Doc. 300.1.1

Date: 28th May 2019

External evaluation report

- **Higher education institution:**

  The University of Cyprus

- **Town:** Nicosia

- **Programme of study (Name, ECTS, duration, cycle)**

  Διατμηματικό Μεταπτυχιακό Πρόγραμμα Πολυτεχνικής Σχολής «Ενεργειακές Τεχνολογίες και Αειφόρος Σχεδιασμός» (ΕΤΑΣ)

  Interdepartmental Postgraduate Programme «Energy Technologies and Sustainable Design» (ETSD) (M.Eng. 3-8 semesters / 90 ECTS & M.Sc. 3-8 semesters / 114 ECTS)

- **Language of instruction:** Greek
- **Programme's status -currently operating:**
  since 2010 – first graduates 2012

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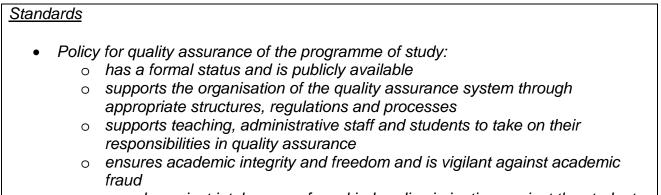
A. Introduction

This evaluation visit took place on 27th and 28th May 2019.

We would like to thank the Programme team, University and Quality Assurance Agency for the very good and timely arrangements made during our visit. The hospitality was excellent and we were made to feel very welcome. We also very much appreciated the thoughtful and flexible responses from all involved in relation to our requests.

B. External Evaluation Committee (EEC)

Name	Position	University
Prof. Fionn Stevenson	Chair	The University of Sheffield
Prof. Abraham Kribus	Member	Tel Aviv University
Prof. Petr Hájek	Member	Czech Technical University in Prague
Assoc. Prof. Dezso Sera	Member	Aalborg University
Mr Andreas Kasartos Mashias	Member	Cyprus University of Technology

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

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*

- o *supports the involvement of external stakeholders*

- *The programme of study:*
  - o *is designed with overall programme objectives that are in line with the institutional strategy and have explicit intended learning outcomes*
  - o *is designed by involving students and other stakeholders*
  - o *benefits from external expertise*
  - o *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)*
  - o *is designed so that it enables smooth student progression*
  - o *defines the expected student workload in ECTS*
  - o *includes well-structured placement opportunities where appropriate*
  - o *is subject to a formal institutional approval process*
  - o *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*
  - o *is regularly monitored in the light of the latest research in the given discipline, thus ensuring that the programme is up-to-date*
  - o *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*
  - o *is reviewed and revised regularly involving students and other stakeholders*

- *Public information (clear, accurate, objective, up-to date and readily accessible):*
  - o *about the programme of study offered*
  - o *the selection criteria*
  - o *the intended learning outcomes*
  - o *the qualification awarded*
  - o *the teaching, learning and assessment procedures*
  - o *the pass rates*
  - o *the learning opportunities available to the students*
  - o *graduate employment information*

Findings

Quality Assurance:

A clear quality assurance procedure and path for approval of changes in the programme exists at departmental level. However, there is less structure visible at the program level. Program committee meetings appear not specifically aimed at quality assurance. Every two years a change of programme coordinator is an opportunity for review of the program, but it is not mandatory.

Input from students seems sporadic and mostly relates to problems in specific courses. The students are not aware of any regular procedure for providing input at

the program level. Apparently, there is no program-level input from external stakeholders such as industry.

No information was provided about specific measures regarding integrity, fraud, intolerance, etc. Presumably these are general university practices that do not need specific measures within the program.

Program of study:

Program objectives are clear and are aimed to fulfil an important need in the market for professionals with a broad multi-disciplinary background and with experience in collaborative work. The program supports the personal and professional development of the students by introducing them to new areas of knowledge, and developing new skills that are less emphasized in conventional disciplinary programs.

Learning outcomes are not clearly defined, both at the program level and for many of the individual courses.

The plan of studies is simple and clear so students should find it easy to progress through the program. There are only a few cases where prerequisites require taking courses in sequence. The expected workloads are clearly defined.

There is no formal procedure for work placement opportunities at the program level. A university level office is available for students seeking such opportunities.

The programme design was formulated by involved Faculty members from the four departments, and there seems to be little or no involvement of other stakeholders such as students or the industry. There are contributions of external experts as guest lecturers in some courses but not at the programme level.

The Procedure for approval of the programme, and approval of changes or updates, is clearly defined and involves several levels of scrutiny from the departments up to Senate. However, there is no formal provision for regular periodic reviews of the programme, and this is left to occasional initiative of involved teaching staff.

The content of all the compulsory courses, and some of the elective courses, is influenced by the need to serve students from a wide range of backgrounds. Therefore, these courses are somewhat less rigorous than similar courses given to a homogeneous student population in disciplinary programs. Some students have reported that they find the courses to be easy compared to their undergraduate experience. This is not a major concern for the professional M.Eng. program where the main goal is developing the inter-disciplinary understanding of the students rather the depth of disciplinary knowledge. However, this approach may be less appropriate for the M.Sc. research-oriented programme.

The university policy to develop programmes also in English in order to attract international students can apply to this programme, which can have applicability and appeal to a wider audience. However, the programme leadership expressed concern that converting to English may repel Greek-speaking candidates who are not sufficiently comfortable in English.

Public information:

The programme web site contains information on the programme structure and requirements, admission criteria, learning and assessment procedures, and qualification awarded. It does not offer information on learning outcomes, the pass rates, or graduate employment opportunities.

Strengths

- The programme's stress on inter-disciplinary and collaborative work, with an extensive practical experience in the Capstone project, leads to an excellent professional experience that prepares students for real-life experience in the workplace. The M.Eng. programme is an outstanding professional degree that should be very beneficial to the professional development of the students and their employability prospects.

- The programme offers an opportunity for a significant boost in the students' work and communication skills: architects are exposed to a variety of engineering quantitative methods, while engineers are exposed to qualitative approaches, rules and standards that are missing from the disciplinary engineering studies.

Areas of improvement and recommendations

- There is a need for a formal Annual Review and development procedures at the programme level. The review should consider aspects such as technology changes, students' feedback, and the changing market requirements for graduates. The review should consider aspects such as: program specification, forward planning budget, and resource provision.

- Inputs should be solicited from external stakeholders, for example by performing a market study including: demand for graduates, skill set requested by potential employers, competing programs, both national (Cyprus + Greece) and international (for consideration of an English version of the program).

- It would be very useful to initiate specific work placement procedure or events to introduce students to potential employers, in collaboration with relevant industry (in Cyprus and abroad), and government agencies.

- Some of the courses seems to be at an academic level that is too low for a research-oriented M.Sc. degree, compared to disciplinary M.Sc. programs in this university and elsewhere. This is due to the requirement of making courses accessible to students from a wide range of disciplines. The program should consider offering courses at a higher level to M.Sc. students, possibly taken from the disciplinary M.Sc. programs. In parallel, staff should consider ways for students from different backgrounds to gain the missing prerequisite knowledge and succeed in these higher-level courses. The Capstone project, which is very suitable for the professional M.Eng. program, should be reconsidered for the M.Sc. program. Possibly it could be reformulated as a more research-oriented activity, including an introduction to research methodology. This should be beneficial for students aiming for a research Ph.D. track rather than professional employment.

- We encourage the program coordinator to consider seriously offering the program in English and actively attracting international candidates. This is probably the only way to expand and develop the program. The concern about local candidates should be addressed with a support system to aid students having difficulty in English, and

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stressing the advantage of English proficiency to gain wider opportunities for future employment and advanced studies.

<u>Mark from 1 to 10 the degree of compliance of each quality indicator/criterion</u>

1 – 4: Non-compliant

5 or 6: Partially compliant

7 or 8: Substantially compliant

9 or 10: Fully compliant

	Quality indicators/criteria	1 - 10
1.1	Academic oversight of the programme design is ensured	9
1.2	The guide and / or the regulations for quality assurance provide the adequate information and data for the support and management of the programme of study for all the years of study.	8
1.3	Internal Quality Assurance processes safeguard the quality and the fulfillment of the programme's purpose, objectives and the achievement of the learning outcomes. Particularly, the following are taken into consideration:	
	1.3.1 The disclosure of the programme's curricula to the students and their implementation by the teaching staff	9
	1.3.2 The programme webpage information and material	8
	1.3.3 The procedures for the fulfillment of undergraduate and postgraduate assignments / practical training	9
	1.3.4 The procedures for the conduct and the format of the examinations and for student assessment	9
	1.3.5 Students' participation procedures for the improvement of the programme and of the educational process	6
1.4	The purpose and objectives of the programme are consistent with the expected learning outcomes and with the mission and the strategy of the institution.	7
1.5	The following ensure the achievement of the programme's purpose, objectives and the learning outcomes:	
	1.5.1 The number of courses	9
	1.5.2 The programme's content – M.Eng / M.Sc.	9 / 6

	1.5.3	The methods of assessment	8
	1.5.4	The teaching material	9
	1.5.5	The equipment	9
	1.5.6	The balance between theory and practice – M.Eng / M.Sc.	9 / 7
	1.5.7	The research orientation of the programme	8
	1.5.8	The quality of students' assignments	8
1.6	The expected learning outcomes of the programme are known to the students and to the members of the teaching staff.		6
1.7	The teaching and learning process is adequate and effective for the achievement of the expected learning outcomes.		8
1.8	The content of the programme's courses reflects the latest achievements / developments in science, arts, research and technology.		8
1.9	New research results are embodied in the content of the programme of study.		8
1.10	The content of foundation courses is designed to prepare the students for the first year of their chosen undergraduate degree.		N/A
1.11	Students' command of the language of instruction is appropriate.		10
1.12	The programme of study is structured in a consistent manner and in sequence, so that concepts operating as preconditions precede the teaching of other, more complex and cognitively more demanding, concepts.		8
1.13	The learning outcomes and the content of the courses are consistent.		6
1.14	The European Credit Transfer System (ECTS) is applied and there is correspondence between credits, workload and expected learning outcomes per course and per semester.		9
1.15	The higher education qualification awarded to the students corresponds to the purpose, objectives and the learning outcomes of the programme.		9
1.16	The higher education qualification and the programme of study conform to the provisions for registration to their corresponding professional and vocational bodies for the purpose of exercising a particular profession.		N/A
1.17	The programme's management in regard to its design, its approval, its monitoring and its review, is in place.		6
1.18	The programme's collaborations with other institutions provide added value and are compared positively with corresponding collaborations of other departments / programmes of study in Europe and internationally.		N/A

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1.19	Procedures are applied so that the programme conforms to the scientific and professional activities of the graduates.	6
1.20	The admission requirements are appropriate.	10
1.21	Sufficient information relating to the programme of study is posted publicly.	8
1.22	The teaching methodology is suitable for teaching in higher education.	9

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

1.3.5: It seems that the student feedback is limited to specific course survey and there is no formal mechanism for student-teacher discussion of the programme as a whole, teaching methods etc.

1.4: Learning outcomes are poorly defined for the program as a whole and for a large part of the courses. Therefore, it is not possible to assess the consistency of the learning outcomes with the objectives of the programme and the institution.

1.5.2: The programme's contents are very suitable for the professional M.Eng. programme. However, we believe that they are less suitable for the research-oriented M.Sc. program, see comments and suggestions above.

1.5.6: The balance of theory and practice is very suitable for the professional M.Eng. programme. However, we believe that the M.Sc. programme should have deeper theoretical content, consistent with other M.Sc. programs around the world. The practical design component can be shifted to a project of less breadth and deeper research-oriented work.

1.6: The learning outcomes of the programme are poorly formulated and should be revised.

1.13: The learning outcomes of many of the courses are either missing or poorly formulated, and should be revised.

1.17: There seems to be no regular procedure for periodic review and update of the program, and it is left to occasional initiative of the teaching staff. Monitoring of the program performance with key indicators such as students' pass rates, etc., seems to be completely missing.

Provide information on:

- Employment of program graduates – no information was provided.

- Pass/fail rates – no information was provided.

- Exams and assignments – a sample of exams and assignments was reviewed, and found to be in very good correspondence to the level of the program and the number of ECTS.

Please circle one of the following for:

Study programme and study programme's design and development

Non-compliant   *Partially compliant*   *substantially compliant*   *Fully compliant*

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2. Teaching, learning and student assessment (*ESG 1.3*)

Standards

- *The process of teaching and learning supports students' individual and social development and respects their needs.*
- *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.*
- *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.*
- *Mutual respect within the learner-teacher relationship is promoted.*
- *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.*

Findings

The program as an entirety supports the students' individual development through the courses / lectures and individual assignments, while the capstone projects and group assignments prepare the students for working in an interdisciplinary social setting. The interaction with students has shown that to a high degree, they feel well-supported within the programme.

The most flexibility in teaching and learning can be identified at the capstone project part of the curriculum, where lectures, workshops, site visits, lab and on-site experiments as well as individual and group assignments are combined. Some of the courses also offer variety of delivery methods, however, most did not appear as flexible and individualized as the capstone projects.

The formal venue for students to get involved in creating the learning process, is to provide feedbacks about every course at the end of the semester. However, no details were given on the type of feedback the students can provide. Furthermore, there is no formal staff-student committee to support the programme.

Based on the meeting with staff and student, the capstone projects especially the group projects provide a good basis for autonomous work and fosters creative thinking. Two teachers for 4-5 groups appears to be suitable to provide adequate support and guidance.

The university has an electronic system (Blackboard) through which all course materials and assignments are distributed and collected. Courses appear to rely on traditional slide-based presentations; however, no information was given on the use of more innovative techniques such as in-lecture polling, quizzes, or videos.

Based on the submitted material and meeting with teaching staff and students, the mandatory courses can be applied well in the capstone projects where typical project topics focus on solving problems in existing systems (such as renovation of an existing building with input from owner).

While there was no information on this in the submitted material, the meetings with the teaching staff and students have revealed a respectful and supportive learner-teacher relationship

The assessment for courses is based on a combination of lecture attendance, activity during lectures /assignments, and exams (mid-term and final). This is not unified for all courses (e.g. weight of different elements vary), however the students are informed of these at the beginning of the semester.

The details on the assessment of the capstone projects were not available to the EEC. The weight of different elements (activity, assignment, final project presentation) was not clarified in some of the courses.

Methods of assessment are published, however there was no information on criteria for marking.

- *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.*

No information provided.

- *Assessment, where possible, is carried out by more than one examiner.*

No information provided on courses. The capstone project exams are attended by multiple teachers however no formal roles and procedures are assigned, e.g. voting on the grade, procedures in case of disagreements, etc.

> *Strengths*
> - Overall a good combination of theoretical and practical studies within the programme.
> - Good support for individual and social development of students. The number of students per teacher is adequate (~ 20 students per class).
> - Capstone projects are an asset of this programme, as they allow application of knowledge from the courses in a real-life setting, and in the same time preparing the candidates for working in multidisciplinary teams.

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Areas of improvement and recommendations
- Assessment (especially for the capstone projects) is recommended to be better clarified, i.e. the exact contribution of different components (such as individual and group assignments, projects) to the final grade, and in the same time the assessment criteria (marking) for these components to be defined.
- Based on the material available to the EEC, we recommend that the intended learning outcomes for the individual courses as well as for the programme to be identified more clearly.
- We suggest inclusion of regular formative assessment of the students throughout the programme, e.g. within courses, with the aid of modern educational technologies.

Mark from 1 to 10 the degree of compliance of each quality indicator/criterion

1 – 4: Non-compliant

5 or 6: Partially compliant

7 or 8: Substantially compliant

9 or 10: Fully compliant

	Quality indicators/criteria	1 - 10
2.1	The actual/expected number of students in each class allows for constructive teaching and communication.	10
2.2	The actual/expected number of students in each class compares positively to the current international standards and/or practices.	9
2.3	There is an adequate policy for regular and effective communication with students.	7
2.4	The methodology implemented in each course leads to the achievement of the course's purpose and objectives and those of the individual modules.	8
2.5	Constructive formative assessment for learning and feedback are regularly provided to the students.	6
2.6	The assessment system and criteria regarding student course performance are clear, adequate, and known to the students.	6
2.7	Educational activities which encourage students' active participation in the learning process are implemented.	9
2.8	Teaching incorporates the use of modern educational technologies that are consistent with international standards, including a platform for the electronic support of learning.	7

![ENQA - European Association for Quality Assurance in Higher Education] ![ΔΙΠΑΕ CYQAA] ΦΟΡΕΑΣ ΔΙΑΣΦΑΛΙΣΗΣ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΗΣ ΤΗΣ ΠΟΙΟΤΗΤΑΣ ΤΗΣ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

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2.9	Teaching materials (books, manuals, journals, databases, and teaching notes) meet the requirements set by the methodology of the programme's individual courses and are updated regularly.	8
2.10	It is ensured that teaching and learning are continuously enriched by research.	8
2.11	The programme promotes students' research skills and inquiry learning.	8
2.12	Students are adequately trained in the research process.	8

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

2.3. There is an adequate policy for regular and effective communication with students. (score: 7)

Based on the meeting with the teaching staff and programme coordinator there seems to be regular close communication with students, however that depends on the individual teacher and no formal policy for staff/student meetings seems to be created.

2.5 Constructive formative assessment for learning and feedback are regularly provided to the students. (score:6)

The EEC could not find information on regular formative assessment for the students. It is possible that individual teachers do provide this, however no information on this was included in the material.

2.6 The assessment system and criteria regarding student course performance are clear, adequate, and known to the students (score: 6)

The key weakness of the assessment system is the lack of clearly defined criteria on which the students are marked.

2.8 Teaching incorporates the use of modern educational technologies that are consistent with international standards, including a platform for the electronic support of learning (score: 7)

The university uses an electronic teaching platform Blackboard, which in principle can be used for classroom activities such as quizzes, questionnaires, etc. however no information was provided on whether these capabilities are being incorporated in the teaching within this programme.

Please circle one of the following for:

Teaching, learning and student assessment

Non-compliant   *Partially compliant*   *substantially compliant*   *Fully compliant*

3. Teaching Staff (*ESG 1.5*)

Standards

- *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 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).*
- *Recognised visiting teaching staff participates in teaching the study programme.*
- *The teaching staff is regularly engaged in professional and teaching-skills training and development.*
- *Assessment of the teaching staff takes into account the quality of their teaching, their research activity, the development of their teaching skills and their mobility.*

Findings

The teaching staff is formed by professors, associate professors and assistant professors from four cooperating departments. In total 9 full-time faculty and 3 adjunct faculty are teaching in the program ETSD – 2 professors, 4 associate professors, 3 assistant professors, 2 postdocs and 1 PhD candidate. Full-time faculties represent 75% of the total number of teaching staff.

All courses in the programme are supported by teaching staff specialised in the field of specific course.
The recruitment and development of the teaching staff is secured by four involved and cooperating departments based on university rules.

Based on a set of CV's enclosed in an application and supported by discussion with representatives of the teaching staff during on-site meeting, the committee is convinced that teaching staff qualifications are adequate to achieve the objectives and planned learning outcomes and to ensure quality and sustainability of the teaching and learning in the study programme.

Most of the teaching staff involved in the study programme are collaborating in the specific scientific field with other partners on country as well as international level. This has been recognised by a number of research projects performed in the specific field which the staff are involved with. Teaching staff are also involved in the research in university research centres that are focused to problems connected with main topic of the programme ETSD – e.g. FOSS Research Centre for Sustainable Energy, KIOS Research Centre for Intelligent Systems and Networks. The teaching staff are supervising students of the programme doing research tasks within their study and particularly during preparation of their theses.

The EEC is not aware about any visiting teaching staff to be involved in the study programme.

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Quality of teaching and teaching skills of teaching staff is supported by Teaching and Learning centre at a university level, but it is not clear what pedagogical training the staff engage in, and this is to be encouraged.

The quality of teaching is assessed by regular annual survey provided by students of the program. Results of this survey is used for the evaluation of the teaching staff by the Inter-departmental Coordinating ETSD Graduate Programme Committee. Teaching, development of teaching skills and research activity of teaching staff is regularly assessed on the departmental level. The professional quality of teaching staff is evident from the high number of research papers and associated citations and high level of h indexes.

Strengths
- Interdisciplinary cooperation of teaching staff – especially within teaching a Capstone Design Project
- Good age proportion of the teaching staff: there are involved young teachers assuring continuation of the programme in long term perspective
- Involvement of teaching staff in the research enable continuous update of the programme by innovative solutions
- High number of research papers and citations

Areas of improvement and recommendations
- Higher involvement of visiting staff in the teaching of the courses
- Providing pedagogical training of the teaching staff including training in the use of innovative teaching methods

Mark from 1 to 10 the degree of compliance of each quality indicator/criterion

1 – 4: Non-compliant

5 or 6: Partially compliant

7 or 8: Substantially compliant

9 or 10: Fully compliant

	Quality indicators/criteria	1 - 10
3.1	The number of full-time teaching staff, occupied exclusively at the institution, and their fields of expertise, adequately support the programme of study.	9
3.2	The members of teaching staff for each course have the relevant formal and fundamental qualifications for teaching the course, including the following:	
3.2.1	Subject specialisation	10

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	3.2.2	Research and Publications within the discipline	9
	3.2.3	Experience / training in teaching in higher education	6
3.3		The programme attracts visiting professors of recognized academic standing.	6
3.4		The specialisations of visiting professors adequately support the programme of study.	N/A
3.5		Special teaching staff and special scientists have the necessary qualifications, adequate work experience and specialisation to teach a limited number of courses in the programme of study.	9
3.6		In the programme of study, the ratio of the number of courses taught by full-time staff, occupied exclusively at the institution, to the number of courses taught by part-time staff, ensures the quality of the programme of study.	10
3.7		The ratio of the number of students to the total number of teaching staff supports and safeguards the programme's quality.	10
3.8		The teaching load allows for the conduct of research and contribution to society.	9
3.9		The programme's coordinator has the qualifications and experience to coordinate the programme of study.	10
3.10		The results of the teaching staff's research activity are published in international journals with the peer-reviewing system, in international conferences, conference minutes, publications etc.	10
3.11		The teaching staff is provided with adequate training opportunities in teaching methods, adult education and new technologies.	6
3.12		Feedback processes for teaching staff in regard to the evaluation of their teaching work, by the students, are satisfactory.	8

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

3.2.3 and 3.11 Training of the teaching staff including training in the use of innovative teaching methods and new technologies should be enhanced.

3.3 The involvement of recognised visiting teaching staff in the study programme should be supported and number of visiting teachers increased.

Provide information on the following:

In every programme of study the special teaching staff should not exceed 30% of the permanent teaching staff.

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In total 9 full-time faculty and 3 adjunct faculty are teaching in the program ETSD – 2 professors, 4 associate professors, 3 assistant professors, 2 postdocs and 1 PhD candidate. Full-time faculties represent 75% of the total number of teaching staff.

Please circle one of the following for:

Teaching Staff

Non-compliant   *Partially compliant*   *substantially compliant*   *Fully compliant*

4. **Students** (*ESG 1.4, 1.6, 1.7*)

Standards

- *Pre-defined and published regulations regarding student admission, progression, recognition and certification are in place.*
- *Access policies, admission processes and criteria are implemented consistently and in a transparent manner.*
- *Information on students, like 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, is collected, monitored and analysed.*
- *Fair recognition of higher education qualifications, periods of study and prior learning, including the recognition of non-formal and informal learning, are essential components for ensuring the students' progress in their studies, while promoting mobility.*
- *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.*
- *Student support is provided covering the needs of a diverse student population (such as mature, part-time, employed and international students, as well as students with disabilities).*
- *A formal procedure for student appeals is in place.*
- *Students are involved in evaluating the teaching staff.*
- *Students' mobility is encouraged and supported.*

Findings

The available material on the programme is considered adequate for students. Material is available in the programme's website, on general information, programme of studies, admissions, news and announcements, and communication details.

Postgraduate Studies Rules, containing all information concerning the programme, are provided. Policies, processes and criteria are described in the Postgraduate Studies Rules and are applied.

Analytical information on students at a programme level, like key performance indicators on drop out rates, grading etc. both annual and as trends over the years was apparently not available to the programme coordinator or to the EEC.

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Students are provided with a 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.

Administrative personnel are competent to provide student support. Although the personnel are part-time employed, the program has an average of 20 students which can be supported with the current workload. Also, students are assigned to Academic Advisor, which is a faculty member, from whom can request support. We would recommend developing a pastoral advisor to the programme, to provide students with independent wellbeing support from the academic advisor and student buddy system.

A formal procedure for student appeals is in place through the administration office.

Windows based platforms are also available, such as the Online banner and Online Blackboard system. Online Banner contains all personal data for each student, course registration, analytical grading, etc. Online Blackboard System contains the curriculum material for each course and interaction tools with class members and instructor.

The Online Banner web offers a (mandatory) survey at the end of each semester for students to evaluate the teaching staff.

Due to the fact the programme is completed in 3 semesters and there is a workflow with in the 3 modules capstone course, student mobility is not encouraged.

Strengths

1. Students once are admitted to the program are appointed to an Academic Advisor.
2. Due to the fact, the program is interdepartmental and has an average of 20 students per year, gives the student the advantage of utilizing the low student-faculty ratio and the ability to move and collect data within all four departments.
3. The online platforms of Online Banner Web and Online Blackboard System is a helpful tool during studies to check data and form the curriculum path.
4. Also, there is good support from staff of program for the students.

Areas of improvement and recommendations

The interdepartmental format of the programme, and the departmental split between four departments, needs to be more clear for students as sometimes they seek help or information directly from the departments when instead they need to go to interdepartmental administrator

Mark from 1 to 10 the degree of compliance of each quality indicator/criterion

1 – 4: Non-compliant

5 or 6: Partially compliant

7 or 8: Substantially compliant

9 or 10: Fully compliant

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	Quality indicators/criteria	**1 - 10**
4.1	The student admission requirements for the programme of study are based on specific regulations and suitable criteria that are favourably compared to international practices.	8
4.2	The award of the higher education qualification is accompanied by the diploma supplement which is in line with European and international standards.	N/A
4.3	The programme's evaluation mechanism, by the students, is effective.	6
4.4	Students' participation in exchange programmes is compared favourably to similar programmes across Europe.	N/A
4.5	There is a student welfare service that supports students in regard to academic, personal problems and difficulties.	8
4.6	Statutory mechanisms, for the support of students and the communication with the teaching staff, are effective.	9
4.7	Mentoring of each student is provided and the number of students per each permanent teaching member is adequate.	9
4.8	Flexible options / adaptable to the personal needs or to the needs of students with special needs, are provided.	8
4.9	Students are satisfied with their learning experiences.	9

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

4.3 Although there is a feedback survey for the each course, the interdepartmental programme lack a formal evaluation mechanism for the overall programme itself.

Please circle one of the following for:

Students

Non-compliant   *Partially compliant*   *substantially compliant*   *Fully compliant*

5. Resources (*ESG 1.6*)

Standards

- *Adequate and readily accessible resources (teaching and learning environments, teaching materials, teaching aids and equipment, financial, physical and human*

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support resources*) are provided to students and support the achievement of objectives in the study programme.

* Physical resources: premises, libraries, study facilities, IT infrastructure, etc.
 Human support resources: tutors/mentors, counsellors, other advisers, qualified administrative staff

- *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.*
- *Teaching staff is involved in the management of financial resources regarding the programme of study.*

Findings

Generally, there is an excellent availability of accessible resources for achieving the objectives of this study programme which the staff are proud of. Students have access to numerous appropriate research laboratories for their coursework and theses. There is a substantial amount of digital and technical equipment for the students to use for monitoring and testing with several workshops for physical manufacture of models. Students are supported by a range of well-qualified full-time staff and some part-time staff – the balance of these is good. There is a very good ratio of staff:students at 1:20. There is good support from the administration team of two (part-time technician and administrator).

Currently the programme is running at half its capacity (20 out of a possible 40 students) so it is hard to tell if the programme is well prepared for doubling this number in terms of staff resources. Certainly, the physical resources could cope with this increase. The University has faced a series of cuts in public funding in recent years subsequent to the global financial crash of 2009 and appears to be have been able to expand through increased efficiencies and donations. The demographic profile of Cyprus is changing with less and less young people. The University plan is to expand international student numbers, with more programmes delivered in English and through blended/online learning aspects. It already has a number of Masters programmes delivered this way. This programme is not yet prepared for these changes.

Almost all the resources are fit for purpose (see below for further comment). Students are generally informed about the services available to them within the University and the Departments via the University website, programme website and Programme Prospectus (see below for further comment).

It is unclear how the staff are involved in the management of financial resources in the programme. It would appear that a sum is allocated to the programme each year and that this is divided between staff costs and resource overheads. What is not clear is how staff allocate these resources to the different courses within the programme and what the forward 5-year planning budget is for increasing student numbers.

Strengths
1. Capstone Project resources provide an excellent vehicle for teaching interdisciplinary collaboration skills and developing this perspective in professional teamwork

2. Live physical monitoring by students of real building projects reflects reality
3. Excellent physical resources
4. Access to excellent research laboratories carrying out world-class testing (KIOS and FOSS) for student courses and theses
5. A new engineering faculty building is under development which promises more integrated and improved resources for the future.

Areas of improvement and recommendations
1. The Programme Co-ordinator post is currently unfunded. This post should be properly funded, and time assigned in recognition of its leadership status and the time needed to be more pro-active in developing the programme with the team, in order to internationalise and develop the teaching pedagogy in relation to online learning opportunities within the courses to help increase student access (e.g. to record all lectures for students and possibly 'flip' them). At present the coordinator does an excellent job of managing the programme, but there is little or no time left over to plan forward.
2. Consideration should be given to the length of rotation of the Programme Co-ordinator role. 2 years is really too short to learn the role, develop new programme initiatives/changes to the courses/see them start and test them for effectiveness. The University should consider a 4 year rotation, in order to increase effectiveness and continuity.
3. The Programme Administrator role appears also to rotate every 2 years between Departments, and is associated with the Co-ordinator's Department. This role should also be extended in its duration, in line with the Co-ordinators, or potentially centralized to Faculty level for greater continuity and institutional memory.
4. The Postgraduate Prospectus handbook issued to students at the start of the programme sets out the basic aim, process and resources in the Introduction, as well as the courses. It should be expanded to include statements on plagiarism, support for mental wellbeing, and web links to various physical resources available to the student (laboratories, workshops, library etc). The aim is to turn the Prospectus and Programme website into more of a student self-help tool and reduce the number of unnecessary contacts with an already overburdened administrator. The programme website basically repeats the Postgraduate Prospectus, and could be usefully expanded with more information about resources, teaching locations, and support.
5. The Academic Supervisor is currently also the Pastoral Advisor – it is best practice to have these roles separated, so that the students have a trained Pastoral Advisor to turn to if they are experiencing any issues with their Academic Supervisor, and who is more familiar with mental health and wellbeing issues, and aware of all the resources the University has for supporting students in these areas.
6. The University/Programme should take a more pro-active role to ensure that all students have a meeting at least once a year, independently of the Academic team, with their Pastoral Advisor to pro-actively check on their wellbeing.
7. While the new library is an excellent resource, it is noted that a number of key research journals that could be related to the programme are missing, and also that a number of the courses have rather dated texts – consideration should be given to subscribing to some of these top journals (e.g. Energy and

Building, Buildings and Environment, Building Research and Information etc.etc.) and at the same time ensuring that all courses are up to date with the texts they use.

Mark from 1 to 10 the degree of compliance of each quality indicator/criterion

1 – 4: Non-compliant

5 or 6: Partially compliant

7 or 8: Substantially compliant

9 or 10: Fully compliant

	Quality indicators/criteria	1 - 10
5.1	Adequate and modern learning resources are available to the students.	8
5.2	The library includes the latest books and material that support the programme.	8
5.3	The library loan system facilitates students' studies.	10
5.4	The laboratories adequately support the programme.	10
5.5	Student welfare services are of high quality.	6
5.6	Statutory administrative mechanisms for monitoring and supporting students are sufficient.	8
5.7	Suitable books and reputable journals support the programme of study.	7
5.8	An internal communication platform supports the programme of study.	9
5.9	The equipment used in teaching and learning (laboratory and electronic equipment, consumables etc.) are quantitatively and qualitatively adequate.	10
5.10	Teaching materials (books, manuals, scientific journals, databases) are adequate and accessible to students.	7
5.11	Teaching materials (books, manuals, scientific journals, databases) are updated regularly with the most recent publications.	7

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

5.5. The Academic Supervisor is currently also the Pastoral Advisor – it is best practice to have these roles separated, so that the students have a trained Pastoral Advisor to turn to if they are experiencing any issues with their Academic Supervisor, and who is more familiar with mental health and wellbeing issues, and aware of all the resources the University has for supporting students in these areas. The University/Programme should take a more pro-active role to ensure

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that all students have a meeting at least once a year, independently of the Academic team, with their Pastoral Advisor to pro-actively check on their wellbeing.

5.7. While the new library is an excellent resource, it is noted that a number of key research journals that could be related to the programme are missing, and also that a number of the courses have rather dated texts – consideration should be given to subscribing to some of these top journals (e.g. Energy and Building, Buildings and Environment, Building Research and Information etc.etc.) and at the same time ensuring that all courses are up to date with the texts they use.

Please circle one of the following for:

Resources

Non-compliant　　*Partially compliant*　　*substantially compliant*　　*Fully compliant*

C. Conclusions and final remarks

Programme Design and Development:

This is a very good professional programme which is really useful to support the industry, based on the interdisciplinary collaboration of four disciplines. We believe it would be more fruitful to separate the scientific/research MSc. track more from the professional M.Eng track in order to improve its quality. We recommend to improve the procedures for Annual Review and future development of the programme. It would be beneficial for the Programme team to elicit inputs from external stakeholders in order to better understand the needs and requirements of the employment market.

Teaching and Learning:

The Capstone Project is a real asset because it allows students to experience real-world collaboration as an interdisciplinary built environment professional team, and to apply the learning from courses immediately in an applied project. The curriculum alignment, including course programme objectives, course objectives, learning outcomes and assessment should be improved with the Programme Co-ordinator checking across all syllabuses and courses for consistency.

Teaching Staff:

Interdisciplinary cooperation of teaching staff specialised in specific professional and scientific fields represents key and strong point of the of the ETSD Graduate Program. The teaching staff is well qualified to achieve the objectives and planned learning outcomes and to ensure quality and sustainability of the teaching and learning in the study programme. There is a well-balanced and appropriate number of staff on the programme.

Students:

The students are in general very satisfied with their accomplishments in the programme. The programme with its average of 20 students per year, gives the student the advantage of utilizing the low student-faculty ratio and the ability to easily interact within all four departments. There is excellent support from staff of program for the students.

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Resources:

Generally, there is an excellent availability of accessible resources for achieving the objectives of this study programme. Currently the programme is running at half its capacity and has room for expansion. The University plan is to expand international student numbers, with more programmes delivered in English and through blended/online learning aspects which the programme has an opportunity to prepare for. The programme staff are encouraged to develop a forward 5 year planning budget which reflects future ambition for increasing student numbers.

Overall the EEC team believes this is a very good programme and supports its continuing validation.

Additional comments on the arrangement of the visit:

To help improve future programme evaluation visits of this nature we would recommend the following:

1. The University should ideally provide the EEC team with a dedicated and secure room on the Campus, for the duration of the visit, and ideally in the vicinity of the Programme staff offices. This is to ensure that any queries for additional academic or administrative materials can be well co-ordinated and easily obtained throughout the duration of the visit and all materials can be kept secure on the University premises.
2. The Programme Team should provide full translation of the actual Course Syllabuses as used with the students, rather than providing additional summary version Course Descriptors which are only partial descriptors.
3. The EEC needs to have access to the Programme Co-ordinator over the full duration of the visit – including the second day of report writing – in order for the EEC to be able clarify any queries on the programme, or ask for additional information while they are writing the Evaluation Report.

D. Signatures of the EEC

Name	*Signature*
Prof.Fionn Stevenson	
Prof. Abraham Kribus	
Prof.Petr Hájek	
Assoc. Prof. Dezso Sera	
Mr Andreas Kasartos Mashias	

Date: 28th May 2019