Doc. 300.1.2

Higher Education Institution's Response

Date: 21/09/2023

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

  In Greek:

  Μηχανική Πετρελαίου, Φυσικού Αερίου και Ενέργειας (3 χρόνια, 180 ECTS, Διδακτορικό)
  In English:

  Oil, Gas and Energy Engineering (3 years, 180 ECTS, Doctor of Philosophy (PhD))
- **Language(s) of instruction:** English
- **Programme's status:** Currently Operating
- **Concentrations (if any):**

  In Greek:
  In English:

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

A. 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 300.1.1/1 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. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*

- *In particular, under each assessment area and by using the 2nd column of each table, the HEI must respond on the following:*

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

- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report* ***without any interference*** *in the content.*

- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in *.pdf format and named as annex1, annex2, etc.*

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

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
The PhD program is only attended by a total of 9 students, with a yearly intake of 1 or 2 students. The current students pursue research in scientifically not very well related subjects. So far, two students have graduated. This can explain the flexible program, but it also raises the question as to whether this program a priority for the University.	Indeed, the student cohort of the doctoral program is small which to a certain extent reflects the small size of the Oil & Gas Engineering programs. A small student body is beneficial for doctoral students, as they receive more attention from faculty members. Given that scientific research is a top priority for the University of Nicosia, doctoral programs are instrumental in this direction. Hence, the university has in place comprehensive regulations and provides student support too. For instance, the university has in recent years instituted student teaching assistantships for doctoral students. Moreover, the Vice-Rector's office offers financial support for doctoral students to attend conferences and present their work. Expanding quality research is a top University of Nicosia goal as this is linked to the University ranking status. Doctoral students are an integral part of increasing research output and educating the next generation of researchers.	
The PhD topics should demonstrate relevance to the specific field of study, particularly in the case of oil and gas engineering research. Some topics related to subsea bolts are purely mechanical engineering in nature. It is important for a PhD topic in this field to align closely with the key areas of interest and advancements in oil and gas engineering.	Thanks for the suggestion. Two aspects predominantly govern the selection of doctoral research topics. First, are the research expertise/interests of faculty members who assume the responsibility for supervising a doctoral student. The second is related to the source of funding for doctoral research/student. If funded either from a research project or a government scholarship, the research topic is more or less pre-defined with little scope for deviation. Self-funded students though have more freedom together with their supervisors to define the research topic. Please be	

	reminded that the doctoral program in Oil, Gas & Energy Engineering also encompasses the energy sector and thus it broadens substantially the potential research topics that students can specialize at. Whatsmore, oil and gas engineering is a broad field by itself. For example, the topic related to the corrosion of subsea bolts relates to wet (subsea) wells from oil and gas fields residing at the seabed. Nonetheless, we will try to select the research topics of doctoral students more carefully in the foreseeable future.	

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

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Considering the potential isolation experienced by some PhD students, it would be beneficial to implement a mandatory external stay to foster scientific connections and enhance the overall scientific quality.	Students of the PhD in Oil, Gas & Energy Engineering also interact with doctoral students in Electrical Engineering, Computer Science, and other university research programs. Various opportunities arise within and beyond the university for student mobility. In the past years, doctoral candidates of the PhD in OGEE, have travelled abroad (e.g., Germany, the US, Lebanon, Israel, etc.) for research related purposes. To cultivate scientific connections and present their research, students have in the past participated in local and international conferences and attended online and face-to-face training sessions. Various examples include the summer school we held at the University on the Messinian Evaporites, training schools in Germany and Cyprus and Erasmus exchanges. Especially for students who undertake experimental research, study on a part-time basis while working full-time or have families, a mandatory stint would not be easy. Exploiting other opportunities such as workshops, conferences and industrial cooperation could prove equally beneficial. Finally, students are given the opportunity to interact and present their research at the PhD Colloquiums organized by the Cyprus Rectors Conference. In these colloquiums students are invited to present their work, attend other students' presentations, and interact with their fellow colleagues and the wider academic community. More details for a previous conference organized in our university can be found here: https://www.unic.ac.cy/cfp-colloquium2020/	

Additionally, doctoral students pursuing laboratory-based studies should be granted increased access to laboratories to prevent them from being displaced by younger students. They should also be obliged to fill risk assessment forms with respect to materials and procedure and to do lab induction with a trained laboratory technician/qualified academic.	Doctoral students conducting experimental research have almost unrestricted access to labs as happens in other institutions. In fact, several of them have lab keys too. Often, they collaborate among them when there is a need to run similar experiments or simply help each other. Faculty members frequently help coordinate things between students, if needed, to ensure the smooth utilization of experimental set-ups. Doctoral students also receive help from faculty members familiar with laboratory equipment and our technician. Laboratory training and safety manuals help guide and protect the students from potential hazards. As detailed in the evaluation of the BSc in OGEE (§5), we have reconsidered and updated our current Laboratory Health and Safety regulations manual to adhere to international standards. In order to address the EEC's recommendation, the Safety Manual (Annex 1) will be provided to all doctoral students prior to using any system (device) in the laboratory followed by the equipment's induction.	

3. Teaching staff

(ESG 1.5)

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Choosing a co-supervisor with more academic experience and industrial contributions can bring numerous benefits to the PhD projects.	Besides the main mentor, co-supervisors who frequently interact with doctoral students commonly provide advice and help. Hence, enriching the educational experience and enhancing the research output of the student. Occasionally, it is not easy to engage competent co-supervisors keen to help research students. However, this is an area where both faculty members and the Departmental Postgraduate Programme Committee (DPPC) try to do more through their suggestions and connections. Please be informed that before July 2022, in accordance with the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA) guidelines, co/supervisors qualified to participate in doctoral committees ought to be full-time teaching and research academic staff. In line with the revised CYQAA regulations thereafter, we will try to engage more industrial and senior academics in future doctoral supervisory committees.	

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

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
This program should probably be reconsidered.	We plan to further develop the PhD in Oil, Gas and Energy Engineering by admitting more students. Doctoral students stand to benefit from a larger student cohort by learning from each other, pursuing similar research directions and joint collaborations. Worth mentioning that there is considerable interest for graduate students and professionals to earn a doctoral degree. Yet given the rigorous nature of the program in the geosciences, petroleum engineering and the energy sector, the Departmental Postgraduate Programme Committee (DPPC), is highly selective. Also, the introduction of two compulsory graduate level courses, beginning in fall 2023 term, that doctoral students will need to take we perceive will strengthen their educational experience. Branching out to more contemporary research topics such as renewable energy sources, carbon capture and hydrogen, to name a few, could help attract more and of higher caliber doctoral applicants.	

5. Learning resources and student support

(ESG 1.6)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
International norms with respect to laboratory safety should be adhered to.	We have reconsidered and updated our current Laboratory Health and Safety regulations manual to adhere to international standards. To address the EEC's recommendation, the following steps will be adopted: (a) The Safety Manual (Annex 1) will be provided to any doctoral student when using any system (device) in a laboratory followed by the equipment's induction. (b) In consultation with the university's Health and Safety Officer, we have added all required signs to our Oil and Gas Engineering laboratories (Annex 2). (c) We have removed any incompatible equipment from the laboratories (e.g., microwave oven and coffee machine; See Annex 2). (d) We have created storage space for all relevant materials and consumables located outside the building for safety reasons. Please refer to Annex 2.	

6. Additional for doctoral programmes

(ALL ESG)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Is the PhD school too small?	Compared to the undergraduate and postgraduate (Master's level) student cohort of all the programs of the University of Nicosia, doctoral programs accommodate far fewer students. By comparison, only 1.7% of the around 12500 students of the university are enrolled in doctoral degrees. More recently, placing more attention on scientific research, the University of Nicosia is in tandem expanding the number of doctoral programs. Similarly, the doctoral student intake will grow. Doctoral students, like undergraduates and other graduate students, receive much attention and support. This ranges from psychological help, academic guidance, developing new skills, more teaching opportunities, participation in research projects, webinars, lectures, lab assistance, etc. Given the vibrant interest in 3rd cycle programs, the number of doctoral students across the university is expected to increase with time. It is also helpful to mention that each doctoral topic is unique and often very rigorous in terms of publications and scientific contributions. Therefore, many limitations bound the capacity of the university to admit a large group of doctoral students.	
Are links to scientific collaborators in other universities sufficiently strong so that external stays can be facilitated?	Most of the faculty members of the Department of Engineering are very actively pursuing research projects and publications. Frequently, faculty members collaborate with colleagues from universities and the industry from various countries including the UK, the US, Greece, Italy, Norway, Germany, France, and Spain, to name a few. In the oil and gas sectors, faculty members have connections at the University of Cardiff, Saudi Aramco, the National	

	Technical University of Athens, Aristotelion University, Halliburton, Schlumberger, and others. If needed, doctoral students could travel to various institutions and companies in consultation with our contact points. An obstacle to such an endeavor will be the financial resources to cover the costs of travelling, accommodation, and subsistence. It could be easier for the doctoral students to undertake an industrial research internship at another overseas educational institution or a company in Cyprus. Leveraging on our connections with multiple companies and universities, this arrangement could be easier to implement.	

7. Eligibility (Joint programme)

(ALL ESG)

Areas of improvement and recommendations **by EEC**	Actions Taken by the Institution	For Official Use ONLY

B. Conclusions and final remarks

Conclusions and final remarks **by EEC**	Actions Taken by the Institution	For Official Use ONLY
Teaching staff appears well educated and well selected, although with low diversity with respect to gender and ethnicity.	The University of Nicosia has in place a policy for ethnicity and gender equality. For all new faculty positions either for full- or part-time teaching, applicants of different ethnicity and gender are encouraged to apply. However, the Department of Engineering is willing to revise its policy by following specific practices for all future faculty recruitment calls in order to improve diversity, gender balance and nationality among the permanent staff. Few of these steps include: (a) Add the following sentence: "*The University has an equal opportunity policy for recruitment and encourages both genders to apply for all levels of Academic and Administrative Staff. The University does not discriminate in any way based on gender, religion or belief, ethnicity, national or social origin, age, physical ability, marital status, or sexual orientation*." (b) Explicitly communicate in international venues such as academic websites, conferences, research communities, as well as female-oriented communities such as the Society of Women Engineers (SWE) the university's policy (see point (a)). (c) Include in recruitment committees for full- and part-time staff a female member. The lady can be from an allied field from another department of the university, if such faculty member exists.	
It is a concern that teaching load is high and could counteract up to date research-	To help alleviate some of the teaching load of faculty members involved in research and doctoral	

based instruction.	student supervision, the Department of Engineering will adopt the following measures: (a) Lower the teaching load of the faculty members (within the limit of the minimum teaching hours dictated by their contracts and the collective agreement in force) and by recruiting, where possible, part-time lecturers holding a PhD to assist in both teaching and research. (b) Take advantage of the recently established university policy for paid Teaching Assistantships by PhD candidates.	
A program of sabbaticals could provide more focused research time and facilitate international collaboration.	The University already has in place an established procedure for sabbatical leave designed to help faculty members pursue and expand research collaborations related to projects and publications. Often faculty members utilize the EU Erasmus+ mobility scheme to travel to European, Middle East or American institutions for teaching and research purposes.	
The laboratory facilities are good for instruction on bachelor and master level, but space for PhD students should be taken into account.	Appreciating the importance of laboratory facilities, the program in Oil and Gas Engineering is continuously striving to expand in size and diversity. Research projects help acquire state-of-the-art equipment and so do donations, when available. The point raised by the EEC was addressed in the Department of Engineering evaluation. Below we cite the major matters: The Department has asked the university management to include in the development budget space for more laboratories. We expect this to materialize in the coming years since there is a project under study to build new facilities to house the health-related programmes. Three of these programmes (Pharmacy, Physiotherapy and Veterinary Medicine) are currently housed in the same building as the Department of Engineering and	

	some of the released space from their labs will be available for expanding the Department's laboratory capacity.	
Safety instructions are given in the laboratories, but a stricter adherence to international space and safety norms is recommended.	Please consult §5.	

C. Higher Education Institution academic representatives

Name	*Position*	*Signature*
Dr George Gregoriou	Dean, School of Sciences & Engineering	
Dr Stelios Neophytou	Head, Department of Engineering	
Dr Constantinos Hadjistassou	Coordinator, PhD in Oil, Gas and Energy Engineering	

Date: 21/09/2023