Doc. 300.3.1/1

Date: 17 September 2021

External Evaluation Report

(Programmatic within the framework of Departmental Evaluation)

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

Programme 1 – PhD (3 academic years, 180 ECTS, Doctorate (PhD))
In Greek:
Διδακτορικό στην Ηλεκτρολογική μηχανική, Μηχανική Ηλεκτρονικών Υπολογιστών και πληροφορική
In English:
PhD in Electrical Engineering, Computer Engineering and Informatics
Language(s) of instruction: English

Programme 2 – MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))
In Greek:
MSc στη μηχανική Ηλεκτρολογίας
In English:
MSc in Electrical Engineering
Language(s) of instruction: English

Programme 3 – BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
In Greek:
BSc στη μηχανική Ηλεκτρολογίας
In English:

BSc in Electrical Engineering

Language(s) of instruction: English

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. Introduction

This part includes basic information regarding the onsite visit.

An External Evaluation Committee (EEC) was assembled to evaluate the Department of Electrical Engineering, Computer Engineering and Informatics of Frederick University, as well as the BSc, MSc and PhD level study programmes offered by this Department. The evaluation process was performed under the curation and support the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA) and more specifically of Mr Avramis Depsotis. This report documents the results and findings of the EEC regarding the BSc, MSc and PhD study programmes offered by this Department.

Because of the Covid-19 pandemic, the evaluation took place in an online manner. In particular, on September 8, 2021, the members of the EEC and Mr Despotis (from CYQAA) held a coordination pre-meeting via Zoom prior to the evaluation. During this pre-meeting, the EEC members discussed the evaluation process, the preparation of the evaluation, and obtained the required documentations as well as information for the evaluation from CYQAA.

The evaluation took place in 2 days, on September 9-10, 2021 remotely via Zoom. The evaluation of the Department and of the BSc programme, took place on the first day, while the evaluation of the MSc and PhD programmes, as well as a virtual tour to the facilities of the Department, followed on the second day.

The evaluation of the study programmes started on the first day, when the EEC had a meeting with the coordinator of the BSc programme discussing about the BSc programme, its standards, admission criteria, learning outcomes and ECTS, as well as the contents and the persons involved in the design and development of the programme. Later on the same day, the EEC met with all the members of the teaching staff involved in the BSc programme. Afterwards, the EEC had a meeting with active students and graduates of the BSc programme. During the second day of the evaluation, the EEC had a meeting with the coordinator of MSc programme, discussing about the MSc programme, its standards, admission criteria, learning outcomes and ECTS, as well as the contents and the persons involved in the design and development of the programme. The day continued with a meeting between the EEC and the PhD coordinator discussing about the PhD programme, its standards, admission criteria, learning outcomes and ECTS, as well as the contents and the persons involved in the design and development of the programme. Later on the same day, the EEC met with all the members of the teaching staff involved in the MSc and PhD programmes. Afterwards, the EEC had a meeting with active students and graduates of the MSc and PhD programmes of the Department. Also, relevant to the study programmes' evaluation was the virtual tour in 5 different education- and research-related facilities of the department in the campus of Nicosia, which took place at the end of the second day of the evaluation.

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. This evaluation report describes how the standards are met and provides additional suggestions for further improvements.

At last, the EEC would like to take the opportunity and acknowledge the arrangements made by Frederick University which facilitated the evaluation of the study programmes and the writing of this evaluation report.

B. External Evaluation Committee (EEC)

Name	*Position*	*University*
Lazaros Nalpantidis (chair)	Associate Professor	Technical University of Denmark
Georgios Karagiannidis	Professor	Aristotle University of Thessaloniki, Greece
Zhiguo Ding	Professor	Manchester University, UK
Yiannis Zapitis	Electronics and Computer engineer	ETEK (Professional Association)
Panagiotis Chrysanthou	Student	University of Cyprus
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 each 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.

Findings for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

The PhD programme is well structured, follows well-established principles, and reflects best practices. It meets the standard expected at international universities.

Findings for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

The MSc programme is well structured, follows well-established principles, and reflects best practices. It meets the standard expected at international universities. There are feedback mechanisms in place for students. The teaching staff brings students in connection to their research projects and also industrial and societal needs. The Department offers excellent support to the students in terms of administration and other support services.

Findings for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

The MSc programme is well structured, follows well-established principles, and reflects best practices. It meets the standard expected at international universities. There are feedback mechanisms in place for students. The teaching staff brings students in connection to their research projects and also industrial and societal needs. The Department offers excellent support to the students in terms of administration and other support services.

Strengths

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

Strengths for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

Students in the PhD progamme report high level of satisfaction with the supervision and resources provided to them.

Strengths for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

Students in the MSc programme report high level of satisfaction with the level of their studies and the support and availability from the teaching staff. The teaching and laboratory facilities are of very good quality. Employability of graduates is excellent.

Strengths for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

Students in the MSc programme report high level of satisfaction with the level of their studies and the support and availability from the teaching staff. The teaching and laboratory facilities are of very good quality. Employability of graduates is excellent. The industrial placement course is very positively assessed by the students and brings them in contact with real-world cases.

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.

Areas of improvement and recommendations for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

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

Areas of improvement and recommendations for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

Study duration of MSc students is often longer than the expected 1.5 years. The Department should look into the reasons.

Areas of improvement and recommendations for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

Study duration of BSc students is often longer than the expected 3 years. The Department should look into the reasons.
The Senior Project (Bachelor thesis) could be given more ECTS points, to emphasize its importance in line with common international practices.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		PhD (3 academic years, 180 ECTS, Doctorate (PhD))	*MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))*	*BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))*
1.1	Policy for quality assurance	Compliant	Compliant	Compliant
1.2	Design, approval, on-going monitoring and review	Compliant	Compliant	Compliant
1.3	Public information	Compliant	Compliant	Compliant
1.4	Information management	Compliant	Compliant	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 and 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.

Findings for BSc/MSc in Electrical Engineering

Click or tap here to enter text.

- From the discussion with the staff, the EEC received the information that there are MSc students that are actively involved in research and participate in projects from the EU and from the industry. This is very important for the success of the MSc program
- In several courses of the MSc program, there is a support to the students to develop their abilities to write and publish their research.
- The department offers modern software platforms to the MSc students. The platforms are offered for coursework but also for the final Projects.
- The students reported that teaching during the COVID19 pandemic was very robust and all the classes carried on online without problems.
- In the MSc curriculum, there are theoretical and practical characteristics, which develop the students' skills and prepare them for the profession carrier after the graduation.
- There are well organized programs for students' exchange and internships and most of the requests are satisfied. The students reported that they are very satisfied with the practical training in research projects as well in the industry.
- The students reported that the feedback from the supervision and evaluation of their Theses, papers, etc, is very useful and helps them a lot in the academic progress during their studies.

Findings for PhD in Electrical Engineering

Click or tap here to enter text.

- Almost all of the PhD students work in funded projects. Although this provides them with funding to publish papers and attend conferences, a higher supervision by the department is needed in order to ensure that the students' publications can be sufficiently funded.
- The PhD students can take some courses dedicated to scientific writing
- PhD students are often involved as assistants. This is very important for the development of skills, which help the student after graduation for an academic carrier
- The intermediate evaluation of the students' progress and the approval by the committee, help the students to monitor their progress. It also creates very useful feedback to the supervisor.

Strengths

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

Strengths for BSc/MSc

Click or tap here to enter text.

- The EEC received very good comments from students and graduates, regarding the teaching during the covid 19 period.
- There is a program for office hours that works very well.

- The labs seem to be modern, clean and well equipped
- The students' supervision seems to be efficient and constructive
- As overall the EEC found a very strong support to the students

Strengths for PhD

Click or tap here to enter text.

PhD students and graduates reported a tight supervision from the faculty staff

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.

Areas of improvement and recommendations for BSc/MSc

Click or tap here to enter text.

The EEC did not detect any areas for improvement

Areas of improvement and recommendations for PhD

Click or tap here to enter text.

- 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.
- 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 are not participating in the supervisory team.
- The department administration should supervise the PhD students' publications. This is a critical point for the healthy development of the PhD program

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

Sub-area	***Non-compliant/ Partially Compliant/Compliant***		
	PhD (3 academic years, 180 ECTS,	*MSc Electrical Engineering (3*	*BSc Electrical Engineering (4*

		Doctorate (PhD))	*academic semesters, 90 ECTS, Master (MSc))*	*academic years, 240 ECTS, Bachelor (BSc))*
2.1	Process of teaching and learning and student-centred teaching methodology	Compliant	Compliant	Compliant
2.2	Practical training	Compliant	Compliant	Compliant
2.3	Student assessment	Compliant	Compliant	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.

Findings for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

BSc in Electrical Engineering

Findings for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

MSc in Electrical Engineering

Findings for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

PhD in Electrical Engineering

The panel found that the expertise of the faculty staff to teach these programmes is appropriate to the content to be delivered on the programmes. In particular, the faculty members in the department have the adequate qualifications and knowledge to ensure that the objectives and planned learning outcomes of the study programmes can be accomplished. The teaching materials and assessments produced by the teaching staff of the department have high standards and meet the quality expectations. The administrative members of the department are also well organized and adequate to ensure an efficient running of the three teaching programmes.

Strengths

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

Strengths for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

BSc in Electrical Engineering

Strengths for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))
MSc in Electrical Engineering

Strengths for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
PhD in Electrical Engineering

The department has provided a good and distinctive intellectual social and physical environment to ensure that academic staff reach their potentials. For example, the panel was informed that there is an academic training centre dedicated for staff development and teaching skill training.

For all the three programmes, the academic teaching staff has a reasonable workload. This is particularly the case for the master programme, where the light teaching load and the low student-staff improve the students' learning experience significantly.

For the BSc and MSc programmes, the department has established a formal mechanism for student feedback, where students are provided opportunities to feed their suggestions back to the department by completing questionnaires at the end of each term. The existence of such a feedback mechanism is important for student-centred teaching and learning, and also useful to the further improvement of these teaching programmes.

For all the three programmes, the department has also done an excellent job for research informed teaching, where students are exposed to those research content and activities ongoing within the department. For example, for the BSc senior projects and the MSc projects, it has been a common practice in this department the academic supervisors in the department inform students about those research findings in their fields of study.

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.

Areas of improvement and recommendations for PhD (3 academic years, 180 ECTS, Doctorate (PhD))
BSc in Electrical Engineering

The department has a few administrators, namely academic advisors, academic councillors, and tutors, which have overlapping duties. The department may want to merge these academic roles, which also is helpful to reduce the workload of academic staff.

Areas of improvement and recommendations for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))
MSc in Electrical Engineering

Areas of improvement and recommendations for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
PhD in Electrical Engineering

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.

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.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		PhD (3 academic years, 180 ECTS, Doctorate (PhD)) ***BSc in EE***	*MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))* ***MSc in EE***	*BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))* ***PhD in EE***
3.1	Teaching staff recruitment and development	Compliant	Compliant	Compliant
3.2	Teaching staff number and status	Compliant	Compliant	Compliant
3.3	Synergies of teaching and research	Compliant	Compliant	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.

Findings for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

The group of PhD students is relatively small, but it is supported adequately, and has available all necessary research facilities.

Findings for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

The low number of students, can restrict the number of available electives, and specialization in a different topic than the one of the thesis.
There are very few female students.

Findings for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

There are appropriate plans and teaching advisors to monitor and support student progression. The drop out rate is quite low, and the employment rate is close to 100% of the most recent graduates.

Strengths

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

Strengths for PhD (3 academic years, 180 ECTS, Doctorate (PhD))

The practices followed are in line with the expected world-standards.

Strengths for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))

The EEC has observed a high level of satisfaction among students, regarding the program and the support they receive.

Strengths for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
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.

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.

Areas of improvement and recommendations for PhD (3 academic years, 180 ECTS, Doctorate (PhD))
The EEC recommends the financial support of students who want to publish additional journals.

Areas of improvement and recommendations for MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))
A strategy should be implemented to address the gender gap issue. An example could be to use current female students and graduates as "ambassadors" of the program to high school students, especially females.

Areas of improvement and recommendations for BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
To attract students, it may be helpful to actively promote and advertise the positive values and high potential of this program to prospective students and relevant stakeholders.

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

Sub-area	***Non-compliant/ Partially Compliant/Compliant***		
	PhD (3 academic years, 180 ECTS, Doctorate (PhD))	*MSc Electrical Engineering (3 academic semesters, 90 ECTS,*	*BSc Electrical Engineering (4 academic years, 240 ECTS,*

			Master (MSc))	*Bachelor (BSc))*
4.1	Student admission, processes and criteria	Compliant	Compliant	Compliant
4.2	Student progression	Compliant	Compliant	Compliant
4.3	Student recognition	Compliant	Compliant	Compliant
4.4	Student certification	Compliant	Compliant	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.

Findings for BSc/MSc

Click or tap here to enter text.

- During the pandemic the academic staff hours were increased to better support student educational activities. Also it is very important that the attendance is monitored at the university level.
- It is a very good practice that the students submit their electronic evaluations prior to receiving their grades. The staff involved in the teaching has access to these evaluations.
- There are two well equipped libraries in the two campuses of the universities.
- The EEC recognizes that there is a student welfare service and a strong departmental support.
- The facilities and learning resources are in very good conditions.
- The university offers scholarships in the means of financial support.
- Students reported that the space in the classes during the exams is not enough.

Findings for PhD

Click or tap here to enter text.

- The PhD students and graduates reported a satisfaction for the support in their PhD studies, through the advanced facilities used in the department.
- The university offers open access to a large pool of electronic resources that facilitate research through subscriptions.

Strengths

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

Strengths for BSc/MSc

Click or tap here to enter text.

- An academic advisor exists for MSc students.
- It is very good that the university provides access to scientific journals and online databases through VPN.
- The structure of the program is in line with the students' needs, in order to help them to build a career in academia or industry
- The students reported an appreciation for the experimental part of the program

Strengths for PhD

Click or tap here to enter text.

- The university provides access to a number of electronic resources through VPN including access to scientific journals, online databases where the university maintains subscriptions annually.
- The faculty members support the PhD students when it is necessary to access research facilities that are not available in Frederick. They also ensure access to other national facilities.

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.

Areas of improvement and recommendations for BSc/MSc

Click or tap here to enter text.

The department should assist the students who divided between studies and other responsibilities, as for example jobs, maternity, etc

Areas of improvement and recommendations for PhD

Click or tap here to enter text.

The EEC cannot identify areas of improvement and provide recommendations

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		PhD (3 academic years, 180 ECTS, Doctorate (PhD))	*MSc Electrical Engineering (3 academic semesters, 90 ECTS, Master (MSc))*	*BSc Electrical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))*
5.1	Teaching and Learning resources	Compliant	Compliant	Compliant
5.2	Physical resources	Compliant	Compliant	Compliant
5.3	Human support resources	Compliant	Compliant	Compliant
5.4	Student support	Compliant	Compliant	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.

The department has designed appropriate criteria and implemented reasonable selection procedures for PhD admission, which ensure that the recruited PhD students meet the expected standard. In addition, the department has provided clear guidance for PhD supervision, and the panel's meeting with the students confirmed that the academic supervisors in the department have met their PhD students regularly and provided useful guidance to their studies. The department has also built a clear policy for students' dissertation writing as well as their defence.

Strengths

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

Click or tap here to enter text.

The department has a clear policy that each PhD student is expected to publish 3 articles in international journals and conferences. Such a policy ensures that the students on this PhD programmes are graduated with a good amount of achievements. These achievements are necessary for PhD students to build a successful future career. Furthermore, this policy can indirectly contribute the increase in the departmental publication volume and external research funding.

For each PhD student, a three-member committee is built, which ensures smooth PhD studies for each student. For each student's defence, two external members are involved in the student's defence committee, which ensures the quality of the dissertation and the integrity of the evaluation procedure.

Furthermore, the department has been well funded by various external research funding agencies, including the European Research Council and Research Promotion Foundation, as well as industrial partnership. The PhD programme offered by this department has benefited from such external research activities. For example, some PhD students can carry out secondments or visiting to universities and institutes outside of Cyprus. In addition, the panel was informed that quite a few faculty members have organized various research events and workshops, which are also beneficial to the students enrolled on this PhD programme.

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.

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.

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

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

D. Conclusions and final remarks

Please provide constructive conclusions and final remarks, which may form the basis upon which improvements of the quality of each programme of study under review may be achieved, with emphasis on the correspondence with the EQF.

Click or tap here to enter text.

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.
- For the MSc programme
  - The study duration of MSc students is often longer than the expected 1.5 years. The Department should look into the reasons and support students with additional responsibilities such as jobs, maternity, etc.
  - The department can establish a series of departmental seminars with distinguished speakers from industry and academia.
  - A strategy should be implemented to address the gender gap issue.
  - The department should assist the students who divided between studies and other responsibilities, as for example jobs, maternity, etc
- For the BSc programme
  - The study duration of BSc students is often longer than the expected 3 years. The Department should look into the reasons and support students with additional responsibilities such as jobs, maternity, etc.
  - The Senior Project (Bachelor thesis) could be given more ECTS points, to emphasize its importance in line with common international practices.
  - The department has a few administrators, namely academic advisors, academic councillors, and tutors, which have overlapping duties. The department may want to

merge these academic roles, which also is helpful to reduce the workload of academic staff.

- To attract students, it may be helpful to actively promote and advertise the positive values and high potential of this program to prospective students and relevant stakeholders.

E. Signatures of the EEC

Name	*Signature*
Lazaros Nalpantidis	
Zhiguo Ding	
George Karagiannidis	
Ioannis Zapitis	
Panagiotis Chrysanthou	
Click to enter Name	

Date: 17 September 2021