

Date: Date

- Higher Education Institution:
Frederick University
- Campus: Nicosia - Limassol
- School: Health Sciences
- Department / Sector: Pharmacy
- Programme(s) of study under evaluation
Name (Duration, ECTS, Cycle)

Programme

In Greek:

Φαρμακευτική

(3 ακαδημαϊκά έτη, 180 ECTS, Διδακτορικό (PhD))

In English:

Pharmacy

(3 academic years, 180 ECTS, Doctorate (PhD))

Language(s) of instruction: English and Greek

- Specializations (if any):

In Greek: -

In English: -

Programme's Status: New

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.300.3.1) must justify whether actions have been taken in improving the quality of the department 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 deficiencies noted under the quality indicators (criteria)*
 - *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. 300.3.1).*
- *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)

Areas of improvement and recommendations

1.a. It is recommended that the Doctoral Program Committee adopts quality criteria for the Doctoral programs at the University.

Department's Response:

At the University level, the internal quality of doctoral programs is ensured through the University's Internal Quality Policy and System. At the department level, the Departmental Quality Committee and the Doctoral Program Committee applies consistently the university's policy.

Quality indicators and criteria examined through the internal quality procedure for doctoral programs include among other and the following:

- (a) Research record of the academic staff of the doctoral program, including research funding, publications and citations, as well as the contribution in editorial boards, paper reviewing and conference organization.
- (b) Research infrastructure including research labs, laboratory equipment and software, as well as, access to printed and electronic journals and research data.
- (c) Number of doctoral students and the number of doctoral students per Research Advisor.
- (d) Doctoral student retention, student dropouts and duration of studies.
- (e) The number of students with funding through research programs, or by the industry
- (f) Number of publications and bibliometric indicators of publications of the doctoral students.
- (g) Employment record of the graduates of the doctoral program.

2. Student – centred learning, teaching and assessment

(ESG 1.3)

Areas of improvement and recommendations

- 2.a. The program of study should be modified so that it provides more flexibility, while at the same time structuring the course work of the students, adapting it to each project and individual student's needs. This can be done by having the student and the Advisory Committee write a plan for courses to be taken at the beginning of the program, as well as a proposal for the project for the three years. It is advised that a minimum of 25 ECTS are allocated to course work, early in the program.

Department's Response:

The structure of the PhD Program Pharmacy is in line with the "Regulations for Doctoral Programs" of Frederick University, while a similar program structure is used in the other 12 doctoral programs of the University, which have already been evaluated and validated by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA) in the past three years. The proposed program structure is based on the ECTS philosophy, where all components of the student workload, including taught course attendance, preparation and defense of a research proposal, research work, dissemination of research results, and preparation and defense of a research dissertation are allocated ECTS credits through specific modules in the course structure. All modules specified in the program structure, with the exception of four taught courses offered in the first year, refer to the activities required to fulfill the program requirements.

During their first year of study, doctoral students need to attend four PhD level courses of a total of 40 ECTS. These courses aim in the enhancement of the student's skills in conducting research in general, and in the enhancement of the student's tools for accomplishing his/her thesis. The Doctoral Level Coursework includes two courses in research methodology (PHDPH101 - Research Methods - Biostatistics, PHDPH102 - Research Planning I - Research Methods) and two courses in Advanced Topics (PHDPH202, PHDPH203). The content of the advanced topics courses must be within the thematic area of the thesis of the student.

A research proposal (PHDPH201- Research Planning and Research Proposal) is submitted by the doctoral student in the second semester, and approved by the student's Research Advisory Committee. Through the evaluation and the approval of this proposal it is ensured that the proposed research is original and innovative, it is according to international standards, and can be completed within the proposed time frame. Approval of the research proposal by the Research Advisory Committee is a milestone for the continuation of the research work of the doctoral student, and is used as a reference document for the student's research work.

2.b. The EEC suggests that the Qualifying Exam in the first semester is dropped as a course, as it cannot be considered as an independent course. The faculty should focus on admitting students that possess adequate proficiencies to undertake Doctoral studies in Pharmacy.

Department's Response:

The qualifications of PhD program candidates for the admission are evaluated by the department based on the documents submitted by the candidate, according to the program admission policy, as well as, on an interview between the Program Committee and the candidate. Doctoral students are expected to pass a Qualifying Exam during their first year of studies, in order to ensure that they indeed possess the necessary skills to contact independent doctoral level research work. Through this exam the risk of student dropouts at a later stage is reduced, since it is ensured that students can indeed contact doctoral level research work. It is noted that a similar form of qualifying exam is common in most doctoral programs in Cyprus, in other EU and third countries.

2.c. The selection process should adapt to each student's academic background. In this context, during the admission process, the students may be encouraged to take undergraduate courses related to their proposed PhD studies. This should be done without the allocation of ECTS units, simply for the enrichment of their background.

Department's Response:

According to the program admissions requirements, eligible applicants must possess a Master level degree in Pharmacy or in a discipline outside Pharmacy but related to Pharmacy such as chemistry etc. Applicants with a Master degree in a discipline outside Pharmacy but related to Pharmacy can be conditionally admitted in the program, with the condition that they successfully complete a number of undergraduate or postgraduate courses, which can vary according to the background of the applicant and the research area of the dissertation. More specifically students coming from related discipline will have to take the undergraduate level Pharmacology I and Toxicology courses. Additionally, according to the scientific area of their PhD studies they will have to be taught a relevant course such as Pharmaceutical Chemistry I in case their PhD thesis is related to Pharmaceutical Chemistry, Pharmacognosy I in case their PhD thesis is related to Pharmacognosy etc. In case the applicant has undertaken these courses during his/her previous postgraduate or undergraduate studies then this pre-requisite is considered as fulfilled. It is noted that the ECTS credits for these courses do not count towards the completion of the requirements of the doctoral program.

Furthermore, the student's Research Advisory Committee can ask the student attend undergraduate or graduate level courses as audit (no-credit) courses, in order to enrich their background in areas related to their dissertation.

3. Teaching staff

(ESG 1.5)

Areas of improvement and recommendations

- 3.a. The program's Coordinators should strive to include faculty (PhD supervisors) for all modern pharmacy disciplines, including for example molecular pharmacology, clinical pharmacy, pharmacogenomics and pharmacogenetics.

Department's Response:

Current academic staff members of the Department ([List](#)) of various pharmacy specializations including pharmaceutical chemistry, radiopharmacy, pharmaceutical technology, molecular pharmacology, toxicology, pharmaceutical biotechnology and therapeutics, may be PhD supervisors.

Visiting faculty staff members who keep a close collaboration with the Department for teaching and research purposes, may also serve as PhD supervisors. Visiting staff members who support modern pharmacy disciplines including clinical pharmacy, pharmacogenomics and pharmacogenetics suggested by the EEC are the following

- Visiting Associate Professor Nikolaos Drakoulis ([CV](#)). Dr Drakoulis is a medical doctor with specialization in Clinical Pharmacology. He has a long teaching and research experience in clinical pharmacology, clinical therapeutics and pharmacogenomics/pharmacogenetics. Dr Drakoulis has a rich publication record on pharmacogenomics and pharmacogenetics.
- Visiting Assistant Professor Dimitrios Panides ([CV](#)). Dr Panides is a pharmacist with specialization in Clinical Pharmacy and Clinical Pharmacology. He has extensive experience in pharmaceutical policy making, clinical trials / pharmacovigilance, pharmacoinformatics, methodology of epidemiologic research in pharmacy and evidence-based medicine.

New hires: We have made two announcements for full-time posts, in line with the specializations suggested by the EEC for the BSc/Integrated Program ([Link](#)) as well as the MSc Program in Advanced Cosmetic Science and Natural Health Products. More specifically,



two full-time positions (one position in Pharmaceutical Technology with specialization in cosmetology and one position in Pharmacology with specialization in Clinical Pharmacology) have been advertised, as well as several part-time posts. For the full-time position in pharmaceutical technology a suitable candidate has been selected by the University. **Dr Constantinos Gardikis** ([CV](#)) has significant research background in pharmaceutical technology with expertise in cosmetology and cosmetics production. He has agreed terms with the university and due to prior engagements will commence employment from the university from the new academic year (September 2023).

With respect to the full-time position in pharmacology, no applications that meet the minimum criteria have been received and we have reposted the job vacancy announcement with a new deadline set at April, 30th ([Link](#)). The University has been in contact with relevant organizations in order to promote the vacancies and aid the recruitment of suitable candidates.

4. Student admission, progression, recognition and certification

(ESG 1.4)

Areas of improvement and recommendations

4.a. It is suggested that specific criteria are set in place for potential PhD candidates coming from disciplines outside of pharmacy.

Department's Response:

According to the program admissions requirements, eligible applicants must possess a Master level degree in Pharmacy or in a discipline outside Pharmacy but related to Pharmacy such as chemistry etc. Applicants with a Master degree in a discipline outside Pharmacy but related to Pharmacy can be conditionally admitted in the program, with a condition that they successfully complete a number of undergraduate or postgraduate courses that can vary according to the background of the applicant and the research area of the dissertation. These courses are decided by the Doctoral Program Committee and explicitly stated in the Program Admission Evaluation Report, after the evaluation of the application.

4.b. At the beginning of the studies, the EEC recommends that a detailed research proposal should be written by the student in collaboration with the Advisor and approved by the Advisory Committee.

Department's Response:

Submission and successful defence of a Research Proposal (PHDPH201- Research Planning and Research Proposal) is one of the main program completion requirements. This proposal includes the problem statement, the thesis statement, the novelty of the proposed research work, the related work, the methodology, the expect results, the time planning, as well as other issues such as any ethical issues. The Research Proposal is developed by the student in collaboration with the Research Advisor, submitted and presented at the end of the second semester, and evaluated and approved by the student's Research Advisory Committee. Approval of the research proposal by the Research Advisory Committee is a milestone for the

continuation of the research work of the doctoral student, and is used as a reference document for the student's research work.

4.c. There should be plans for proposed course work made prior to the start of the student's program, in order to strengthen the background of the student in the scientific area of the planned PhD project.

Department's Response:

As described in sections 2c and 4a above, undergraduate or graduate level courses are required to be completed by students with a Master degree in a discipline outside Pharmacy but related to Pharmacy, who have been conditionally accepted in the program.

All doctoral students need to attend four PhD level courses of a total of 40 ECTS during their first year of study, These courses aim in the enhancement of the student's skills in conducting research in general, and in the enhancement of the student's tools for accomplishing his/her thesis. These courses include two courses in research methodology (PHDPH101 - Research Methods - Biostatistics, PHDPH102 - Research Planning I - Research Methods) and two courses in Advanced Topics (PHDPH202, PHDPH203). The content of the advance topics courses must be within the thematic area of the thesis of the student and are decided by the student's Research Advisory Committee.

Furthermore, the student's Research Advisory Committee can ask the student attend undergraduate or graduate level courses as audit (no-credit) courses, in order to enrich their background in areas related to their dissertation.

5. Learning resources and student support

(ESG 1.6)

Areas of improvement and recommendations

5.a. The EEC strongly recommends that the laboratories are quickly organised and fully equipped so that they will be ready to successfully accommodate the research activities of the Doctoral program.

Department's Response:

As per the EEC's recommendation, the laboratory infrastructure and equipment have been significantly enriched. It is noted that the two research laboratories that were under construction during the EEC visit due to the global supply chain disruptions have now been finished and equipped with specialised facilities and are available for inspection by the CYQAA. Furthermore, teaching laboratory facilities have been upgraded with new equipment. Equipment further supporting pharmaceutical courses have been purchased according to the committee's comments and modern equipment, such as HPLC-MS, GC-MS, spectrofluorometer, granulators, tableting machine, and a modern organic chemical synthesis apparatus have been purchased. Please refer to Annex 1 with specifics of the acquisition. It is noted that any equipment waiting to be delivered does not affect the delivery and the quality of the educational process and is not used for teaching purposes (excluding possible use on project work) for the offering of the programme.

6. Additional for doctoral programmes

(ALL ESG)

Areas of improvement and recommendations

6.a. At the beginning of the studies, the EEC recommends that a detailed research proposal should be written by the student in collaboration with the Advisor and approved by the Advisory Committee.

Department's Response:

As stated in section 4b, the submission and successful defence of a Research Proposal (PHDPH201- Research Planning and Research Proposal) is one of the main program completion requirements. This proposal includes the problem statement, the thesis statement, the novelty of the proposed research work, the related work, the methodology, the expected results, the time planning, as well as other issues such as any ethical issues. The Research Proposal is developed by the student in collaboration with the Research Advisor, submitted and presented at the end of the second semester, and evaluated and approved by the student's Research Advisory Committee. Approval of the research proposal by the Research Advisory Committee is a milestone for the continuation of the research work of the doctoral student, and is used as a reference document for the student's research work.

6.b. During the admission process, the students may be encouraged to take undergraduate courses related to their proposed PhD studies. This should be done without the allocation of ETCS units, simply for the enrichment of their background.

Department's Response:

As described in section 4c above, undergraduate or graduate level courses are required to be completed by students with a Master degree in a discipline outside Pharmacy but related to Pharmacy, who have been conditionally accepted in the program. The ECTS credits for these courses do not count towards the doctoral program completion requirements.

Furthermore, the student's Research Advisory Committee can ask the student attend undergraduate or graduate level courses as audit (no-credit) courses, in order to enrich their background in areas related to their dissertation.

6.c. There should be plans for proposed course work made prior to the start of the student's program, in order to strengthen the background of the student in the scientific area of the planned PhD project.

Department's Response:

All doctoral students need to attend four PhD level courses of a total of 40 ECTS during their first year of study, These courses aim in the enhancement of the student's skills in conducting research in general, and in the enhancement of the student's tools for accomplishing his/her thesis. These courses include two courses in research methodology (PHDPH101 - Research Methods - Biostatistics, PHDPH102 - Research Planning I - Research Methods) and two courses in Advanced Topics (PHDPH202, PHDPH203). The content of the advance topics courses must be within the thematic area of the thesis of the student and are decided by the student's Research Advisory Committee.

Furthermore, the student's Research Advisory Committee can ask the student attend undergraduate or graduate level courses as audit (no-credit) courses, in order to enrich their background in areas related to their dissertation.

6.a. The EEC recommends that the supervisor of a PhD Thesis has high experience in supervising PhD studies, which usually means that she/he is already in the higher academic ranks.

Department's Response:

The Research Advisor must be a faculty member with research expertise in the same area of the dissertation of the student and must hold a PhD for at least three years, while the other two members of the Research Advisory Committee must have extensive knowledge in the research area of the dissertation of the student. In case that the Research Advisor is at the rank of lecturer or assistant professor, at least one of the other two members of the Research



Advisory Committee must be at the rank of associate professor or professor with high experience in supervising PhD students. Since all three members of the Research Advisory Committee have a significant role in the planning, monitoring and assessment of the student's research work, the quality of the research work, in relation to the Research Advisor is ensured.

It is noted that in various other external evaluations of PhD programs, the EEC members were strongly in favour of allowing lecturers and assistant professors acting as Research Advisors, since this can help them improve their research work.

Furthermore, in many cases the coordinators or principal investigators of funded research programs are either lecturers or assistant professors, while doctoral students are funded by these projects, therefore, they are eligible for being Research Advisors. This is also essential in cases where doctoral students are funded by the industry where the university's contact person is at the rank of a lecturer or assistant professor.

7. Conclusions and final remarks

7.a. The evaluated program is highly structured; however, the content of the studies should be further clarified. The EEC strongly recommends that at the very beginning of the studies, there is an evaluation of the background of the student (Qualifying Process), so that the students would receive on time proper guidance and additional preparatory courses, if required. Additionally, the program would benefit from students individually tailoring their own course work plan in collaboration with their supervisors. Although the EEC recognizes the difficulties of hiring academic personnel due to the particularities of the country (e.g. language limitations), the committee strongly recommends that the Department strive to complement the academic personnel with full-time scientists in all major and modern pharmacy disciplines. Lastly, the EEC recommends that the research facilities are put in place as soon as possible, and research laboratories are soon properly organized in order to efficiently serve the Doctoral program.

Department's Response:

- It is noted that, with the exception of the Research Methods courses, and in part the Advanced Pharmacy Topics, the rest of the courses listed in the program structure are not taught courses. They are referring to the activities and events required to ensure the normal flow of the research process and the completion of the program requirements. Therefore, some components, such as the course content, the learning outcomes and the bibliography, of the course descriptions of these courses cannot be extensively clarified. Thus, although the structure of the program seems highly structured, in many aspects it concerns modules that need to be fulfilled during the PhD studies.
- During the evaluation of the application, and the interviewing of the applicant, the Doctoral Program Committee evaluates the background of the candidate and in case that his/her fundamental background is inadequate then additional preparatory courses are offered according to the relevant area of expertise that he/she wants to make his/her PhD studies.
- The students have the right to organize their course work plans according to their needs as far as they fulfill the program requirements, choosing, in collaboration with their

supervisor the research plan and the Advanced Topics that need to be taken for the successful adoption of the requirements. The list of PhD courses and their order is indicative and can be changed in cases the PhD student is unable to follow this program, having also the potential for extension of the studies with maximum of twelve semesters.

- We agree that it is beneficial to increase the full-time faculty members with research capacity and this is also in the strategic planning of the Department. We have made two announcements for full-time posts, in line with the specializations suggested by the EEC ([Link](#)). More specifically, two full-time positions (one position in Pharmaceutical Technology with specialization in cosmetology and one position in Pharmacology with specialization in Clinical Pharmacology) have been advertised, as well as several part-time posts. For the full-time position in pharmaceutical technology a suitable candidate has been selected by the University. Dr Constantinos Gardikis ([CV](#)) has significant research background in pharmaceutical technology with expertise in cosmetology and cosmetics production. He has agreed terms with the university and due to prior engagements will commence employment from the university from the new academic year (September 2023).

With respect to the full-time position in pharmacology, no applications that meet the minimum criteria have been received and we have reposted the job vacancy announcement with a new deadline set at April, 30th ([Link](#)). The University has been in contact with relevant organizations in order to promote the vacancies and aid the recruitment of suitable candidates.

Further to the above additions, the Department aims to continue to increase the number of academics with research potential it employs based on its expected growth which we expect to be facilitated with the new programs of study integrated into the Department's operations

- As per the EEC's recommendation, the laboratory infrastructure and equipment have been significantly enriched. It is noted that the two research laboratories that were under construction during the EEC visit due to the global supply chain disruptions have now been finished and equipped with specialised facilities and are available for inspection by the CYQAA. Furthermore, teaching laboratory facilities have been upgraded with new equipment. Equipment further supporting pharmaceutical courses have been purchased according to the committee's comments and modern equipment, such as HPLC-MS, GC-



MS, spectrofluorometer, granulators, tableting machine, and a modern organic chemical synthesis apparatus have been purchased. Please refer to Annex 1 with specifics of the acquisition. It is noted that any equipment waiting to be delivered does not affect the delivery and the quality of the educational process and is not used for teaching purposes (excluding possible use on project work) for the offering of the programme.



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CYPRUS AGENCY OF QUALITY ASSURANCE AND ACCREDITATION IN HIGHER EDUCATION



B. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
Prof. George Demosthenous	Rector	

