Doc. 300.1.2

Higher Education Institution's Response

Date: 26/5/2021

- **Higher Education Institution:**
  Cyprus University of Technology
- **Town: Limassol**
- **Programme of study**
  Name (Duration, ECTS, Cycle)

  In Greek:

Πτυχίο Μηχανικών Γεωπληροφορικής, Πτυχίο Πολιτικών Μηχανικών, Μεταπτυχιακό Πρόγραμμα Πολιτικών Μηχανικών, Διδακτορικό Πρόγραμμα Πολιτικών Μηχανικών

  In English:

  BEng in Geomatics, BEng in Civil Engineering, MSc in Civil Engineering & Sustainable Design, PhD in Civil Engineering
- **Language(s) of instruction: Greek**
- **Programme's status:** Currently Operating
- **Concentrations (if any):**

  In Greek: Concentrations
  In English: Concentrations

The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the "Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws of 2015 to 2019" [N. 136 (I)/2015 to N. 35(I)/2019].

A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area.*

- *In particular, under each assessment area, the HEI must respond on, without changing the format of the report:*

    - *the findings, strengths, areas of improvement and recommendations of the EEC*
    - *the conclusions and final remarks noted by the EEC*

- *The HEI's response must follow below the EEC's comments, which must be copied from the external evaluation report (Doc.300.1.1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4).*

- *In case of annexes, those should be attached and sent on a separate document.*

1. Study programme and study programme's design and development
(ESG 1.1, 1.2, 1.7, 1.8, 1.9)

BEng in Surveying Engineering & Geoinformatics

Findings

The program purposes and objective and the intended learning outcomes are well described in a complete, in-depth and detailed way in terms of knowledge, skills and autonomy and responsibility according to the European Qualifications Framework (EQF). The course descriptions are complete including prerequisites, main objectives, learning outcomes and methods, short syllabus, bibliography and assessment modality. The program of the courses appears well balanced between the different disciplines of surveying engineering and Geoinfomatics and despite the number of academic staff probably due to: - a good integration between the curriculum of the assessed programme (BEng Surveying Engineering and Geoinformtions Engineering). and the programme in BEng Civil Engineering with a common I year and many common courses in II years; - a clear separation of the program curriculum of BEng Surveying Engineering and Geoinformations in the third and fourth years to reach expected specific skills and learning outcomes including the fundamental disciplines and topics of geomatics; - a limited number of students per years (20-25) that allows to implement "in field" exercises required i for making a good Surveyors and an expert in Geoinfomatics. The teaching load is well distributed during the semesters with 2 periods of practical training to introduce students in the real professional word. The Procedure for syllabus changes and monitoring is well defined. The responsible for the Programs of Study and the Curricula is the Department of Civil Engineering and Geomatics that guaranties the quality assurance defining 3 specific Committees: Undergraduate Studies Committee, committee for curriculum revision specialized in Surveying, Internal Quality Assurance Committee. The participation of students in decision making processes and in monitoring activities (students in Departmental Council and student representatives in other relevant University committee) allows an effective and robust information gathering for an effectual quality assessment.

Strengths

A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc. The tremendous success of the Department in Civil Engineering and Geomatics in a relatively short period despite existing in a very challenging economic environment in the last few years guaranties an optimal and solid link between this programme and the current emerging trends in job market. This aspects are continuously confirmed by the Departments being in constant contact with our social partners Industrial Partners, Society (e g Chamber of Engineers ETEK, Civil Eng Association, Surveying Engineers Association etc Government (e g public departments e g Water Development Department, Ministry of Interior, Civil Defense Land Survey Department), Funded projects (e g results from the existing funded project synergy with teaching). The presence of a significative number of students (5) inside of Department Council guaranties an effective interaction with students to better analyse the curriculum, highlighting critical aspects to monitor, understand and possibly modify and correct. The confirmation of the correctness and importance of this approach comes from the high level of satisfaction of students for curriculum extracted by anonymous questionnaires.

Areas of improvement and recommendations

The language of this program (Greek) does not allow a significant internationalization of the students. Given the strengths described above that denote a very innovative programme, it is suggested in the future to evaluate the possibility to propose an duplication in English of this programme for improving the presence of international students. Some pages (Structure & contents and Semester modules, Modules description) of the CUT website relative to the programme of BEng Surveying Engineering and Geoinformations Engineering does not allow a correct visualization in English language despite , there is the EN command option in the top right part of the web pages. Given the level of attention of this curriculum to the most current issues, it is finally suggested the possibility of including some parts relating to the topic of Geospatial Artificial Intelligence (GeoAI), an emerging topic in the geomatics field.

RESPONSE

As it was clearly stated during the evaluation procedure the official language of our undergraduate programmes which is determined by the state law is Greek. Based on that, it is not allowed to run our undergraduate programs in English. However, the Department has already accepted to provide 4 modules in English based on a recent approval given by the Government of Cyprus. Also, in the direction of attracting Erasmus students, the respective Departmental Committee is in continuous communication with other European Universities, and we lately see a gradual improvement.

Regarding our website deficiencies, a specialized person has been dedicated to fill in the missing information and keeping the site up to date.

The Department fully agrees with the comment of the evaluation committee with respect to GeoAI. This has already discussed within the GEOMATICS Discipline and was agreed to include it in our syllabus as an elective module in year 4.

BEng, MSc and PhD in Civil Engineering

Findings for B.Eng

The program of the courses appears well balanced between different disciplines of civil engineering and despite the number of academic staff. The content of the program corresponds to the EQF. The program is coherent without significant overlaps between courses. The foundation courses are designed to ensure a solid theoretical basis of students so as they can eventually apply the theoretical basis of what they were taught into practice. Passing/failing rates are deemed reasonable.

Findings for M.Sc

The fundamental topics are well distributed during the semesters and new topics like Sustainability, Surveying, Environmental Impact Assessment, Durability of Infrastructures and Risk Management have been inserted, for giving a modern approach of civil engineering. The content of the program corresponds to the EQF. The program is coherent without significant overlaps between courses. The foundation courses are designed to ensure a solid theoretical basis of students so as they can eventually apply the theoretical basis of what they were taught into practice and/or in research works. Passing/failing rates are deemed reasonable.

Findings for PhD

Usually, a full time PhD student graduates in 4 years. Reasons for dropping out may be related to failing the candidacy examination after one year of the doctoral studies. Strengths A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc. Strengths for B.Eng The stages during summer period assist students in applying the theoretical concepts learned during the semester. Also, the laboratory activities are well planned, and the quality of experimental facilities is exceptional.

Strengths for M.Sc

N/A

Strengths for PhD

N/A

Areas of improvement and recommendations for B.Eng

N/A

Areas of improvement and recommendations for M.Sc

The courses taught only in Greek do not help the participation of international students. This issue is related to the student exchange (Erasmus).

RESPONSE

Our MSc courses are currently offered in Greek. We are in the process of changing the language to English through the relevant internal University procedures.

Areas of improvement and recommendations for PhD

The courses taught only in Greek do not help the participation of international students. This will offer the possibility to host international academic staff so giving up the opportunity to increase the research exchange. While the program is well run, few more ECTS may be considered.

RESPONSE

As we explained in the online meeting our PhD programme is offered in English as well. The Research Methods are taught in both languages and the rest of the PhD programme is also offered in both languages. Also, we have already international PhD students. The PhD programme has a total of 240 ECTS units which are lowered to 180 in the case of a relative MSc degree. We offer 6 ECTS for the Research Methods and the rest ECTS units are based on pure research and research outputs. The PhD students have the opportunity to take more ECTS units from the existing modules of the MScs of Department or the School, to enrich their background. But please take into consideration that our PhD programs are fully research based.

2. Student – centred learning, teaching and assessment
(ESG 1.3)

BEng in Surveying Engineering & Geoinformatics

Findings

The virtual visit and the application files have demonstrated that the HEI follows a student centred teaching policy and this is reflected by the various modes of conduct for the transfer of information and knowledge to the student.12 The variety of the random examples presented regarding the Final Report of the students involved in Field Exercices and the variety of their current employment status indicates a student and specific skill centred policy which has excellent results. During the virtual visit, no critical issues or point of attention emerged in the student assessment procedures.

Strengths

The proposed curriculum contains some valuable and innovative aspects:

- many laboratory activities are well programmed with a good and modern experimental facilities;

- 2 specific Field Exercises in Surveying Geoinformatics during summer period help the student in applying the theoretical concepts learned in the semester ("learning by doing");

- 2 specific courses on Integrated Design for Civil, Surveying Geoinformatics Engineers permit to deal the engineering design activities with new multidisciplinary approaches in a definitely modern and innovative way;

- 2 courses in Professional Studies and Skills and 2 stage periods introduce students in the job market allowing a practical evaluation of achieved abilities and autonomy.

The good results of this program is confirmed by the high level of satisfaction of students for curriculum extracted by anonymous questionnaires, to confirm the effective integration of students in decision-making processes.

Areas of improvement and recommendations

During the virtual visit and the analysis of the application no specific criticalities emerged.

RESPONSE

We would like to thank the reviewers for their encouraging and positive comments.

BEng, MSc and PhD in Civil Engineering

Findings for B.Eng

The virtual visit and the application files have demonstrated that the HEI follows a student-centred teaching policy, and this is reflected by the various modes of conduct for the transfer of information and knowledge to the student.

Findings for M.Sc

The virtual visit and the application files have demonstrated that the HEI follows a student-centred teaching policy, and this is reflected by the various modes of conduct for the transfer of information and knowledge to the student.

Findings for PhD

The virtual visit and the application files have demonstrated that the HEI follows a student-centred teaching policy, and this is reflected by the various modes of conduct for the transfer of information and knowledge to the student.

Strengths for B.Eng

Interesting balance between theory and practical applications; hands on experience along with active learning both at local and urban scale.

Strengths for M.Sc

The variety of random examples presented regarding the Master Dissertations of the students and the variety of their current employment status indicates a student and specific skill centred policy which has excellent results.

Strengths for PhD

Consistent assessment procedures are established; this is demonstrated by the fact that doctoral students are efficient in completing their work in 4 years when they work full time. A formal evaluation procedure of doctoral students is put in place for transparent evaluation and feedback.

Areas of improvement and recommendations for B.Eng,

Perhaps the programme coordinator through the procedures for syllabus monitoring could examine the suggestions of the Scientific and Technical Chamber of Cyprus (ETEK) during the initial accreditation of the syllabus, to make minor adjustments such as incorporation of specialty courses that could not be incorporated to the BEng program due to the limitations within the given timetable.

Areas of improvement and recommendations for M.Sc

N/A

Areas of improvement and recommendations for Ph.D.

N/A

RESPONSE

As it has been previously stated we will pursue discussing with ETEK and consider seriously their comments for the sustainability and continuous improvement of our degrees. In fact, we are in the process of re-organizing our curricula and in this direction we will arrange more frequent meetings with ETEK including the student representatives. This will be facilitated markedly by the active participation of some of our faculty members at the ETEK board/committees.

3. Teaching staff

(ESG 1.5)

BEng in Surveying Engineering & Geoinformatics

Findings

Teaching staff recruitment and development

The competence of the teaching staff is ensured as the lecturers in the courses are predominantly the assistant, associate and full professors of the Department. In certain courses that require additional expertise, specialized teaching personnel are used where in the few cases this is done the corresponding staff are of good academic standing. The recruitment procedure is of high quality as the standards for the teaching staff are predominantly the standards used for the appointed assistant professors. The teaching staff is responsible for teaching courses that are very well correlated to their field of research and there is a very good agreement between the academic expertise of the lecturer of a course and the syllabus of the course. The HEI has a separate office of teaching related experts and administrators who appeared during the visit to be very actively involved in making suggestions to the staff related to their further training. Furthermore, the fact that the lecturers are teaching courses related to their research ensures that they are kept up to date on the syllabus of the course A specific number of teaching hours is mandatory for all assistant/associate/full professors (8 hours per week). The HEI does not allow for researchers to buy-out teaching hours using research projects. This protects younger members of the department from being overloaded and ensures that the high profile researchers continue to teach the courses related to their expertise. The previous are indicative of the HEI's recognition of the importance of teaching. The use of innovative teaching methods was demonstrated during the visit and the demo of the on-line 15 course, where an online platform was used for students to directly answer quiz -questions and receive feedback on their replies in real time.

Teaching staff numbers and status

The undergraduate degree has 20-25 students per year, with a good integration with the BEng in Civil Enginneering. Hence the number of the teaching personnel (34 in total, in collaboration with BSc in Civil Engineering, MSC in Civil Engineering and Sustainable Design and MSc in Geoinformatics and Geospatial Technologies) results in a very appropriate ratio of students to lecturers, which allows for initiative such as tutorials. The staff is predominantly assistant/associate/full permanent position or tenure track professors. The staff is on average expected to teach 8 hours per week roughly at most 6 courses per year which is a reasonable requirement. There are some teachers with many brief courses (from 7 to 13 courses with 2-3 ECTS) with a potential criticality, that requires a future development in the number of involved teachers, for example with new positions banned in the most suffering sectors.

Teaching and research

As previously stated research and teaching are very well integrated. The teaching staff are Civil Engineers, Surveying Engineers, Geoinformatics Engineers, Physics, Environmental Engineering, Architectural Engineering with master degrees and often PhD specialisation: the teaching personnel denotes a very relevant background and research to the courses taught. Several members have efficiently integrated research related courses, but of high value to industry and good theoretical value, to the programme. A part of the evaluation of assistant professors during their tenure period teaching is a requirement for the post of the lecturers to be permanent.

Teaching evaluation takes into account through a questionnaire that officially gathers the view of students. Additionally the lecturers appear to monitor feedback from the students during the lectures.

Strengths

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

-Research and teaching are very well integrated

-This allows the staff to teach innovative courses that follow the state-of-the art

-The teaching personnel is predominantly permanent post holders

-The lecturers have expertise related to the courses they teach

-The HEI's policy of not allowing research based buy-outs from teaching protects younger academics from being overloaded and ensures that high profile researchers are engaged in teaching

-The HEI has a good official mechanism to collect feedback

-Lecturers receive additional student feedback during lectures

-A separate office, the Learning Center, for teaching matters exists supporting students and lecturers

-Very good ratio of number of students to lecturers

Areas of improvement and recommendations

During the virtual visit no significant critical issues emerged, as well as analysing application and other documents. However, a certain suffering of teaching staff is reported with many brief courses (up to 13) held by the same teacher. It is suggested to try to increase the teaching staff, particularly in the topics most closely related to geomatics

RESPONSE

There is a misunderstanding here. The total teaching load of our academic stuff is 12 hours annually (6 hours per week per semester). This corresponds to 3-4 modules per year. Based on the public budget acceptance for CUT, the Senate allocated 4 academic positions for the Department. As it has been explained to the evaluation committee, two of them will be dedicated to the Civil Engineering direction and two to the direction of Geomatics.

BEng, MSc and PhD in Civil Engineering

Findings

The virtual visit and the application files have demonstrated that the HEI follows a compliant policy for all three subcategories related to teaching staff.

Findings for B.Eng

Teaching staff recruitment and development

The competence of the teaching staff is ensured as the lecturers in the courses are predominantly the assistant, associate and full professors of the Department. In certain courses that require additional expertise, specialized teaching personnel are used where in the few cases this is done the corresponding staff are of good academic standing. The recruitment procedure is of high quality as the standards for the teaching staff are predominantly the standards used for the appointed assistant professors. The teaching staff is responsible for teaching courses that are very well correlated to their field of research and there is a very good agreement between the academic expertise of the lecturer of a course and the syllabus of the course. The HEI has a separate office of teaching related experts and administrators who appeared during the visit to be very actively involved in making suggestions to the staff related to their further training. Furthermore, the fact that the lecturers are teaching courses related to their research ensures that they are kept up to date on the syllabus of the course. A specific number of teaching hours is mandatory for all assistant/associate/full professors (6 hours per week). The HEI does not allow for researchers to buy-out teaching hours using research projects. This protects younger members of the department from being overloaded and ensures that the high-profile researchers continue to teach the courses related to their expertise. The previous are indicative of the HEI's recognition of the importance of teaching. The use of innovative teaching methods was demonstrated during the visit and the demo of the on-line course, where an online platform was used for students to directly answer quiz -questions and receive feedback on their replies in real time.

Findings for M.Sc

The undergraduate degree accepts 20 students per year, the MSc on average seems to accept certainly below 20 and usually around the low tens. Hence the number of the teaching personnel (16) results in a very appropriate ratio of students to lecturers, which allows for initiative such as tutorials. The staff is predominantly assistant/associate/full permanent position or tenure track professors. The staff is on average expected to teach 6 hours per week, roughly at most 4 courses per year which is a reasonable requirement.

Findings for PhD

As previously stated, research and teaching are very well integrated. The teaching staff are Civil Engineers (or Surveying Engineers for those compulsory courses) with very relevant background and research to the courses taught. Several members have efficiently integrated research related courses, but of high value to industry and good theoretical value, to the programme. Teaching evaluation takes into account through a questionnaire that officially gathers the view of students. Additionally, the lecturers appear to monitor feedback from the students during the lectures. As teaching is part of the evaluation of assistant professors during their tenure period teaching is a requirement for the post of the lecturers to be permanent. Strengths A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Strengths for B.Eng,

-The teaching personnel is predominantly permanent post holders

-The lecturers have expertise related to the courses they teach

-Lecturers receive additional student feedback during lectures

-The HEI's policy of not allowing research based buy-outs from teaching protects younger academics from being overloaded and ensures that high profile researchers are engaged in teaching

-The HEI has a good official mechanism to collect feedback

-Lecturers receive additional student feedback during lectures

Strengths for M.Sc

-Very good ratio of number of students to lecturers

-The HEI has a good official mechanism to collect feedback

Strengths for PhD

-Research and teaching are very well integrated.

This allows the staff to teach innovative courses that follow the state-of-the art

Areas of improvement and recommendations for B.Eng,

There aren't many problems detected during this virtual visit. A recommendation would be the following:

-The Department can consider a joint points system for teaching and participation in administrative tasks. -The Department can consider retaining a fixed ratio of students registered in a class per number of lecturers and apply that rule even to courses where a large number of students attends the course because of re-sits.

RESPONSE

The total teaching load of our academic stuff is fixed by law at 12 hours annually (6 hours per week per semester). This corresponds to 3-4 modules per year. In terms of the administration load we try to distribute it equally among the academic staff.

As it was explained during the on line evaluation procedure, the normal audience consists of 25 – 30 students. In the case of very large audiences normally we split the class in two.

Areas of improvement and recommendations for M.Sc

There aren't many problems detected during this virtual visit. A recommendation would be the following:

-The Department can consider a joint points system for teaching and participation in administrative tasks.

-The Department can consider retaining a fixed ratio of students registered in a class per number of lecturers and apply that rule even to courses where a large number of students attends the course because of re-sits.

RESPONSE

The total teaching load of our academic stuff is fixed by law at 12 hours annually (6 hours per week per semester). This corresponds to 3-4 modules per year. In terms of the administration load we try to distribute it equally among the academic staff.

As it was explained during the on-line evaluation procedure, the normal audience in the MSc cources consists of 10 – 15 students. We consider this as a healthy ratio.

Areas of improvement and recommendations for PhD

There is not much to improve at this stage.

4. Student admission, progression, recognition and certification *(ESG 1.4)*

BEng in Surveying Engineering & Geoinformatics

Findings

Student admission

The undergraduate student admission to the University is regulated by the participation of students to the Pancypriot exam. As such the regulations regarding admission are very well defined on a national level. Additional students and exceptions related to access policies and the related criteria have been defined consistently on a national level and are appropriate and have been defined in a transparent manner.

Student progression

The student progression is again defined clearly. Students are expected to pass each of the compulsory and the required number of elective modules. This results in very clear conditions for progression. The Learning centre monitors the failure rate of students in various courses and suggests additional tutorials to support courses with high failure rate, or of observed higher difficulty and further support students who have need further help in the form of tutorials being in their last years.

Recognition

In terms of recognition, the state nature of the University aligns its policy on recognition to the national policy of Cyprus which is of course aligned with the Lisbon Recognition Convention and the policies of ENIC/NARIC.

Student certification

The undergraduates receive a certification of a BSc upon successful completion. All certifications and the requirements to achieve them are clearly defined. This programme is accredited by the Cyprus Scientific and 19 Technical Chamber (National Engineering Licensing Body) and address traditional, current and emerging trends in the fields of Civil Engineering and Geomatics (www.etek.org.cy). It provide professional rights ETEK Cyprus Association of Rural Surveying Engineers Cyprus Civil Engineers Association-SPOLMIK.

Strengths

A strength of BEng Surveying Engineering and Geoionformatics is the small number of students admitted in the after a very competitive national entry exam. A particular feature to highlight is related to the student admission where a determined number of additional positions (up to 14%) are destined to:

- Cypriots candidates from families with special circumstances;
- Cypriots candidates with serious health problems;
- Cypriots candidates with particular characteristics (religion, sports, …);
- candidates from abroad (up to 10% of Cypriot candidates).

Areas of improvement and recommendations

During the virtual visit no significant critical issues emerged, as well as analysing application and other documents

RESPONSE

We would like to thank the reviewers for their encouraging and positive comments.

BEng, MSc and PhD in Civil Engineering

Findings for B.Eng

The undergraduate student admission to the University is regulated by the participation of students to the Pan Cypriot exam. As such the regulations regarding admission are very well defined on a national level. Additional students and exceptions related to access policies and the related criteria have been defined consistently on a national level and are appropriate and have been defined in a transparent manner. The student progression is again defined clearly for the undergraduate program. Students are expected to pass each of the compulsory and the required number of elective modules. This results in very clear conditions for progression. The Learning centre monitors the failure rate of students in various courses and suggests additional tutorials to support courses with high failure rate, or of observed higher difficulty and further support students who have need further help in the form of tutorials being in their last years. The undergraduates receive a certification of a BEng upon successful completion of the program.

Findings for M.Sc

The admittance to the MSc program follows evaluation by a Departmental committee under criteria related to the academic qualifications and grade of the Candidate (in a Civil Engineering degree) and reference letters. The information about the requirements is clearly stated and publicly available in the Universities Website. The student progression is again defined clearly for the MSc program. Students are expected to pass each of the compulsory and the required number of elective modules. This results in very clear conditions for progression. The Learning centre monitors the failure rate of students in various courses and suggests additional tutorials to support 22 courses with high failure rate, or of observed higher difficulty and further support students who have need further help in the form of tutorials being in their last years. The M.Sc students receive an M.Sc certification upon completion of the program. All certifications and the requirements to achieve them are clearly defined.

Findings for PhD

The PhD student progression involves two comprehensive examinations that have an advisory role during the progress of the PhD, the allocation of a 3-member supervisory committee, an oral presentation in front of the supervisory committee in the final year and before the defense, and a defense of the thesis in front of an Examination Board that includes external examiners. Hence, the process has multiple control and advisory to the PhD student points. The doctoral students receive a PhD certification upon completion of the program. All certifications and the requirements to achieve them are clearly defined. Strengths A list of strengths, e.g. examples of good practices, achievements, innovative solutions etc.

Strengths for B.Eng

-A small number of students admitted in the BEng after a very competitive national entry exam

Strengths for M.Sc

A reasonable number of students admitted in the M.Sc after careful evaluation

Strengths for PhD

-Previous experience is recognized in the stipend of PhD students

-Multiple control points of the progress of PhD candidates

Areas of improvement and recommendations for B.Eng

Nothing in particular.

Areas of improvement and recommendations for Msc

Nothing in particular.

Areas of improvement and recommendations for PhD

The following is a recommendation, rather than an identified strong weakness: -As the University has been very successful in securing funding for PhD students from EU sources, the Department will benefit from an official policy on how the fees of PhD students working in those projects are to be covered. For example, it would be reasonable for the Department to either wave the fees or to increase the salaries of those students so that they can cover the fees.

RESPONSE

The Department is not allowed to wave fees directly to the students. However, we help them by promoting their paid participation in research projects and their employment in teaching assistant positions.

5. Learning resources and student support

(ESG 1.6)

BEng in Surveying Engineering & Geoinformatics

Findings

During the virtual site visit of the evaluation committee and after review of pertinent material distributed to the committee, it is evident that the teaching and learning resources offered by the department to students meet the standards seen in high-profile universities in Europe. The students are well informed regarding the available resources to them during classes. Moreover, the library services organize regular information sessions. The library services ensure access to a large volume of textbooks and 22 other material (over 500000 titles available). Moreover,

the IT infrastructure is sufficient including multiple workstations, access to pertinent software that is currently used in the civil engineering research and practice communities. With regard to teaching materials and equipment, the faculty maintains and constantly improves them to ensure the high quality of the education process. It is evident that the condition of classrooms, lab spaces for teaching and research purposes is exceptional. Students are regularly advised on how to excel. Moreover, services are provided to students with special needs due to physical disabilities. The students seem to appreciate access to support services including pertinent software, textbooks to fulfil their needs. Finally, after careful evaluation and comparison with a number of universities in Europe, it is evident that proper procedures have been established to ensure a seamless transition to meet demands in case that student number(s) change or in operations under special circumstances such as the COVID-19 pandemic period.

Strengths

The following items are considered to be current strengths of the programme:

1. Exceptional quality of teaching and research labs that ensure high quality hands on experience in teaching and research;

2. Effective use of student evaluations to ensure high quality of teaching across programmes;

3. The library offers many customized services for students, researchers, faculty and visitors, including ways to trace plagiarism in student works, consultations with a librarian, training sessions, guides and tutorials, remote services.

Areas of improvement and recommendations

While the committee thinks that there should not be any particular areas of improvement, two recommendation for potential future improvements could be: - the development of Massive Open Online Courses (MOOC), which is a great resource in contemporary efforts with regard to digital education. However, after discussions with current faculty during the virtual site visit, it is evident that preliminary discussions have already commenced on how to offer additional resources to students to strengthen educational initiatives with emphasis on digital resources for teaching and learning; - the implementation of specific policies for teachers, students and other involved people to achieve gender equality and empower all women and girls according to goal 5 of Sustainable Development Goals proposed by ONU.

RESPONSE

We have already discussed in the Department to initiate and promote further the use of digital resources on teaching and learning.

BEng, MSc and PhD in Civil Engineering

Findings for B.Eng

During the virtual site visit of the evaluation committee and after review of pertinent material distributed to the committee, it is evident that the teaching and learning resources offered by the department to students meet the standards seen in high-profile universities in Europe. The students are well informed regarding the available resources to them during classes. Moreover, the library services organize regular information sessions. The library services ensure access to a large volume of textbooks and other material (over 500000 titles available). Moreover, the IT infrastructure is sufficient including multiple workstations, access to pertinent software that is currently used in the civil engineering research and practice communities. With regard to teaching materials and equipment, the faculty maintains and constantly improves them to ensure the high quality of the education process. It is evident that the condition of classrooms, lab spaces for teaching and research purposes is exceptional. Students are regularly advised

on how to excel. Moreover, services are provided to students with special needs due to physical disabilities. The students seem to appreciate access to support services including pertinent software, textbooks to fulfil their needs. Finally, after careful evaluation and comparison with a number of universities in Europe, it is evident that proper procedures have been established to ensure a seamless transition to meet demands in case that student number(s) change or in operations under special circumstances such as the COVID-19 pandemic period.

Findings for M.Sc

During the virtual site visit of the evaluation committee and after review of pertinent material distributed to the committee, it is evident that the teaching and learning resources offered by the department to students meet the standards seen in high-profile universities in Europe. The students are well informed regarding the available resources to them during classes. Moreover, the library services organize regular information sessions. The library services ensure access to a large volume of textbooks and other material (over 500000 titles available). Moreover, the IT infrastructure is sufficient including multiple workstations, access to pertinent software that is currently used in the civil engineering research and practice communities. With regard to teaching materials and equipment, the faculty maintains and constantly improves them to ensure the high quality of the education process. It is evident that the condition of classrooms, lab spaces for teaching and research purposes is exceptional. Students are regularly advised on how to excel. Moreover, services are provided to students with special needs due to physical disabilities. The students seem to appreciate access to support services including pertinent software, textbooks to fulfil their needs. Finally, after careful evaluation and comparison with a number of universities in Europe, it is evident that proper procedures have been established to ensure a seamless transition to meet demands in case that student number(s) change or in operations under special circumstances such as the COVID-19 pandemic period.

Findings for PhD

During the virtual site visit of the evaluation committee and after review of pertinent material distributed to the committee, it is evident that the teaching and learning resources offered by the department to students meet the standards seen in high-profile universities in Europe. The students are well informed regarding the available resources to them during classes. Moreover, the library services organize regular information sessions. The library 27 services ensure access to a large volume of textbooks and other material (over 500000 titles available). Moreover, the IT infrastructure is sufficient including multiple workstations, access to pertinent software that is currently used in the civil engineering research and practice communities. With regard to teaching materials and equipment, the faculty maintains and constantly improves them to ensure the high quality of the education process. It is evident that the condition of classrooms, lab spaces for teaching and research purposes is exceptional. Students are regularly advised on how to excel. Moreover, services are provided to students with special needs due to physical disabilities. The students seem to appreciate access to support services including pertinent software, textbooks to fulfil their needs.

Strengths for B.Eng,

1. Exceptional quality of teaching and research labs that ensure high-quality hands-on experience in teaching and research 2. Effective use of student evaluations to ensure high quality of teaching across programmes 3. The library offers many customized services for students, researchers, faculty and visitors, including ways to trace plagiarism in student works, consultations with a librarian, training sessions, guides and tutorials, remote services.

Strengths for M.Sc

1. Exceptional quality of teaching and research labs that ensure high-quality hands-on experience in teaching and research 2. Effective use of student evaluations to ensure high quality of teaching across programmes 3. The library offers many customized services for students, researchers, faculty and visitors, including ways to trace plagiarism in student works, consultations with a librarian, training sessions, guides and tutorials, remote services.

Strengths for PhD 1. Exceptional quality of teaching and research labs that ensure high-quality hands-on experience in teaching and research 2. The library offers many customized services for students, researchers, faculty and visitors, including ways to trace plagiarism in student works, consultations with a librarian, training sessions, guides and tutorials, remote services.

Areas of improvement and recommendations for B.Eng

While the committee thinks that there should not be any particular areas of improvement, one recommendation for potential future improvements could be the development of Massive Open Online Courses (MOOC), which is a great 28 resource in contemporary efforts with regard to digital education. However, after discussions with current faculty during the virtual site visit, it is evident that preliminary discussions have already commenced on how to offer additional resources to students to strengthen educational initiatives with emphasis on digital resources for teaching and learning.

RESPONSE

We have already discussed in the Department to promote further the use of digital resources on teaching and learning.

Areas of improvement and recommendations for MSc

While the committee thinks that there should not be any particular areas of improvement, one recommendation for potential future improvements could be the development of Massive Open Online Courses (MOOC), which is a great resource in contemporary efforts with regard to digital education. However, after discussions with current faculty during the virtual site visit, it is evident that preliminary discussions have already commenced on how to offer additional resources to students to strengthen educational initiatives with emphasis on digital resources for teaching and learning.

RESPONSE

We have already discussed in the Department to promote further the use of digital resources on teaching and learning.

Areas of improvement and recommendations for PhD

N/A.

6. Additional for doctoral programmes

(ALL ESG)

Findings

The PhD programme has been established to secure admission to high calibre graduate students. Besides detailed bachelor's and Master's degree titles, a list of reference letters is required along with certificates of proficiency in Greek and English. Moreover, candidates are required to submit a research statement on the particular reasons for selecting the program as well as their research interests. The department ensures the proper advertisement of PhD positions through the formal website of the university, social media as well as the network of existing faculty. A fulltime PhD student completes, on average, the PhD degree in about 4 years, which is typical in civil engineering and Geoinformatics considering the nature of research work. Through the presentation of a variety of examples, doctoral students have access to established guidelines on how to write a dissertation, detect plagiarism through best practices established by library services. Moreover, the students are well informed regarding the consequences of plagiarism actions. Doctoral students generally follow the standard procedures established by the university library to submit their dissertation. To ensure proper training and supervision, the PhD student progression involves two comprehensive examinations that have an advisory role early on during the progress of the PhD, the allocation of a 3-member supervisory committee, an oral presentation in front of the supervisory committee in the final year and before the defence, and a defence of the thesis in front of an Examination Board that includes external examiners. Hence, the process has multiple control and advisory to the PhD student points. Moreover, doctoral students are required to take sufficient coursework from a variety of electives in the department as well as across the university to best fulfil the research needs of their work. The above are well developed mechanisms to ensure a high scientific quality of a PhD thesis work. This is also attested from the fact that the vast majority of PhD graduates has already been absorbed by either high profile industry nationally or internationally. Moreover, a good portion of recent graduate work as research associates of faculty in academic institutions. Supervisors meet regularly with their students to evaluate progress over the course of a PhD thesis and provide constant feedback to doctoral students. Based on sufficient evidence presented during the virtual visit, it is clear that students and supervisors regularly participate in scientific conferences, publish in high quality peer-reviewed journals in their respective disciplines. Some of the existing faculty participate in research-to-practice activities to ensure a seamless transition of scientific findings to the practice communities

Strengths

1. Well-established examination mechanisms for doctoral students to ensure a successful path during a PhD thesis.
2. Active participation in conferences and scientific meetings to ensure dissemination of research findings.
3. Regular publications in high-quality peer-reviewed journals.
4. Well established program requirements including compulsory courses (total of 6 ECTS units).
5. Financial resources to doctoral students are sufficient for them to focus on their research work.

Areas of improvement and recommendations

The committee firmly believes that the department has established a successful path to ensure a high-quality doctoral degree program. One recommendation may be the offering of courses in English to potentially attract more international students. Another suggestion may be to increase the number of ECTS units from 6 to 12 or 60 as it is done in other EU universities so as doctoral students could take more elective courses that could be potentially interesting in their research work. This could allow them to build a more diverse background as well.

Response

As we explained in the online meeting our PhD programme is offered in English as well. The Research Methods are taught in both languages and the rest of the PhD programme is also offered in both languages. Also, we have already international PhD students. The PhD programme has a total of 240 ECTS units which are lowered to 180 in the case of a relative MSc degree. We offer 6 ECTS for the Research Methods and the rest ECTS units are based on pure research and research outputs. The PhD students have the opportunity to take more ECTS units from the existing modules of

the MScs of Department or the School, to enrich their background. But please take into consideration that our PhD programs are fully research based.

7. Eligibility (Joint programme)
(ALL ESG)

Click or tap here to enter text.

B. Conclusions and final remarks

BEng in Surveying Engineering & Geoinformatics

The members of the EEC committee found the academic programme in Surveying Engineering and Geoinformatics to be compliant in all examined aspects. Overall, the programmes have been very successful in attracting high caliber students. The existing course offerings provide a balance between fundamentals and practice including several activities that demonstrate effective practices of active learning, which is an important element of contemporary education ("learning by doing") ant it is essential in Surveying topics. Moreover, the existing teaching labs and university facilities in general, although distributed over a large area in the city, they are of exceptional quality.

A thorough revision of a broad range of examples on report of "in field" exercises and on final dissertations demonstrates the complementary activities of academic staff in various emerging areas in Surveying engineering and geoinformatics. This is particularly interesting because former graduates have been absorbed in high-profile industries or they hold academic positions in various institutions.

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

With regard to admission requirements, formal control points have been established so as high-caliber students enter the university at all levels.

While the EEC committee members are of the opinion that there are no major aspects of immediate action to improve the overall quality of the programmes of study under review, a number of recommendations have been suggested for consideration to ensure the future evolution of the programmes. These recommendations include to the following:

• potential future improvements with regard to digital resources in education (e.g., Massive Open Online Courses);

• the implementation of specific policies for teachers, students and other involved people to achieve gender equality (Sustainable Development Goals by ONU);

• the consideration of course offerings in English in addition to Greek to further attract international students in addition to Erasmus students. This could potentially attract International academic staff and embrace international collaborations;

• potentially new hiring of young academic staff members could be more focused in the specific areas of geomatics to relieve some teachers very busy.

BEng, MSc and PhD in Civil Engineering

The members of the EEC committee found the academic programmes in civil engineering and Geoinformatics to be compliant in all examined aspects. Overall, the programmes have been very successful in attracting high calibre students. The existing course offerings provide a balance between fundamentals and practice including several activities that demonstrate effective practices of active learning, which is an important element of contemporary education. Moreover, the existing teaching labs and university facilities in general, although distributed over a large area in the city, they are of exceptional quality. A thorough revision of a broad range of examples on masters/PhD dissertations demonstrates the complementary activities of academic staff in various emerging areas in civil engineering and Geoinformatics. This is particularly interesting because former graduates have been absorbed in high-profile industries or they hold academic positions in various institutions. With regard to teaching, formal procedures have been established so as student feedback is seen in a constructive manner for the further tailoring of existing coursework, which follows the state-of-the-art. Moreover, the ratio of number of students-to-lecturers appears to be fairly optimal. With regard to admission requirements, formal control points have been established so as high-calibre students enter the university at all levels. Moreover, doctoral student supervising/mentoring follows the same standards and practices of top academic institutions from around the world. Doctoral students get the opportunity to present their research and disseminate their research findings in top scientific meetings and national/international conferences. The faculty along with graduate students publish their scientific results in top peer-reviewed journals in the field of discipline based on numerous (and impressive) examples presented to the EEC committee. While the EEC committee members are of the opinion that there are no major aspects of immediate action to improve the overall quality of the programmes of study under review, a number of recommendations have been suggested for consideration to ensure the future evolution of the programmes. These recommendations include to the following:

• Potential future improvements with regard to digital resources in education (e.g., Massive Open Online Courses) as well as considerations in the graduate and post-graduate programmes.

• A potential increase in number of required ECTS units in the doctoral programme to further enrich the academic background of future graduates.

• The consideration of course offerings in English in addition to Greek to further attract international students in addition to Erasmus students. This could potentially attract International academic staff and embrace international collaborations.

• Syllabus monitoring and updating in coordination with the Scientific and Technical Chamber of Cyprus (ETEK) in accordance with the initial accreditation of the syllabus.

• Potentially new hiring of young academic staff could be more focused in the general areas of computational mechanics, data-driven methods for performance-based engineering, sensing, among others.

RESPONSE

First and foremost, we would like to sincerely thank the members of the evaluation committee for their valuable time and for their thoughtful comments/suggestions towards the improvement of our undergraduate and postgraduate degree programmes. The Department considers the overall review procedure highly professional and extremely constructive. We have taken into serious consideration all the reviewer comments. We hereafter provided further explanations where needed, as well as outline the actions envisioned to be implemented towards addressing the recommendations set forth.

C. Higher Education Institution academic representatives

Name	*Position*	*Signature*
Evangelos Akylas	Professor	

Date: 26/5/2021