This report elaborates on this and makes recommendations for improving the programme under evaluation.

B. External Evaluation Committee (EEC)

<i>Name</i>	<i>Position</i>	<i>University</i>
Christina Lioma	Professor	University of Copenhagen
D.K. Arvind	Professor	University of Edinburgh
Giuseppe Di Fatta	Professor	Free University of Bozen-Bolzano, Italy
Ioannis Zappitis	Professional body representative	ETEK
Krinos Vasileiou	Student representative	Cyprus University of Technology
Name	Position	University

C. Guidelines on content and structure of the report

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

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

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

1.1 Policy for quality assurance

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*

1.2 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*

1.3 Public information

Standards

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

1.4 Information management

Standards

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

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

You may also consider the following questions:

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

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.

The content and the learning outcomes of the programme Computer Science and Artificial Intelligence (4 academic years, 240 ECTS, Bachelor (BSc)) of the NEAPOLIS University, Pafos, are mostly in line with the current standards and expectations in the sector. Some aspects of the learning outcomes and the programme structure can be revised to better reflect the title and the vision of the new degree as well as the current state-of-the-art in Artificial Intelligence and Machine Learning.

Overall the programme complies with most quality assurance policies in place at the University. The program structure and course distribution in semesters are clearly and properly identified with a coherent list of compulsory and elective courses.

The programme was designed involving the company JetBrain as an external stakeholder. The programme belongs to the Department of Computer Science of the university. The IT Department currently has five other programmes, which are supported by approximately 10 faculty members and 2 external experts from the company JetBrains. In order to support this new programme 2 additional staff members are going to be hired. The academic staff teaching the courses have the appropriate qualifications, only in part consistent with the new program (we elaborate on this point later in this section). The new appointments and retraining of the existing staff will be sufficient to support the new programme. Faculty members hold a doctoral degree in a relevant subject. Their teaching load is consistent with the sector. The courses are taught mostly by permanent full time staff.

The new programme was developed to meet the demand and expectations of local and international employers, which either require digital innovation in general or specific AI solutions. The programme is expected to have excellent employability statistics, similarly to the other programmes of the Department. For example, it was orally reported that 93% of CS graduates are in employment in the first three months after graduation, and that 75% of industrial placements result in employment before graduation.

Strengths

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

Overall, the new programme meets either fully or partially the quality conditions and expectations for a Higher Education Institution in Cyprus and at the European level.

The objectives of the programme of study are aligned with the university strategy and have explicit intended learning outcomes. Further, the programme results in a qualification that is clearly specified and communicated. The programme reflects adequately the four purposes of higher education of the Council of Europe, and is designed so that the content corresponds to the required number of ECTS. The programme includes well-structured placement opportunities.

The department has been successful in attracting some external research funding and demonstrated strong links to the local market and industry.



The dropout rate for students in the programmes of the Department is 15% in the first year and negligible in the following years, which is acceptable.

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.

There is a formal policy for quality assurance (QA) for the programme of study, however it is not publicly available on the university website. This should be amended, so that the QA policy is publicly available to all, not upon request, on the university's website.

The QA policy has a formal status and is guided by structures, regulations, and processes. The following points should be amended:

- (i) the minimum number of members that must attend in order for a QA meeting to take place must be clearly stated;
- (ii) meetings should not take place without the student member attending, in order to ensure appropriate representation of the student body in all meetings;
- (iii) the minutes of all QA meetings should be readily publicly available on the university website to all, not upon request;
- (iv) it is not clear if the QA committee has representatives from external stakeholders; the composition of the QA committee should include external stakeholders. All processes on the selection and term of QA members should be clearly stated in the policy that should be made publicly available.

Without the above amendments, the policy for quality assurance does not fully support teaching, administration staff and students as per all CYQAA standards.

It is not clear what precisely is the formal institutional approval process for the design of the programme as a whole and of its components individually. There was not always agreement between the application material submitted by the institute and the outcomes of the discussions that the committee had with teaching and managerial staff. This raises questions on the extent to which formal procedures are followed in practice. This point should be amended. It was also not clear what is the process of periodically reviewing the programme contents to ensure that it is up-to-date, not only technically and scientifically, but also in response to changes in societal needs, student needs, and input from external stakeholders. The committee notes that even though the involvement of JetBrains in the programme design is commendable, there should also be other external stakeholders involved, to avoid overfitting the programme to one particular industrial direction. Furthermore, there was no evidence of students being involved in the design of the programme. As a result of this, the committee recommends that a formal advisory board on the programme design and revision should be established to include representatives from external stakeholders as well as students. Meetings should be formally held every two years specifically for the curriculum review. Student input to the review should be encouraged and documented.

As this is a new programme, information on it is not publicly available yet on the university's website. When this becomes available, the committee recommends that, in addition to the information that is stated on the university

website for its other CS programmes, the following points are also clearly stated: (i) teaching and learning procedures (currently only the assessment procedures are listed), and (ii) graduate employment information, when this becomes available. In addition, the committee strongly recommends that all faculty and teaching staff be listed on the departmental website of the university, with their brief CVs. Adding this information will meet the CYQAA standards.

The committee is overall satisfied with the structures and processes for collecting and monitoring information about the programme, with the exception of dropout statistics. The committee was informed that logged information is used to make predictions about the number of future applications from prospective students, but not about student dropout. It was also not clear to the committee to what extent the causes of dropout were identified and fed into a strategy for reducing dropout. The committee was informed that even though the current CS dropout (15% in the first year, and negligible thereafter) costs the university in terms of tuition fees, it all balances out in the end because the university benefits from having more resources freed as a result of this dropout. This is not a healthy analysis of student dropout. The committee strongly recommends that dropout statistics are analysed and fed into a strategy aimed at reducing dropout.

The course descriptions state the ECTS, number of weeks, and number of hours per week. This information does not cover the expected student workload of each course. The expected student workload should be broken down into:

- Number of lecture hours (already there)
- Number of preparation hours (missing)
- Number of hours spent in coursework (missing)
- Number of hours spent in exam preparation (missing)
- Number of hours spent in exam (missing)

This point should be amended for all courses.

We commend the vision of the programme, which reflects current technological and societal trends. In terms of the programme courses, the current composition does not accurately reflect the programme title. The committee recommends the following amendments:

1. The programme is too heavy in mathematics. The committee recommends that the material covered in these courses be consolidated into fewer courses, which are tailored to CS and AI, leaving more space for other CS and AI topics (see points below).
2. The course Programming Paradigms in semester B introduces students to programming paradigms that are not relevant to today's AI, such as Pascal, Haskell, Prolog. The idea behind different programming paradigms can be covered in the introductory programming courses. We recommend revising this course, to place more emphasis on hands-on advanced programming.
3. It is not clear why courses on Operating Systems Development, Psychology, and Compilers are compulsory for this programme. We recommend that they become elective courses.
4. The Artificial Intelligence course as it stands addresses topics in AI which are out of proportion to their current importance. Instead, topics in Machine Learning should be given greater prominence and time. The committee finds that research papers 1,2,3,6 in the course description are not appropriate for this course.
5. We recommend that the following elective courses become compulsory: Pattern Recognition and Machine Learning, Data Science and Big Data, Data Mining, Human Computer Interaction
6. We recommend that the following new courses be introduced: Optimisation for Machine Learning, Natural Language Processing and Foundational Models (LLMs, Generative Models) in order to strengthen the AI angle of the programme and bring it up-to-date with the state-of-the-art in the area.



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

Sub-area		<i>Non-compliant/ Partially Compliant/Compliant</i>
1.1	Policy for quality assurance	Partially compliant
1.2	Design, approval, on-going monitoring and review	Partially 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

- 2.1 Process of teaching and learning and student-centred teaching methodology**
- 2.2 Practical training**
- 2.3 Student assessment**

2.1 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.*

2.2 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.*

2.3 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:

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



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.

The Department booklet describes the approach and guidelines that will be adopted in the programme for student-centred learning, teaching and assessment. The overall methodology is focused on developing the ability of students for an independent approach to modeling, design and implementation of algorithms, software and AI solutions for a wide range of areas and applications. Both formative and summative forms of assessment are accounted for. Development of soft skills and experience in industry is well integrated in the programme structure. In particular, there is a compulsory course dedicated to “Industrial Experience (Placement)”, and topics for student projects (Thesis I and II) are gathered from local companies to allow further exposure to real-world problems and applications. Several extra-curriculum initiatives are also offered, such as participation in data science or mathematical competitions.

The program combines strong theoretical and mathematical foundations with training in traditional Computer Science fields, such as programming, software design and development, Databases, mobile computing, Robotics, Computer Vision, Artificial Intelligence. The envisioned assessment methodology and procedures are overall consistent, appropriate, transparent, objective and are adequate to support the development of the students. Initiatives in adaptive learning have been piloted with McGraw Hill, although the tool is not expected to be introduced systematically into the new programme.

Strengths

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

The student-staff ratio is healthy, and there is evidence from interviewing students that the staff are friendly and helpful towards the students in achieving the learning outcomes.

The practical elements of teaching for the proposed Programme is centred around 3 laboratories: UI Lab, AI Lab and Robotics Lab. The latter two are under construction and will be an asset for both teaching and research when completed in time for the academic year 2024-25.

The university's close collaboration with the local industry fosters a dynamic learning environment, where students have the opportunity to gain hands-on experience through mandatory industry placements and benefit from the expertise of industry professionals who actively participate in advisory boards. This collaboration also ensures that the curriculum remains relevant, aligning with industry needs and preparing students for successful careers. Additionally, the institution encourages students to participate in competitions, where they have achieved notable successes. Furthermore, the university is investing in the development of new laboratories and facilities, providing students with state-of-the-art resources and enhancing their learning experience.

The programming language for instruction has been moved from Java to Python for the proposed programme. This is a positive and essential step for the AI courses on the programme.

Student welfare mechanisms and support with personal tutors are in place.

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 drop-out rate of 15% in the first year in the existing undergraduate degree programmes in this department can become a cause for concern, as no analysis was presented on the outcomes of the exit interviews (or if such interviews were even held). An analysis of the causes for the dropout should inform the recruitment and retention of students in the proposed programme.

Overall, students receive theoretical training on key areas of Mathematics and Computer Science, although some specialised topics in AI and Machine Learning are currently missing in compulsory courses. Some course titles could be revised to indicate explicitly when they are tailored to provide foundational elements to AI.

The EEC recommends that in the future, when the staff members and the curriculum modules advance in numbers, the university should consider a formal Teaching & Learning (T&L) Board to monitor the T&L processes, shared responsibility of exam papers and assessment moderation, curriculum review and resources at all stages, taking into account the student and staff feedback more formally as well as the introduction of external examiners.

It is recommended to have in place procedures, appropriate training, guidance and support, for teaching staff, to enable personnel to efficiently support the educational process. Workshop and training in pedagogical topics should be offered by experts in didactics and made compulsory for teaching staff.

Each student has an academic mentor, however students may benefit from the introduction of student mentors in the support services of the department, where the mentor is at a higher stage of studies (student buddy system).

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

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

3. Teaching staff (ESG 1.5)

Sub-areas

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

3.1 Teaching staff recruitment and development

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.*

3.2 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.*

3.3 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:

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

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.

Overall the number of teaching staff is currently adequate to support the programme. Conditions of employment that recognise the importance of teaching are followed, and the assessment and promotion of teaching staff is well thought of. However, the current match between the qualifications of the teaching staff and the needs of the programme is not perfect. Furthermore, the teaching staff's engagement with teaching-skills training and development, such as formal pedagogical and didactic training, is also rather ad hoc at the moment. The committee recommends ways to improve these points in this section.

Strengths

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

All the appointed teaching faculty have doctoral degrees with an average age of less than 40 years. The teaching faculty are keen and helpful as evidenced in the interviews with students and their evaluation of teachers by their students (avg 4.5/5).



There is a degree of flexibility in the teaching load with some reduction as incentive to publish conference/journal papers, and for securing successful grants. The teaching load can be reduced to a minimum of teaching 3 courses per year. In addition, faculty are provided conference fees and travel expenses to attend conferences.

The online learning system in collaboration with McGraw-Hill could be an asset for self-learning and thereby augment face-to-face teaching. The caveat is that the system should be tested and trailed by more than 2 students, which is currently the case.

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.

There was no evidence that newly-appointed faculty had formal training from the University of Nicosia, from certified staff in didactics before student contact. The committee was informed that the university has a 'Pedagogical Planning and Learning Process' unit, however it appears this unit has not been used in this case. Pedagogical and Didactic training (as opposed to solely teaching experience) should be an essential component of the onboarding phase for new academic staff. During their interview process for recruiting new academics, prospective candidates should be invited to give a short teaching lecture on a suggested topic to evaluate their competence to lecture in English. The staff do endeavour to submit research proposals each year, and are supported by a small team in the University, but have not been too successful so far. There should be active involvement of senior staff within the University with experience of successful grant funding to mentor the staff. In addition, the department should pair them with other successful grant holders in their field to participate in future research proposals. The department should actively seek to appoint Visiting Professors in gaps in research topics that they wish to fill, who can mentor junior Faculty members and plug them into research networks. There was no evidence of seed corn funding to bootstrap the research of newly-appointed faculty. This would be a good incentive for recruiting talented new academics. In addition, a PhD programme will help the recruitment of research-active faculty members and support research. The female gender imbalance (3/12 faculty staff) should be attended to in future appointments. They could also help as role models for recruiting female students to their undergraduate courses. The current syllabus for the proposed CS and AI course is light on AI courses, There are compulsory legacy CS courses such as Operating systems and Compilers, and the one on Psychology which could be replaced by specialist courses in AI (such as, Large Language Models, Predictive Analytics, Speech Processing/Understanding and Generation, Image Understanding) taught by current staff who have been retrained or future appointments with research expertise in these areas. Two of the teachers in this programme are not employed by the university. They have an employment contract with the company JetBrains. Despite not being employed by the university, they are allowed to design courses, teach lectures and labs, and assess students. The committee recommends that the university sets up a formal procedure for selecting and appointing adjunct faculty, who can teach courses without being employed by the university. The criteria for nomination and responsibilities of such a position should be clearly stated. This would allow the university to continue the teaching collaboration with JetBrains on a more solid ground.



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

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

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

Sub-areas

- 4.1 Student admission, processes and criteria
- 4.2 Student progression
- 4.3 Student recognition
- 4.4 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)?*
- *How is the procedure of recognition for prior learning and work experience ensured, including recognition of study results acquired at foreign higher education institutions?*
- *Is the certification of the HEI accompanied by a diploma supplement, which is in line with European and international standards?*

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.

The student admission process reveals a well-structured and transparent system. The process is clearly defined, with explicit regulations in place. The criteria includes a minimum high school grade requirement of 75% (16/20) and the necessity of a knowledge certificate of the English language certificate. Consistency is evident in the process, corroborated by both the documentation and as observed during interviewing the administrative staff.

The student progression system within the program is structured to facilitate continuous assessment and feedback. Assignments are a primary tool for assessment, with academics expected to provide written feedback through Moodle. While the consistency of written feedback may vary, the overall responsiveness of the faculty, including their availability to address student queries and provide guidance outside of scheduled class hours, has been positively received by the students.

The program mandates that teachers provide detailed feedback on assignments and exams within 10 working days.

Attendance monitoring is systematically implemented, with instructors utilizing a specific Moodle interface to log attendance for each session.

Both the internal department committee and the university's general committee monitor graduate outcomes and dropout rates. For placements, the assessment is jointly conducted by the hosting company and a faculty supervisor, with reports evaluated by a Liaison Officer.



Regulations and guidelines for these processes are documented in an online Teacher's Handbook, accessible to faculty members.

Strengths

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

Students completing the program receive recognition through the accreditation process by national and international bodies, including the Technical Chamber of Cyprus (ETEK), which is the engineering regulatory body in Cyprus.

Student attendance is logged into an online system by teaching staff after each session. This is a very good practice. Attendance is compulsory, and a multilayer penalty process for missing classes is in place. This process requires that at minimum, students have 60% course attendance and 80% lab attendance. If this is not met, then the first penalty is students not being able to get a grade higher than 80%. The second penalty is prohibiting students from taking the exam of the course in question. It is commendable that the average attendance in the department is 80%.

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.

While all the faculty members that the committee met stated that they always provide grades accompanied by written feedback to all forms of hand-ins and exams, the committee found out from the students interviewed that this was mostly but not always the case. The committee recommends that the practice of providing grades and written feedback is strongly enforced by all.

A marking rubric is in place, but it is not clear to the committee if it is available to students. The marking rubric should be publicly available to all students. In addition, information about who designed the marking rubric and what is the process of revising it should be clearly stated in the QA policy.

For the BSC dissertation, there is an emphasis on industry-based projects. Students should receive in advance information about potential intellectual property issues pertaining to the work they complete while working on an industrial project. This information should be communicated to all students prior the commencement of their project work, not upon request by students.



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



eqar /// enqa



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

Sub-area		<i>Non-compliant/ Partially Compliant/Compliant</i>
4.1	Student admission, processes and criteria	Compliant
4.2	Student progression	Compliant
4.3	Student recognition	Compliant
4.4	Student certification	Compliant

5. Learning resources and student support (ESG 1.6)

Sub-areas

5.1 Teaching and Learning resources

5.2 Physical resources

5.3 Human support resources

5.4 Student support

5.1 Teaching and Learning resources

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 supported.*

You may also consider the following questions:

- *Evaluate the supply of teaching materials and equipment (including teaching labs, expendable materials, etc.), the condition of classrooms, adequacy of financial resources to conduct the study programme and achieve its objectives. What needs to be supplemented/ improved?*
- *What is the feedback from the teaching staff on the availability of teaching materials, classrooms, etc.?*
- *Are the resources in accordance with actual (changing) needs and contemporary requirements? How is the effectiveness of using resources ensured?*
- *What are the resource-related trends and future risks (risks arising from changing numbers of students, obsolescence of teaching equipment, etc.)? How are these trends taken into account and how are the risks mitigated?*
- *Evaluate student feedback on support services. Based on student feedback, which support services (including information flow, counselling) need further development?*
- *How is student learning within the standard period of study supported (student counselling, flexibility of the study programme, etc.)?*
- *How students' special needs are considered (different capabilities, different levels of academic preparation, special needs due to physical disabilities, etc.)?*
- *How is student mobility being supported?*

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.



The Department uses computer laboratories, designated areas for group and individual work, a library, rooms for developing learning skills, and new research spaces (under construction). The committee has observed that the computer laboratories have sufficient capacity to accommodate students, with stable connectivity to facilitate seamless access to learning resources.

There is provision for student support, particularly focusing on students with special educational needs and disabilities. The establishment of the Special Educational Needs and Disabilities Center, along with the SKEPSI Center for Research and Psychological Services, indicates a structured approach to supporting these students. These centers are backed by an official policy and set procedures aimed at integrating students with special needs into the community, reflecting a commitment to inclusivity.

The process for accessing these support services requires students to proactively reach out via email to schedule an assessment of their needs. Following this, the Special Educational Needs and Disabilities Office is tasked with taking the necessary steps to accommodate the student's requirements.

Similarly, for psychological support, students must inform the Psychological Support Service and provide the necessary documentation to receive appropriate accommodations in their course examinations. This service is actively promoted to new students by the psychology department, indicating an attempt to ensure that students are aware of and can access the support available.

The administrative staff appears adequate in numbers and expertise.

Each student is assigned a counselor, which is a part of the program's effort to provide personalized support. Academic counselors are mandated to hold bi-semester meetings with students of which the meeting minutes are recorded.

The program's facilities and technological infrastructure are in a phase of transition and enhancement to support its educational objectives. The current setup includes 17 classrooms and three labs, accommodating between 18 to 65 students each. However, the existing labs are noted to lack the computing resources necessary to support AI-related activities (we discuss this point later in the section).

In response to the resource limitations, the program is in the process of establishing three new specialized labs: the iLab, the AiLab, and the Robotics Lab. While these new facilities are not yet operational, their anticipated contributions are expected to significantly bolster the program's technical capabilities, especially in AI and robotics. The upcoming robotic resources, while provisionally equipped with some computational capacity, are suggested to benefit from additional dedicated GPU resources to enable students to effectively develop and test their own AI models.

Collaboration with the Cyprus Institute is highlighted, providing access to high-end CPUs and GPUs. However, it remains unclear how these resources will integrate with the lab environment or if they will be available for routine use by students in a lab setting.

The program's network infrastructure currently offers a 600mbps connection, which is deemed sufficient, with plans to upgrade to a 1gbps connection to cater to growing digital demands.

A suite of online services is available to students, administrative, and teaching staff, including Office 365, cloud storage, and access to learning and communication tools. Interactive boards are used, and there is a printing platform available to all students. Additionally, the Moodle online platform serves as a centralized hub for course materials, timetables, assignments, and feedback, illustrating a commitment to leveraging technology in managing and delivering educational content.

Upon enrolment, students are equipped with an identification card, email address, Moodle credentials, and library access, ensuring they are well-prepared to engage with the academic and community life of the university.



The library offers a variety of e-books, e-journals, publications, and physical books. Collaborations with search and retrieval services, publishing houses, and online databases enrich the library's offerings. The presence of study desks and the observed usage of library space by students indicate that it serves as a conducive environment for study and research.

Strengths

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

Adequate and modern learning resources are available to the students, including the library, computing labs, general university infrastructure, services for student welfare, academic mentoring, etc. In general, facilities are overall fit for purpose to achieve the course learning outcomes with a student-centred approach.

The committee has observed a high level of satisfaction among students, attributed to the availability of dedicated academic advisors and tutors who provide personalized support and monitoring to ensure their academic success. Moreover, a significant portion of students have access to financial aid opportunities, further enhancing their overall educational experience.

An external collaboration with JetBrains adds a financial support component to the student support system, offering scholarships to 15 students each year for a four-year period. This initiative not only alleviates financial burdens for the recipients but also exemplifies the program's efforts to secure external partnerships to enhance student support.

Students of the current programmes appear satisfied with the infrastructure and the services provided to them.

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 committee finds that the GPU infrastructure needs to be substantially improved for the programme to be adequately supported, in particular considering the AI elements of it. It should be ensured that all lab PCs include at least entry level GPUs. One or two GPU servers with Tensor cores could be acquired to support AI student projects without relying on external computing infrastructures for the development and testing phase. The committee was informed that there is access to external HPC infrastructures, however this should be coordinated with the IT department (currently it is not) to provide clear instructions and assistance to staff and students who may need them. Practical issues pertaining to queuing and demand of HPC resources must also be carefully coordinated prior to the commencement of the programme. The committee further recommends that a small fund be allocated to run student projects in external Cloud services.

The completion of the two physical laboratories and new auditorium facilities should be ensured before the start of the first cohort of students. However, none of the new facilities include toilets. Access to toilets requires exiting the



facilities and walking around the parking space to enter another building that has toilet facilities. This is a considerable distance. The committee recommends amending this point.

The committee strongly recommends that handicap access is made easy to all new and old premises of the university. Currently there are areas where handicap access is not easy either because the doors are too heavy and cannot be opened with buttons, or because the elevator in place is too narrow to comfortably fit a wheelchair, or because even though ramps exist, the points where they meet other surfaces are not smooth. The committee strongly recommends addressing these issues.

The committee recommends that the university establishes formal processes for periodically assessing the adequacy and suitability of the lab and computational resources and inform the responsible services of the university for their actions. The department should establish a process to promote requests for the continuous upgrading and maintenance of laboratories and equipment, and for the unimpeded access of students to the resources (e.g., the external HPC facility available to some staff members).

Finally, the criteria for receiving financial support by students should be clearly and publicly stated on the university's website, with appropriate timelines and guidelines for applying.

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

Sub-area		<i>Non-compliant/ Partially Compliant/Compliant</i>
5.1	Teaching and Learning resources	Compliant
5.2	Physical resources	Partially 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.

You may also consider the following questions:

- How is the scientific quality of the PhD thesis ensured?
- Is there a link between the doctoral programmes of study and the society? What is the value of the obtained degree outside academia and in the labour market?
- Can you please provide us with some dissertation samples?

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	Choose answer
6.2	Proposal and dissertation	Choose answer
6.3	Supervision and committees	Choose answer



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.

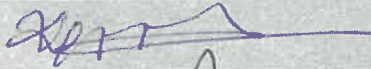


The EEC reviewed and examined the materials provided by the Cyprus University of Technology pertaining to its Bachelor's Degree Program in Computer Science and Artificial Intelligence of the Department of Computer Science. The one-day site visit was held on 30 January 2024.

The EEC was presented with detailed information about the degree program. During the site visit, the EEC met university, school and department leadership peers and met professors, teachers and administrators. It also met current and past students of the program.

Based on the examination and evaluation of the accreditation materials and the remote site visit, the EEC concludes that some of the required standards are met fully, and some of the required standards are met partially. Specifically, the standards that are met partially pertain to: physical resources (computational infrastructure needed to support the AI element of the programme, and disabled accessibility); teaching staff recruitment and development (degree of misalignment between teaching staff expertise and the programme, and lack of formal compulsory didactic training); policy for quality assurance; design, approval, on-going monitoring and review of the programme; public information and information management. The committee has made a list of recommendations targeted to each of these points.



E. Signatures of the EEC

Name	Signature
Click to enter Name CHRISTINA LIOMA	
Click to enter Name D. K. ARVIND	
Click to enter Name GIUSEPPE DI FATTA	
Click to enter Name IOANNIS ZAPPITIS	
Click to enter Name KRINOS VASILEIDOU	
Click to enter Name	

Date: Click to enter date 2 February 2024