

Doc. 300.1.2

Date: 15 September 2022

Higher Education Institution's Response

- **Higher Education Institution:**
UNIVERSITY OF CYPRUS

- **Town:** Nicosia

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

In Greek:

Πτυχίο Μηχανικού Υπολογιστών (4 χρόνια/243 ECTS)

In English:

Bachelor of Science in Computer Engineering (4
academic years/243 ECTS)

- **Language(s) of instruction:** Greek
- **Programme's status:** Currently Operating
- **Concentrations (if any):** None



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].

A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*
- *In particular, under each assessment area and by using the 2nd column of each table, the HEI must respond on the following:*
 - *the areas of improvement and recommendations of the EEC*
 - *the conclusions and final remarks noted by the EEC*
- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report **without any interference** in the content.*
- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in *.pdf format and named as annex1, annex2, etc.*

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

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For official use Only
<p>The involvement of external stakeholders is not currently part of the formal quality assurance policy. The policy for quality assurance should be modified to support the involvement of external stakeholders in a structured way.</p>	<p>The formal policy for quality assurance is decided and modified at the University-level. Thus, the University should decide the details/logistics of how to formally involve external stakeholders (e.g., industry representatives) in the quality assurance process. Nevertheless, regarding the probing of industry needs, our academic staff has strong connections with local industry (e.g., the Electricity Authority of Cyprus, various telecommunication companies, start-ups, etc.) , mainly through numerous collaborative research efforts and internship programmes. We always ask our industrial partners for feedback regarding both our research and teaching activities, but this is done mostly in an ad-hoc manner. Based on the EEC's recommendation, we will formalize this process; we will start inviting all pertinent stakeholders to annual meetings held at the Department's premises, where we will ask for feedback regarding the needs of the industry and how those can be served by the activities of our Department.</p>	<p>Choose an item.</p>
<p>The process of designing this programme, or any new programme, should include students. It is not clear to the EEC if this is the case, formally and in a structured way. Similarly, it is not clear if and how external stakeholders are directly involved in the reviewing and revision of this programme, in a structured way, rather than in an ad hoc way.</p>	<p>Any changes to the Programme of Study must be discussed and approved by the Departmental Council. Currently, there are 6 student representative members in the Council (out of a total of 25 Council members). Hence, we believe that there is sufficient student involvement in all decisions pertaining to the Program of Study. Regarding the formal (as opposed to ad-hoc) involvement of external stakeholders, this is a decision that must be made at the University level (as stated in our response above). In any case, our Department is always in contact with industry stakeholders as part of our extensive research activities, and their opinion regarding our Program of Study is always taken into consideration.</p>	<p>Choose an item.</p>
<p>The descriptions of the courses of this programme define student workload in terms of the number of hours planned for lectures and labs, but not in terms of the number of hours students should dedicate to preparation, self-study and soon. This should be amended, so that course</p>	<p>In all course descriptions of all the Departments at the University of Cyprus, the information given is with regard to so called "contact hours," i.e., hours spent in lectures, laboratories, and tutorials. The hours required for self-study and self-preparation by the students is given by the ECTS credits of each course. As per the European Credit Transfer System, each ECTS credit corresponds to between 25 to 30 hours of TOTAL study (i.e., including both contact hours and self-study). Thus, we believe that the way the</p>	<p>Choose an item.</p>

<p>descriptions define the overall expected student workload.</p>	<p>information is currently presented includes all information mentioned by the EEC.</p>	
<p>For a few courses, the bibliography was out-of-date. For example, the programming language course uses textbooks from 2003 and 1990, according to the application material the EEC received, During the visit, the HEI pointed out that the textbooks for this course have been updated, since the HEI submitted the application. The EEC recommends that the HEI makes sure all bibliography for all courses is updated, and that the internal procedures that make sure that the material taught is uptodate are followed.</p>	<p>We thank the EEC for pointing this out. In fact, the specific courses mentioned by the EEC are courses offered to our Department as service courses by the Department of Computer Science. We havenotified the Department of Computer Science to update the book editions in the bibliography of their courses. The Department of Computer Science has already updated the bibliography, as shown in the revised attached (Appendix at the end of this document) description of the course in question. We would like to clarify that the bibliography of those Computer Science courses referred to older EDITIONS of some books. The books themselves are correct and highly relevant, and the material taught is fully up-to-date.</p> <p>Finally, we have re-looked at the bibliography of all the courses offered by our Department and ensured that it is fully up-to-date. Further, all instructors are asked to update the book editions, etc., every time they teach a course.</p>	<p>Choose an item.</p>
<p>Information about graduate employment is not always uptodate or readily accessible. The HEI is keen on collecting and monitoring this information, but is currently facing difficulties in doing so. The EEC recommends that the HEI intensifies its efforts to collect and monitor this information efficiently. A mixture of traditional methods (emailing or calling graduates) and more recent methods (using LinkedIn or similar social networking platforms) is encouraged.</p>	<p>The Department’s view on this very important issue is that the mechanism to keep track and analyze graduate employment information should be implemented at the University-level through the office responsible for the alumni.</p> <p>Nevertheless, recognizing the importance of this issue, and in the absence of a mechanism at the university-level, the Department has made an effort in the past to create an archive with the contact and employment information of all its graduates. That document includes this information for all the graduates from 2007 (the Department’s first graduates) to 2012. Based on the EEC’s recommendation, we will now resume this documentation effort and we will gradually contact all the remaining graduates (from 2013 onward) to complete our archive. This archive will be updated periodically (every few years), in order to ensure that it remains as up-to-date as possible. It should be noted that the key impediment in maintaining contact with our graduates is the fact that they lose access to their university email address upon graduation. The Faculty of Engineering has recently initiated an effort to raise this issue at the University-level, in order to find a way to provide graduates with some form of “alumnus” email address.</p>	<p>Choose an item.</p>

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

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For official use Only
<p>Several of the students we spoke to have mentioned the challenges that they and their class mates faced in the first two semesters. Staff referred to this as a period of “finding their feet”. Some particular difficulties stemmed from those students who had been on military service immediately before starting their studies. Although the impact of this transition may be reduced with the possibility of one year of military service rather than two and the ability to do some study with the military, we would strongly urge that the Department consider extra help to ensure that students do not fall behind from the start of their career. It would be very regrettable if students suffered as a direct effect of serving their country in this way.</p>	<p>We are in full agreement with the EEC regarding this issue. In fact, the Department holds an orientation meeting with new incoming students every year (before classes start) and we explicitly warn the students (and especially the male students that just completed their military service) about the criticality of the first few semesters, the emphasis they should place on their study habits, etc. During that meeting, student representatives are also present, emphasizing, from their own perspective, critical aspects of the program that the new students should pay particular attention to. These student representatives also provide their contact information and they regularly assist the new students with all parts of the student life. In fact, the student representatives act as “mentors” for new incoming students throughout their studies.</p> <p>Furthermore, the Department assigns a personal Academic Adviser to each incoming student and explicitly asks all incoming students to have regular meetings with their Adviser to tackle any problematic issues from the outset. Specifically, the admission letter of all first-year students states their academic advisor and the relevant contact information and stresses the importance of meeting with the advisor to plan the courses that each student should register for each semester, discuss any issues troubling the student (related to courses, personal issues, etc.) and affecting his/her academic performance, in an effort to quickly try to resolve them, as well as discuss possible areas of specialization and possible opportunities/careers following graduation.</p>	<p>Choose an item.</p>
<p>We welcome the manner in which staff were involved in planning for the new buildings. However, it will be important to ensure that the student voice is heard once they move in - often a number of teething issues can emerge that were not anticipated during the early stages of design and development.</p>	<p>We thank the EEC for this advice. The involvement of students till now in the design of the new buildings was limited to graduate students that have been involved together with their advisors in the design of their respective research labs. Nevertheless, there are 6 student representatives on the 25-member Departmental Council, so the students’ voice will definitely be heard once the Department moves to the new building. In fact, we plan to have dedicated Departmental Council meetings after we move in to specifically discuss issues related to the new building.</p>	<p>Choose an item.</p>

	<p>We would also like to stress out that the team that designed the new buildings has significant experience in the design of academic buildings and has followed best practices from different countries. Thus, in the design of the new buildings there are several common and study rooms, open spaces for mingling and discussions, relaxation areas, etc., especially designed to accommodate the students.</p>	
<p>We note that there no formal process of exam moderation - a point also raised under the MSc/MEng courses. The Department Chair is responsible for noting when a particular course may have a very different distribution of marks than others - this creates the concern that a student's overall GPA might be influenced as much by their choke of low or high scoring modules as to their academic ability.</p>	<p>The issue of implementing a formal process of exam moderation is something that cannot be taken individually by the Department, since it involves the Law/Rules of the University. Hence, such a major change must be made at the University-level and applied to all Departments. We understand that formal processes for exam moderation are part of (for instance) the UK system, but they are not part of every tertiary education system. The logistics involved in having other academics moderate the exams/grading of each course are quite substantial and would have to be formally supported by the University.</p>	<p>Choose an item.</p>
<p>We also note that there is no formal process for review of exam papers while they are being written, except in the case of adjunct or visiting faculty members. This could take the form of review by other colleagues, or review by an external examiner, or both.</p>	<p>Please, see the response above. In summary, involving additional (and even external) examiners for the exams of each offered course every semester is a major change that involves changing the Law/Rules of the University and must be taken at the University level.</p>	<p>Choose an item.</p>

3. Teaching staff (ESG 1.5)

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<p>The plan to increase the academic staff to 25 or more is welcomed, as that will make it much easier to maintain a good range of optional courses. Our assessment of teaching staff number and status as partially compliant indicates the importance we attach to completing the planned increase in staff numbers- It would be worth considering a more systematic approach to sharing ideas and best practices for teaching among the academic staff, for example by organising an annual teaching away-day for the department.</p>	<p>The planned increase of academic staff to 25 is well under way. We have very recently hired 3 new academics, reaching a total staff number of 22. It is up to the University to allocate the additional remaining positions (to reach the number of 25) in a timely manner. We request new positions every year, but the ultimate decision is made at the University-level, as a number of Schools/Departments compete for the faculty positions allocated annually to the University by the government.</p> <p>Regarding the organization of a teaching away-day, we have been holding Departmental Annual Retreats , whereby all academic staff meet over a weekend to discuss all strategic issues related to the Department, including the Department’s vision, strategic planning, and steps ahead. During those meetings issues related to teaching, research, and administration are regularly discussed amongst the Department’s faculty in an effort to develop and follow best practices.</p>	<p>Choose an item.</p>

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

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For official use Only
<p>It was unclear if there were any students on the more detailed policy committees below the Council - of course, it is important not to overload students with too many of these responsibilities but it would be equally important to ensure that the Council is not simply approving detailed suggestions made by groups for which there is minimal or no student representation.</p>	<p>Student representatives (6 in our Department's case – elected by all students registered in the Department) are part of the Departmental Council that, ultimately, makes all decisions pertaining to the Department's policies and operation. Students are not part of the various Departmental Committees, because those Committees simply provide recommendations to the Departmental Council. The actual discussion and voting take place at the Council level, where the students are present. We feel that adding students to these Committees will simply overload them with additional monthly meetings during the semester. Since the students know all the items on the meeting's agenda beforehand, as well as the committees' recommendations, they have ample chance to formulate suggestions and propose their own recommendations before any vote. Therefore, we feel that no important decision is made at the Department level without adequate participation by the student body.</p>	<p>Choose an item.</p>
<p>Previous sections have described how some staff felt that there were delays before people could get an overview of a student's progress "while all the marks are entered into the system". There are good processes and procedures in place for formative feedback but perhaps the central systems might be augmented by Department infrastructure to provide an early warning if someone is struggling across a number of different courses.</p>	<p>The central grading system of the University immediately notifies the Department whenever a student fails 50%, or more, of their courses in any semester. The student is unable to register for the following semester unless they visit their academic adviser to discuss their academic performance and any reasons related to the failing of courses. We feel that this mechanism already provides a timely warning for problematic students at the end of each semester. It is not clear how a warning could be issued even earlier (i.e., in the middle of a semester), given that courses have different assessment methods and the mid-term exam dates vary from course to course. Nevertheless, each student is assigned an academic advisor that is available to the student at any time during the semester to discuss any issues troubling the student (related to courses, personal issues, etc.) and affecting his/her academic performance, in an effort to quickly try to resolve them. Further, students can either personally or through their student representatives bring to the attention of the Department Chair or the Departmental Council any issues related to courses, instructors, etc., that need immediate attention. Finally, at the University level there are a number of services aiming to support the students academically (i.e., tutoring, etc.) as well as at a personal level (i.e., psychological support, etc.).</p>	<p>Choose an item.</p>

<p>Although the criteria for progression were clear to us. there is a continuing concern that students arriving in the University were not fully prepared for the demands that would be placed on them. It ‘takes a while for a student to find their feet’ especially when they are coming from military service. One proposal might be to assign a group of first years to a second or third year mentor who can explain to them early on what is expected for progression. The students were also concerned that so many of their colleagues had difficulty in the early stages. Conversely, staff mentioned a number of students who seemed to proactively find ways to prolong their studies by retaking courses for better marks even though they could presumably proceed to graduation; while it is important to provide opportunities for resits where they are needed such needless retaking of subjects may not be in their best interests, the best interests of staff or of future generations of students who might otherwise be admitted to places on the degree.</p>	<p>As mentioned in a previous response above, the Department is very actively trying to warn new incoming students about these early difficulties. The Department holds an orientation meeting with new incoming students every year (before classes start) and we explicitly warn the students (and especially the male students that just completed their military service) about the criticality of the first few semesters, the emphasis they should place on their study habits, etc. During that meeting, student representatives are also present, emphasizing, from their own perspective, critical aspects of the program that the new students should pay particular attention to. These student representatives also provide their contact information and they regularly assist the new students with all parts of the student life.</p> <p>Furthermore, the Department assigns a personal Academic Adviser to each incoming student and explicitly asks all incoming students to have regular meetings with their Adviser to tackle any problematic issues from the outset. Specifically, the admission letter of all first-year students states their academic advisor and the relevant contact information and stresses the importance of meeting with the advisor to plan the courses that each student should register for each semester, discuss any issues troubling the student (related to courses, personal issues, etc.) and affecting his/her academic performance, in an effort to quickly try to resolve them, as well as discuss possible areas of specialization and possible opportunities/careers following graduation.</p> <p>Regarding the suggestion of student mentors, we believe that this is one of the main roles of student representatives, who also act as mentors to new students. These representatives are very active and, as mentioned, they also participate in the annual meeting with the new incoming students, where they explicitly ask the new students to seek advice from them.</p> <p>Finally, regarding the issue of students re-taking courses to improve their grades, this is allowed by the Rules of the University. Hence, for this to change, the decision has to be made at the University-level. Nevertheless, it should be noted that this practice is not widespread (only a few students retake courses for a better grade), as the program of study is quite intensive and it discourages students from registering for additional courses over and above the regular semester load.</p>	<p>Choose an item.</p>
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CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION



5. Learning resources and student support (ESG 1.6)

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For official use Only
<p>There is considerable flexibility in the structure of the degree, allowing students to repeat courses if necessary and prolong their period of study up to 12 semesters. This follows from university structures and policies and is outside the control of the department. We understand that only small numbers of students extend their period of study in this way. Nevertheless, this policy risks diluting the rigour of the degree by allowing students to study less intensively over a longer period.</p>	<p>We fully agree with the EEC that this policy potentially dilutes the rigor and value of the degree. Unfortunately, as the EEC states, this policy is outside the control of the Department. Any change to the 12-semester maximum duration of studies has to be made at the University-level and, perhaps, even at the country's Parliament-level.</p>	<p>Choose an item.</p>
<p>The evaluation committee recommends periodic review of the program by taking into consideration feedback from academic staff, students, external local industry experts and professional bodies.</p>	<p>We thank the EEC for this suggestion. Indeed, we plan to have periodic reviews of our Programs of Study to assess any potential changes that may be needed. These periodic reviews will be done as a part of the preparation for the accreditation of the Department's programs of study (i.e., every five years). All pertinent stakeholders (staff, students, industry, professional bodies) will all be asked for their extensive feedback prior to the periodic reviews in order to incorporate their feedback to the revised programs of study.</p>	<p>Choose an item.</p>
<p>We share the hope of the department that the new Engineering building will be available in the near future.</p>	<p>We are also eagerly awaiting our re-location to the new SOE buildings that will significantly enhance our programs of study (with new, modern facilities, laboratory equipment, etc). Based on the latest information provided to us by the University, the new Faculty of Engineering building is on course to be completed by the end of 2023.</p>	<p>Choose an item.</p>



6. Additional for doctoral programmes (ALL ESG)

Not applicable.



7. Eligibility (Joint programme) (ALL ESG)

Not applicable.

B. Conclusions and final remarks

Conclusions and final remarks by EEC	Actions Taken by the Institution	For official use Only
<p>Overall we are broadly happy with the BSc programme. There are significant strengths and the caveats we have noted remain a focus for improvement. We thank all the staff and students who helped in this exercise and wish you well for the future.</p>	<p>The Department will continue its effort to maintain and improve the quality levels of all of its Programs of Study.</p>	<p>Choose an item.</p>

C. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
Chrysostomos Nicopoulos	Associate Professor, Chair of the Department of Electrical and Computer Engineering	
Charalambos A. Charalambous	Associate Professor, Vice-Chair of the Department of Electrical and Computer Engineering	
Georgios Ellinas	Professor, Department's Quality Assurance Evaluation Coordinator	
Click to enter Name	Click to enter Position	
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Date: 15 September 2022

Appendix

Course Title	Introduction to Programming Principles for Electrical and Computer Engineers						
Course Code	CS 034						
Course Type	Compulsory						
Level	Undergraduate						
Year / Semester	1 st Year/2 nd Semester						
Teacher's Name	Offered by the faculty of the Department of Computer Science						
ECTS	7	Lectures week	/	2 x 1.5 hours (lecture) + 1 hour (tutorial) per week	Laboratories week	/	2 hours (laboratory) per week
Course Purpose and Objectives	Introduction of methods for problem-solving through programming. Development of procedural problem solving skills and algorithmic thinking. Provision of deep understanding of basic programming principles and algorithmic techniques, design, implementation, testing and debugging of modular programs. Understanding the important concepts such as program abstraction and data abstraction. Mastering of a high-level programming language (C).						
Learning Outcomes	<ul style="list-style-type: none"> • Demonstrate knowledge and understanding of the software development process • Demonstrate knowledge and understanding of the basic programming principles and program design • Demonstrate knowledge and understanding of data types, control structures, functions and modular programming. • Ability to design and develop simple programs. 						
Prerequisites		Corequisites					
Course Content	Introduction to computers and programming languages. Problem solving and programming, problem specification, algorithms and programs, modular programming, program and data abstraction. Software development process, top-down design, problem decomposition, reuse, trial and debugging. Variables: names, values, addresses, basic types (numbers, characters, logical values), operators and expressions, constants, library usage. Input/Output operations. Procedures (functions), parameters, calls, value or address referral. Program flow, variables' scope, lifecycle of variables/function calls, program's state. Procedural programming, algorithmic structures (sequence, selection, loop, recursion), memory. Synthesized and enumerated data types, arrays (vectors and multidimensional), structures, pointers (variables of pointer type, address and indirect referral operators, arrays and pointers and functions). Introduction to dynamic memory allocation.						

Teaching Methodology	<ul style="list-style-type: none"> • Lectures (3 hours weekly) • Laboratory sessions (2 hours weekly) • Tutorial (1 hour weekly).
Bibliography	<ul style="list-style-type: none"> • Problem Solving and Program Design in C, J.R. Hanly, E.B. Koffman, 8th Edition, ISBN-13: 9780134015156, Pearson, 2016. • C Programming: A Modern Approach, K.N. King, Second Edition, ISBN-10: 0393979504, ISBN-13: 978-0393979503, W. W. Norton & Company, 2008.
Assessment	<ul style="list-style-type: none"> • Two Midterm Exams • Final Examination • Programming Exercises • Project
Language	Greek