Doc. 300.3.1/1

External Evaluation Report

(Programmatic within the framework of Departmental Evaluation)

Date: Date.

- **Higher Education Institution:** Cyprus University of Technology
- **Town:** Limassol
- **School/Faculty:** Geotechnical Sciences and Environmental Management
- **Department:** Chemical Engineering
- **Programme(s) of study - Name (Duration, ECTS, Cycle)**

Programme 1 – BSc

In Greek:
Προπτυχιακό Πρόγραμμα στη Χημική Μηχανική (4 έτη, 240 ECTS)
In English:
Undergraduate Programme in Chemical Engineering (4 years, 240 ECTS)
Language(s) of instruction: Greek

Programme 2 – PhD

In Greek:
Διδακτορικό Πρόγραμμα στη Χημική Μηχανική και Περιβαλλοντική Τεχνολογία (3 έτη, 240 ECTS)
In English:
PhD Programme in Chemical Engineering and Environmental Technology (3 years, 240 ECTS)
Language(s) of instruction: Greek

Programme 3 – [Title 3]

In Greek:
Programme Name
In English:
Programme Name
Language(s) of instruction: Language(s)

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

A. Introduction

This part includes basic information regarding the onsite visit.

The committee members visited the Cyprus University of Technology (CUT) physically during May 18 - May 20, 2023. The meeting with members from the university took place at CUT in Limassol on May 18 and featured an introduction of the members of the external evaluation committee, a very brief meeting with the Rector of CUT (due to other obligations) and a meeting with the members of the Internal Evaluation Committee.

Accordingly, separate meetings took place (a) with the Head of the department and the coordinator of the Undergraduate and PhD programs (b) the academic and teaching staff (c) the administrative staff and (d) students representatives. During these meetings, the EEC members had the opportunity to have a thorough review of the Undergraduate and PhD Programs.

More specifically, the following meetings took place:

(a) A meeting with the Head of the department and the coordinator of the Undergraduate and PhD programs, where detailed presentations were given on the Department's mission statement and operation, and in the two programs under evaluation. The head of the department and the coordinator of the two programs along with a few members of the teaching staff responded successfully to the questions raised by the EEC members, while fruitful discussions took place on the prospects of the two programs.

(b) A meeting with academic and teaching staff members, in which the discussion focused on teaching, research and administrative aspects of all courses. Faculty and teaching staff members gave extensive and detailed presentations showing enthusiasm regarding their work at CUT and were eager to answer questions asked by the EEC members and provide any additional data and complimentary information required.

(c) A meeting with administrative staff members where detailed and sufficient information has been provided to the ECC members while the administrative staff members explained in detail the different administration practices in the department.

(d) A meeting with 15 students, both under- and postgraduate students, followed, discussing very openly their perspective and experience of their studies and of their life as CUT students.

Later in the afternoon, a physical tour took place, visiting the Department's laboratories and teaching and research facilities, where the EEC members had the opportunity to be informed in more details on several research case-studies by both professors and PhD students.

Finally, a wrap-up discussion was held with the Head of the Department and the Undergraduate's Programme Coordinator, to clarify questions that came up during the day.

B. External Evaluation Committee (EEC)

Name	*Position*	*University*
Efstathios Kikkinidis	Professor	Aristotle University of Thessaloniki
Jens Abildskov	Associate Professor	Technical University of Denmark
Waheed Afzal	Senior Lecturer	University of Aberdeen
Michalis Chrysaphis	Professional Chemical Engineer	Scientific and Technical Chamber of Cyprus Representative-ETEK
Marios Alkiviades	Post Graduate 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 BSc

The BSc in Chemical Engineering program meets the requirements for quality assurance policies, design, approval, reviewing processes, public engagement, and data management.

The program provides students with the necessary depth, breadth, and support systems for lifelong learning, employment, personal and professional development, and becoming professional chemical engineers.

The curriculum offers significant opportunities for career selection within the discipline.

Findings for PhD

The PhD in Chemical and Environmental Engineering program meets the requirements for quality assurance policies, design, approval, reviewing processes, public engagement, and data management.

The program provides advanced-level training in the relevant subject area, with a focus on discovery, knowledge creation, dissemination, impact, and improvement of the current state of the art within their specialization.

The program offers opportunities for narrow specialization in a range of research topics consistent with the university's strengths and needs.

Findings for [Title 3]

Click or tap here to enter text.

Strengths

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

Strengths for BSc

The program demonstrates strong elements of quality assurance policies, with information readily available to the public through the institutional website and other means.

Quality assurance mechanisms are effectively developed and implemented by the university's committee on quality control, which oversees compliance and provides leadership and advice to departments.

The department manages quality assurance initiatives through the departmental council and ad-hoc committees involving staff, student representatives, and external stakeholders.

Adequate policies and procedures are in place to ensure academic integrity.

While the language of the program may present accessibility challenges for eligible individuals (students and staff), policies are in place to prevent intolerance or discrimination.
The program's design, delivery, and assessment are appropriately carried out, supported by available staff and administrative mechanisms.

The program is effectively advertised on the university website and other communication channels.
The university and department comply with information management requirements.

Strengths for PhD
The program demonstrates strong elements of quality assurance policies and effective implementation.

The program has a well-designed structure, with regular monitoring, review, and a reasonable cohort of students at different stages.

Language restrictions do not limit program accessibility for suitably qualified individuals.

Strengths for [Title 3]
Click or tap here to enter text.

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

Areas of improvement and recommendations for BSc
Enhance the involvement of external stakeholders, including employers, industrial practitioners, and subject experts from other institutions, especially those in recognized research environments.

Increase the frequency of course and program reviews, considering an annual or biennial cycle to ensure ongoing improvement. Given the program's relative newness, the recent completion of a program review cycle is unclear.

Conduct a top-down review of the program to course level to address repetitions, and include topics such as computer applications, programming, artificial intelligence and machine learning, engineering thermodynamics, sustainability and ethics, process safety, group design, and teamwork throughout the curriculum.

Areas of improvement and recommendations for PhD
Consider enhancing the involvement of subject experts from recognized research environments in the evaluation committee for theses.

Offer optional short courses in research methods, programming, career planning, project management, and other relevant areas to all PhD students, tailoring recommendations to individual students' needs.

Areas of improvement and recommendations for [Title 3]

Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		BSc	*PhD*	[Title 3]
1.1	Policy for quality assurance	Compliant	Compliant	Choose answer
1.2	Design, approval, on-going monitoring and review	Compliant	Compliant	Choose answer
1.3	Public information	Compliant	Compliant	Choose answer
1.4	Information management	Compliant	Compliant	Choose answer

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

Process of teaching and learning and student-centered teaching methodology

The academic staff is highly professional and passionate about the continuous improvement of their department curriculum. They use a combination of several modern learning tools and technologies to develop the expected learning outcomes. This is both an outcome of our committee and an outcome from the students' meeting.

Practical training

The program is not so strong in practical training. This was our impression from the circulated material, and it was also confirmed in interviews with students.

Student assessment

Student assessment seems fair and transparent.

Findings for PhD

Process of teaching and learning and student-centred teaching methodology

It seems that the Professors have a great understanding of building synergies with National Policy when choosing their PhD posts. The example of the PhD post for "Creating Local Ecosystems of Climate Innovation" aligns with the national efforts to develop a better National Energy and Climate Plan (NECP) addressing the stakeholders' needs and the efforts of the Republic of Cyprus to become the regional climate policy leader by developing related scientific tools.

Practical training

Practical training of doctoral students will mostly take place in research laboratories, where the department seems to be in a good position.

Student assessment

See above.

Findings for [Title 3]

Click or tap here to enter text.

Strengths

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

Strengths for BSc

Process of teaching and learning and student-centred teaching methodology

The curriculum includes some elements of Environmental Science and Engineering which are not always typical in similar Departments (e.g. environmental toxicology, water technologies etc), which is considered an advantage for young Chemical Engineering students as they may have a better development of sets of skills for their career.

Practical training
(Compulsory) Industrial internships + some (though not extensive) experimental facilities.

Student assessment
The program has a personalized approach to learning difficulties (dyslexia etc.) of students, which is a strength.

Strengths for PhD
Process of teaching and learning and student-centred teaching methodology
There is a varied set of opportunities for development of independence of researchers, such as ERASMUS-programs and extensive collaborations with outside project partners.

Practical training
See above.

Student assessment
There is a well-developed system in place for the assessment of PhD students, including 3-person examinations committee.

Strengths for [Title 3]
Click or tap here to enter text.

Areas of improvement and recommendations
A list of problem areas to be dealt with, followed by or linked to the recommendations of how to improve the situation.

Areas of improvement and recommendations for BSc
Process of teaching and learning and student-centered teaching methodology
The process of teaching and learning should support students' individual and social development, including the development of national and European identity, social responsibility and active citizenship initiatives for chemical communities/industrial areas of Cyprus. The Head of department could follow the 4 purposes of higher education of the Council of Europe.

Practical training
The duration of practical training of students, following discussion with them, could be possibly extended. The University could expand the list of the collaborating industries and companies that accept students for practical training and include also all the working environments in which Chemical Engineers could work in the future (public, private, remote). That would benefit both the students and also the public awareness about the department and the role of Chemical Engineering in society and in the local economy.

Student assessment
No needs detected.

Areas of improvement and recommendations for PhD
Process of teaching and learning and student-centered teaching methodology

It would be a benefit for students to be able to take some ECTS-course credits, instead of having to rely on colleagues to learn necessary things, such as the use of MATLAB or similar.

Students are encouraged to take a more active role in creating the learning and research process and in being the future active citizens. Particularly PhD students in collaboration with administration and research officers shall be leaders in making CUT a young leader in Public Learning organizations (e.g. provide classes or mentoring for Chemeng students and public departments though CUT E--learning platform). We also suggest they be involved in making CUT a Research leader within public organizations.

The department could discuss ways for increasing the University Ranking through Research programs. First, there could be a better dissemination of ChemEng Research results of European Programs both internally with other departments of CUT and externally with other public Universities in order to make gradually an ecosystem of E-Universities in the Republic of Cyprus.

Areas of improvement and recommendations for [Title 3]

Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		BSc	*PhD*	[Title 3]
2.1	Process of teaching and learning and student-centred teaching methodology	Compliant	Compliant	Choose answer
2.2	Practical training	Compliant	Compliant	Choose answer
2.3	Student assessment	Compliant	Compliant	Choose answer

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 BSc

Overall, we met a university with a strong turnout of staff, eager to participate in discussions and aspects of quality assurance.

Teaching staff recruitment and development:

The competence of the teaching staff is ensured as the course instructors are predominantly assistant, associate and full professors employed at the department. In certain courses specialized teaching personnel are used. In the cases where this is done, the corresponding staff are of good academic standing. It is our impression (as is recognized by the department) that there is a need for recruiting more faculty with core competencies in chemical engineering.

Number/Status:

There are about 14 instructors. This is not many for handling a 4-year plus PhD program. Currently about 15-25 students are enrolled per year. The impression is that the department is close to its capacity level (< 30 students per year). A specific number of teaching hours is mandatory for all assistant/associate/full professors (6 hours per week). This is a quite high number. This is also experienced as high among the faculty.

Synergies teaching/research:

The teaching staff is responsible for teaching courses that correlate well with their field of research and there is a very good alignment between the academic expertise of the instructors and the syllabus of their courses. Furthermore, the fact that the lecturers are teaching courses related to their research ensures that they are kept up to date on the syllabus of the course. Yet, there is a difference to be respected between chemistry and chemical engineering, related to the comments above.

Findings for PhD

Overall, we met a university with a strong turnout of staff, eager to participate in discussions and aspects of quality assurance.

Teaching staff recruitment and development:

See above (BSc).

Synergies teaching/research:

As previously stated, research and teaching are very well integrated. The teaching staff are a mix of chemists and chemical engineers with very relevant background and research to the courses taught.

Findings for [Title 3]

Click or tap here to enter text.

Strengths

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

Strengths for BSc

- The teaching personnel is very engaged, enthusiastic and hard-working
- The teaching personnel is predominantly permanent position holders
- The lecturers have expertise related to the courses they teach
- The HEI has a good official mechanism to collect feedback
- The department has many project proposals granted, which makes it well connected, internationally, and gives the teaching staff a strong basis for the delivery of this program.

Strengths for PhD

Research and teaching are very well integrated. This allows the staff to be well connected via several European project networks.

Strengths for [Title 3]

Click or tap here to enter text.

Areas of improvement and recommendations

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

Areas of improvement and recommendations for BSc

Employment of more core-chemical-engineering faculty.

Areas of improvement and recommendations for PhD

There are not many problems detected during this virtual visit, regarding the teaching staff of PhD programs. We do believe it would be helpful for students, enrolling with an MSc as their basis, to be able to take university courses. Presently students enrolled with an MSc degree are not supposed to do that. However, there can be a need for courses – even at PhD level – when trying to learn something new.

Areas of improvement and recommendations for [Title 3]

Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		BSc	*PhD*	[Title 3]
3.1	Teaching staff recruitment and development	Compliant	Compliant	Choose answer
3.2	Teaching staff number and status	Compliant	Compliant	Choose answer
3.3	Synergies of teaching and research	Compliant	Compliant	Choose answer

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 ssential 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 BSc

The BSc in Chemical Engineering program demonstrates compliance with the pre-defined regulations for student admission, progression, recognition, and certification. The admission processes are transparent, student progression is effectively monitored, and fair recognition of qualifications and prior learning is ensured. The university provides accurate certification reflecting the achieved qualification and learning outcomes.

Findings for PhD

The PhD in Chemical and Environmental Engineering program meets the requirements for student admission, progression, recognition, and certification.

Findings for [Title 3]

Click or tap here to enter text.

Strengths

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

Strengths for BSc

The program benefits from strong adherence to policies and procedures regarding student admission, progression, recognition, and certification. Additionally, undergraduate students have the opportunity to participate in Erasmus exchange programs with other universities.

Strengths for PhD

The program demonstrates strong adherence to policies and procedures regarding student admission, progression, recognition, and certification. It also offers the opportunity for external visits to different European universities under exchange and mobility programs.

Strengths for [Title 3]

Click or tap here to enter text.

Areas of improvement and recommendations

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

Areas of improvement and recommendations for BSc

Consider streamlining a process to address cases where students may face difficulty in passing compulsory courses, such as issuing alternative awards (e.g., certificates or diplomas) with lesser requirements.

Areas of improvement and recommendations for PhD

No specific areas of improvement identified.

Areas of improvement and recommendations for [Title 3]

Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		BSc	*PhD*	[Title 3]
4.1	Student admission, processes and criteria	Compliant	Compliant	Choose answer
4.2	Student progression	Compliant	Compliant	Choose answer
4.3	Student recognition	Compliant	Compliant	Choose answer

4.4	Student certification	Compliant	Compliant	Choose answer

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

Teaching and Learning resources + Physical resources:

During the site visit of the evaluation committee, and after review of the material distributed, it is evident that for theoretical and laboratory courses the teaching and learning resources offered by the department to students meet the standards seen in high-profile universities in Europe. The students are well informed regarding the available resources to them during classes. The library services ensure access to a large volume of textbooks and other material (over 500000 titles available). Moreover, the IT infrastructure is sufficient including multiple workstations, access to pertinent software that is currently used in the civil engineering research and practice communities. Regarding teaching materials and equipment, the faculty maintains and constantly improves them to maintain high quality of the program. The condition of classrooms, lab spaces for teaching and research purposes is adequate, though we believe a more integrated campus could be beneficial.

Human support resources + Student support:

Services are provided to students with special needs due to physical disabilities. Nevertheless, it is evident that the department needs more staff to extend its capacity limits to meet demands in case that student number(s) change.

Findings for PhD

See the comments above

Findings for [Title 3]

Click or tap here to enter text.

Strengths

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

Strengths for BSc

Good quality of teaching facilities and research labs that ensure high-quality hands-on experience in teaching and research. Effective use of student evaluations to maintain high quality of teaching across programmes. The library offers many customized services for students, researchers, faculty and visitors. Enthusiastic/engaged teaching staff.

Strengths for PhD

See the comments above.

Strengths for [Title 3]

Click or tap here to enter text.

Areas of improvement and recommendations

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

Areas of improvement and recommendations for BSc
A more integrated campus would be desirable.

Areas of improvement and recommendations for PhD
See the comments above.

Areas of improvement and recommendations for [Title 3]
Click or tap here to enter text.

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

Sub-area		***Non-compliant/ Partially Compliant/Compliant***		
		BSc	*PhD*	[Title 3]
5.1	Teaching and Learning resources	Compliant	Compliant	Choose answer
5.2	Physical resources	Compliant	Compliant	Choose answer
5.3	Human support resources	Compliant	Compliant	Choose answer
5.4	Student support	Compliant	Compliant	Choose answer

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.

PhD in Chemical and Environmental Engineering program adheres to the expected standards. These expected standards include well-defined selection criteria and procedures for student admission, as well as clear requirements for the doctoral degree program. Guidelines are provided for writing the proposal and dissertation, including structure, limits, and plagiarism checks. The program establishes supervision and committee guidelines, ensuring regular meetings, feedback, and support for research papers. Overall, the program prioritizes quality and rigour, contributing to the scientific integrity of the theses and their value in academia and the job market.

Strengths

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

The PhD group is quite closely knit within the department as they are involved in teaching as well as research while engaging with other faculty members who are not necessarily their supervisors. The structure of supervision having an advisory committee is very useful.

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 final assessment of PhD thesis may enhance the involvement of subject experts from recognized external research environments.

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.

The EEC members have found the two academic programs in chemical engineering to be compliant in all examined aspects.

Overall, the programs have been very successful in attracting large numbers of funded research projects.

The existing course offerings provide a balance between fundamentals and practice including several activities. The teaching labs and university facilities in general, they are of good quality, despite the fact that are distributed over a large area in the city.

A thorough revision of a broad range of examples of research portfolios demonstrates the complementary activities of academic staff in various emerging areas in chemistry and chemical engineering.

Regarding teaching, formal procedures have been established so that student feedback is seen in a constructive manner for the further tailoring of existing coursework, which follows the state-of-the-art. The ratio of number of students-to-lecturers appears to be fairly optimal.

Regarding admission requirements, formal control points have been established. Moreover, doctoral student supervising/mentoring follows the same standards and practices of top academic institutions from around the world. Doctoral students get the opportunity to present their research and disseminate their research findings in top scientific meetings and national/international conferences.

The faculty along with graduate students publish their scientific results in top peer-reviewed journals in the field of discipline based on numerous examples presented to the EEC committee.

While the EEC members firmly believe that there are no major aspects of immediate action to improve the overall quality of the programs of study under review, a few recommendations have been suggested for consideration to ensure the future evolution of the programs.

These recommendations include the following:
• Recruitment of more faculty with core-chemical-engineering competences
• Better integration of facilities within the same (or closely situated) buildings
• There seems not-to-be much consciousness among students about representation and how to exert influence on programs, this makes the students an under-utilized resource in the development of the programs
• Somewhat more emphasis on practical operation of chemical engineering processing systems at intermediate to larger scale
• Develop access to practical experiences with larger scale processing equipment. Internships may help with this, but then internships must not reduce to analytical work only.

E. Signatures of the EEC

Name	*Signature*
Efstathios Kikkinidis	
Jens Abildskov	
Waheed Afzal	
Michalis Chrysaphis	
Marios Alkiviades	
Click to enter Name	

Date: May 20 2023

5 Lemesou Avenue, 2112, Nicosia
T: + 357 22 504 340
F: + 357 22 504 392
e-mail: info@dipae.ac.cy