

Doc. 300.3.1

Date: Date

External Evaluation Report (Departmental)

- **Higher Education Institution:**
Frederick University
- **Town:** Nicosia
- **School/Faculty:** School of Engineering
- **Department:** Department of Mechanical Engineering
- **Department's Status:** Currently Operating
- **Programme(s) of study under evaluation:**
Name (Duration, ECTS, Cycle)

Programme 1

In Greek:

Programme Name

In English:

Mechanical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))

Programme 2

In Greek:

Programme Name

In English:

Energy Engineering (3 academic semesters, 90 ECTS, Master (MSc))

Programme 3

In Greek:

Programme Name

In English:

Mechanical Engineering (3 academic years, 180 ECTS, Doctorate (PhD))



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].

Department's programmes (to be filled by the CYQAA officer and verified by the EEC):

DEPARTMENT	PROGRAMMES OF STUDY
<ul style="list-style-type: none"> Department of Mechanical Engineering 	Mechanical Engineering (4 academic years, 240 ECTS, Bachelor (BSc))
	Energy Engineering (3 academic semesters, 90 ECTS, Master (MSc))
	Mechanical Engineering (3 academic years, 180 ECTS, Doctorate (PhD))



A. Introduction

This part includes basic information regarding the onsite visit.

An onsite visit was not possible because of the Covid-19 pandemic. The committee members participated at a sequence of online sessions with the Rector, Vice Rectors, the Dean of the School of Engineering, and several members of the Mechanical Engineering Department (henceforth: DME) on December 21st and 22nd, 2021. Thanks to the comprehensive presentations given, the informative online discussions and the additional material provided, the committee had all information needed to conduct the evaluation.

B. External Evaluation Committee (EEC)

<i>Name</i>	<i>Position</i>	<i>University</i>
Nicolas Moussiopoulos, Chair	Professor	Aristotle University Thessaloniki
Dimitrios Kyritsis	Professor	EPFL
Dmytro Orlov	Professor	Lund University
Iakovos Christodoulou	Professional Mechanical Engineer	Scientific and Technical Chamber of Cyprus (ETEK) representative
Panagiotis Chrysanthou	Student Member	University of Cyprus
Name	Position	University

C. Guidelines on content and structure of the report

- *The external evaluation report refers to the Department as a whole (programmes offered, teaching staff, administrative staff, infrastructure, resources, etc.).*
- *The external evaluation report follows the structure of assessment areas and sub-areas.*
- *Under each assessment area there are quality indicators (criteria) to be scored by the EEC on a scale from one (1) to five (5), based on the degree of compliance for the above mentioned quality indicators (criteria). The scale used is explained below:*

1 or 2:	<i>Non-compliant</i>
3:	<i>Partially compliant</i>
4 or 5:	<i>Compliant</i>

- *The EEC must justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.*
- *It is pointed out that, in the case of indicators (criteria) that cannot be applied due to the status of the Department, N/A (= Not Applicable) should be noted and a detailed explanation should be provided on the Department's corresponding policy regarding the specific quality indicator.*
- *In addition, for each assessment area, it is important to provide information regarding the compliance with the requirements. In particular, the following must be included:*

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - 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 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.***
- **The report may also address other issues which the EEC finds relevant.**

1. Department's academic profile and orientation

(ESG 1.1, 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9)

Sub-areas

- 1.1 Mission and strategic planning (including SWOT analysis)
- 1.2 Connecting with society
- 1.3 Development processes

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

1 or 2: Non-compliant

3: Partially compliant

4 or 5: Compliant

Quality indicators/criteria		
1. Department's academic profile and orientation		
1.1 Mission and strategic planning (including SWOT analysis)		1 - 5
1.1.1	The Department has formally adopted a mission statement, which is available to the public and easily accessible.	5
1.1.2	The Department has developed its strategic planning aiming at fulfilling its mission.	5
1.1.3	The Department's strategic planning includes short, medium-term and long-term goals and objectives, which are periodically revised and adapted.	5
1.1.4	The programmes of study offered by the Department reflect its academic profile and are aligned with the European and international practice.	4
1.1.5	The academic community is involved in shaping and monitoring the implementation of the Department's development strategies.	5
1.1.6	Stakeholders such as academics, students, graduates and other professional and scientific associations participate in the Department's development strategy.	4
1.1.7	The mechanism for collecting and analysing data and indicators needed to effectively design the Department's academic development is adequate and effective.	5
Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.		

Programmes, especially at graduate level, concentrate primarily on areas of primary importance for Cypriot industry and economy.

Consultations with professional and scientific associations take place but could be further enhanced.

Additionally, provide information on the following:

1. Coherence and compatibility among programmes of study offered by the Department.
2. Coherence and compatibility among Departments within the School/Faculty (to which the Department under evaluation belongs).

The discussions during the virtual visit led to the conclusion that the programmes offered by DME are coherent and compatible. Moreover, it was demonstrated that coherence and compatibility are aimed at among the Engineering Departments.

Provide suggestions for changes in case of incompatibility.

[Click to enter text.](#)

1. Department's academic profile and orientation

1.2 Connecting with society

1 - 5

1.2.1	The Department has effective mechanisms to assess the needs and demands of society and takes them into account in its various activities.	5
1.2.2	The Department provides sufficient information to the public about its activities and offered programmes of study.	5
1.2.3	The Department ensures that its operation and activities have a positive impact on society.	4
1.2.4	The Department has an effective communication mechanism with its graduates.	4

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

Communication with alumni takes place but is only informal at present.

1. Department's academic profile and orientation

1.3 Development processes

1 - 5

1.3.1	Effective procedures and measures are in place to attract and select teaching staff to ensure that they possess the formal and substantive skills to teach, carry out research and effectively carry out their work.	5
1.3.2	Planning teaching staff recruitment and their professional development is in line with the Department's academic development plan.	4

1.3.3	The Department applies an effective strategy of attracting high-level students from Cyprus and abroad.	5
1.3.4	The funding processes for the operation of the Department and the continuous improvement of the quality of its programmes of study are adequate and transparent.	5

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

Newly recruited faculty members should be able to contribute to excellence in research and innovation.

Additionally, write:

- Expected number of Cypriot and international students
- Countries of origin of international students and number from each country

2021/22: 254 students (207 Cypriots, 37 from other EU countries and 10 from third countries)

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

DME was established 2007, the starting year of Frederick University. Its BSc programme, together with programmes leading to 2-year Diplomas, existed already at times of Frederick University's forerunner, the College "Frederick Institute of Technology". In the last 15 years, DME (as also Frederick University as a whole) undergoes a transition process aiming – according to the mission statement – “to keep abreast of the scientific and technological developments” and “to build its research capacity”. The committee noted that efforts for meeting the above goals have been to a large extent successful, yet there are still areas where improvements are possible.

The evidence provided proves that the programmes developed by DME both at the bachelor and the graduate levels are coherent and that they effectively prepare students for their professional development. DME appears having a clear strategic plan for adapting its programme structure to meet to the needs of the labour market and to contribute to building up the competitive advantage of Cyprus.

Strengths

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

1. DME's faculty members maintain close links with Cypriot industry and professional bodies, and a fair fraction of them maintain cooperation with other Universities and/or attract external research funding.
2. Basic understanding is reinforced with laboratory experiments and insight in the engineer's workaday life is provided to the students through participation in industrial training schemes.

3. The course offerings at the graduate level are appropriate for preparing qualified energy engineers both for the building and the hydrocarbon industry sector.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. DME should enhance its international cooperation in education, e.g., by establishing more exchange agreements and by a stronger involvement in joint programmes of study with other Universities.
2. A formal alumni centre should be established.

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

Sub-area	<i>Non-compliant / Partially Compliant / Compliant</i>
1.1 Mission and strategic planning	Compliant
1.2 Connecting with society	Compliant
1.3 Development processes	Compliant

2. Quality Assurance

(ESG 1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 1.8)

Sub-areas

- 2.1 System and quality assurance strategy
- 2.2 Quality assurance for the programmes of study

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

- 1 or 2: *Non-compliant*
- 3: *Partially compliant*
- 4 or 5: *Compliant*

Quality indicators/criteria		
2. Quality Assurance		
2.1 System and quality assurance strategy		1 - 5
2.1.1	The Department has a policy for quality assurance that is made public and forms part of the Institution's strategic management.	5
2.1.2	Internal stakeholders develop and implement a policy for quality assurance through appropriate structures and processes, while involving external stakeholders.	5
2.1.3	The Department's policy for quality assurance supports guarding against intolerance of any kind or discrimination against students or staff.	5
2.1.4	The quality assurance system adequately covers all the functions and sectors of the Department's activities:	
2.1.4.1	Teaching and learning	5
2.1.4.2	Research	4
2.1.4.3	The connection with society	5
2.1.4.4	Management and support services	5
2.1.5	The quality assurance system promotes a culture of quality.	5
2.1.6	Students' evaluation and feedback	5

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

More measurable data on research outputs could prove very useful.

2. Quality Assurance

2.2 Quality assurance for the programmes of study

1 - 5

2.2.1	The responsibility for decision-making and monitoring the implementation of the programmes of study offered by the Department lies with the teaching staff.	5
2.2.2	The system and criteria for assessing students' performance in the subjects of the programmes of studies offered by the Department are clear, sufficient and known to the students.	5
2.2.3	The quality control system refers to specific indicators and is effective, which have been presented and discussed.	5
2.2.4	The results from student assessments are used to improve the programmes of study.	4
2.2.5	The policy dealing with plagiarism committed by students as well as mechanisms for identifying and preventing it are effective.	5
2.2.6	The established procedures for examining students' objections/ disagreements on issues of student evaluation or academic ethics are effective.	5
2.2.7	The Department publishes information related to the programmes of study, credit units, learning outcomes, methodology, student admission criteria, completion of studies, facilities, number of teaching staff and the expertise of teaching staff.	5
2.2.8	Names and position of the teaching staff of each programme are published and easily accessible.	5
2.2.9	The Department has a clear and consistent policy on the admission criteria for students in the various programmes of studies offered.	5
2.2.10	The Department flexibly uses a variety of teaching methods.	5
2.2.11	The Department systematically collects data in relation to the academic performance of students, implements procedures for evaluating such data and has a relevant policy in place.	5
2.2.12	The Department analyses and publishes graduate employment information.	4

2.2.13	The Department ensures adequate and appropriate learning resources in line with European and international standards and/or international practices, particularly:	
2.2.12.1	Building facilities	5
2.2.12.2	Library	5
2.2.12.3	Rooms for theoretical, practical and laboratory lessons	5
2.2.12.4	Technological infrastructure	5
2.2.12.5	Academic support	5
2.2.14	There is a student welfare service that supports students in regard to academic, personal problems and difficulties.	5
2.2.15	The Department's mechanisms, processes and infrastructure consider the needs of a diverse student population such as mature, part-time, employed and international students as well as students with disabilities.	5
2.2.16	Mentoring of each student is provided and the number of students per each permanent teaching member is adequate.	5
2.2.17	The provision of quality doctoral studies is ensured through doctoral studies regulations, which are publicly available.	5
2.2.18	The number of doctoral students, under the supervision of a member of the teaching staff, enables continuous and effective feedback to the students and it complies with the European and international standards.	5
2.2.19	The Department has mechanisms and funds to support writing and attending conferences of doctoral candidates.	5
2.2.20	There is a clear policy on authorship and intellectual property.	5
Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.		
Limited information on an overall evaluation by the students at the end of their programme of study.		

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

The applied procedures described in the documents and presented by Vice Rector Kyriacou are appropriate. An Internal Quality Committee is in place and coordinates all processes associated with Quality Assurance. In addition to the departmental and programme self-evaluations, courses are being evaluated by faculty members, as well as by students. The latter are also evaluating the faculty. Regarding

the performance of faculty members both self-evaluation and appraisal procedures are foreseen. All these activities take place in an online manner using forms and templates that the committee considers to be adequate.

Strengths

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

The committee appreciates the existence of a clear hierarchy and procedures for reporting on courses, programmes and the DME as a whole, involving the staff at all levels and students.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. More measurable data on research outputs (for instance, number of publications and citations) could prove very useful for DME.
2. At the end of their study period students could be invited to participate at an evaluation survey of the whole programme of study.

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

Sub-area	<i>Non-compliant / Partially Compliant / Compliant</i>
2.1 System and quality assurance strategy	Compliant
2.2 Quality assurance for the programmes of study	Compliant

3. Administration (ESG 1.1, 1.3, 1.6)

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

1 or 2: Non-compliant
3: Partially compliant
4 or 5: Compliant

Quality indicators/criteria		
3. Administration		1 - 5
3.1	The administrative structure is in line with the legislation and the Department's mission.	5
3.2	The members of the teaching and administrative staff and the students participate, at a satisfactory degree and on the basis of specified procedures, in the management of the Department.	5
3.3	The administrative staff adequately supports the operation of the Department.	5
3.4	Adequate allocation of competences and responsibilities is ensured so that in academic matters, decisions are made by academics and the Department's council competently exercises legal control over such decisions.	5
3.5	The Department applies effective procedures to ensure transparency in the decision-making process.	5
3.6	Statutory sessions of the Department are held and minutes are kept.	5
3.7	The Department's council operates systematically and autonomously and exercise the full powers provided for by the law and / or the constitution of the Department without the intervention or involvement of a body or person outside the law provisions.	5
3.8	The manner in which the Department's council operates and the procedures for disseminating and implementing their decisions are clearly formulated and implemented precisely and effectively.	5
3.9	The Department applies procedures for the prevention and disciplinary control of academic misconduct of students, teaching and administrative staff, including plagiarism.	5
3.10	The Department has appropriate procedures for dealing with students' complaints.	5

3.11 Internalization of the Department and external collaborations. 5

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

Click to enter text.

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

In the online sessions the committee members won the impression that the administration structure is adequate and that the staff involved is fully engaged with the functioning of the University as a whole and DME in particular.

Strengths

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

1. The administration staff is informed on the needs of all DME staff members and of the students. Everybody seems to be fit for service regarding all operations and procedures.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. It is unclear to what extent minutes are kept of the statutory sessions and made available as appropriate.

Please select what is appropriate for the following assessment area:

Assessment area	<i>Non-compliant / Partially Compliant / Compliant</i>
3. Administration	Compliant

4. Learning and Teaching (ESG 1.2, 1.3, 1.4, 1.9)

Sub-areas

- 4.1 Planning the programmes of study
- 4.2 Organisation of teaching

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

- 1 or 2: *Non-compliant*
- 3: *Partially compliant*
- 4 or 5: *Compliant*

Quality indicators/criteria		
4. Learning and Teaching		
4.1 Planning the programmes of study		1 - 5
4.1.1	The Department provides an effective system for designing, approving, monitoring and periodically reviewing the programmes of study.	5
4.1.2	Students and other stakeholders, including employers, are actively involved on the programmes' review and development.	4
4.1.3	Intended learning outcomes, the content of the programmes of study, the assignments and the final exams correspond to the appropriate level as indicated by the European Qualifications Framework (EQF).	5
4.1.4	The programmes of study are in compliance with the existing legislation and meet the professional qualifications requirements in the professional courses, where applicable.	5
4.1.5	The Department ensures that its programmes of study integrate effectively theory and practice.	5
Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.		
A stronger role of alumni and employers in programme reviewing could prove beneficial.		
4. Learning and Teaching		
4.2 Organisation of teaching		1 - 5

4.2.1	The Department establishes student admission criteria for each programme, which are adhered to consistently.	5
4.2.2	Recognition of prior studies and credit transfer is regulated by procedures and regulations that are in line with European standards and/or international practices.	5
4.2.3	The number of students in the teaching rooms is suitable for theoretical, practical and laboratory lessons.	5
4.2.4	The teaching staff of the Department has regular and effective communication with their students, promoting mutual respect within the learner-teacher relationship.	5
4.2.5	Student-centred learning and teaching plays an important role in stimulating students' motivation, self-reflection and engagement in the learning process.	5
4.2.6	The teaching staff of the Department provides timely and effective feedback to their students.	5
4.2.7	The criteria and the method of assessment as well as the criteria for marking are published in advance.	5
4.2.8	The assessment allows students to demonstrate the extent to which the intended learning outcomes have been achieved.	5
<p>Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.</p> <p>Click to enter text.</p>		

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

The virtual visit demonstrated that DME benefits from an appropriate staff-student ratio, enabling a high-quality learning and teaching environment to operate. DME achieves a very good balance between theory and practice, and at the same time it scores well in student-centred teaching. The facilities, especially the laboratories, are excellent for the number of students admitted.

The committee members discussed with students and graduates in the absence of faculty members. This discussion showed that there is a very good atmosphere in the University, with an excellent relation between instructors and students. The latter underlined that faculty members always take seriously their suggestions for improvements. They stressed that DME's reputation is key for their finding a job immediately after graduation.

Strengths

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

1. Very good staff-student ratio.
2. Commitment of staff to their programmes and students.
3. Use of innovative teaching methods, including hybrid systems during the pandemic situation.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. A shift towards software labs is advisable.
2. Students should have access to electronic versions of all essential course materials via the Internet.

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

Sub-area	<i>Non-compliant / Partially Compliant / Compliant</i>
4.1 Planning the programmes of study	Compliant
4.2 Organisation of teaching	Compliant

5. Teaching Staff (ESG 1.5)

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

- 1 or 2: *Non-compliant*
 3: *Partially compliant*
 4 or 5: *Compliant*

Quality indicators/criteria		
5. Teaching Staff		1 - 5
5.1	The number of teaching staff - full-time and exclusive work - and the subject area of the staff sufficiently support the programmes of study.	5
5.2	The teaching staff of the Department has the relevant formal and substantive qualifications for teaching the individual subjects as described in the relevant legislation.	4
5.3	The visiting Professors' subject areas adequately support the Department's programmes of study.	5
5.4	The special teaching staff and special scientists have the required qualifications, sufficient professional experience and expertise to teach a limited number of programmes of study.	5
5.5	The ratio of special teaching staff to the total number of teaching staff is satisfactory.	5
5.6	The ratio of the number of subjects of the programme of study taught by teaching staff working fulltime and exclusively to the number of subjects taught by part-time teaching staff ensures the quality of the programme of study.	5
5.7	The ratio of the number of students to the total number of teaching staff is sufficient to support and ensure the quality of the programme of study.	5
5.8	Feedback processes for teaching staff in regard to the evaluation of their teaching work, by the students, are satisfactory.	5

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

Respectable KPIs should be a main criterion for selecting future teaching staff members.

Also, write the following:

- Number of teaching staff working full-time and having exclusive work
- Number of special teaching staff working full-time and having exclusive work
- Number of visiting Professors
- Number of special scientists on lease services

12 full-time teaching staff members from DME, 10 from other departments, 2 special teaching staff members, 6 visiting professors and 4 special scientists

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

Based on the presentations and the discussions during the online sessions, DME comprises 12 faculty members in mechanical engineering and 10 faculty members from other departments with teaching assignments in DME's programmes of study. In addition, two other special teaching staff members and six visiting instructors are involved in the courses. Finally, four special scientists and laboratory assistants aid the teaching process in terms of laboratory works and demonstrator courses.

Strengths

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

1. Laboratories complement DME's facilities and ensure active learning and hands on experience for students and scientists.
2. Dedicated MSc programme with emphasis on energy engineering.
3. Interesting coursework on complementary topics at the graduate level.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. During the human resources development, attention should be turned to recruiting new faculty members with respectable KPIs (especially citations, h-index, and external funding).
2. An increase of a faculty member's research involvement should lead to a reduction of his/her teaching load.
3. The existing good integration between research and teaching in the energy sector should be expanded to other areas.

Please ✓ what is appropriate for the following assessment area:

Assessment area	<i>Non-compliant / Partially Compliant / Compliant</i>
Teaching staff number, adequacy and suitability	Compliant
Teaching staff recruitment and development	Compliant
Synergies of teaching and research	Compliant

6. Research

(ESG 1.1, 1.3, 1.5, 1.6)

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

1 or 2: *Non-compliant*
3: *Partially compliant*
4 or 5: *Compliant*

Quality indicators/criteria		
6. Research		1 - 5
6.1	The Department has a research policy formulated in line with its mission.	5
6.2	The Department consistently applies internal regulations and procedures of research activity, which promote the set out research policy and ensure compliance with the regulations of research projects financing programmes.	5
6.3	The Department provides adequate facilities and equipment to cover the staff and students' research activities.	5
6.4	The Department has the appropriate mechanisms for the development of students' research skills.	5
6.5	The results of the teaching staff research activity are published to a satisfactory extent in international journals which work with critics, international conferences, conference proceedings, publications, etc. The Department also uses an open access policy for publications, which is consistent with the corresponding national and European policy.	5
6.6	The Department ensures that research results are integrated into teaching and, to the extent applicable, promotes and implements a policy of transferring know-how to society and the production sector.	4
6.7	The Department provides mechanisms which ensure compliance with international rules of research ethics, both in relation to research activity and the rights of researchers.	5
6.8	The external, non-governmental, funding of research activities of teaching staff is similar to other Departments in Cyprus and abroad.	5
6.9	The policy, indirect or direct of internal funding of the research activities of the teaching staff is satisfactory, based on European and international practices.	5

Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies.

Number of PhD students rather low.

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

In view of the recent establishment of DME's PhD programme, so far there have been only two graduates from that programme, while in the current academic year only 10 PhD students are enrolled. DME's faculty members have secured a respectable amount of funding of the order of 2 million Euros since 2015 and have participated in projects with international partners in Cyprus and abroad. The research facilities have improved over the recent years in a targeted way, by the acquisition of equipment that is optimized for the research needs of the members.

Strengths

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

1. DME's faculty members conduct high quality research despite the relatively small number of PhD students.
2. DME has achieved a reasonable amount of research funding, with a clear emphasis in the energy sector. This can only improve as the number of PhD students grows in the upcoming years.
3. Collaborations are maintained with other Universities in Cyprus and abroad.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

1. DME should increase efforts towards reaching a higher number of PhD students. There will be many benefits from this growth for the Department in terms of research capacity improvements and competitiveness increase at all levels.
2. Research activities should expand to all areas of Mechanical Engineering.

Please ✓ what is appropriate for the following assessment area:

Assessment area	<i>Non-compliant / Partially Compliant / Compliant</i>
Research mechanisms and regulations	Compliant
External and internal funding	Compliant
Motives for research	Compliant
Publications	Compliant

7. Resources (ESG 1.6)

Mark from 1 to 5 the degree of compliance for each quality indicator/criterion

- 1 or 2: *Non-compliant*
 3: *Partially compliant*
 4 or 5: *Compliant*

Quality indicators/criteria		
7. Resources		1 - 5
7.1	The Department has sufficient financial resources to support its functions, managed by the Institutional and Departmental bodies.	4
7.2	The Department follows sound and efficient management of the available financial resources in order to develop academically and research wise.	5
7.3	The Department's profits and donations are used for its development and for the benefit of the university community.	5
7.4	The Department's budget is appropriate for its mission and adequate for the implementation of strategic planning.	4
7.5	The Department carries out an assessment of the risks and sustainability of the programmes of study and adequately provides feedback on their operation.	5
7.6	The Department's external audit and the transparent management of its finances are ensured.	5
7.7	The fitness-for-purpose of support facilities and services is periodically reviewed.	5
Justify the numerical scores provided for the quality indicators (criteria) by specifying (if any) the deficiencies. More funds from external sources could prove very helpful in future.		

Findings

A short description of the situation in the Department based on evidence from the Department's application and the site - visit.

Although an on-site visit would have provided a better insight on the way that financial resources are being managed, as well as a clear impression of the support facilities and services, the committee infers from the material that has been examined and from the discussions that took place that the departmental operation is not unfavourably affected by any budget issues.

Strengths

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

DME appears to have the resources needed and to be adequately organized for meeting its main objectives related to education and research, thus fulfilling its mission.

Areas of improvement and recommendations

A list of problem areas followed by or linked to the recommendations of how to improve the situation.

Seeking more external funding either associated with research activities or related to donations would increase flexibility regarding financial planning.

Please ✓ what is appropriate for the following assessment area:

Assessment area	Non-compliant / Partially Compliant / Compliant
7. Resources	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 the Department under review may be achieved.

The Department of Mechanical Engineering (DME) is part of Frederick University, a higher educational institution in Cyprus that emerged from a college existing since 1965. In the less than 15 years since its foundation, DME (together with Frederick University as a whole) is undergoing a gradual transition from a purely educational establishment to a modern department offering high quality programmes and conducting leading-edge research. The external evaluation committee members won the impression that this process is evolving smoothly, they would however strongly recommend that in case of the recruitment of new faculty members the main selection criterion should be the proven ability to contribute to excellence in research and innovation. Furthermore, the University should consider more drastic teaching load cuts for professors who are at the same time top-ranking researchers.

DME performs satisfactorily regarding participation at international competitive research activities. In this context, the committee believes that external funding will be essential for the further development of DME (and the University as a whole), especially given the conditions of the competition with public universities in Cyprus. For this to be materialized it will be necessary to secure substantial funding from competitive research in all areas of Mechanical Engineering, along the lines currently demonstrated in the example of Energy Engineering. Other potential sources of external financing would be donations from alumni – one more reason for accelerating the creation of an alumni centre, as already suggested in the present report – and synergies with industrial partners (e.g., for jointly developing test facilities of common interest). Long-term cooperation agreements with enterprises could also help further expanding the laboratory infrastructure to be used for education, research, and the provision of consulting services.

The programmes offered by the Department are appropriate at the present stage of its development. Procedures for their improvement are in place.

The committee members were satisfied to note that the University is engaged in adapting to the recommendations formulated for meeting UN's Sustainable Development Goals (SDGs) and expects that this applies to DME.

It is acknowledged that DME faculty members are aware of the significance to collaborate with other institutions in Cyprus and abroad. The committee members believe that in its next phase DME will have to strive for more internationalization, and therefore it encourages the University to increase its efforts towards MoUs for exchanges (ERASMUS etc.) based on the finding that DME, and possibly more departments in the School of Engineering, have the critical mass to attract the necessary attention of higher educational institutions all over the world. Moreover, it is recommended that schemes be developed both for inviting non-Cypriot experts to participate at educational and research activities in Nicosia, and for offering to DME faculty members the possibility to plan sabbatical stays in other countries.

Apparently DME graduates easily find a job in the Cypriot market and have also good chances to be employed in other countries. Yet, the areas in Mechanical Engineering evolve, and it is very likely that in the years to come engineers will be needed with skills in fields not yet exhaustively considered in the department programmes. Specific examples may include Sustainability Engineering and Circular Economy,



4th Industrial Revolution, Big Data, and Innovative Materials. It is recommended that such themes are the subject of future MSc programmes and that skilled graduates are given the opportunity to work on PhD dissertations in these emerging topics.



E. Signatures of the EEC

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