Doc. 300.1.2

Higher Education Institution's Response

Conventional-face-to-face programme of study

Date: 17/12/2021

- Higher Education Institution:
 Frederick University
- Campus: Nicosia and Limassol
- School: Engineering
- Department / Sector: Electrical Engineering,
 Computer Engineering and Informatics
- Programme(s) of study under evaluation
 Name (Duration, ECTS, Cycle)

Programme

In Greek:

Ηλεκτρολογική Μηχανική, Μηχανική Ηλεκτρονικών Υπολογιστών και Πληροφορική (3 ακαδημαϊκά έτη, 180 ECTS, Διδακτορικό (PhD))

- PhD in Electrical Engineering
- PhD in Computer Engineering
- PhD in Computer Science

In English:

Electrical Engineering, Computer Engineering and Informatics (3 academic years, 180 ECTS, PhD)

- PhD in Electrical Engineering
- PhD in Computer Engineering
- PhD in Computer Science

Language(s) of instruction: English

Programme's Status: Currently Operating

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the "Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2019" [N. 136 (I)/2015 to N. 35(I)/2019].

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.300.3.1) must justify whether actions have been taken in improving the quality of the department in each assessment area.
- In particular, under each assessment area, the HEI must respond on, <u>without</u> changing the format of the report:
 - the findings, strengths, areas of improvement and recommendations of the EEC
 - the deficiencies noted under the quality indicators (criteria)
 - the conclusions and final remarks noted by the EEC
- The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc. 300.3.1).
- In case of annexes, those should be attached and sent on a separate document.

1. Study programme and study programme's design and development

(ESG 1.1, 1.2, 1.7, 1.8, 1.9)

All areas marked as compliant.

Areas of improvement and recommendations

a. While the number of publications from PhD students is good, the Department should encourage publications of higher quality and impact from the PhD students.

Department's Response:

One of the graduation requirements for the PhD program is the successful submission of at least one (1) publication in an international refereed journal and at least one (1) in a refereed international conference proceedings, while the minimum of three (3) publications in refereed international journals and a refereed international conference proceedings is required. Furthermore, at least one paper must be presented at an international conference.

It is noted that all program graduates have a very good publication record with a minimum of five publications, while many graduates have more than ten publications on their doctoral research work, while most of the PhD graduates have secured jobs in the academia and in research centres.

To address the recommendation of the EEC, the graduation requirements for the program will explicitly state that the three (3) scientific papers mentioned above will be published in high impact Scopus indexed refereed international journals or conference proceedings. (please refer to Annex 1).

 Student – centered learning, teaching and assessment (ESG 1.3)

All areas marked as compliant.

Areas of improvement and recommendations

a. The EEC recommends the development of a visiting professor program to improve the research environment. This could refer to academic visitors who could participate in research and teaching activities.

Department's Response:

Visiting Professors are normally hosted by the Department via Erasmus+ mobility programs, where academic visitors participate in research and teaching activities through short visits.

For the next academic Semester until Summer 2022, visiting professors from Bangkok University (Thailand), National University and Science and Technology (NUST) will be hosted under Erasmus+ Credit mobility programs.

Short visits for research and teaching activities initiated also with the invitation of Prof O. Koufopavlou from University of Patras (Greece) and Prof B.M.A. Rahman, City, University of London (UK), Prof Petros loannou, University of Southern California (USA) and others. The Department is currently working on the development of a formal scheme for exploiting all available resources for hosting visiting professors

The Department is currently working on the further development of the scheme for exploiting all available resources for hosting visiting professors as well as working on an ERA Chair proposal for a discipline related to its research activities.

b. The EEC recommends increasing gradually the number of PhD students, in order the program to become healthy and robust after 5 years.

Department's Response:

The increase of PhD students is one of the priorities and the primary strategic goals of the Research and Innovation Strategy of the Department and the University. The reduction of the tuition fees by 90% for PhD students, as well as the Memorandum of Understanding signed

with other Universities for joint PhD Supervisions are promising steps towards that direction aiming to provide the critical mass for research students community.

c. It is strongly recommended to connect PhD students with teaching activities

Department's Response:

PhD students are engaged in teaching activities through a TA program for doctoral students, where students are employed as lab assistants, teaching assistants or undergraduate tutors.

d. It would be useful to establish a monitoring and assessment process, which will involve other members who are not participating in the supervisory team

Department's Response:

Monitoring and assessment for doctoral students is primarily the responsibility of the student's Research Advisor and the student's Advisory Committee through specific activities and requirements specified in the program structure. However, the progress of doctoral students is also examined by the Departmental PhD Program Committee. Furthermore, the whole process is overseen by the Postgraduate Studies Committee of the Senate. It is also noted that at least two out of five members of the Dissertation Committee are external academics.

e. The department administration should supervise the PhD students' publications. This is a critical point for the healthy development of the PhD program

Department's Response:

PhD students' publication planning is done by the students and the student's Research Advisor in consultation with the student's Advising Committee. The whole process is monitored by the departmental PhD Program Committee.

3. Teaching staff

(ESG 1.5)

All areas marked as compliant.

Areas of improvement and recommendations

a. For the MSc and PhD programmes, it is important that the department can establish a series of departmental seminars, where distinguished speakers from industry and academia can be invited to physically visit the department (or via a remote manner) and provide talks and seminars. Such seminars are particularly important to the MSc and PhD students to know the latest development in their fields of studies. In addition, such extracurricular activities are also important for staff development as they provide an effective way to improve the research visibility of the department.

Department's Response:

One of the graduation requirements of the PhD program is the completion of a series of courses called "Graduate Seminars", through which each doctoral student is expected to attend at least three research related events, with a minimum of 25 for the whole program. These events include research related talks given by the department's faculty members, as well as related talks given in other local universities, invited speakers from other universities or research centres, as well as attendance to conferences and other actions such as COST events.

Following the EEC recommendation, the Department is working on the establishment of a formal scheme for organizing such talks and events.

b. In addition, the department may want to build concrete plans and provide more support to junior staff, i.e., the colleagues who just start their academic roles. It could be helpful by allocating light teach load during the first few years, if possible, and providing more academic training schemes related academic practices.

Department's Response:

One of the main pillars of Frederick University is the support of the staff and the development of the skills and abilities of the members of our University community.

As per the 97th Senate's Decision,

- The maximum teaching load is 12 hours per week for faculty members.
- Reduction of teaching hours is made for University officials, for faculty members with intense research activity or for faculty members to whom the University assigns additional responsibilities and work e.g. members of Special Committees or other working groups.
- When conditions such as above occur, this is considered an increased research activity and is included in the reduction of teaching hours.
- The exact number of reductions of teaching hours is approved by the Rector's Council, after a suggestion of the Head of the Department and the consent of the Dean of the School.
- In addition to the above, faculty members of the University can redeem teaching workload, through their research fund.

Furthermore, The University has identified the need for systematic communication and staff training on a wide variety of topics. To this end, the University Council has established the Center for Professional and Personal Development at Frederick (PDF), which is responsible for developing a policy for training and professional development schedule.

As part of the action of the Professional Development Center, the following staff training workshops / seminars have been carried out so far:

- Networking Skills Development for Academics and Researchers, Research and Innovation Networking (R&D)
- Proposal Budgeting Principles & RIF Bridge Proposal Budgets
- Unconscious Bias Training"
- Improving Teaching in Online Times
- Online Assessment Methods and Skills
- New Staff and Faculty Orientation and Induction Material
- Frederick University & Sustainable Development Goals: Re-imagining the future
- Mental Health and Wellbeing

4. Student admission, progression, recognition and certification

(ESG 1.4)

All areas marked as compliant.

Areas of improvement and recommendations

 a. The EEC recommends the financial support of students who want to publish additional journals.

Department's Response:

Students who wish to publish additional journals can be financed, either, by their research advisor's research budget, departmental conference budget and more recently by internal research and collaboration publication funding schemes launched by the University, under the 2021- 2026 Research and Innovation Strategic Plan. Furthermore, students participating in research project or performing project related research activities receive additional funding for journal or conference publications.

5. Learning resources and student support

(ESG 1.6)

All areas marked as compliant.

Areas of improvement and recommendations

The EEC cannot identify areas of improvement and provide recommendations

The EEC raises no points for improvement. The Department accepts and adopts all points raised in the report and has no further comments

6. Additional for doctoral programmes (ALL ESG)

Currently, the department has provided a good support to PhD students' research. The panel has learned that each student will be provided a good support for them to attend international conferences and cover the costs related to journal publications, such as open access charges and overlength fees. The panel was also informed that some costs related to students' research could not be covered due to the financial constraints. The panel suggests that the department may want to prioritise the PhD students' publication goals. In specific, it could be a promising and cost-effective strategy to encourage students to publish their research results in international-leading journals, such as IEEE and ACM transactions, or those SCI indexed journals. This not only reduces the costs for publications, but also improves the research profile of the department.

The Department encourages students to publish in the above Journals and during the last 4 years an average of three (3) IEEE Transactions Journals per graduate student has been achieved. Publication costs are covered through funding obtained from funded research programs, through the annual journal and conference Department's budget, as well as through the research budget of the student's research advisor.

As mentioned in section 4 above, the University has recently, under the 2021- 2026 Research and Innovation Strategic Plan, launched an Internal Research Funding scheme which aims to cover research collaboration and publication expenses. This scheme will include publication expenses not covered by the rest of the supporting schemes offered.

7. Conclusions and final remarks

During the whole evaluation process, the ECC has obtained substantial and insightful information regarding the operation and structure of the 3 study programmes offered by the Department of Electrical Engineering, Computer Engineering and Informatics at Frederick University. In particular, the Department has provided comprehensive documentation and support material. Based on the information collected from the submitted documentation and the remote visit, the EEC can conclude that the 3 study programmes of the Department being evaluated have high standards and meet the quality expectations.

The EEC would like to compliment the Department but also suggest the following points as potential points for further improvement:

For the PhD programme:

- The Department should encourage publications of higher quality and impact from the PhD students. The Department administration should monitor the PhD students' publications.
- The Department is recommended to establish a visiting professor program to improve the research environment.
- The EEC recommends increasing gradually the number of PhD students, in order the program to become healthy and robust after 5 years.
- It is strongly recommended to connect PhD students with teaching activities.
- It would be useful to establish a monitoring and assessment process, which will involve other members who do not participate in the supervisory team.
- The department can establish a series of departmental seminars with distinguished speakers from industry and academia

We are thankful for the very positive report and we are looking forward to further improving our Department. All recommendations by the EEC have been adopted and implemented as shown in sections 1-6.

B. Higher Education Institution academic representatives

Name	Position	Signature

Prof. George Demosthenous Rector



