



Doc. 300.1.2

07.14.318.066

Higher Education Institution's Response

Conventional-face-to-face programme of study

Date: Date

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

Programme

In Greek:

Φαρμακευτική

(5 ακαδημαϊκά έτη, 300 ECTS, Ενιαίο και Αδιάσπαστο Μάστερ)

ή

Φαρμακευτική

(5 ακαδημαϊκά έτη, 300 ECTS, Πτυχίο (BSc))

In English:

Pharmacy

(5 academic years, 300 ECTS, Integrated Master)

or

Pharmacy

(5 academic years, 300 ECTS, Bachelor (BSc))

Language(s) of instruction: English and Greek

- **Specializations (if any):**

In Greek: -

In English: -

Programme's Status: Currently Operating

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 could be considered to have a separate IQC for the pharmacy program, which is new and highly academically demanding.

Department's Response:

The Internal Quality Committee of the University has developed and applies the Quality Assurance Policy of the University. The Internal Quality Policy concerns the following four broad areas: (a) its programs of study and teaching, (b) the research output and the creation of new knowledge, (c) the management of the University and the administrative services and (d) the connection with the society and the social contribution.

The internal quality system includes the processes and methodologies which (a) define, monitor, analyse and evaluate the quality indicators, (b) identify weaknesses and opportunities for further improvement and (c) apply remedial measures. The internal quality process is achieved through annual reporting from all parties involved in the operation of the University. The internal quality processes concerning the academic staff, the student performance and the programs of study is achieved through student questionnaires and self-evaluation reports. The Internal Quality Committee monitors the implementation of the internal quality process and reports to the Senate every two years.

The internal quality reporting process is achieved through a number of report templates and questionnaires. These templates include the Student Course Evaluation (IQC100), Faculty Course Evaluation (IQC101), Program Self Evaluation (IQC104), Faculty Activity Report (IQC105), Faculty Appraisal Report (IQC106) and the Department Self Evaluation Report (IQC107).

The Department of Pharmacy has adopted and applies a quality assurance policy which is the departmental implementation of the Quality Assurance Policy of the University. Through this policy, the Department is committed to the continuous improvement of the quality of its Programs.

The internal evaluation of the Program is the responsibility of the program Coordinator, in cooperation with the Departmental Quality Committee. This committee consists of two of the department's Teaching and Research Staff (TRS) members appointed by the Council of the Department and one of the student representatives in the Council of the Department.

After the end of each academic year, the Coordinator of the Program completes the Program Self Evaluation (IQC104) report which includes quality indicators related to the program (structure, content, etc), the students (assessment, progress, etc), and the graduates (employability, degree grades, duration of studies, etc). This report utilizes also data and information obtained through the Student Course Evaluation (IQC100) questionnaires, the Faculty Course Evaluation report (IQC101), as well as comments and suggestions made by the focus groups (students, graduates and employers). The Program Self Evaluation reports also on the action taken, related to the Program, with respect to the implementation of the Departments Action Plan agreed between the Department and the Internal Quality Committee.

The Program Self Evaluation report is submitted to the Council of the Department and is part of the Department Self Evaluation Report (IQC107), which is submitted to the Internal Quality Committee of the University. The suggestions of the Department and the Internal Quality Committee are reported in the Action Plan of the Department, which includes also agreed actions and measures that aim in the upgrade and improvement of the Program. The implementation of this action plan is reported in the relevant (next academic year quality reports reports) and is monitored by the Departmental Quality Committee, while it is also checked by the Internal Quality Committee of the University.

Program Review:

The programs of study, offered by the Department, are reviewed following the process specified in the "Regulations for Review of a Program of Study" of the University. Changes in the programs of study are decided by the Council of the Department following the suggestions of an ad-hoc committee set by the Council of the Department for this purpose. This committee is chaired by the Program Coordinator, while the students are represented with one of the Program's student, appointed by the Students' Council. For the revision of the Program the committee considers (a) the findings and suggestions from the Program Self-Evaluation Report, including suggestions of the students, the academics and the focus groups (students,

graduates and employers), (b) the current developments in the fields related to the Program, (c) suggestions from the Internal Quality Committee, the external evaluation teams, professional bodies, such as the Pharmacy Board, as well as suggestions by international bodies, such as the International Pharmaceutical Federation.

The revision of the Program can include the revision of the courses of the program and/or the revision of the structure of the Program.

Course Review:

The revision of courses aims to update/upgrade the courses of the Program. This revision might refer to:

- Update of the content and the learning outcomes of the course. Changes in the content of the course must be in accordance with the set learning outcomes, the number of ECTS and the student's workload. If this revision requires significant changes, then these changes must be considered as a program revision and the relevant procedures must be followed.
- Change in the prerequisites of the course.
- Update of the bibliography of the course.
- Introduction of new teaching methods.
- Changes in the assessment methods, criteria and weights.

The revision of the courses is decided by the Council of the Department before the beginning of the new academic year, while the School Council and the Senate are notified. The Chairperson of the Department acts upon updating the Departments web site and the Study Guide of the Program.

Course Structure Review:

The revision of the Program structure may refer to:

- Significant changes in the content of the courses of the Program.
- Changes in the learning outcomes of the Program.
- Significant changes in the semester allocation of course and/or course prerequisites.
- Changes in the number of ECTS and the teaching time of courses.
- Introduction of new courses and removal of existing ones.

Changes in the type (compulsory, elective, etc) and the level of courses.

The review of the structure of the Program is decided by the Council of the Department and submitted to the Council of the School and the Senate for approval. The Chairperson of the Department informs the Studies Office on the changes and acts upon updating the Departments web site and the Study Guide of the Program.

In the case that the review of the Program requires significant restructuring of the Program (eg add new courses and remove existing ones, etc), the changes are submitted to the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA) for approval.

Additional indicators have been included in the IQC for the pharmacy program of the department in order to provide information on the following issues:

- Number of students registered for the BSc versus the Integrated Master Program
- Number of students completing their practical training via Erasmus
- Number of students completing their practical training locally
- Location of Practical Training (Pharmacy, Hospital or the Industry)
- Practical Training Assessment Results
- Elective course selected by BSc Students
- Elective courses selected by Integrated Master Students

2. Student – centred learning, teaching and assessment

(ESG 1.3)

Areas of improvement and recommendations

2.a. The equipment support of basic pharmaceutical courses is not adequate and should be substantially enriched.

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.

2.b. ECTS units should be allocated to the diploma thesis in the BSc program. In certain cases, it would be advantageous for the students to integrate the thesis work with practical training, for example in hospital pharmacies or the pharmaceutical industry. This is especially important in strengthening the program on clinical aspects of pharmacy practice as well as improving external stakeholder relations.

Department's Response:

Compulsory ECTS units have been allocated to the diploma thesis in the BSc program (PHA 506 Undergraduate Thesis) and the students will have the opportunity to complete their

thesis, according to the subject of their study, in collaboration with external stakeholders such as the industry and/or hospitals/health centers, under the supervision of their research supervisor. This is clearly stated in the course description of PHA506 Undergraduate Thesis course. Furthermore, the students will be able to have their thesis work at the same stakeholder that their practical training will take place. Please refer to Annex 2 – Course Descriptions and Annex 3 – Course Distribution per semester.

2.c. In order to justify the integrated Master degree, a number of basic pharmaceutical subjects should be at a very high level and include all the recent scientific findings on the subject.

Department's Response:

Specific advanced courses have been introduced in the Integrated Master program and their content includes the recent scientific findings in the field. Please see revised course descriptions in Annex 02.02, of: Advanced Pharmaceutical Biotechnology (PHA419), Advanced topics in Design, Discovery & Development of Drugs (PHA420), Advanced Topics in Radiopharmaceutical Chemistry (PHA421), Clinical Pharmacy and Pharmaceutical Care (PHA 413), Pharmacology II (PHA 405) and Pharmaceutical Chemistry II (PHA401).

2.d. Some compulsory subjects should be changed to elective, such as Food Chemistry and Nutritional Science (PHA 209) and Chemistry of Bioactive Natural Compounds (PHA 204), in order to make room for important basic pharmacy courses such as Molecular Pharmacology, Pharmacogenomics, and Cosmetic Science. Furthermore, the compulsory course offering should be diversified to include more patient-centred and social pharmacy courses. Conversely, certain elective courses should become compulsory (e.g. Research Methodology in the BSc program).

Department's Response:

Food Chemistry and Nutritional Science (PHA 209) has become elective. Chemistry of Bioactive Natural Compounds (PHA 204) has been removed and part of its content has

been included in a more important basic pharmacy course named Pharmacognosy I (PHA 311). Chemistry & Technology of Cosmetics (PHA 414) is now included in the Program, and Molecular Pharmacology (PHA306) has been included as a compulsory course. Additionally, the syllabus of Clinical Pharmacy and Drug Interactions (PHA406) course has been significantly changed in order to become more patient-centred. More specifically this course has been renamed to Clinical Pharmacy and Pharmaceutical Care (PHA413). There are two more theory teaching hours per week in this new course. Therefore it now includes 4 theory hours per week. It also has been supplemented with practical training in clinics and hospitals. Apart from PHA413, the course descriptions of Pharmacology I (PHA309) and II (PHA405) have been strengthened towards the patient-centred aspect of pharmacy. Pharmacogenomics subject has been included as part of Clinical Pharmacy and Pharmaceutical Care (PHA413), Biopharmacy & Pharmacokinetics (PHA301) and Molecular Biology and Biotechnology (PHA212). Furthermore, Research Methodology (PHA 412) has become a compulsory course in BSc program as suggested.

2.e. The course called Clinical Pharmacy and Drug Interactions (PHA 406) is only theoretical and does not help students gain clinical insights into patient pharmacotherapy. The course is very focused on pharmacokinetics, which should have been dealt with in prior courses. The course has very ambitious goals, which cannot be met in one course of 6 ECTS. A natural progression of students towards using pharmaceutical knowledge in practice is not evident. The course needs to be supplemented with practical training in order to apply this knowledge and concepts in real life situations.

Department's Response:

The compulsory course Clinical Pharmacy and Drug Interactions (PHA406) has been changed to Clinical Pharmacy and Pharmaceutical Care, PHA413. It has been supplemented with practical training in clinics and hospitals. The teaching hours of the course have been increased by two hours and changes in the content of the course have been made in order to substantially decrease the load of pharmacokinetics and significantly increase the clinical insights of the course and patient pharmacotherapy.

2.f. No communication training is evident in the program in order to provide patient and health care professional counselling.

Department's Response:

Prior to starting their practical training, students will be required to complete a mandatory communication and patient counselling training. Please see description in the syllabus of PHA509, PHA504. Completion of this seminar series is mandatory in order to be able to initiate with practical training. Please see description in the syllabus of PHA509, PHA504.

Furthermore, topics on pharmaceutical care and patient communication have been introduced to Clinical Pharmacy and Pharmaceutical Care, PHA413 which also involves patient communication due to practical training in hospitals and clinics. This course has been revised as described in answer to 2.e. and it has also been increased by two hours per week. Management, pharmaceutical care and patient communication has also been introduced in Principles of Management and Economics in Pharmaceutical Business, PHA420.

2.g. It would be beneficial for the program that the academic staff is increased and supplemented with full-time faculty members with expertise and research capacity in pharmacology, patient-centred pharmacy and social aspects of pharmacy.

Department's Response:

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 for the current program ([Link](#)) as well as the MSc 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, in addition to part-time positions.

For the full-time position in pharmaceutical technology, following due process, **Dr Constantinos Gardikis** ([CV](#)) has been selected. Dr Gardikis has significant research background in pharmaceutical technology with expertise in cosmetology and cosmetics

production and a clear research potential in addition to satisfying the needs of the specialization. The University and Dr Gardikis have already agreed terms and it is expected that his election will be formally finalized in the next University Council meeting. In the agreed terms, due to prior engagements of Dr Gardikis employment will commence 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 taken the necessary steps to promote the vacancy and aid the recruitment of suitable candidates.

It is noted that currently the academic demands in patient-centred pharmacy and social aspects of pharmacy for teaching purposes are fully met with a combination of specialized visiting faculty members and full-time faculty members. Specifically, the following personnel is involved in these subjects:

- 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.
- 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.
- Special Teaching Staff Member, Mrs Stavroula Kitiri ([CV](#)). Mrs Kitiri is a Clinical Pharmacist in the Bank of Cyprus Oncology Center who specializes in pharmaceutical care and therapeutics.

Furthermore, full time staff members also supporting patient-centred pharmacy are the following: Prof. Maritsa Gourni (medical doctor who specializes in pharmaceutical microbiology), Associate Professor Giorgos Charalambous (medical doctor who specializes in Internal Medicine and Healthcare Management), Lecturer Phivos Simeonides (medical doctor with expertise in Cardiology Pharmacology), Lecturer Savvas Ioannou (a medical doctor who specializes in Internal Medicine, Infectious Diseases and Diabetes Mellitus).

2.h. The number of ECTS units allocated to Organic chemistry (PHA 202 and PHA 206) should be substantially reduced and reallocated to more pharmacy-oriented subjects. The description of the course called Toxicology (PHA 408) should be made more concrete and more oriented towards the pharmacy profession.

Department's Response:

The Organic chemistry II course (PHA206) has been removed. Therefore, the Program has one Organic Chemistry course (PHA 211) instead of two. As a result, the ECTS units have been substantially reduced giving room for pharmacy-oriented subjects such as Molecular Pharmacology (PHA306), Clinical Pharmacy and Pharmaceutical Care (PHA 413), Pharmacognosy I (PHA311) and II (PHA312). The description and the content of Toxicology (PHA 408) has been changed. Efforts have been made to make it more concrete and more oriented towards the pharmacy profession, as suggested by the committee.

2.i. Microbiology laboratory training should be broadened to more bacteria and even other microorganisms (yeasts, fungi, vira). Tests that are clinically relevant such as gram staining and antibiograms should be included.

Department's Response:

Microbiology laboratory training has been strengthened, including more microorganisms in the laboratory part of the course as well as clinical tests (gram staining and antibiograms). Please see revised course description of Microbiology (PHA203) in Annex 02.01 & 02.02.

2.j. The practical laboratory work in certain pharmaceutical subjects such as pharmaceutical chemistry, biopharmaceutics/pharmacokinetics, pharmacology and pharmacodynamics should be strengthened. The industrial pharmacy edge in pharmaceutical technology (e.g. pharmaceutical processing and dosage form design) courses should be further strengthened as well.

Department's Response:

The practical laboratory work in the following subjects has been strengthened according to the committee's comments. The changes concern the Pharmaceutical Chemistry I (PHA 307) and II (PHA401), Inorganic & Bioinorganic Pharmaceutical Chemistry (PHA301), Biopharmacy & Pharmacokinetics (PHA302), Pharmacology I (PHA309) and II (PHA405), Molecular Pharmacology (PHA306). The industrial pharmacy edge in pharmaceutical technology courses (PHA308, PHA402) were further strengthened as well. Please refer to the amended course descriptions.

2.k. The principles of evidence-based medicine and critical literature assessment should be well integrated within the entire program.

Department's Response:

Topics on evidence-based medicine, clinical case analysis and reviewing of literature have been strengthened in the following courses throughout the program: Please refer to Annexes 02.01 & 02.02 - Pharmacology I (PHA309) and Pharmacology II (PHA405), Clinical Pharmacy and Pharmaceutical Care (PHA 413), Pharmaceutical Chemistry I (PHA307) and II (PHA401), Pharmaceutical Technology II (PHA402), Advanced Topics in Pharmaceutical Biotechnology (PHA419) and Advanced Topics in Design, Discovery & Development of Drugs (PHA420).

2.l. It is recommended that fewer ECTS are allocated to botany.

Department's Response:

We accept the EEC recommendation. The number of ECTS has been reduced from 6 to 5. Also, the theory teaching load has been reduced from three hours to two hours, to align with the ECTS modification.

2.m. The course on Pharmaceutical Chemistry and Technology of Industrial Pharmacy and Cosmetics (PHA 411) should be split up and the industrial pharmacy content transferred into the pharmaceutical technology courses. The cosmetics course should be taught as a separate compulsory course

Department's Response:

The course PHA411 has been split up. Chemistry and Technology of Cosmetics (PHA 414) is now offered as a compulsory course. The industrial pharmacy content has been transferred into the pharmaceutical technology courses. Please refer to Annex 02.01 - 02.02.

2.n. The Pharmacology course should include sufficient practical training (laboratory coursework) and be supplemented with Molecular Pharmacology, which is currently an elective subject.

Department's Response:

The laboratory coursework of Pharmacology I (PHA307) and II (PHA405) courses has been enriched with laboratory coursework. Moreover, clinical case studies have been included for the familiarization of the students with real-life clinical cases. The Molecular Pharmacology course (PHA306) has become compulsory and sufficient laboratory coursework has also been added.

2.o. The practical training should be better structured and, at the same time, this course should be substantially modified. Firstly, the students need to receive structured assignments relevant to the practical training and that are monitored and assessed by the appropriate faculty staff. Secondly, the preceptors at the pharmacies should be selected and adequately prepared by the university staff to undertake the training of the students.

Department's Response:

The practical training course has been substantially modified according to the committee's comments, especially as far as the learning outcomes, the course content and the assessment

methods are concerned. The course content describes the demanded procedures and assignments the students need to undertake and their performance will be assessed on a regular base by the registered pharmacist and the practical training committee (please see course description of Practical Training - PHA504, PHA507 and PHA509 – “Placement Guidelines” with the Instructions for Pharmacy Students (Trainees) and Supervising Pharmacists, PT1 - Practical Training Assessment, PT2 - Practical Training Self-Assessment and PT3 - Final Practical Training Assessment). Please refer to Annex 4 – Practical Training Documentation.

According to the Pharmacy Board in Cyprus, all pharmacists practice within strict Codes of Ethics and Professional Standards and have a personal commitment to maintaining professional competence through continuing professional development. The practical training required for pharmacist registration has been set at twelve months. The six months of practical training is compulsory in an approved private or government pharmacy and the rest can be done apart from the pharmacies mentioned above in one of the following activities:

- (a) Preparation of pharmaceutical form of medicinal products
- (b) Preparation and control of pharmaceutical products
- (c) Testing of medicinal products in a testing laboratory pharmaceutical product
- (d) Storage, preservation and distribution of pharmaceutical products in wholesale stage
- (e) Supply, preparation, control, storage, distribution and disposal safe and effective pharmaceutical products of the required quality in pharmacies that are open to the public
- (f) Preparation, control, storage, distribution of safe and effective pharmaceutical products of the required quality in hospitals

As the number of primary care services available through community pharmacies is currently expanding due to the implementation of a General Healthcare System (GHS) in Cyprus, pharmacy students are trained to develop more patient-centred roles. They are motivated to manage issues such as increasing prescription volume, overall population aging, increasing polypharmacy, innovations in chronic disease management, advances in technology and personalized medicine, greater administrative requirements for handling third-party payments that require an expanded competency in pharmaceutical science.

Students are evaluated by the registered pharmacist of the community pharmacy, hospital pharmacy or pharmaceutical industry in the following evaluation categories:

- **Theoretical knowledge and research application.** The trainee pharmacists access, retrieve, critically analyze and apply relevant information to make evidence-based decisions within their practice with the goal of ensuring safe and effective patient care.
- **Ethical, Legal and Professional skills.** The trainee pharmacists practice within legal requirements, demonstrate professionalism and uphold professional standards of practice, codes of ethics and policies.
- **Patient Care and health promotion.** The trainee pharmacists, in partnership with the patient and in collaboration with other healthcare professionals, meet the patient's health and drug-related needs to achieve the patient's health goals. Pharmacists use their expertise to advance the health and wellness of patients, communities and populations.
- **Communication and education.** The trainee pharmacists communicate effectively with patients, the pharmacy team, other healthcare professionals and the public, providing education when required.
- **Drug dispensing and product distribution.** The trainee pharmacists ensure accurate product distribution that is safe and appropriate for the patient.

The Practical Training component of the Programme is supervised by Dr Charalambos Triantis who oversees all aspects of the Practical Training content, delivery and assessment. Dr Triantis is in constant collaboration with the external stakeholders that host the students, as well communicating with the students regarding any issues that may arise during their practicum. Ms Sophia Karavergou (Pharmacist) and Mr Elias Papadopoulos (Pharmacist) are staff members who supervise students and monitor their progress during placement. The students are also monitored and evaluated by members of the Departmental Practical Training Committee (Dr Charalambos Triantis, Dr Panagiotis Nompelos, Dr Giorgos Papagiouvannis). Professional supervision during the practical training period is also provided by the Registered Pharmacist.

Practical training is assessed through direct observation, question-based assessments to evaluate theoretical knowledge, answering questionnaires / interviews and submitting a "Practical Training Book". A "Practical Training Book" is kept by students as a diary in their practical training. It is a log book where the basic activities, exercises, assignments and obligations of the intern at the pharmacy, attendance at the pharmacy, attending lectures and examination at the end of each semester are described. It includes also pharmaceutical

practice in community pharmacy, specific clinical cases in prescriptions, first aid, ethics, and safety, as well as functionality, organization of the hospital pharmacy, the construction in the pharmacy and validation process. The “Practical Training Book” is checked by the registered pharmacist regularly, by the faculty members who are monitoring the progress of the students’ practical training, and at the end of each 3-monthly period, it is also evaluated by the practical training committee of the Department.

The supervision and assessment of practical training has been better structured using the appropriate forms (see below) and also different types of assessment (self-peer-evaluation, continuous - final):

- Monthly Attendance Forms (6)
- Practical Training Book
- PT1. Monthly Practical Training Assessment (by the Registered Pharmacist)
- PT2. 3-Monthly Practical Training Assessment (by the trainee)
- PT3. Final Practical Training Assessment (by the Practical training Committee)

The assessment is continuous and recorded every month and at the end of practical training. A Likert-type scale is used to evaluate students in practical training, which has a qualitative characteristic, as no grade is entered. In addition to the scale, the registered pharmacist can also write some comments/observations for improvement. Additionally, the students fill in a self-evaluation report in a trimonthly base (PT2 - Practical Training Self-Assessment) with the aim of identifying the deficiencies/gaps and filling them up after consultation with the practical training committee.

The preceptors at the pharmacies who take on a Pharmacy student for practical training must be registered pharmacists with at least three-year experience, and the students are always under their close supervision. They should not have any type of relationship with the trainee student (direct relationship, marriage, financial interests, etc.), they should be included in the list approved by the Competent Authority and train only one student at a time. They are in close contact with the practical training committee of the Department and receive the detailed “Placement Guidelines” with the learning objectives, the forms and contact numbers. Also, the preceptors at the pharmacies are prepared by attending a training/workshop which is held by the Department, every semester/year, so that they are adequately prepared to undertake the training of the students. The specific workshop aims to support the development on teaching, training and supervision skills as well as assessment skills using various methodologies. The

workshop is offered in person and online and is recorded and shared with all participants in order to be able to refer back as needed. A Certificate of Attendance is issued to all participants. Moreover, the University supports the professional development of its academic staff members and trainers through the Personal and Professional Development Center (P²DF) initiatives which also offers specific training sessions to the Teaching Staff Members for the adoption of modern teaching methodologies.

2.p. More time should be allocated for skill development (e.g. counselling and monitoring patients) and more professional supervision in the practical training period is needed.

Department's Response:

Prior to starting their practical training, students will be required to complete a mandatory communication training and patient counselling seminar series of a total of 10 hours. Completion of this seminar series is mandatory in order to be able to proceed to practical training. Please see description in the syllabus of PHA509, PHA504. Furthermore, topics on skill development such as counselling, management, pharmaceutical care and patient communication have been introduced to Clinical Pharmacy and Pharmaceutical Care, PHA413 (which also involves patient communication due to practical training in hospitals and clinics) as well as in Principles of Management and Economics in Pharmaceutical Business, PHA418 (elective course).

The Practical Training component of the Programme is supervised by Dr Charalambos Triantis who oversees all aspects of the Practical Training content, delivery and assessment. Dr Triantis is in constant collaboration with the external stakeholders that host the students, as well communicating with the students regarding any issues that may arise during their practicum. Ms Sophia Karavergou (Pharmacist) and Mr Elias Papadopoulos (Pharmacist) are staff members who supervise students and monitor their progress during placement. The students are also monitored and evaluated by members of the Departmental Practical Training Committee (Dr Charalambos Triantis, Dr Panagiotis Nompelos, Dr Giorgos Papagiouvannis).

Professional supervision during the practical training period is also provided by the Registered Pharmacist. According to the regulations set by the Pharmaceutical Services, Ministry of

Health, the preceptors at the pharmacy must be registered pharmacists with at least three-year experience, and the students are always under their close supervision. The Department offers to all preceptors at the pharmacies training/workshop so that they are adequately prepared to undertake the training of the students

Please also refer to answer 2.o. for the student evaluation documentation.

2.q. Students should have a thorough and in-depth clinical knowledge base and understanding of pharmaceutical care prior to entering practical training.

Department's Response:

The Clinical Pharmacy and Pharmaceutical Care (PHA413) and partly through the Pharmacology I (PHA307) and II (PHA405) courses, students will become accustomed with the clinical aspects of Pharmacy and gain sufficient understanding of pharmaceutical care. Moreover, in Clinical Pharmacy and Pharmaceutical Care (PHA413) there will be practical training in a hospital setting in order for the students to become accustomed to the clinical aspects of the pharmacy profession. These courses will be offered prior to entering practical training (PHA504 or PHA509). Further to that, prior to starting their practical training, students will be required to complete mandatory communication training and patient counselling seminar series of a total of 10 hours. Completion of this seminar series is mandatory in order to be able to initiate with practical training. Please see description in the syllabus of PHA509, PHA504.

2.r. The equipment support of all pharmaceutical courses is not adequate and should be substantially enriched.

Department's Response:

Please refer to previous answer 2.a.

2.s. It is suggested that the postgraduate Thesis and the practical training are executed separately, so that each one covers 30 ECTS on distinct semesters.

Department's Response:

We accept the EEC recommendation. The postgraduate Thesis (PHA 508, 30 ECTS) and the Practical Training (PHA509, 30 ECTS) are now on distinct semesters and are offered separately on the 9th and 10th semester, respectively. Please refer to Annex 3 – Course Distribution per semester.

2.t. The university should address the issue of non-Greek speaking students with regard to the practical training at the final year of the program.

Department's Response:

The Registered Pharmacist who will train and supervise the students must be fluent in English language (Proof of English language proficiency, such as the TOEFL (minimum grade 90), the IELTS (minimum grade 6.5), or other equivalent language examinations or who have completed an undergraduate or graduate program where the instruction language was English, satisfy the proof of English language proficiency requirement). Moreover, practical training may be performed abroad through the Erasmus+ Programme and students are generally encouraged to gain an international experience.

2.u. The assessment of students should include more diverse methods.

Department's Response:

The assessment of students usually includes a final written examination which takes place at the end of each semester and may involve open-type questions, short answered, computational, etc. This usually comprises 60% of the final grade of the course. The course work assessment (40% of the final grade) which is performed throughout the semester may involve a combination of the following assessment methods:

- Participation in the lesson and solving of exercises or problems
- Individual work and presentation
- Group work and presentation
- Project (usually offered in 4th year courses)
- Critical assessment of selected scientific literature and presentation

- Learning journal (where the students record their learning progress and reflect on what they have learnt during a course or if they had hard time understanding specific points)
- Laboratory assignments where students analyse an experimental procedure they have performed and interpret/present the results of an experiment
- Laboratory written examinations
- Case studies analysis (i.e. in Clinical Pharmacy and Pharmaceutical Care, Pharmacology I and II, Pharmaceutical Legislation and Ethics)
- Practical Training

The University supports the professional development of its academic staff members through the Personal and Professional Development Center (P²DF) initiatives which also offers specific training sessions to the Teaching Staff Members for the adoption of modern teaching methodologies and assessment method. Practical training will be assessed through direct observation, question-based assessments to evaluate theoretical knowledge, submitting the practical training log book, answering questionnaires and interviews.

2.v. ECTS units should be allocated to the Thesis in the BSc program.

Department's Response:

Please refer to previous answer 2.b.

2.w. Students should be enabled to apply their knowledge on real life situations.

Department's Response:

The laboratory practice and the practical training as well as the study and analysis of clinical cases are methods/ways enabling the students to adopt and apply their knowledge on real life situations. Additionally, as far as the clinical aspects are concerned, clinical practice in real life situations has also been adopted in Clinical Pharmacy and Pharmaceutical Care course (PHA413) as per the committee's suggestions (see Department's response to comment 2q). Prior to starting their practical training, students will be required to complete a mandatory communication training and patient counselling seminar series of a total of 10 hours.



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Completion of this seminar series is mandatory in order to be able to initiate with practical training.

3. Teaching staff

(ESG 1.5)

Areas of improvement and recommendations

3.a. Teaching staff should be expanded to include pharmacology (molecular pharmacology) and patient and societally orientated pharmacy disciplines. The teaching staff should strive to adopt modern teaching methodologies, such flipped classroom, online discussion forum and peer-feedback.

Department's Response:

Regarding teaching staff expansion please refer to previous answer 2.g.

Modern teaching methodologies have been included, such as flipped classroom on clinical cases study analysis. Furthermore, online discussion forums and the peer-feedback are applied in some of the courses (i.e. Clinical Pharmacy and Pharmaceutical Care, Pharmacology I and II, Pharmaceutical Legislation and Ethics) especially regarding the exercises and the laboratory assignments as well as at the case study analysis. The assessment of students usually includes a final written examination which takes place at the end of each semester and may involve open-type questions, short answered, computational, etc. This usually comprises 60% of the final grade of the course. The course work assessment (40% of the final grade) which is performed throughout the semester, may involve a combination of the following assessment methods: Participation in the lesson and solving of exercises or problems, Individual work and presentation, Group work and presentation, Project (usually offered in 4th year courses), Critical assessment of selected scientific literature and presentation, Learning journal (where the students record their learning progress and reflect on what they have learnt during a course or if they had hard time understanding specific points), Laboratory assignments (where students analyse an experimental procedure they have performed and interpret/present the results of an experiment), Laboratory written examinations, Case study analysis, Practical Training Assessment.

Finally, the University supports the professional development of its academic staff members through the Personal and Professional Development Center (P²DF) initiatives which also offers specific training sessions to the Teaching Staff Members for the adoption of modern teaching methodologies.

4. Student admission, progression, recognition and certification

(ESG 1.4)

Areas of improvement and recommendations

4.a. International mobility of students should be strengthened by encouraging students to take courses abroad.

Department's Response:

Mobility via Erasmus+ programmes, is highly encouraged throughout the University. For the Department of Pharmacy, in the last three (3) years, 86 students have participated in mobility schemes.

The Department has the following international collaborations:

Erasmus+ mobility actions:

- Universitat de València, Spain
- Aristotle University of Thessaloniki, Greece
- National and Kapodistrian University of Athens, Greece

International Credit Mobility:

- Kanazawa University, Japan
- Mansura University, Egypt
- Zarqa University, Jordan

Furthermore, Frederick University is a full member of the EU-Conexus European University, where students are encouraged to participate not only in exchange programmes but also in research and summer school schemes.

4.b. A research orientated diploma work should be included into the BSc program.

Department's Response:

Please refer to previous answer 2.b.



5. Learning resources and student support

(ESG 1.6)

Areas of improvement and recommendations

5.a. The EEC strongly recommends that the laboratory equipment resources are significantly enriched, as mentioned previously.

Department's Response:

Please refer to previous answer 2.a.

6. Conclusions and final remarks

The EEC after careful evaluation of the material presented to it by the university, the site visit, the discussion with the teaching staff and the students has arrived at the following main conclusions and recommendations, which would in the opinion of the EEC, contribute to the improvement of the evaluated program.

- The program needs reorganisation regarding compulsory and elective courses, see specific comments above.
- Patient and societally orientated courses should be mandatory in the program and the teaching staff should be expanded accordingly.
- The laboratory equipment should be substantially enriched, especially for the core pharmaceutical courses.
- Diploma work (involving research) should be included in the BSc program.
- External stakeholders should be more involved in monitoring and assessing the program.
- International collaborations in research and teaching and student mobility should be enhanced in the program.

Department's Response:

We would like to sincerely thank the EEC for their dedicated work and invaluable comments provided both within their evaluation report and during the frank discussions held throughout the visit. All suggestions made by the EEC have been adopted and implemented, as seen by the answers throughout sessions 1-5.



B. Higher Education Institution academic representatives

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

