

Doc. 300.1.2

Date:

Higher Education Institution's response

- **Higher education institution:**
UNIVERSITY OF CYPRUS
- **Town:** NICOSIA
- **Programme of study (Name, ECTS, duration, cycle)**
In Greek:
ΕΝΕΡΓΕΙΑΚΕΣ ΤΕΧΝΟΛΟΓΙΕΣ ΚΑΙ ΑΕΙΦΟΡΟΣ ΣΧΕΔΙΑΣΜΟΣ, MEng (90 ECTS), MSc (120 ECTS)
In English:
ENERGY TECHNOLOGIES AND SUSTAINABLE DESIGN, MEng (90 ECTS) of 3-8 semesters, MSc (114 ECTS) of 3-8 semesters
- **Language of instruction:**
GREEK (currently) | GREEK and/or ENGLISH (in future)
- **Programme's status**
Currently operating since 2010 - first graduates in 2012

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 and 2016” [N. 136 (I)/2015 and N. 47(I)/2016].

A. Guidelines on content and structure of the report

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

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.

Response: We thank the committee for these insightful remarks which we share to a great extent. The program has been relatively young- only 9 years of existence – indeed without established formalized procedures for quality assurance, nevertheless being under the overall supervision of the Engineering School Council the program has been going through review procedures under the umbrella of the Engineering School Council meetings. Specifically the program has one through 3 major review processes; one after 4 years from its first operation, then at 6 and then at 8 years where significant major improvements were realized following the experiences of the teaching staff and the students feedback after initiatives of the program committee, such as the introduction of the Capstone Design Project, then the identification of a common core of mandatory course subjects and so forth. Nevertheless, these were indeed implemented following informal processes (i.e. as part of the School Council meetings umbrella) and we agree that this review as part of a quality assurance process should be formally established and regularized. And we will take the necessary actions to introduce this formally.

Currently industrial involvement is limited through its involvement through the implementation of the Capstone Design Project; nevertheless this could be boosted also in other ways and this will be pursued as part of the next internal review (within the Engineering School) of the ETSD program for implementation of improvement measures following this external evaluation.

Indeed, any measures on integrity, fraud etc. are part of the overall university unified policy.

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.

Response: Individual course syllabi were not translated in English in detail for the purpose of this evaluation as language instruction is in Greek and detailed instructions were mostly given in Greek. Nevertheless in some cases-courses, more details could be provided and we will ensure that a consistent level of detail across the different course syllabi is provided.

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.

Response: Work placement was not examined during the development of the program as this requires important infrastructure at the university level to establish such a placement program; the university and in particular the Engineering School is at the moment making development plans for establishing this and the ETSD program committee will examine such a prospect in the context of a more broadly organized scheme.

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.

Response: We share the remark of the committee; it is an observation we also made in the last years. We will address this remark in the progress review implementation on how most effectively to take care of this.

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.

Response: This is indeed the feedback we have been receiving from the students at times; however, we believe that in the context of a wider change at the university level (given its participation in the European University Consortium) this will become a more attractive part as the use of English language will reflect also a more international audience/attendance. The internationalization of the program is one of the desired aims for the Program Coordinating Committee.

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.

Response: We provide this information elsewhere on other occasions e.g. during an established introductory Student-Staff meeting at the beginning of each semester. We will also include this formally on the public available information e.g. websites etc.

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.*

Response: We thank very much the committee for the positive remarks on the ETSD program.

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

Response: We are grateful for these valuable remarks and insights which are truly helping to design a substantially improved version of our current ETSD graduate programs. We will address thoroughly all points through a formal progress review under the Engineering School and we will implement them. For efficiency purposes at this stage, we will make the most of any upcoming reformation processes designed at the University level involving the transition to English language, and the work placement based on the Engineering School plans. We will definitely initiate, promote and support these discussions for the benefit of these reformations.

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

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.

Response: We believe that what is offered as “Core/Mandatory Courses” are as flexible and individualized as the capstone project is. We thus assume that the evaluation committee refers to the elective courses as being stringent or restrictive for some students. In any case, the committee will revisit and revise (where necessary) the list of the elective courses to add more interdepartmental value in their context. Moreover, new courses, exclusively along an interdepartmental philosophy, will be added in the list. To this end, each department will be asked to design and offer interdisciplinary modules that are suitable for students having different engineering/architecture background.

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.

Response: Please see attached “Course Evaluation Questionnaire”. All students are obliged to respond and complete this questionnaire (anonymously) at the end of each semester. This is the main formal feedback mechanism each course leader receives. We, as a committee, intend to request access to these evaluations to reflect, revise and advise the course leaders where necessary.

Moreover, following necessary bureaucratic procedures and approvals, students’ representatives (e.g. one from each academic department) will be asked to participate in interdepartmental committee meetings (1-2 per year) that will focus on review and future teaching planning.

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.

Response: We reassure the evaluation committee that most of the teaching staff is using modern teaching tools and approaches that well include 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.

Response: We believe that non-uniformity in assessment is very minor. The teaching staff is obliged to use/apply two different assessment methods from a list that includes (written examinations, oral examinations, individual and/or group projects).

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.

Response: The quality criteria that form the final grade is the completeness of the response to the specific tasks, the creativity and novelty in the design of the project, the quality of the oral presentation as well as the reports and finally the interest of the students and their responsiveness to meet the tasks' deadlines.

Within the framework of Capstone Design Project I, II, and III, the assessment processes are fully described in the Syllabuses, in which the weighting factors for each assessment element are given. Hereafter you may find as an indicative example of the assessment elements and the accompanying weight factors for the Capstone Design Project I.

- Attendance and personal involvement on the lectures: 10%
- Individual projects/ exercises: 25%
- Team project: 65%, from which:
- Intermediate presentations: 30%
- Final presentation and deliverables: 35%

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.

Response: Within the framework of the Capstone Design Project I, II, and III, the assessment procedure and the criteria of marking are described on the Syllabuses (presented to the students at the beginning of the semester). According to the University's regulations of the post-graduate studies the teacher/s of each course is/are responsible for the nomination of the final grade. The Capstone Design Project I, II, and III have two instructors who assess and mark the projects independently, based on the syllabus' criteria. The final grade of the course is calculated as the average of the two independent grades. The external evaluators that are invited to comment on the final presentation of each semester provide feedback regarding the quality of each project that is taken into consideration by the teachers during the marking process. The process of providing feedback to the students is continuous and spreads out across the whole semester. The teachers comment and advice the students regarding the weak and strong points of their individual and team projects during the intermediate and final presentations, as well as during individual group-meetings throughout the semester.

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.*

Response: We intend to capitalise on these strengths and improve our teaching, learning and assessment procedures.

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.

Response: Peer assessment will be introduced as an additional evaluation means to add transparency and fairness in the final marking of students.

- 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.

Response: A standardised/uniform template for Course Descriptions will be formulated. This template will include specific guidelines for the instructors to clearly state the intended learning outcomes of their course.

- We suggest inclusion of regular formative assessment of the students throughout the programme, e.g. within courses, with the aid of modern educational technologies.

Response: We will need to implement this through the formal venue of the Teaching and Learning Centre at the University of Cyprus. Every effort will be made to include regular formative assessment of the students.

3. Teaching Staff (ESG 1.5)

Responses to the conclusions and suggestions of the external evaluation committee (committee comments indicated in italics) appear below:

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.

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.

Response: The inter-departmental postgraduate committee shares the committee's observations.

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*

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observations.

Areas of improvement and recommendations:

- *Higher involvement of visiting staff in the teaching of the courses*

Response: Apart from inviting more external experts and professionals to give seminars, starting from the winter semester of 2020, the inter-departmental postgraduate committee will attract at least one visiting professor of recognized academic standing to teach an elective course.

- *Providing pedagogical training of the teaching staff including training in the use of innovative teaching methods*

Response: The inter-departmental postgraduate committee will take all necessary measures to enhance the use of innovative teaching methods and technologies. For this purpose, the committee will (i) strengthen the collaboration with the Teaching and Learning centre of the university, (ii) promote the participation of existing and future teaching staff in short courses and seminars provided by the Teaching and Learning centre of the university, (iii) promote at the University level the periodic involvement of teaching staff in adult education and training in innovative teaching methods.

4. Students (ESG 1.4, 1.6, 1.7)

Responses to the conclusions and suggestions of the external evaluation committee (committee comments indicated in italics) appear below:

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.

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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.

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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

Response: We share the committee's observation. Inter-departmental postgraduate committee will take all necessary measurements in order to make this information accessible to the students.

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.

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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.

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation. It should be noted that independent wellbeing support is also provided by the Academic Affairs and Student Welfare Service, Ucy, which is responsible for supporting students in all issues relating to their studies and student life, while providing personal and career guidance, and social and financial support. The inter-departmental postgraduate committee will address in the upcoming formal internal Program Revision Review (following this evaluation) the development of a pastoral advisory scheme, as per the evaluation suggestion.

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.

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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.

Response: The inter-departmental postgraduate committee shares the committee's observation and the difficulties in the workflow of the capstone course during the 3 first semesters. I should be noted that student mobility is available for part-time students (up to 8 semesters). It is also noted that a member of programme's students have successfully participated in Erasmus exchange programme or other mobility activities.

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.*

Response: The inter-departmental postgraduate committee is grateful for the committee's positive observation.

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

Response: The inter-departmental postgraduate committee shares the committee's observation and will work towards the enhancement of the role of the inter-departmental administrator.

Deficiencies noted under the quality indicators (criteria)

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

Response: The department shares the committee's observation. It should be noted that independent surveys --beyond the evaluation of each course-- also provide adequate feedback and evaluation for the overall programme itself. Taking your suggestion into consideration, the formal evaluation mechanism for the interdepartmental programme will be discussed with Centre for Teaching and Learning, UCY.

B. Conclusions and final remarks

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.

Response: The inter-departmental postgraduate is grateful for the committee's positive observation.

5. Resources (ESG 1.6)

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).

Response: We thank the evaluation committee for the overall positive evaluation remarks on the aspect of Resources.

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.

Response: We share the remarks of the evaluation committee and the Program Committee will target more actively the promotion of the Program with measures to be decided in the upcoming formal internal Revision Program Review following this evaluation.

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.

Response: The delivery of programs in English requires both changes over a broader structure and corresponding support. The program committee has already been positive to move in this direction. We are currently considering to embed this effort within the university's required associated planning (amongst others) following UCy's recent success in the European Calls for European University Consortia; specifically UCy is a consortium university member of the European University YUFE and as such, the program will benefit also from the English language support infrastructure required to be developed at the university level.

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).

Response: We share the remarks of the evaluation committee and we thank them for the positive remarks.

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.

Response: We share the remarks of the evaluation committee to a great extent. We would like to clarify that the courses offered within the inter-departmental program are not specially designed inter-departmental courses exclusively for the ETSD program except for the POL - Capstone Design Project hence this is the only one so far supported by the ETSD financial provisions. The taught courses offered within ETSD are courses which are offered in parallel within specific constituent Departments of the Engineering School, and therefore the budget for that is planned and provided at the Departmental level. Nevertheless, we completely share that a 5-year plan will be substantially beneficial and we will put this forward to the Engineering School Council for the corresponding strategic decision making.

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.

Response: We thank the evaluation committee for the overall positive evaluation remarks on the strengths of Resources.

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.

Response: We thank the evaluation committee for the positive remarks and we totally agree that allowance of extra time for the Coordinator should be made so that proactive and forward planning can be made.

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.

Response: We agree with this observation and we will address this in our formal internal Program Revision Review at the Council of the Engineering School and the Graduate School.

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.

Response: Similarly as above, we agree with this observation and we will address this in our formal internal Program Revision Review at the Council of the Engineering School and the Graduate School.

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.

Response: This recommendation will be fully implemented. To achieve this, the program's committee will immediately liaise with the following administrative services of the University: a) Academic Affairs and Student Welfare Service, b) Research Support Service, c) IT Infrastructure Service, d) Information Application Service.

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 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.

Response: The ETSD program's committee is positive to this remark and it will address it in its formal internal Program Revision Review in the Council of the Engineering School; specifically to consider establishing the role of Pastoral Advisor through qualified staff working in the Academic Affairs and Student Welfare Service.

6. While the new library is an excellent resource, it is noted that a number of key research journals that could be related to the program 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 Buildings).

Response: The University has full subscriptions to all top journals in the fields related to the programme. In addition, the library has sophisticated and user-friendly search tools, as per the links provided below:

<http://library.ucy.ac.cy/en/subject-guides/architecture>

<http://library.ucy.ac.cy/en/subject-guides/civil-engineering>

<http://library.ucy.ac.cy/en/subject-guides/electrical-engineering>

<http://library.ucy.ac.cy/en/subject-guides/mechanical-engineering>

We thank the evaluation committee for the positive remarks and we share the remarks on possible improvement actions. These will be taken care under a formal progress review reformation meeting organized both within the Interdepartmental Coordination Committee and the Engineering School Council in the upcoming semester.

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.

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.

Overall Response:

First of all, we wish to thank the evaluation committee for the time and effort to go through in detail in this extensive set of information for an Inter-departmental program formed by four departments; we are furthermore grateful for the thorough remarks and valuable insights into the Program; this has provided an extremely helpful feedback for us to take the next steps to improvement. Our responses on the individual themes and topics have been provided in detail in the corresponding sections.

The actual steps and actions for the ETSD Program Revision for Improvement following this evaluation will be discussed formally both within the ETSD interdepartmental committee and at the School Council level. The implementation process will draw both from the university level changes as well as it will address more customized – specialized changes reflecting the course special nature and needs.

D. Higher Education Institution academic representatives

Name	Position	Signature
Marina Neophytou	Associate Professor, Department of Civil and Environmental Engineering, ETSD Program Coordinator	
Charalambos A. Charalambous	Associate Professor, Department of Electrical and Computer Engineering	
Dimokratis Grigoriadis	Assistant Professor, Department of Mechanical and Manufacturing Engineering	
Aimilios Michael	Assistant Professor, Department of Architecture	

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