



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
**Εθνικόν και Καποδιστριακόν
Πανεπιστήμιον Αθηνών**
— ΙΔΡΥΘΕΝ ΤΟ 1837 —

**SCHOOL OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY
MSc PROGRAM IN "CLINICAL PHARMACY"**

**APPENDIX A5
STUDY GUIDE FOR THE CURRENT ACADEMIC YEAR**



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PHARMACY DEPARTMENT

GUIDE FOR POSTGRADUATE STUDIES

MSc Program in "Clinical Pharmacy"



Academic Year

2022 - 2023

PROLOGUE

Dear postgraduate students of the Department of Pharmacy,

The main purpose of this Study Guide is to fully inform you about the "Clinical Pharmacy" master's program (MSc) in "Clinical Pharmacy" of the Pharmaceutical Technology Division of the Department of Pharmacy, National and Kapodistrian University of Athens (NKUA), for the academic year 2022-2023. More specifically, this Study Guide provides detailed information on the following:

- The history, organization, and operation of the NKUA and the Department of Pharmacy.
- The courses offered and their contents
- The teachers in each course
- Program Regulations
- Services offered.

In addition, we have recently implemented an advisory service for issues that concern you (online link: https://www.pharm.uoa.gr/sympliromatikes_ypiresies_gia_toys_foitites_farmakeytikis/), as well as an email address (suggestions@pharm.uoa.gr) for submitting suggestions from students regarding possible improvements of the services provided by our Department. We recommend that you frequently visit the website of the Department of Pharmacy, NKUA, to keep up to date with various current issues and updates to regulations and procedures. The successful completion of your postgraduate course, through your active participation in course lectures and your research work, will provide you with a thorough scientific training, and ensure your personal and professional success as an active member of society. The entire staff of our department is always at your disposal to discuss any educational and research issues and help you overcome any difficulties you may encounter.

Athens March 2023

The Coordinating Committee of the Clinical Pharmacy MSc Program

Georgia Valsami, Professor, (Program Director)

Evangelos Karalis, Associate Professor

Maria Vertzoni, Associate Professor

Aristides Dokoumetzidis, Associate Teacher

Nikolaos Drakoulis, Associate Professor

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1. HISTORY AND ORGANIZATION OF THE UNIVERSITY OF ATHENS

1.1 ESTABLISHMENT - NAME

The "Hellenic University of Otto", with four schools, was founded in 1837. The first rector was appointed Professor of History K.D. Schinas. "Semantors", i.e., deans, were Michael Apostolidis of the Theological Faculty, Anastasios Lefkias of the Medical Faculty, Georgios Rallis of the Law Faculty and Neophytos Vamvas of the Faculty of Philosophy. Later, in 1862, the institution was renamed "National University."

In 1911, to fulfill a condition of the will of the great benefactor of the university, Ioannos Dombolis, the "Kapodistrian University" was founded, to which the Faculties of Theology, Law, and Philosophy belonged. The remaining faculties, namely Medicine and Physics, formed the "National University". These two institutions, each with a separate legal personality, property, seal, and importance, had a common administration. By the Statute of 1932 (Law 5343), it was established that the two institutions constituted the "National and Kapodistrian University of Athens" (NKUA) with a common administration. The Constitution of June 9, 1975 (Article 16, paragraph 5), enshrined the full autonomy of the university as a higher educational institution. The organization of the university was reformed by Law 1268/1982 and today its operation is governed by Law 4009/2011 as amended and in force.

1.2 LOCATION

The University was initially housed under the Acropolis, in the private house of the architect Cleanthi, which has already been restored to its original form. The present main building (on Panepistimiou Street) was designed by the Danish architect Hansen, founded in 1839 and built and landscaped in stages. This building houses the Rector's Authorities and Administrative Services, apart from the Technical Service, which is housed on the Campus (Zografou), and the Administrative Directorate, the Financial Services, the Directorate of Faculty Offices, and the Directorate of Endowments, which are housed in the building at 6 Christou Ladas Street.

The Faculty of Theology is housed in its own building on the Campus. The Faculty of Law and the Faculty of Economics and Political Sciences are mainly housed in the Mansion of Theoretical Sciences, on Sina, Solonos and Massalias Streets. The Faculty of Medicine is housed in its own premises in Goudi and in various Hospitals, Clinics, etc. The Faculty of Philosophy is housed in its own building on the campus. The Faculty of Science and the Faculty of Pharmacy are housed in their own buildings on the campus. Also the Department of Physical Education and Sports Science is housed in the buildings of the old Easa in Daphne, the Department of Dentistry and the Department of Nursing in their own buildings in Goudi, the Department of Primary Education in 8 Hersonos Street and 57 Solonos Street, the Department of Kindergarten Education at 33 Hippokratous Street, the Department of Communication and Media at 5 Stadiou Street, the Department of Theatre Studies and the Department of Music Studies at the University Campus.

1.3 UNIVERSITY CAMPUS

In 1963, forest land in the municipalities of Zografou and Kaisariani was ceded.

of approximately 1,550 acres, from the state to the university, for the construction of the university campus. Initially, the large Student House, the sports facilities, the Technical Services building, and the Faculty of Theology were opened.

In July 1981, the new buildings of the Departments of Biology and Geology of the Faculty of Science were inaugurated and put into operation. In 1988, the building of the Faculty of Philosophy was inaugurated and put into operation, and in 1989, the construction of the premises of the Departments of Chemistry and Pharmacy was completed.

Today, many infrastructure projects have been completed (roads, lighting, water supply, car parking, restaurants, medical centers, reading rooms, kindergartens). A bus service has been provided to transport staff and students indoors. However, there are still many projects pending to complete the campus according to the original plan.

1.4. ADMINISTRATION

As a higher educational institution, the university is, according to the Constitution, a legal entity under public law, fully self-governing, supervised and subsidized by the State through the Ministry of Education, Research and Religious Affairs. The governing bodies of the University are the Senate, the Rector's Council, the Rector, and the Vice Rectors.

The Senate is made up of: a) the Rector; b) the Vice Rectors; c) the Deans of the Faculties; d) the Presidents of the Departments; and e) student representatives who make up 10% of the total number of Senate members in cases a) to d). The student representatives shall be at least one (1) representative from the undergraduate category and one (1) in total from the categories of postgraduate students and doctoral candidates, if any; f) three (3) representatives, one (1) from each of the Foundation's E.E.P. E.D.I.P, and E.T.E.P ; g) one (1) representative from the Foundation's administrative staff..

1.5. ACADEMIC UNITS AND TITLES OF STUDIES

Each foundation consists of schools. A school covers a set of related disciplines and ensures an interdisciplinary approach, communication between them, and the coordination necessary for teaching and research. The school supervises and coordinates the operation of the departments in accordance with their own regulations.

The schools are divided into departments. The Department shall promote science, technology, or the arts in the relevant scientific fields, organize teaching within curricula, and ensure continuous improvement in learning.

The Departments shall be divided into sections, which shall coordinate the teaching of part of the subject matter of the Department corresponding to a particular field or fields of science.

The governing bodies: a) of the Faculty, are the General Assembly, the Dean's Office and the Dean; b) of the Department, are the Department Assembly, the Board of Directors and the President of the Department; c) of the Section, are the General Assembly and the Director.

In addition to the degrees, the university also grants postgraduate degrees and doctoral degrees.

1.6 STAFF

The staff of the University consists of the Teaching Research Staff (D.E.P.), the Special Education Staff (E.E.P.), the Laboratory Teaching Staff (E.D.I.P.), the Special Technical

Laboratory Staff (E.T.E.P.) and the Administrative Staff. The teaching staff consists of professors (professors, associate professors, assistant professors) and lecturers in service. The teaching staff of the University also includes non-doctoral assistants who have remained at the University for doctoral studies, as well as research assistants and foreign language teachers.

1.7 STUDENTS

The students of the University are divided into undergraduate, postgraduate and doctoral students. Undergraduate students are those who attend the first cycle of studies, postgraduate students are those who attend the second cycle of studies and doctoral candidates are those who attend the third cycle of studies.

1.8 STUDENT CARE

The status of student is acquired upon enrolment at an HEI and is withdrawn upon receiving the degree.

Students are entitled to use all the facilities and means with which the UAS is equipped for the fulfilment of its educational work, in accordance with the internal regulations and the decisions of the competent bodies of the AEI.

1.8.1 SERVICES TO STUDENTS

University Club

The University Club, housed in the building at 15 Ippokratous Street, offers the student:

Health Service

Medical and Hospital Care for uninsured students of the Hellenic University of Cyprus

According to paragraph 3 of article 31 of Law 4452 /15-2-2017 (A' 17) "undergraduate and postgraduate students and doctoral candidates who do not have other medical and hospital care, are entitled to full medical and hospital care in the National Health System (E.S.Y.) with coverage of the relevant costs by the National Health Services Organization in accordance with the application of article 33 of Law 4368 /2016 (A' 83), only using their social security number (A.M.K.A.)

Information: Secretariat, tel. 210 3688208

Health Service of the University Club.

Office hours:

α) Pathology Clinics (tel. 210 3688241, 210 3688243)

- Monday - Wednesday - Friday 8.00 - 14.30

- Tuesday and Thursday 8.00 - 13.00

b) Ophthalmology Clinic (tel. 210 3688240)

- Monday - Wednesday - Friday 8.30 - 13.30

- Tuesday - Thursday 9.30 - 14.30

c) Dental Clinic (tel. 210 3688210, 210 3688211)

- Monday to Friday 8.30 - 13.30

d) Dermatological examination

The students of the N.K.U.A. have the possibility to be examined at the "Andreas Syngros" Hospital by arrangement with the Secretariat of the Health Service of the University Club.

Student Restaurants

The University of Athens, in order to provide food for its students, currently operates four restaurants: The restaurant at the Faculty of Philosophy, which serves students attending classes on the campus, the restaurant at Goudi's that serves students of Health Sciences, the restaurant at Dafni that serves students attending the Department of Physical Education and Sports Science and the restaurant at 14 Lycabettus Street that serves students attending classes in the center of Athens.

Free meals are provided to:

α) All active students of the Hellenic University of Athens, undergraduate, postgraduate and doctoral students, provided that they do not already hold a degree, postgraduate or doctoral degree respectively.

b)

i. Students registered as visiting students at the N.K.U.A., who come from other higher education institutions of the domestic territory in the framework of educational or other research cooperation programs, as defined in Article 36, par. 2 a and b of Law 4009/2011 (Art. 195).

ii. 2 a and b of Law 4009/2011.

c) Students who temporarily move from one higher education institution to another in Greece, in accordance with the Organization of the home institution, as defined in Article 36, par. 2 e of Law 4009/2011 (Art. 195).

d) Foreign scholarship holders of the Ministry of Education, Research and Religious Affairs who are pursuing undergraduate studies at the N.K.U.A.

For more information: <http://www.lesxi.uoa.gr>

Foreign Language Courses

The School of Foreign Languages of the NKUA is an independent and autonomous academic unit, which provides higher level language teaching.

Today, 27 languages of all levels are taught at the School.

In addition, special programs are offered for anyone wishing to specialize in language, translation, law or medicine. The School of Foreign Languages issues a Certificate of Attendance & Certificate of Studies to those who successfully complete the course in which they are enrolled.

Contact telephone numbers: 210 3688232, 210 3688263, 210 3688265, 210 3688266, 210 3688267, 210 3688204, 210 3688270.

For more information: <http://www.lesxi.uoa.gr>

Music Department

The Music Department is responsible for the musical education of students and in particular the organization of courses and seminars in musicology, music history, musical instruments, art, folk and Byzantine music, as well as the organization and operation of a student choir and orchestra.

The main core of its operation and its participation in university life was - and still is - the mixed choir and orchestra of the University of Athens with a repertoire of both classical and Greek music.

The performances of the Music Department in University ceremonies, in concerts inside and outside the University, in Greece and abroad, attract the interest of the students and are motivation for their participation in the Music Department, a place where, apart from the practice of art, not only the communication of persons is forged, but also - due to the different sciences the students study - inter-scholastic, interdisciplinary communication, a place where the student's university life is concentrated.

It has a large training room equipped with the necessary sound facilities, a music library with classical music, a discotheque with classical music records, a film library and other musical instruments.

The Music Department is located on the 4th floor of the University Club (Tel. 210-36.88.235, 210-36.88.229).

For more information: <http://www.lesxi.uoa.gr>

Gymnastics and Sports

The purpose of the University Gymnasium is the organization and operation of physical exercise programs and sports activities for students, including the teaching of the art of sports.

The University Gymnasium and its sports facilities in the University Campus - Ano Ilisia are available to all students of the University of Athens, so that they can participate in the various programs and sports sections, making use of their free time, organize their activities and give themselves a new quality of life and content, which will ensure their mental and physical health and contribute to the creation of a balanced personality.

Interested students can choose any of the activities offered, such as Tennis, Swimming, Football, Classical Gymnastics, Chess, etc.

Registration is open daily Monday to Friday from 10:00 to 13:30. To register, students must present their pass and a certificate from a physician or cardiologist.

The Gym is open continuously from 09:00 to 18:00 every day except weekends.

Apart from their recreational participation in the activities, the participating students can join the representative teams of their department and/or the University and participate during the academic year in internal, inter-university and international student leagues.

Information is available at the telephone numbers:

210 727 5551, 210 727 5557, 210 727 5560 and 210 727 5549.

Care for Housing and Work

The Public Relations and Student Employment Department of the Panhellenic Club has the following responsibilities:

- Informing students about a variety of issues that concern them, such as scholarships and awards, seminars, workshops, conferences. It also provides information on Student Housing issues (admission procedure to the Student Residence - renting apartments), and, in general, informs students about the benefits of the University Club and any other issue concerning student life at the University of Athens.

- It receives applications from students wishing to work and facilitates them in finding employment. It also registers - codifies requests from the labour market by informing and contacting students who meet the requirements - criteria mentioned in each request.

- It supervises the operation of the Cultural Club of Students of the University of Athens and undertakes, in cooperation with its Sections, the organization of various student cultural events.

The Department is located on the 4th floor of the University Club (Ippokratous 15). Contact phone: 210 368 8227 - 210 368 8251 - 210 368 8254

For more information: <http://www.lesxi.uoa.gr>

Liaison Office

The Liaison Office is the link between the University and the job search industry in order to provide services to students and graduates of the University of Athens. The main objective of the Liaison Office is to prepare new graduates for their smooth integration into the professional world, to facilitate and support them in their professional and educational career. The aim of the Liaison Office, through its career guidance services, is to support students-graduates in developing and continuously adapting their skills throughout their lives, alongside the new and ever-increasing demands.

More specifically, the Guidance Office provides the following services:

1. Development of advisory, career guidance, information, and guidance services for interested students and graduates at the NKUA, in order to facilitate the selection of the most appropriate professional and educational directions for them. Assistance and advisory support to students and graduates, both during the job search process and during the application process for postgraduate studies (drafting of CVs, letters of recommendation, preparation for selection interviews, etc.) through individual and group meetings, concerning the development of skills.

2. Development and enrichment of a Web site (<http://career-office.uoa.gr>) for students, alumni, businesses, and issues of academic interest.

3. Monitoring the labour market in a systematic way, recording vacancies/new jobs, informing students/graduates about the required job qualifications. Also, at regular intervals, organizes Career Days with the participation of major Greek and international companies.

4. Conducting surveys and studies regarding the situation in the labour market, the absorption of graduates and the productive sector in general. Occupational description guides and vocational guidance. Informing the departments of the Foundation and the Senate.

5. Publicity and dissemination of the results of the University of Athens Liaison Office. The Liaison Office participates in exhibitions, organizes workshops and publishes brochures and posters promoting its work. It invites speakers and cooperates with productive institutions and embassies to organize joint events.

6. Support the Youth Entrepreneurship Program, which aims to develop the entrepreneurial spirit.

7. Developing links with secondary education, the Counselling and Guidance Centers and the School Counselling and Guidance Offices.

8. International Career/Liaison Unit

Within the Liaison Office, the International Career Unit in the Regional Liaison Office of the Department of Political Science and Public Administration is operating on a pilot basis. It aims at the timely and systematic collection of all notices, competitions and vacancies in European and international organizations, non-governmental organizations, international missions and activities, research centers and other related needs, permanent or short-term. It also seeks to create a global network of Greek executives who serve or have served in international organizations.

Contact:

Central Liaison Office

Postal address,

Athens, 157 84 Athens, 157 84

Telephone: 210 727 5220, 210 727 5190

Fax: 210 727 5214

E-mail: gd@di.uoa.gr

Location on the map

Website

Regional Liaison Office of the Department of Political Science and Public Administration

Postal address.

Phone: 210 368 8947

E-mail: imeleas@pspa.uoa.gr

Student residences

The University of Athens operates the Student Residence of the University of Athens (FEPA) which consists of 4 buildings, dormitories A, B, C and D, located on the University campus. The old F.E.P.A. was also located there.

Only students of the NKUA as well as students of other universities and TEI of the basin, whose brothers and sisters already reside in the dormitory, are admitted to the dormitories.

The admission criteria are social and are described in the Operating Regulations, which also contain all the living rules.

A restaurant operates for the hostellers in building A. In the same building there are medical clinics that serve both the hostellers and the staff of the University Departments on campus. There is also a computer room.

For more information, students can contact the F.E.P.A. Secretariat.

The telephone number of the Student Housing Secretariat is.

Website: <http://fepa.uoa.gr>

Students' Cultural Club (P.O.F.F.P.A.)

For the entertainment and development of the students' artistic identity, the Students' Cultural Club operates, which includes the Theatre, Dance, Film and Photography Sectors.

The Students' Cultural Club aims to support and promote the artistic activities of the students of the NKUA. It is a "place" of collective expression and creation. Students are brought into contact with works of art and encouraged to create their own artistic works.

The Student Cultural Club includes (4) four areas.

To become a member of the P.O.F.F.P.A., a student need only apply in writing to the office of the area of interest (the Drama, Photography and Film are located on the Mezzanine Floor, while Dance is in the First Basement of the University Club).

210-36 88 205 - 210-36 88 275 - 210-36 88 276.

The Student Cultural Club of the NKUA is represented by a Management Committee, elected by election by all the members of the Student Cultural Club.

The Students' Cultural Club in cooperation with the Department of Public Relations organizes various cultural events and all students who wish to participate in them may do so.

Student Reading Rooms

The student reading rooms are in the building of the University Club, at 15 Ippokratous Street. There are two (2) Reading Rooms in the premises of the Student Club, at 15 Ippokratous Street (one on the 2nd floor, with 250 seats, and one on the 4th floor of the same building with 120 seats and 4 computers available to students). The reading rooms are open every day, except Saturday and Sunday, from 8 am to 9 pm. At the same time, a reading room is also open on the campus premises.

In the Reading Rooms, students' study with their own books or with books from the library, borrowed with their student or police ID card and by filling in a library loan form (internal borrowing). If the student has not yet been provided with a student ID card (newly enrolled students), the books are borrowed with another proof of the student ID card, together with the identity card. Books are not borrowed outside the Student Reading Rooms.

Tel: 210-3688219 (2nd floor), 210-3688231 (4th floor).

LIBRARY OF THE SCHOOL OF SCIENCE LOCATION

The Library of the Faculty of Science is housed in a building between the Departments of Physics and Mathematics, where the main entrance of the Library is located. There is a second entrance to the Library from the corridor on the 3rd floor of the Department of Mathematics.

CONTACT

Information: 210 727 6599, Secretariat: 210 727 6525

Website: <http://sci.lib.uoa.gr/>, E-mail: sci@lib.uoa.gr



OPERATING HOURS

The Library of the Faculty of Sciences is open:

Monday to Friday 08:30 - 19:00 and Saturday 09:00 - 14:00

The Library is closed on public holidays, as determined by the Rector's Council. During holidays (Christmas, Easter, summer) the opening hours are adjusted accordingly.

The Secretariat and the Interlibrary Loan Office are open Monday to Friday from 09:00 to 15:00.

COLLECTION

The Collection includes books, scientific journals (printed and electronic), postgraduate theses, doctoral dissertations, maps and other material in the following subject categories: Biology, Geology and Geo-environment, Mathematics, Computer Science and Telecommunications, Pharmacy, Physics, Chemistry.

LIBRARY SERVICES

READING ROOMS AND GROUP STUDY ROOMS

The Library has five reading rooms (3rd and 4th floors) and four group study rooms for six people (3rd and 4th floors).

PERIODICALS SHOWROOMS

The Library has a room on the 3rd floor where the latest issues of current periodicals (those available in print and for which subscriptions are still being taken out) are on display.

COMPUTER WORKSTATIONS (COMPUTER WORKSTATIONS)

In the Library (3rd and 4th floor) there are special areas with computer workstations for searching the material of the University of Athens Libraries in the Open Public Access Catalogue (<http://www.lib.uoa.gr/yphresies/opac/>).

All users of the Library have the possibility to search and access the full text of articles of the scientific journals of the Consortium of Hellenic Academic Libraries (HEAL-LINK) on the website www.heal-link.gr, which supports more than 9,000 journal titles, the electronic subscriptions of scientific journals of the University of Athens which supports more than 1,000 journal titles, as well as bibliographic databases and other services through the website of the University of Athens Libraries (<http://www.lib.uoa.gr>).

Computers are also available in a reading room on the 3rd floor of the Library, which all members with a lending card are entitled to use.

In addition, users can also use their personal laptops, with wireless connection in the reading rooms and wired connection in the group study rooms.



LENDING

The following are entitled to borrow books: a) Members of the Teaching, Research, Administrative and other staff of the University of Athens and b) undergraduate and postgraduate students of the Faculty of Sciences of the University of Athens.

The following are required for the issuance of the loan card:

- Identity card,
- ID card of the university community (Athens University ID card, student ID card),
- one (1) photograph
- (1) one copy of the application form, one copy of the application form, one copy of the application form, one copy of the application form.

The application can be submitted at the Secretariat (Monday to Friday 08.30 - 15.00) and at the Service Office on the 3rd floor (daily 15.00 - 19.00 and Saturday 09.00 - 14.00).

The keeping of the file containing the above information is subject to the Personal Data Protection Act.

For the categories of users who are not able to borrow the material, entry to the Library is permitted upon presentation of their identity card, which is returned upon leaving. The lending card is non-transferable and can only be used by its holder.

Users of each category have the right to renew borrowed material up to two times. At the end of the last renewal and after 15 calendar days, the user may borrow the same item again. The Library reserves the right to recall borrowed material in cases of increased demand. Any user who needs material that is already on loan has the right to reserve it. The maximum limit for reserving material per user is two (2) items. If not requested within three business days, the right to reserve is lost. For material that has been reserved by more than one user, the borrowing period is reduced to better serve everyone.

The detailed User Regulations are available at: <http://sci.lib.uoa.gr/>.

RESERVATION

The Interlibrary Loan Office undertakes to search for books and journal articles in other libraries which are necessary for the user's study and research, and which are not in the Library's collection.

WORKSHOPS FOR PERSONS WITH DISABILITIES

On the third floor of the Library, in a specially designed area, there are workstations for people with disabilities. There are three workstations covering people with blindness, impaired vision, motor disabilities and deafness. The workstations are equipped with special devices and software to facilitate access to the computer, the Internet and the library's collections for all people with disabilities, especially for those who have problems in handling printed material (print disability). They can also be used in the context of writing assignments by students with disabilities or in the cooperation between students with disabilities and fellow students who are volunteers supporting their studies.



TRAINING OF USERS

Every Monday from 10:00-12:00 a tour of the Library and information about the Library's services is provided. Those interested can register by filling in their name on the special form (information at the Service Desk on the 3rd floor).

Accessibility Unit for Students with Disabilities

The mission of the Accessibility Unit for Students with Disabilities is to achieve in practice equal access to academic studies for students with different abilities and requirements. The means employed are Adaptations to the Environment, Assistive Information Technologies and Access Services. The aim is to meet the basic needs and requirements such as: interpersonal communication with members of the academic community, note-taking and writing assignments, access to university buildings, educational materials, classroom blackboard and projections, examinations, and internet content.

The Accessibility Unit includes:

- Registration Service.
- Electronic Accessibility Department.
- Department of Accessibility in the Built Environment.
- Transport Service.

The activities of the Unit include the systematic recording of the needs of all students with disabilities. The registration and services of the Unit are not only for students admitted with special provisions (3%), but also for those admitted with regular or special examinations, as well as for those who acquired a disability during their studies.

The Unit provides assessment of competences of disabled persons using scientific methodology and depending on the specific needs of the student, proposes a specialised Assistive Technology solution. It then helps in the procurement of appropriate equipment and software and technical support in the composition of the personalized technological application.

The Accessibility Unit provides expertise, guidance and tools on Internet Accessibility and checks the accessibility of the websites to ensure that they comply with international guidelines. In addition, the libraries are equipped with workstations and specialised aids for students with blindness, impaired vision, and those with upper limb disabilities.

The main service of the unit is the daily transportation of the FMEs from their homes to the study areas and vice versa. It has a specially designed vehicle that can transport five FmeAs at a time, two of whom are wheelchair or wheelchair bound. The service operates continuously on weekdays from 07:00 to 22:00 with two shifts of drivers.

In the field of Environmental Adaptations, accessibility standards are ensured in the new buildings under construction at the University of Athens and modifications are made to the existing buildings to make them accessible (installation of ramps, lifts, handrails, accessible toilets, special signage for people with visual impairment, low wall-mounted payphones and water coolers, parking spaces for disabled people). Finally, audible signage is installed at traffic

lights and special navigation paths on the pavements around the buildings of the University of Athens for people with visual impairment.

Information and dissemination activities are organized and information leaflets have been published and are available at the secretariats of all departments of the University of Athens.

Contact

Telephone: 210-727 5183

E-mail: access[at]uoa[dot]gr

1.8.2 SCHOLARSHIPS - AWARDS

Every year the University of Athens grants scholarships for undergraduate and postgraduate studies at home or abroad as well as awards to students, authors of scientific papers, etc. Scholarships and prizes are granted according to the will of the testator of each endowment, subject to certain conditions and sometimes by competition and sometimes by selection. The number of scholarship holders is not fixed or the same every year because it depends on the income of each endowment.

Here is a table of the endowment scholarships and awards that are also applicable to students in the Department of Pharmacy. More information can be obtained from the University of Athens Endowments Office (Christou Ladas 6, 6th floor).

Scholarships

1. Maria Avrasoglou: Scholarships, by selection, to students of all Schools and Departments of the NKUA, originating from Eastern Rumelia.
2. Ioannou Varyka: Scholarships, by competition, to students from all Schools and Departments of the NKUA.
3. Con. Con: Scholarships, after a competition, to students of all Schools and Departments of the NKUA, originating from Arta.
4. Theod. Theo: Scholarships, by selection, to students of all HEI's, originating from Siatista, Kozani.
5. E. Micheloudaki: Scholarships, by competition, to needy and financially generally weak students originating from the Prefecture of Rethymnon, who reside in Athens.
6. Sp. Sp. Baltatzi: Scholarships, by choice, to needy students of all the universities of the country, descended from the paternal or maternal line, from Syrrako, Ioannina.
7. Ant. Papadakis: Scholarships, after a competition, to students of all Schools and Departments of the NKUA.
8. S. Papazafeiropoulou: Scholarships, by selection, to students of all Schools and Departments of the Hellenic Universities, coming from the Municipality of Andritsaina, preferably, or from the Province of Olympia or finally from the Prefecture of Ilia, according to the criteria of the order of their admission to the Schools or Departments or their promotion from the previous to the next year of study, with preference to the needy.
9. Θ. Surli: Scholarships, by selection, to needy students of all the Schools and Departments of the NKUA, originating from the Laconia region.
10. Maria Stai: Scholarships, with selection, to Kytherian first-year students, in the order of their admission, in any Faculty of any University Sector of a Greek Higher Educational Institution, except the Military Schools, with preference to those admitted to the Physical and Mathematical Sciences.

11. I. Sfoggopoulou: Scholarships, after a competition, to needy students of all Schools and Departments of the NKUA, coming from the South of Magnesia and preferably from the twenty-four (24) villages of Pelion.
12. D. Skholari: Scholarships to needy or orphaned students preferably a) of all the Polytechnic Schools of the country and among them to be preferred the NTUA and b) of the other Schools and Departments of the country (origin from Vendisti [Amaranto N. Trikala]).
13. A. Topouzoglou: Scholarships to students of the NKUA, preferably needy, with Greek citizenship or coming from the Hellenism of Turkey.

Awards

1. P. Mari-Kamara: Award to the best students of all the Departments of the School.
2. Pantia Rallis.
3. E. Tsampoula: Award of a prize to a student, with satisfactory performance in the courses, of the Faculty of Medicine, preferably, otherwise of the Department of Dentistry, otherwise of any other Faculty or Department of the same, originating, in order of preference, either from Megalo Chorio Evritania, or from Karpenisi, or from the villages: Mikro Chorio, Vutyro, Aniada, Nostimo, Karitsa, Dermati.
4. Aspasia Papadaki-Valiraki: Awarded annually to an outstanding graduate of the Department of Pharmacy.
5. Evangelos Kostakis: Awarded annually to an outstanding graduate of the Department of Pharmacy.

1.8.3 FREE SUPPLY OF TEXTBOOKS

The distribution of textbooks from the academic year 2010-2011 is done through the information system EUDOXOS per course. Specifically, each student is entitled to only one textbook from the options provided by the program. The distribution of the declared textbooks is carried out by the bookstores in the program. Distribution of notes or aids available for the courses is done under the care of the Sections.

1.9. LABORATORY RESEARCHERS

The Department accepts Laboratory Researchers, holders of a master's degree or a Doctoral Degree, for research or postdoctoral research.

2. DEPARTMENT OF PHARMACY

2.1. HISTORICAL BACKGROUND

Pharmacy is one of the first sciences taught at the University of Athens.

On May 18, 1835, a Royal Decree was signed for the establishment in Athens of a "Theoretical and Practical Teaching House of Surgery, Medicine and Pharmacopoeia", exactly one year before the Royal Decree of 1836, which established the NKUA.

On July 15, 1838, a "Chair of Pharmacology" was established in the Medical School, providing the diploma of Pharmacist.

In 1843 the 'Pharmaceutical School' was founded, which was directed by the Dean of the Medical School.

In 1905 the School of Pharmacy was detached from the Faculty of Medicine and attached to

the Faculty of Physics and Mathematics.

It rejoins the Medical School in 1911 and in 1922 returns as the "Pharmacy School" to the Faculty of Physics and Mathematics.

In 1982 it was attached as the "Department of Pharmacy" to the Faculty of Health Sciences. Since 1990, by the decision of the Council of State No. 32/90, which annulled the Decree 410/87 on the establishment of the Faculty of Health Sciences, the Department of Pharmacy has been independent.

Following the Decree 85/2013 (Government Gazette 124/A/3-6-2013), the Department of Pharmacy was incorporated into the Faculty of Health Sciences of the National Academy of Sciences.

The teaching of Pharmacy began in the Royal Pharmacy at the corner of Academias and Vas. Sofias streets, while the first official Laboratory of Pharmaceutical Chemistry was established in 1837 in the basement of the University and in 1866 it was moved to two rooms on the ground floor.

In 1869, the so-called "Pharmaceutical Care Centre" was founded and located in the three north-eastern basements of the University.

In 1870 the first Chemistry Department was built in the courtyard of the Papadopoulou House at the corner of Academias and Massalias Streets and in 1928 it was moved to Solonos Street. This building was built in 1890, destroyed by fire in 1910 and reopened in 1913.

Since 1992 the Department of Pharmacy has been housed in the building complex of the Faculty of Sciences on the campus.

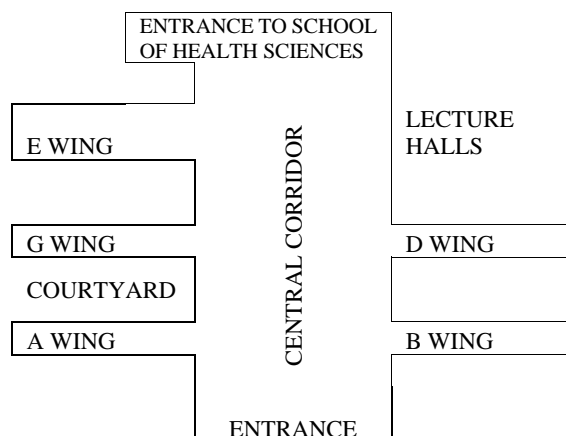
The first Chair of Pharmacy was Pharmaceutical Chemistry, and in 1932 the Chair of Pharmacognosy was established. The Chair of Pharmaceutical Technology was established much later, in 1979.

By Law 1268 of '82 these chairs were renamed as Sections.

2.2. BUILDINGS HOUSING THE DEPARTMENT OF PHARMACY

The Department of Pharmacy is housed in the Sciences building complex on the University campus. The Departments of Biology, Geology and Chemistry are housed in the same complex. The premises of the Department of Pharmacy occupy the north-eastern part of the complex. The building facilities of the campus and a brief architectural plan of the premises of the Department of Pharmacy are presented on the following pages.

The Department communicates internally with the other Departments of the complex through a grid of corridors.



**NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS
DEPARTMENT OF PHARMACY**

GROUND FLOOR

A WING	B WING
-Department of Pharmacognosy and Chemistry of Natural Products Laboratories (F.G.) -Research facilities for large laboratory animals	- Research facilities for small laboratory animals (Pharmaceutical Technology Division) - Research Laboratories of the Pharmaceutical Technology Division

1ST FLOOR DIVISION OF PHARMACOGNOSY AND CHEMISTRY OF NATURAL PRODUCTS			
A WING	B WING	D WING	CENTRAL CORRIDOR
- Offices for teaching staff - Laboratories	- Offices for teaching staff - Laboratories	- Conference Room - Laboratories	- Secretariat - Offices for teaching staff - Laboratories - Lecture Halls FM 1, FM 2

COURTYARD
-E-governance Department -Laboratories

2ND FLOOR DIVISION OF PHARMACEUTICAL TECHNOLOGY			
A WING	B WING	G WING	D WING
- Secretariat - Offices for teaching staff	- Laboratories	- Laboratories - Lecture Halls for Pharmaceutical Technology and Pharmaceutical Chemistry Divisions -Conference room for Pharmaceutical Chemistry Division	- Computer room - Lecture Halls

ENTRANCE TO SCHOOL OF HEALTH SCIENCES
- Secretariat of the Pharmacy Department

3RD FLOOR PHARMACEUTICAL CHEMISTRY DIVISION			
G WING	D WING	E WING	CENTRAL CORRIDOR
- Offices for teaching staff - Laboratories	- Offices for teaching staff - Laboratories	- Secretariat - Offices for teaching staff - Laboratories	- Offices for teaching staff

You can find the Department of Pharmacy at the following **pin**:

<https://www.google.com/maps/place/Φαρμακευτική+Σχολή+Πανεπιστημίου+Αθηνών/@37.9696581,23.7837173,16z/data=!4m5!3m4!1s0x0:0x866572f56749cc5e!8m2!3d37.9680259!4d23.7865689>

Access to the campus is by bus:

- 220 UPPER ILISIA - ACADEMIA (CIRCULAR)
- 221 UNIVERSITY CAMPUS PANEPISTIMIOPOLIS - ACADEMIA (CIRCULAR)
- 235 ZOGRAFOU - ACADEMIA (CIRCULAR)
- 224 KAISARIANI - EL. VENIZELOS (POLYGONO)
- 250 UNIVERSITY CAMPUS PANEPISTIMIOPOLIS - EVANGELISMOS (CIRCULAR)

E90 PIRAEUS - UNIVERSITY CAMPUS (SCHOOL EXPRESS)
140 POLYTONO - GLIFADA (Bus stop "Student Residence". Oulof Palme)
608 GALATSI - ZOGRAFOU

More information on timetables and stops can be found on the website: <http://www.oasa.gr>

3. POSTGRADUATE STUDIES AT THE DEPARTMENT OF PHARMACY

The Department of Pharmacy offers postgraduate programs leading to the Master of Science and Doctor of Philosophy degrees.

3.1 ORGANIZATIONAL STRUCTURE AND FUNCTION OF THE POSTGRADUATE STUDIES PROGRAMS

The Department of Pharmacy of the NKUA has been offering an organized Postgraduate Studies Program 1993-1994, in accordance with the provisions of articles 10 to 13 of the Law 2083/1992 and the 12-5-1993 decision of the Special General Assembly. The objectives of the postgraduate studies are the promotion of scientific knowledge and the fulfilment of the educational, research and development needs of Greece in the field of Pharmaceutical Sciences. Postgraduate studies aim to offer specializations to young scientists both in the wider field of Pharmaceutical Sciences and its more specialized branches to enable them to contribute to the educational and economic development of the country. In addition, postgraduate studies leading to the acquisition of a Doctorate Degree are designed to help scientists acquire the breadth of knowledge and research ability required for them to contribute to the further development of Pharmaceutical Sciences and their applications covering more than one specialization. To achieve the above goals, the Department of Pharmacy seeks cooperation with other Departments of the School of Health Sciences, but also other Departments of the same or other higher education institutions both in the country and abroad as well as with Industry. The Department of Pharmacy offers six MSc degree programs in the following fields:

1. Design and Development of New Pharmaceutical Compounds
 - a. Pharmaceutical Chemistry
 - b. Pharmacology
 - c. Radiopharmaceutical Chemistry
2. Pharmaceutical Analysis - Quality Control
3. Isolation, Development, Production and Control of Bioactive Natural Products
4. Industrial Pharmacy
5. Clinical Pharmacy
6. Cosmetology-Dermatopharmacology

In addition, the Department of Pharmacy awards a Doctorate in Pharmaceutical Sciences.

3.2 "CLINICAL PHARMACY" POSTGRADUATE STUDIES PROGRAM

3.2.1 "CLINICAL PHARMACY" COORDINATING COMMITTEE

(Decision of the Assembly of the Department 16.03.2023, topic 12)

- Director of "Clinical Pharmacy" Program: Valsami Georgia, Professor
- Karalis Evangelos, Associate Professor
- Vertzoni Maria, Associate Teacher

- Dokoumetzidis Aristides, Associate Professor
- Drakoulis Nikolaos, Associate Professor

3.2.2 OBJECTIVES AND EXPECTED LEARNING OUTCOMES OF THE CLINICAL PHARMACY PROGRAM

A. OBJECTIVE – PURPOSE

The purpose of the "Clinical Pharmacy" postgraduate program is to provide the pharmacist with the necessary knowledge to deal with problems that arise during the administration and use of medicines. More specifically, the program provides students with knowledge (theoretical as well as applied) in the fields of clinical pharmacology, pathology-pathophysiology, biopharmaceutics, theoretical and applied pharmacokinetics, statistics, as well as for laboratory and analytical methods in the diagnosis and therapeutic monitoring of patients and the treatment of interesting clinical cases and poisonings. The Clinical Pharmacy program aims to create an internationally recognized postgraduate program, which will stem a worsening brain drain with students resorting to studying abroad rather than remaining in this country. The postgraduate program leads to the award of a Postgraduate MSc Diploma in "Clinical Pharmacy" after the successful completion of all the required study courses outlined in the curriculum. The MSc degree is awarded by the Department of Pharmacy of the School of Health Sciences of the NKUA.

B. EXPECTED LEARNING OUTCOMES

Graduates of the "Clinical Pharmacy" program upon successful completion of the program know and understand in depth:

a.

- The correct and internationally accepted terminology and methodology used in the scientific fields that influence the teaching program as well as its interdisciplinary nature.
- Modern methods of research and development (R&D) within the field of Clinical Pharmacy and the individualization of pharmacotherapy.
- The methodology of statistical thinking, analysis, and presentation of data required to elicit scientifically sound and therefore rational conclusions.
- The basic principles of the application of pharmacokinetics in therapeutics and the individualization of pharmacotherapy.
- The basic principles of clinical pharmacology/pathology/pathophysiology for their application in Clinical Pharmacy and the individualization of pharmacotherapy.
- The correct methodology, and implementation of individualized pharmacotherapy protocols and approach to writing scientific articles.
- Good presentation skills and effective presentation techniques for research data, for the clear communication of research conclusions, and the knowledge, rationale, and logical assumptions on which they are based, both to specialized and non-specialized audiences.
- The real-time demands of the working environment due to mandatory clinical practice guidelines for scientists working within the entire spectrum of Clinical Pharmacy.

- b.** The correct application in their workplace of:
- i. Modern R&D methods and processes for the individualization and monitoring of pharmacotherapy, as well as problem solving techniques in the areas of Clinical Pharmacy.
 - ii. The statistical analysis and evaluation of scientific data.
 - iii. The analytical techniques required for the implementation and monitoring of individualized pharmacotherapy.
 - iv. The procedures developed within the MSc program and the publication of scientific articles.
 - v. The principles and methods of critical thinking
 - vi. The principles of effective communication and team spirit
- c.** Learning skills that will allow them to continue their studies at a PhD level in the field of Clinical Pharmacy.

3.2.3 ADMINISTRATION AND MANAGEMENT OF THE CLINICAL PHARMACY PROGRAM

Administrative bodies for the running of the MSc program according to the law 4957/2022 are:

A. At the Institution level:

A'1. The Postgraduate Studies Committee

A'2. The Senate.

B. At the Department level:

B1. The Assembly of the Department

B 2. The Coordinating Committee (SC)

B3. The Director of the MSc program.

C. Secretarial support for the postgraduate program:

a) The Secretariat of the Department of Pharmacy is responsible for the secretarial and administrative support of the postgraduate program. The Secretary of the Department has appointed a specific member of the secretariat to be responsible for the Postgraduate Programs of the Department (Ms. Aikaterini Nikolaidou, tel. 210 7274666)

b) An administrative employee of the division of Division of Pharmaceutical Technology also participates in the secretarial support of the postgraduate program (Ms. Vassiliki Papathanasiou, tel. 2107274367)

More information about the structure and administrative bodies of the MSc program is provided in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

3.2.4 CATEGORIES-NUMBER OF ENTRANTS – ENTRY PROCEDURE

For the postgraduate program in "Clinical Pharmacy", holders of a degree in Pharmacy from the Departments of Pharmacy of universities within the country or of similar, recognized by

the DOATAP (the Greek Accreditation Centre for foreign university degrees), foreign institutions, are accepted. The postgraduate program in "Clinical Pharmacy", accepts a maximum of 10 (ten) students each academic year. However, the maximum number of admissions is also determined by the number of lecturers and the student-teacher ratio for the MSc program, as well as the logistical infrastructure, lecture halls and the percentage absorption of graduates by the labor market.

In addition to the number of admissions, one (1) member of the Special Educational Staff (EEP), Laboratory Teaching Staff (EDIP) and Special Technical Laboratory Staff (ETEP) categories is accepted each year, if the work carried out by the applicant is related to the field of Clinical Pharmacy. The scholars of the State Scholarships Foundation (IKY) and the foreign scholars of the Greek state, with studies within the field of Clinical Pharmacy, may be enrolled, if they meet the selection criteria mentioned in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II). The "Clinical Pharmacy" program can accept a pharmacist, awarded a scholarship from the Hellenic Army, every three years as a supernumerary, upon recommendation of the SE and approval of the Assembly of the Department, according to the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II). It should be noted that the maximum number of postgraduate students in the postgraduate programs of the Department of Pharmacy is approximately 90 (ninety) per year compared to the number of approximately 190 (one hundred and ninety) undergraduate students per year and the 42 (forty-two) teaching staff of the Department of Pharmacy of the School of Health Sciences of the University. The above data are approximate and correspond to the data available for the year in which this Study Guide was written. Student selection is made in accordance with the current legislation and the provisions of Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II). The date for application submissions is posted on the website of the Department of Pharmacy of the NKUA in the period of June-July, following the approval of the Assembly of the Department of Pharmacy. The selection process is the one described in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

3.2.5 DURATION OF STUDIES - STUDENT STATUS

Student status is obtained by registering for the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy, NKUA. The period of study for the Postgraduate Diploma is defined as 3 (three) academic semesters, during which time the diploma thesis must also be completed. In special cases, an extension can be granted, if the student submits a written application detailing the reasons for requesting the extension, which is thereby forwarded by the SC and approved by the Assembly. The extension may not exceed 1 (one) additional academic semester, to support the thesis, provided that the written application is made at least two months before the end of the 3rd semester. Thus, the maximum time allowed to complete the postgraduate program is set at four (4) academic semesters.

Students who have not exceeded the 4-semester upper limit allowed for completion of the program, may apply to the Department Assembly, for a suspension of studies for a period that does not exceed two (2) consecutive semesters. Suspension of studies is granted for serious reasons (military service, illness, pregnancy, absence abroad, etc.). Attending another postgraduate or other educational program does not constitute a serious reason for granting

a suspension. The application must be justified and accompanied by all relevant supporting documents from public authorities or organizations, which attest to the reasons for suspension of studies. Student status does not apply during the suspension and participation in any educational process is not allowed. The duration of the suspension is not added to the maximum time allowed for the study program. At least two weeks before the end of the suspension, the student must re-enroll in the program to continue his/her studies with full active student status. Students may apply to interrupt their suspension of studies and return to the program only if they have requested suspension of studies for two consecutive academic semesters. The request to stop the study suspension must be submitted no later than two weeks before the start of the second semester of the suspension. The duration of the suspension or extension of the study period is discussed and approved on a case-by-case basis by the SE, which then makes the appropriate recommendation to the Department Assembly. Part-time or distance learning is not allowed.

3.2.6 STUDY PROGRAM

The postgraduate program starts in the winter semester of each academic year. A total of ninety (90) credits (ECTS) are required to obtain the diploma. All courses are organized in semesters, taught weekly and additionally include laboratory exercises, clinical practice, seminars, and the preparation of a diploma thesis. The language of instruction is Greek. If a foreign lecturer is invited as part of a course, the lecture is given in English.

During their studies, postgraduate students are required to attend and pass all postgraduate courses, complete the clinical practice course and their research project for their postgraduate thesis. The language of the master's thesis is Greek or English with the supervisor's consent. Courses are taught live, in accordance with current legislation, defined in article 7 of the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II). The course content and schedule for the academic year 2022-2023 is structured as follows:

First Semester	Teaching hours / week^a	ECTS^β
Clinical Pharmacology I / Pathology/Pathophysiology I	4	6
Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients	3	5
Statistical Methods and their applications in Pharmaceutical Sciences	2	4
Advanced Biopharmaceutical-Pharmacokinetics	2	4
Application of Pharmacokinetics in Therapeutics	2	3
Diploma thesis ^c	13	8
Total	26	30
Second Semester	Teaching hours / week^a	ECTS^β
Clinical Pharmacology II / Pathology/Pathophysiology II	5	8
Investigation of interesting case studies in therapeutics and poisonings	3	5
Seminars ^d	2	1

Diploma thesis ^c	25	16
Total	35	30
Third Semester	Teaching hours / week^a	ECTS^β
Clinical Practice ^c	25	28
Diploma thesis ^c	3	2
Total	28	30
Total Number of Credit Units		90

^a in the case of the diploma thesis, the number of hours corresponds to the hours a student is occupied with research work.

^b the number of credits was calculated assuming that one (1) credit corresponds to twenty (25) hours of total work (teaching, workshops, and personal study).

^c Includes research work, writing and presentation of the thesis.

^d the total number of seminars includes twenty (20) teaching hours distributed over three semesters.

^e Five (5) months of clinical practice with daily attendance of hospital clinics for (5) hours. In addition, processing, evaluation, and presentation of interesting clinical cases.

3.2.7 CONTENT/DESCRIPTION OF COURSES

First Semester

Clinical Pharmacology I/ Pathology – Pathophysiology I

Content: Reference to Clinical Pharmacology, basic pathophysiology, etiology, symptomatology, and differential diagnosis of the following diseases:

- Digestive System Diseases
 - Esophageal Diseases and Disorders: Gastroesophageal reflux, esophagitis, Barrett's esophagus, motility disorders, achalasia, polyps
 - Diseases of the stomach and duodenum: gastritis, ulcer, Zollinger-Ellison syndrome
- Cardiac Diseases
 - Hypertension
 - Arrhythmias centered on Atrial Fibrillation
- Neurological Diseases
 - Epilepsy
 - Parkinson's disease
 - Multiple Sclerosis
 - Vascular Strokes
- Psychiatric Diseases
 - Mood disorders - antidepressants
 - Antipsychotics
 - Anxiolytics, hypnotics, psychotropic drugs, CNS drugs
- Infectious diseases
 - Recording a patient history
 - Classification of microorganisms/ Microbiological diagnosis
 - The phenomenon of antimicrobial resistance
 - Pharmacokinetics-Pharmacodynamics of antimicrobials
 - Infections treated with: β -lactams, aminoglycosides, cephalosporins, carbapenems, macrolides, quinolones, glycopeptides-, colistin, linezolid, tigecycline, daptomycin
 - The pathogenesis of infections

- Upper respiratory infections
- Community-acquired pneumonia
- Urinary tract infections
- Hepatitis
- Gastroenteritis
- Hygiene in the Hospital
- Rational use of antibiotics
- Epidemic outbreaks

Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients

Content:

- Biological Fluids. Sample pretreatment for the analysis of drugs in biological fluids (protein removal, liquid-liquid extraction, solid phase extraction).
- Selection and Optimization of a high-performance liquid chromatography method and biological sample pretreatment based on bibliographic references.
- Laboratory exercise: Determination of ketoconazole in plasma with high performance liquid chromatography and UV detector.
- Introduction to Medical Laboratories
 - Analytical Evaluation of Laboratory Measurements
 - Characteristics and evaluation of analytical methods
- The concept of quality in Medical Laboratories
 - Quality control of laboratory results
 - Internal – IQC
 - External - EQA-PT
- Clinical evaluation of laboratory results
 - Evidence-Based Laboratory Medicine
 - Reference values and their determination
- Hematology and Medical Laboratory
 - Coagulation and hemostasis
 - Hematology and coagulation analyzers
- Organization of Medical Laboratories
 - Organization of Medical Laboratories
 - Certification-Accreditation of Medical Laboratories
- Introduction to POCT
 - POCT Analyzers
 - The quality in the "small" laboratory
 - Management of POCT results
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (1):
 - Metabolism, Carbohydrates, Proteins, Kidneys, Lipids, Electrolytes, Acid-Base Balance, Liver and Enzymes, Cardiac Markers, Immunoglobulins and Hematopoiesis, Vitamins.
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (2):
 - Thyroid, Bone diseases, Neoplasms, Targeted anticancer therapy, Reproductive hormones, Autoimmune diseases,
 - Pituitary gland and Development
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (3):
 - Trace elements, Medicines, Autoimmune diseases,
 - TORCH, Hepatitis, Cardiovascular Risk & Inflammation

Statistical methods and their applications in pharmaceutical sciences

Content:

- Descriptive Statistics (measures of centrality and dispersion).
- Probability Distributions (Binomial, Poisson, normal, standard normal). Examples and Applications
- Probabilities (Definitions-actions, bounded probability, Bayes Theorem. Prior and posterior probability. Examples and Applications.
- Statistical Inference: Introduction, Variables, Categories of statistical methods, Procedure for choosing the most appropriate
- Statistical Inference: Statistical Estimation, One Sample, Examples and Computer Application
- Statistical Inference: Statistical Estimation, Two Samples, Examples and Computer Application
- Statistical Inference: Hypothesis Testing, One and Two Samples, More than Two Samples, Examples and Computer Application
- Linear Regression and Correlation (I): Linear Regression Analysis
- Linear Regression and Correlation (II): Correlation
- Linear Regression and Correlation (III): Numerical examples, Student-solved exercises - Discussion, PC application
- Special cases of linear regression analysis (I): Type II regression and Weighted regression analysis
- Special cases of linear regression analysis (II): Outliers - outlying observations a) in a continuous variable and b) in linear regression and correlation problems
- Non-linear regression analysis

Advanced Biopharmaceutics - Pharmacokinetics

Content:

- Mathematical processing of the process of absorption Wagner – Nelson method. Reference to the Loo – Riegelman method
- Multicompartment Pharmacokinetic Models: Introduction, Reference to the mathematical Laplace transform, Fundamentals of a General Method for Solving Multicompartment Pharmacokinetic Models
- Non-compartmental pharmacokinetic analysis: Convolution - Statistical moments
- Nonlinear kinetics: Applications in pharmacokinetics (biotransformation and carrier-mediated transport), Emphasis on fundamental parameters: Clearance, half-life, AUC
- Gastrointestinal absorption models: Partition pH hypothesis–Absorption potential– Macroscopic approach–Microscopic approach-BCS–BDDCS. FDA, EMA guidelines for biorelease
- Physiological Pharmacokinetic Models: Definition – Principles – Objectives of Physiological Pharmacokinetic Models, Development of the model: Types of Physiological Pharmacokinetic Models - Processes considered - Evaluation of the model / Advantages – Disadvantages of Physiological Pharmacokinetic Models Examples
- Dynamic models of gastrointestinal absorption: Dispersion model - Remaining length for absorption, Mixing reservoir model, Compartmental model of passage and absorption
- Identification of problems related to per os administration in the stage of discovery and early stages of the development of new drugs
- Per os administration: Optimizing the process of drug arrival in the general circulation (I), Addressing problems not related to the arrival in the portal vein
- In vivo methodologies to assess the absorption of drugs administered per os (I)

- Dealing with problems related to the arrival of the drug in the portal vein, Experiments on experimental animals
- In vivo methodologies to assess the absorption of drugs administered per os (II)
- Human experiments – Bioequivalence studies (I) – Design and implementation of the clinical part, Bioequivalence studies – Pharmacokinetic analysis of the data – Statistical analysis of the data
- Pharmacokinetic/Pharmacodynamic models:
- Coupling Model - Pharmacodynamic compartment, Direct coupling, Indirect coupling
- Drug kinetics in the pharmacodynamic compartment, FK-FD model coupling
- Examples – Exercises

Application of Pharmacokinetics in Therapeutics

Content:

- Influence of the criticality of the patient's condition on pharmacokinetics
- Effect of pregnancy on pharmacokinetics
- Clinical pharmacokinetics in burn patients
- Effect of smoking on pharmacokinetics
- Effect of liver function on pharmacokinetics
- Effect of renal function on pharmacokinetics
- Pharmacokinetics in the elderly
- Pharmacokinetics in children
- Effect of food on pharmacokinetics I: General part
- Effect of food on pharmacokinetics II: Special part - examples
- The role of gender in Pharmacokinetics
- The use of Pharmacokinetics to establish the therapeutic equivalence of drugs
- Population pharmacokinetics and Bayesian dose personalization with NONMEM: Theory
- Population pharmacokinetics and Bayesian dosage personalization with NONMEM: Laboratory

Second Semester

Clinical Pharmacology II / Pathology – Pathophysiology II

Content:

Reference to Clinical Pharmacology, basic pathophysiology, etiology, symptomatology, and differential diagnosis of the following disorders/diseases:

Cardiac Diseases

- Coronary artery disease
- Myocardial infarction
- Heart failure

Eye Diseases

Nephrological Diseases

- Acid-base balance
- Cardiorenal syndrome
- Chronic kidney failure
- Water-electrolyte disorders

Skin diseases

- Psoriasis,
- Atopic dermatitis
- Acne
- Aging - Photoaging

Diseases of the Digestive System - Liver

- Diseases of the small intestine
 - Colon diseases: Ulcerative colitis-Crohn's disease
 - Liver diseases: Acute viral hepatitis, Drug-induced hepatitis, Chronic hepatitis (simple reference)
 - Pancreatic diseases
- Respiratory System Diseases
- COPD
 - Asthma
- Rheumatic diseases
- Differential diagnosis of rheumatic diseases
 - Autoimmune Connective Tissue Diseases, Systemic Lupus Erythematosus, Rheumatoid Arthritis
 - Angiitis
- Endocrinological diseases
- Diseases of the anterior and posterior lobe of the pituitary gland
 - Diseases of the hypothalamus
 - Thyroid diseases
 - Diseases of the adrenal glands
 - Diseases of the male and female reproductive system
 - Osteoporosis
- Pediatric Diseases
- Vaccines in children and adolescents
 - Infections in pediatric and adolescent medicine - urinary tract infections, vulvovaginitis
 - Child-Adolescent gynecology-andrology
- Malignant diseases
- General facts about Cancer
 - Melanoma
 - Gastrointestinal cancer
 - Head & Neck Cancer
 - Sarcomas
 - Early Breast Cancer
 - Metastatic Breast Cancer
 - Lung cancer
 - Gynecological Cancer
 - CNS cancer
- Other Topics
- Pharmacotherapy of acute and chronic pain
 - Enteral Nutrition and Enteral Nutrition Solutions
 - Parenteral Nutrition Clinical Decision System
 - Pharmaceutical errors and Anticoagulants in Clinical Practice
 - Pharmaceutical support for seriously ill patients
 - Chemotherapy, Targeted therapy, Immunotherapy in Clinical Practice

Investigation of interesting case studies of Therapeutics and Poisoning

Content:

- Analysis and presentation of interesting cases
- Differential diagnosis of poisonings
- Interaction of ethyl alcohol with drugs and food
- Problems that arise when giving medicines to children
- Investigation of poisoning incidents

Third Semester Clinical Practice

Content:

Clinical practice involves the application and development of the theoretical knowledge acquired during the two previous semesters and the further training of the students in the form of real-time practice in selected hospitals of the Attica region. It is carried out by clinical rotations in pathology, oncology, surgery, intensive care units, etc. Activities during clinical practice include- monitoring the clinical and therapeutic progress of patients, participation in medical visits, preparation and writing of reports of interesting clinical cases in which students are required to critically evaluate each patient's drug therapy. Each interesting clinical case assignment is corrected and graded. In addition, at the end of the academic semester, after the completion of the "Clinical Practice" course, there are written exams.

1st, 2nd, 3rd Semester

Bachelor's thesis

In the first, second and third semesters of the Program, students are required to plan, complete, interpret, and present their postgraduate thesis.

Content: The topics of theses come from the wide range of scientific fields covered during the course program. A thesis typically consists of a thorough investigation of an original research topic, based either on the application of theoretical knowledge to already available clinical data, or to new clinical data collected by the student, or in vitro work where data is collected through laboratory processes.

3.2.8 EXAMS - EVALUATION OF POSTGRADUATE STUDENTS

The educational work for each academic year is organized within two study semesters, the winter, and the spring, each of which includes at least thirteen (13) weeks of teaching and three (3) weeks of exams. The courses of the winter and spring semesters are reviewed repeatedly during the September term.

If a lecture does not take place, it is replaced by another, and students are informed of the date and time on the eclass website.

Attending courses/workshops, clinical practice, seminars, etc. is mandatory. A postgraduate student is considered to have attended a course (and therefore has the right to sit for the exam) only if he/she has attended at least 90% of the course hours. If the percentage of student absences exceeds 10% of the total number of courses, there is a question of his/her being dropped from the program. The matter in question is examined by the SE, which issues an opinion on the matter at the Department's Assembly.

Each students' attendance of the courses/seminars is monitored, and the supporting documentation of any absences is carried out by the Secretariat of the postgraduate program based on the absence reports submitted by the teachers upon completion of the courses, clinical practice, seminars, etc.

The evaluation of postgraduate students and their performance in each mandatory course takes place at the end of each semester with written or oral exams. In addition, the preparation of assignments and laboratory or clinical practice exercises may be evaluated throughout the semester. The evaluation method is defined by the teacher of each course.

Information regarding alternative assessment methods to facilitate students with disabilities or special educational needs, with ill health or recovering from a serious illness, are provided in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

Grading is done on a scale of 1-10. The results of the exams are announced by the teacher and sent to the Secretariat of the Pharmaceutical Technology Division and the Pharmacy Department within two (2) weeks after the examination of the course. If the student fails more than three (3) times in the same course, the procedure defined by the current legislation is followed and as described in the REGULATIONS FOR MANAGEMENT OF COMPLAINTS AND OBJECTIONS and in the REGULATIONS FOR PRACTICAL MOBILITY, PRACTICE AND RESEARCH WORKS STUDIES, which are posted on the website of the postgraduate program in "Clinical Pharmacy" of the Department of Pharmacy. To obtain his/her diploma, each postgraduate student must attend and be successfully examined in all the offered courses of the program and prepare and present a postgraduate thesis, thus accumulating ninety (90) ECTS. The overall grade for the MSc diploma is derived from the sum of the products (credit units x course grade) plus (credit units x thesis grade) times the total number of courses and thesis credit units. More information about the calculation of the final grade for the Degree is given in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

3.2.9 CLINICAL PRACTICE

Clinical training (Clinical Practice) takes place throughout the 3rd semester of studies. It is a mandatory course, credited with twenty-eight (28) ECTS and takes place in public and private Hospitals within the Attica region, in their respective pathology, oncology, surgical clinics, intensive care units, etc. Clinical practice training is performed under the supervision of the course coordinator(s).

The evaluation process for the Clinical Practice course is carried out in accordance with the process of evaluation described in a previous section (see paragraph 3.2.8) and includes:

1. Evaluation of the case studies written and submitted by the students throughout the clinical practice semester.
2. A written final exam.

3.2.10 PREPARATION OF POST GRADUATE THESIS

The preparation of the postgraduate diploma thesis is mandatory. It takes place in the 1st, 2nd, and 3rd semesters of the "Clinical Pharmacy" postgraduate course and is credited with twenty-six (26) ECTS. Research work for the thesis can be carried out at a foreign University within the framework of the ERASMUS program in accordance with the "Mobility Regulation" of the ERASMUS program, (Erasmus_Programme_Guide2023_en, <http://www.interel.uoa.gr/erasmus.html>) of the NKUA.

Following an application by the candidate in which the proposed title of the thesis is submitted, the supervisor is named, and a summary of the proposed thesis is attached, the SE of the postgraduate "Clinical Pharmacy" program submits a relevant recommendation to the Assembly of the Department, which then designates its supervisor and appoints the Three-member Examination Committee for the appraisal of the work, one of whose members is the supervisor. At least two members of the Examination Committee must be members of the teaching staff of the Department of Pharmacy. The postgraduate diploma thesis must be individual, original, have a research character and be drawn up in accordance with the writing instructions mentioned in the REGULATION FOR PRACTICAL RESEARCH WORK STUDIES, which is posted on the website of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy. The writing language of the master's thesis can be Greek or English, with the consent of the supervising professor. To write the master's thesis, candidates must follow the instructions listed below:

Layout and content of the thesis

- The cover and title page should contain the following:
 - The emblem and logo of the NKUA (cyan)
 - SCHOOL OF HEALTH SCIENCES
 - DEPARTMENT OF PHARMACY
 - PHARMACEUTICAL TECHNOLOGY DIVISION
 - POSTGRADUATE DIPLOMA "CLINICAL PHARMACY"
 - TITLE of the thesis
 - The words "Diploma Thesis"
 - Full name of the postgraduate student
 - Title/Qualification of the postgraduate student (Pharmacist)
 - Postgraduate Student Registration Number (#)
 - The word "Athens" and the date of the public support of the thesis (at the bottom of the page)

- Pagination must be done in the following order:
 - Initial pages, with Latin numbering (small letters):
 - Title Page (without visible numbering)
 - Three-member Examination Committee (names, ranks)
 - Preface, Acknowledgments (Dedications, optional)
 - Summary, Keywords (Greek and English)
 - Contents index
 - List of Abbreviations / List of Symbols (optional)

- The main text is separated into sections, with regular numbering starting from 1
 - 1 Introduction
 2. Methodology
 3. Results – Discussion
 4. Conclusions

- References
 - Appendices (if any)

- Page Formatting:
 - Line spacing: 1.5 line
 - Font: Calibri or Times New Roman 11
 - Double-sided printing

- Examples of References:
 - Citation within the text: (surname of first author et al., year of publication).
 - In the case of two authors, both names are listed in parentheses after the year of publication. - Surnames are listed without initials unless there is a synonym.
 - The references are listed alphabetically and then chronologically.
 - If the same author has more than one reference, then these are listed chronologically, for example: (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999; Kramer et al., 2010). In the "References" section these are listed alphabetically.

- For the thesis to be approved, the student must publicly support its content before the Examination Committee. The thesis is graded on a scale from zero to ten (0 – 10), the pass grade being five (5). All the theses are presented during the last month of the three academic semesters.

At the end of the three semesters, the master's student must have completed and supported his thesis (students granted "extension" or "suspension" of their studies are excluded).

- If the student fails to support his/her thesis successfully i.e., obtains an average grade of less than five, or fails to complete the thesis within the time allowed, he/she will be obliged to stop his studies. Postgraduate theses, once approved by the examination committee, must be uploaded onto the "PERGAMOS" Digital Repository, in accordance with the decisions of the NKUA Senate. Since the postgraduate diploma thesis contains original unpublished results, the full text may be published later, at the supervisor's request (countersigned by the postgraduate student), and only the abstracts loaded onto the website.

Copyright for research work presented in diploma thesis.

The primary goal of the research, which is carried out for the diploma thesis, is the education of the postgraduate student and the acquisition of research experience. The research topic can be part of continuous and often long-term research project conducted by research groups/supervisors within a specific field of science, often as part of a research program. Each postgraduate student keeps a continuous research diary. This diary, as well as the related primary data and other files (spectra, electronic files, etc.) belong to the Laboratory where the student carries out the work and must remain there after the student completes his studies.

The supervising professor is responsible for the presentation of results to third parties (publications in journals, announcements at conferences, reports to institutions, patents, etc.), including reference to the postgraduate student, in accordance with international practice and scientific ethics. The use of the research results in any way (including financial exploitation) is regulated based on the regulations of the NKUA and the institution's contracts with third parties.

3.2.11 TUITION FEES – TUITION EXEMPTION

For their participation in the "Clinical Pharmacy" postgraduate program, students must pay tuition fees amounting to €800 per semester. The fee is paid at the beginning of each semester.

The payment of tuition fees is carried out by the student himself or by a third party or legal representative on behalf of the student if this is allowed within the regulations of the postgraduate program.

If a student drops out of the study program or in the event of a cessation of his/her studies, for whatever reason, the study fees that have already been paid are not refunded.

Students who meet specific financial criteria and conditions for excellence during the first cycle of studies, according to the current regulations, may be exempt from tuition fees. This exemption is granted for participation in a single postgraduate program. The number of students who are exempt may not exceed thirty percent (30%) of the total number of students admitted to the program per academic year.

The application for exemption from tuition fees is submitted after the completion of the student selection process for the specific program. The financial situation of a candidate is under no circumstances a reason for non-selection to the postgraduate program.

Those who receive a scholarship from another source are not entitled to an exemption, nor are citizens of non-EU countries. The members of the E.E.P., E.D.I.P., E.T.E.P. categories, who are accepted as supernumeraries (see APPENDIX II), are exempt from paying tuition fees. If members of the same family up to a second-degree relative are studying at the same time, a 50% reduction in the tuition fees may be granted. More information about the tuition waiver process is given in the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

3.2.12 OBLIGATIONS AND RIGHTS OF POSTGRADUATE STUDENTS

1. Postgraduate students have all the rights and benefits as those of students within the undergraduate program of studies, until the end of any granted extension of study, except for the right to receive free textbooks.
2. The University ensures that students with disabilities and/or special educational needs have access to the proposed texts and teaching (<https://access.uoa.gr/>).
3. The NKUA Liaison Office provides advisory support to students in matters of study and professional rehabilitation (<https://www.career.uoa.gr/ypiresies/>).
4. Postgraduate students are invited to participate and attend research group seminars, informative discussions, laboratory visits, conferences/workshops within any subject relating to that of the Clinical Pharmacy, as well as lectures or other scientific events organized by the "Clinical Pharmacy" program, etc.
5. The Assembly of the Department of Pharmacy, after the proposal of the SE, may decide to permanently suspend a student's studies if he/she:
 - exceeds the maximum number of absence days allowed,
 - fails the examination of a course or courses and has not successfully completed the program, in accordance with the current regulation,
 - exceeds the maximum duration of the study program, as defined in the regulation,
 - has violated the written provisions regarding the treatment of disciplinary offenses,
 - has not paid the tuition fees,
 - requests a cessation of studies.
6. If a postgraduate student is suspended from the program, he/she may request a certificate acknowledging that he/she has attended certain courses and has successfully passed the examination of those courses.
7. Students may participate in international student exchange programs, such as the ERASMUS + or CIVIS program, according to the current legislation. The maximum number of ECTS recognized for these programs is thirty (30). More specifically, the diploma thesis may be carried out at a foreign University within the framework of the ERASMUS program in accordance with the "Mobility Regulation" of the ERASMUS program, (Erasmus_Programme_Guide2023_en, <http://www.interel.uoa.gr/erasmus.html>) of the NKUA, after the first semester of studies. Students should apply to the SE of the postgraduate program and follow the terms of the program.
8. Students from international student exchange programs, such as the ERASMUS+ program, may also attend the postgraduate programs in accordance with the terms of the reciprocal agreements made between the universities and providing that the students have the required knowledge of the Greek language i.e., a B2 language certificate, or have the language level specified by the corresponding program.
9. The postgraduate students of the NKUA may register in the postgraduate program of the same or other institutions for higher education of the country or abroad in accordance with the educational or research cooperation programs referred to in the current legislation.
10. It is possible to attend in parallel another undergraduate study program or postgraduate study program or two (2) postgraduate studies programs of the same or another department, in the same or another institution for higher education.
11. At the end of each semester, an evaluation of each course and each teacher is carried out by the postgraduate students (see paragraph 3.2.10).
12. Postgraduate students can request the issuance of a diploma supplement in Greek and English (see APPENDIX I).
13. For their participation in the "Clinical Pharmacy" program, postgraduate students must pay tuition fees amounting to €800 per semester. The fee is paid at the beginning of each semester.
14. In the event of permanent cessation of studies or suspension of a postgraduate student, for any reason, the study fees that have already been paid are non-refundable.

3.2.13 MANAGEMENT OF STUDENT COMPLAINTS/OBJECTIONS

All members of the SE (Coordinating Committee) of the "Clinical Pharmacy" program fully recognize, that the submission, management, and resolution of issues arising from the submission of complaints and/or objections by students is an extremely important process for the improvement of the services provided at a personal, educational, and administrative level.

For this reason, the submission of complaints and/or objections by students is regarded as an opportunity for improvement and is encouraged and managed on a one-to-one basis.

More specifically, student complaints and objections are dealt with in accordance with the procedure clearly described in the "Complaints and Objections Management Regulations" of the "Clinical Pharmacy" postgraduate program, which is posted on the "Clinical Pharmacy" website of the Department of Pharmacy.

3.2.14 ACADEMIC ADVISOR INSTITUTION

The basic principle of the "Clinical Pharmacy" program, Department of Pharmacy, is mutual respect between student and teacher. For this purpose, the "Clinical Pharmacy" program has adopted the institution of the Academic Adviser.

The institution of the Academic Adviser is based on article 35 (Law 4009/2011 Official Gazette A 195) which states the following: "The academic advisor guides and supports students in their study programs. The assignment of study advisor duties to professors is defined in the Internal Regulation of each institution and related issues are regulated".

The institution of the Academic Adviser was started to facilitate undergraduate students to complete their studies in a more efficient way, aiming to reduce the "stagnation" of students. Something similar also applies to postgraduate students, who are invited to make use of the institution of the Academic Adviser to resolve any difficulties that may arise. With the institution of the Academic Adviser, each postgraduate student is given the opportunity to have direct and meaningful communication with the professors responsible for their education. In this way, each student will be able to get reliable information about the issues that concern him/her, such as his/her personal values and goals and their harmonization both with the postgraduate educational program and their integration into society as young scientists.

The Role of the Academic Adviser and the procedures included in the institution of the Academic Adviser are clearly described in the relevant "Regulations for the Operation of the Academic Adviser Institution" of the "Clinical Pharmacy" program, which is posted on the website of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy.

3.2.15 TEACHERS FOR EACH COURSE OF THE CLINICAL PHARMACY PROGRAM

The teaching work of the "Clinical Pharmacy" MSc program is assigned, after the approval of the Assembly of the Department of Pharmacy, following a pertinent proposal from the SE of the program, in accordance with the Internal Regulation for the Operation of the postgraduate program in "Clinical Pharmacy" (see APPENDIX II).

The detailed program and the summary content of the courses are mentioned in paragraphs 3.2.6 and 3.2.7.

The teachers per course for the academic year 2022-2023 are:

Statistical Methods & Their Applications in Pharmaceutical Sciences

Lecturers: Chr. Reppas (Professor), G. Valsami (Professor), M. Christoforou-Symillidou, (Associate Professor), A. Dokoumetzidis (Associate Professor), P. Macheras (Professor), Department of Pharmacy, NKUA.

Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients

Lecturers: M. Vertzoni, (Associate Professor, Department of Pharmacy, NKUA), A. Haliasos, (Clinical Chemist, Physician).

Clinical Pharmacology I/Pathology-Pathophysiology I

Lecturers: S. Markantonis-Kyroudis (Professor-Coordinator), N. Drakoulis (Associate Professor,) Department of Pharmacy, NKUA, E. Giamarellos-Bourboulis, (Professor, School of Medicine, NKUA), G. Vaiopoulos, (Professor, School of Medicine NKUA).

As part of the course, the following will offer informative lectures:

Ch. Dalla (Associate Professor, School of Medicine, NKUA), K. Koumakis (Neurologist, Euroclinic of Athens), N. Kokras (Scientific Associate, School of Medicine, NKUA), S. Gatzonis (Professor, School of Medicine, NKUA), E. Triantafyllidis (Cardiologist, Hospital "ATTIKON").

Advanced Biopharmaceutics-Pharmacokinetics

Lecturers: Chr. Reppas (Professor), G. Valsami (Professor), M. Christoforou-Symillidou (Associate Professor), P. Macheras (Professor), Department of Pharmacy, NKUA.

Applications of Pharmacokinetics in Therapeutics

Lecturers: S. Markantonis-Kyroudis (Professor), A. Dokoumetzidis (Associate Professor), E. Karalis (Associate Professor), Department of Pharmacy, NKUA

In the context of the present course, Dr. D. Panidis (PhD. of Pharmacy, EKPA, E.O.F.) will give a lecture.

Clinical Pharmacology II/Pathology-Pathophysiology II

Lecturers: S. Markantonis-Kyroudis (Professor-Coordinator), I. Andreadou (Professor), N. Drakoulis (Associate Professor) Department of Pharmacy, NKUA, X. Liapi (Professor of Pharmacology NKUA), F. Bakopoulou (Associate Professor Pediatrician-Pharmacist, School of Medicine NKUA), G. Vaiopoulos (Professor, School of Medicine NKUA), M. Rallis (Associate Professor), Department of Pharmacy, NKUA.

As part of the course, the following will offer informative lectures:

D. Vlahakos (Nephrologist, Professor, School of Medicine NKUA), P. Kosmidis (Pathologist-Oncologist, Hygeia Hospital), P. Matsota (Professor of Anesthesiology, School of Medicine, NKUA), A. Karakatsani (Pulmonologist, Professor, School of Medicine, NKUA).

Investigation of Cases Studies in Therapeutics and Poisoning

Lecturers: S. Markantonis-Kyroudis (Professor) Department of Pharmacy, NKUA, M. Stefanidou (Professor) and A. Dona (Associate Professor) School of Medicine, NKUA.

As part of the course, the following will offer informative lectures:

C. Spiliopoulou (Professor), S. Athanaselis (Professor), A. Dona (Associate Professor), I. Papoutsis (Associate Professor), School of Medicine, NKUA.

Seminars

Coordinator/Lecturer: E. Karalis, (Associate Professor) Department of Pharmacy, NKUA

In the seminars, informative lectures will be offered by scientists of recognized prestige, who have specialized knowledge and relevant experience in the field of Clinical Pharmacy.

Clinical Practice

Coordinators/Lecturers: S. Markantonis-Kyroudis (Professor), E. Karalis, (Associate Professor) Department of Pharmacy, NKUA.

3.3 OATH OF THE POSTGRADUATE OF THE "CLINICAL PHARMACY" DIPLOMA COURSE, DEPARTMENT OF PHARMACY

Του Μεταπτυχιακού Τίτλου Σπουδών περί την Κλινικήν Φαρμακευτικήν του Τμήματος Φαρμακευτικής αξιωθείς, όρκον προ του Προέδρου του Τμήματος Φαρμακευτικής ομνύω και πίστιν καθομολογώ τήνδε. Της μεν επιστήμης ως οίον τε μάλιστα εν τω βίω επιμελήσεσθαι καπί το τελειότερον αυτήν προαγαγείν, παν δε ποιήσειν προθύμως ό,τι αν μέλλη ες ευσέβειαν οίσειν και κόσμον ηθών και σεμνότητα τρόπων, μηδ' εθελήσειν τανατία ων αυτός γινώσκω διδάσκειν μηδέ καπηλεύειν την επιστήμην.

Ταύτην μοι την επαγγελίαν επιτελούντι, εἴη μοι τον Θεόν αρωγόν κτήσασθαι εν τω βίω.

3.4 POSTGRADUATE STUDENTS' ASSOCIATION

SY.ME.F.F.A. was founded in 1998 by the Postgraduate Students of the Department of Pharmacy of the NKUA to improve communication, initially with each other and mainly with the Administration Bodies of both the Department and the University in general.

It has approximately 120 members and its activities concern all the Postgraduate Students of the Department of Pharmacy. It is managed by a 7-member Board of Directors, elected in a single ballot held in the month of May, after its last General Meeting. At these elections, a 3-member audit committee (for the financial transactions of SY.ME.F.F.A) is also elected.

Information: Secretariat of the Department of Pharmacy

<http://www.pharm.uoa.gr/symeffa>

4. DEPARTMENT OF PHARMACY TELEPHONE DIRECTORY

Head of Department: Christos Reppas (Professor) 727-4678

Department Secretary: Maria Xesfigi 727-4193

TEACHING STAFF

TEACHING STAFF (727-)

Aligiannis Nektarios, Associate Professor -4757

Andreadou Ioanna, Professor -4827

Chinou Ioanna, Professor -4595

Dallas Paraskevas, Assistant Professor -4677

Demetzos Konstantinos, Professor -4596

Dokoumetzidis Aristides, Associate Professor -4122

Dotsikas Ioannis, Associate Professor -4039, -4696

Drakoulis Nikolaos, Associate Professor -4225

Eleni Skaltsa, Professor -4593

Fokialakis Nikolas, Assistant Professor -4727

Halampalaki Maria, Assistant Professor -4781

Ioannou Efstathia, Associate Professor -4913

Karalis Evangelos, Associate Professor -4267

Kolokouris Antonios, Professor -4834, -4315

Kostakis Ioannis, Associate Professor -4212

Kourounaki Angeliki, Professor -4818, -4831

Loukas Ioannis, Associate Professor -4224, -4039

Louyakis Nikolaos, Assistant Professor -4759, -4184

Magiatis Prokopios, Associate Professor -4052

Marakos Panagiotis, Professor -4184, -4830

Markantoni-Kyroudi Sofia, Professor -4676

Michael Rallis, Associate Professor -4699

Mikros Emmanuel, Professor -4813, -4855

Mitakou Sophia, Professor -4597

Myrianthopoulos Vassilios, Assistant Professor -4353

Panteri Irimi, Professor -4820, -4823

Papanastasiou Ioannis, Assistant Professor -4828, -4808

Papapetropoulos Andreas, Professor -4786

Pippa Anastasia – Georgia, Assistant Professor -4025

Pouli Nicolais, Professor -4185, -4184

Rekkas Dimitrios, Professor -4023

Reppas Christos, Professor -4678

Roussis Vassilios, Professor -4592

Skaltsounis Alexios-Leandros, Professor -4598

Symillides Moira, Associate Professor -4675

Tsotinis Andreas, Professor -4812

Tzakou Olga, Professor -4591

Valsami Georgia, Professor -4022

Vertzoni Maria, Associate Professor -4035

Vlachou-Konstantinidou Marilena, Associate Professor -4674

Zoidis Grigorios, Associate Professor -4809, -4808

E.D.I.P. MEMBERS

Graikou Constantias (E.D.I.P. F/ Pharmacognosy) -4283
Giorgos Lambrinidis (E.D.I.P. Pharmaceutical Chemistry) -4304, -4521
Melliou Eleni (E.D.I.P. Pharmacognosy) -4052
Benaki Dimitra (E.D.I.P. Pharmaceutical Chemistry) -4521
Stathopoulos Panagiotis (E.D.I.P. Pharmacognosy) -4781
Kalpoutzakis Eleftherios (E.D.I.P. Pharmacognosy) -4607, -4886

MEMBERS OF E.T.E.P.

Drosopoulos Dimitrios (ETEP Pharmaceutical Chemistry) -4529
Papathanasiou Vasiliki (ETEP Pharmaceutical Technology) -4367
Harvala Zoi (E.T.E.P. Pharmacognosy) -4588

LABORATORY APPLICATIONS

Abbot Dionysios -4767

DEPARTMENT SECRETARIAT

(Fax: 727-4059)

ADMINISTRATION STAFF:

Maria Xesfigi (Secretary) -4193
Manou Olga (administrative matters) -4355
Georgiou Frederikis (administrative issues / doctoral level) -4058

STUDENT AFFAIRS:

Undergraduate level etc.:

Gouzias Evangelos -4093
Hatzipavlou Ioanna -4351

Postgraduate level etc.:

Nikolaidou Ekaterini -4666

DIVISION OF PHARMACEUTICAL CHEMISTRY

(Fax: 727-4747)

Director: Emmanuel Mikros (Professor) -48130
Secretariat: Karpozilou Rachel -4523

DIVISION OF PHARMACOLOGY AND CHEMISTRY OF NATURAL PRODUCTS

(Fax: 727-4826)

Director: Vassilios Roussis (Professor) -4592
Secretariat: Harvala Zoi -4588
Kapsali Fotini -4290

DIVISION OF PHARMACEUTICAL TECHNOLOGY

(Fax: 727-4027)

Director: Paraskevas Dallas (Assistant Professor) -4677
Secretariat: Papathanasiou Vasiliki -4367
Brova Nonna -4681

OTHER USEFUL TELEPHONE NUMBERS

LIBRARY (School of Positive Sciences) -6599

PORTER, DEPARTMENT OF GEOLOGY (internal postal code) -4219
CARETAKER -4379, -4683
T.Y.P.A. -4300, 4120, 4541
E-GOVERNANCE -4286, -4217
MEDICAL CLINIC (School of Positive Sciences) -4391
MEDICAL CLINIC (School of Philosophy) -7873

5. APPENDIX I

Greek Republic
National and Kapodistrian
University of Athens
ESTABLISHED IN 1837.
FACULTY OF HEALTH SCIENCES
PHARMACY DEPARTMENT

APPENDIX FOR POSTGRADUATE DIPLOMA

This Postgraduate Diploma Supplement follows the model developed by the European Commission, the Council of Europe and UNESCO/CEPES. The objective of the appendix is to provide sufficient independent data to strengthen/augment international "transparency" and the fair recognition of academic and professional qualifications (diplomas, degrees, certificates, etc.). Designed to give a description of the nature, level, background, content, and status of the studies successfully completed by the person named in the original version of the guide to which this appendix is attached. In this appendix there will be no judgment of value and no statements of equivalence or propositions about recognition. There will be information relating to all eight sections. Where no information is available, an explanation will be provided.

1. INFORMATION REGARDING THE IDENTITY OF THE HOLDER OF THE POSTGRADUATE DIPLOMA

- 1.1 Surname(s):
- 1.2 Name(s):
- 1.3 Date of birth (day/month/year)-Place-Country: ...
- 1.4 Student ID number or code (if any):

2. INFORMATION ON THE TYPE OF THE POSTGRADUATE DIPLOMA

- 2.1 Name of the diploma and (if any) the specific diploma (in the original language):
POSTGRADUATE DIPLOMA IN "CLINICAL PHARMACY"
- 2.2 Main field of study for the diploma:
"CLINICAL PHARMACY" postgraduate diploma
- 2.3 Name and status of the awarding institution (in the original language):
NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, STATE UNIVERSITY
- 2.4 Name and status of the Institution (if different from section 2.3) providing the studies (in the original language):
- 2.5 Language(s) of instruction/exams: GREEK

3. TITLE LEVEL INFORMATION

- 3.1 Degree level: SECOND CYCLE OF STUDIES – POSTGRADUATE STUDIES
- 3.2 Official duration of the program: 3 SEMESTERS
- 3.3 Entry requirements:
STUDENT SELECTION IS CARRIED OUT IN ACCORDANCE WITH THE LAW 4957/2022 AND THE PROVISIONS OF THE INTERNAL OPERATING REGULATIONS OF THE "CLINICAL PHARMACY" PROGRAM. EVERY JUNE/JULY, FOLLOWING THE APPROVAL OF THE ASSEMBLY OF THE PHARMACY DEPARTMENT, NKUA, AN

ANNOUNCEMENT FOR THE ADMISSION OF STUDENTS TO THE "CLINICAL PHARMACY" POSTGRADUATE PROGRAM IS POSTED ON THE DEPARTMENT WEBSITE.

4. INFORMATION ABOUT THE CONTENT AND RESULTS ACHIEVED

4.1 Method of study: FULL-TIME

4.2 Program Requirements:

A) ATTENDANCE AND SUCCESSFUL EXAMINATIONS IN ALL COURSES / WORKSHOPS, THE TOTAL OF WHICH CORRESPONDS TO 36 CREDIT UNITS.

B) COMPLETION OF THE CLINICAL PRACTICE COURSE WHICH CORRESPONDS TO 28 CREDIT UNITS.

C) COMPLETION AND SUPPORT OF THE DIPLOMA THESIS WHICH CORRESPONDS TO 26 CREDIT UNITS.

D) COMPLETION OF AT LEAST 90 CREDIT UNITS TOTAL.

E) STUDY DURATION -AT LEAST 3 SEMESTERS.

4.3 Program details: (e.g., course modules or individual courses) and individual grades/credit hours/credits obtained:

A/A	Course Title	Semester	Teaching hours/week	Credits	Grade	Academic Year
				ECTS		
1	Clinical Pharmacology I/Pathology/Pathophysiology I		4	6		
2	Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients		3	5		
3	Statistical Methods and their applications in Pharmaceutical Sciences		2	4		
4	Advanced Biopharmaceutical-Pharmacokinetics		2	4		
5	Application of Pharmacokinetics in Therapeutics	1 ^o	2	3		
6	Clinical Pharmacology II / Pathology/Pathophysiology II	2 ^o	5	8		
7	Investigation of Cases Studies in Therapeutics and Poisoning	2 ^o	3	5		
8	Seminars	2 ^o	2	1		
9	Clinical Practice	3 ^o	25	28		
10	Diploma Thesis	1 ^o – 3 ^o	41	26		

Total Number of Credits: 90

4.4 Grading system and, if applicable, grading scale:

THE GREEK SYSTEM OF GRADING: THE GRADING SCALE FOR EACH COURSE IS FROM 1 TO 10 AND THE FINAL GRADES FOR THE POSTGRADUATE DIPLOMA ARE FROM 5 TO 10 AS FOLLOWS:

5 - 6.49 = GOOD

6.50 - 8.49 = VERY GOOD

8.50 – 10 = EXCELLENT

4.5 General classification of the title (in the original language):

5. INFORMATION REGARDING FURTHER FEATURES OFFERED BY THE POSTGRADUATE DIPLOMA

5.1 Access to further studies:

THE POSTGRADUATE DIPLOMA IS A PREQUISITE FOR ENTRY INTO THE 3RD CYCLE OF STUDIES (DOCTORAL STUDIES)

6. ADDITIONAL INFORMATION

6.1 Additional information:

a) PARTICIPATION IN CONFERENCES, SEMINARS, ETC: ...

b) ERASMUS MOBILITY:

c) PRIZES, DISTINCTIONS:

6.2 Other sources of information:

WEBSITE OF THE NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS
(www.uoa.gr)

WEBSITE OF THE PHARMACY DEPARTMENT (www.pharm.uoa.gr)

WEBSITE OF THE MINISTRY OF EDUCATION, RESEARCH AND RELIGIONS
(www.minedu.gov.gr)

7. APPENDIX FOR ACCREDITATION

7.1 Date: ...

7.2 Signature: ...

7.3 Authority: By order of the Chancellor or the Head of the Directorate of Education and Research.....

7.4 Stamp:

8. 8. INFORMATION ABOUT THE NATIONAL TERTIARY EDUCATION SYSTEM

Higher education in Greece is provided by the state and is free of charge. It includes two parallel sectors: a) the University, which includes Universities, Polytechnics and the School of Fine Arts and b) the Schools of Technology, which include the Higher Technological Educational Institutions (TEI) and the School of Pedagogical and Technological Education (A.S.PAI.TE.). Twenty-two (22) Universities and fourteen (14) TEIs operate in the country. According to Article 16 of the Constitution, higher education is provided exclusively by institutions that are fully self-governing Legal Entities under Public Law. These institutions are under the supervision of the state and are financed by it. State supervision is exercised through the Ministry of Education, Research and Religious Affairs.

The admission of students to the above institutions depends on their performance in national level exams that take place in the final year of High School. The admissions system to higher education institutions is based on the number of available places (numerus clausus), the applicants' preferences for schools/departments and their General Access Grade. Some schools require an examination in special subjects (e.g., architectural design) or practical tests.

The academic year in higher education begins on 1 September of each year and ends on 31 August of the following year. The educational work for each academic year is organised within two semesters. Each semester of study includes at least thirteen (13) full weeks of teaching and two (2) weeks of examinations. The first semester begins in the second fortnight of September

and the second semester ends in the second fortnight of June. During the year there are holidays - the Christmas and Easter holidays - lasting four (4) weeks in total.

Most first-cycle programs at the Universities are of 8 semester duration (4 years – 240 ECTS credits). The duration of some first-cycle university programs exceeds 8 semesters. All graduates of the first - cycle of studies at the Universities and the T.E.I. may apply for admission to second-cycle programs. The standard length of study for the Postgraduate programs is one to two years (2/3-4 semesters, 60/90 or 120 ECTS credits) and leads to the acquisition of MA or MSc postgraduate diplomas. Each semester course receives a specific number of credits (ECTS), which are specified in the Study Program of each Department. The Curriculum also includes, in addition to the titles of the courses, their content and the hours of student engagement per week for each course. The studies leading to a bachelor's degree in Greek Universities last at least four (4) years for most scientific disciplines, five (5) years in Polytechnics, in several Departments of other applied sciences (Agriculture, Forestry, Dentistry, Veterinary Medicine, Pharmacy) and in some Arts Departments (music studies, visual arts) and six (6) years in the Medical School. The student completes his studies and receives a degree when he successfully passes all the required courses of his/her study program and accumulates the required number of credits.

The completion of the study programs of each department/school of Higher Education institutions leads to the acquisition of a corresponding DEGREE, which allows graduates to have better job prospects on the labor market, and gives them access to postgraduate studies, i.e., to second - cycle studies leading to a POSTGRADUATE DIPLOMA (equivalent to a master's degree) and third- cycle studies leading to a DOCTORAL DEGREE.

Source: EURYDIKI NETWORK: <https://eurydice.eacea.ec.europa.eu/>

6. APPENDIX II
INTERNAL OPERATING REGULATIONS OF THE "CLINICAL
PHARMACY" POSTGRADUATE DIPLOMA PROGRAM
(Decision of the NKUA Senate, 8th session 31-3-2023, Item 4 of the agenda)

DECISION

Amendment of the Regulations of the Postgraduate Studies Program of the Department of Pharmacy of the National and Kapodistrian University of Athens entitled "Clinical Pharmacy".

THE ASSEMBLY OF THE NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

Taking into consideration:

1. the provisions of Law 4957/22 "New Horizons in Higher Education Institutions: Strengthening the quality, functionality and connection of Higher Education Institutions with society and other provisions." (A' 141), in particular articles 79 to 88,
2. circular no. 135557/Z1/1-11-2022 of the Ministry of Education and Religious Affairs "Implementation of the provisions of Law 4957/2022 "New horizons in Higher Education Institutions: Strengthening the quality, functionality and connection of Higher Education Institutions with society and other provisions" (A'141) for the organization and operation of postgraduate study programs and other issues,
3. the provisions of Law 4386/2016 "Regulations for research and other provisions" (A'83), as amended and in force,
4. the presidential decree 85/31-5-2013 "Establishment, renaming, reorganization of Schools and establishment of a Department at the National and Kapodistrian University of Athens" (A'124),
5. the provisions of Law 3374/2005 and articles 14 and 15 "Quality assurance in higher education. Credit transfer and accumulation system - Diploma Appendix" (189 A'), as amended and in force,
6. under data Φ5/89656/B3/13-8-2007 "Implementation of the System of Transfer and Accumulation of Credit Units (B'1466),
7. the decision No. 1432/20-01-2023 of the NKUA Senate, which approved the NKUA Postgraduate and Doctoral Studies Regulations (B'392),
8. the decision No. 835/2-7-2018 of the NKUA Senate by which the Postgraduate Studies Program was established. "Clinical Pharmacy" of the Department of Pharmacy (B' 3279),
9. the under no. 860/2-7-2018 decision of the Senate of NKUA for the approval of the Regulations of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy (B'3596),
10. the under no. 1257/19-06-2019 decision of the Senate of NKUA on the amendment of the Regulations of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy (B' 2737),
11. under no. 334/03-08-2020 decision of the Senate of NKUA on the amendment of the Regulation of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy (B' 3624),
12. the decision No. 1221/11-07-2022 of the Senate of the NKUA on the amendment of the Regulation of the "Clinical Pharmacy" postgraduate program of the Department of Pharmacy (B' 3898),
13. the excerpt of the minutes of the Assembly of the Department of Pharmacy of the Greek Academy of Sciences (session 31-01-2023),
14. the extract from the minutes of the Senate of the Greek Academy of Sciences (.....),
15. the fact that this does not cause an expense to the state budget

decides:

the amendment of the Regulations of the Postgraduate Studies Program of the Department of Pharmacy, School of Health Sciences of NKUA entitled "Clinical Pharmacy", from the academic

year 2022-2023, in accordance with the provisions of law 4957/22 and the Regulations for Postgraduate and Doctoral Studies of NKUA, as follows:

ARTICLE 1. OBJECTIVE-PURPOSE

The purpose of the "Clinical Pharmacy" postgraduate program is to provide the pharmacist with the necessary knowledge to deal with problems that arise during the administration and use of medicines. More specifically, the program provides students with knowledge (theoretical as well as applied) in the fields of clinical pharmacology, pathology-pathophysiology, biopharmaceutics, theoretical and applied pharmacokinetics, statistics, as well as for laboratory and analytical methods in the diagnosis and therapeutic monitoring of patients and the treatment of interesting clinical cases and poisonings. The Clinical Pharmacy program aims to create an internationally recognized postgraduate program, which will stem a worsening brain drain with students resorting to studying abroad rather than remaining in this country.

1.2 The Postgraduate Studies Program leads to the award of a Postgraduate Diploma in "Clinical Pharmacy", after full and successful completion of studies based on the curriculum. 1.3 The titles are awarded by the Department of Pharmacy, School of Health Sciences of the National and Kapodistrian University of Athens (NKUA).

1.4 Learning outcomes, qualifications acquired by successfully attending the postgraduate program: Graduates of the "Clinical Pharmacy" program upon successful completion of the program will:

a. Know and understand in depth:

i. The correct and internationally accepted terminology and methodology concerning the scientific fields that influence the teaching program as well as its interdisciplinary nature.

ii. Modern methods of research and development (R&D) within the field of Clinical Pharmacy and the individualization of pharmacotherapy.

iii. The methodology of statistical thinking, analysis, and presentation of data required to elicit scientifically sound and therefore rational conclusions.

iv. The basic principles of the application of pharmacokinetics in therapeutics and the individualization of pharmacotherapy.

v. The basic principles of clinical pharmacology/pathology/pathophysiology for their application in Clinical Pharmacy and the individualization of pharmacotherapy.

vi. The correct methodology, and implementation of individualized pharmacotherapy protocols and approach to writing scientific articles.

vii. Good presentation skills and effective presentation techniques for research data, for the clear communication of research conclusions, and the knowledge, rationale, and logical assumptions on which they are based, both to specialized and non-specialized audiences.

viii. The real-time demands of the working environment due to mandatory clinical practice guidelines for scientists working within the entire spectrum of Clinical Pharmacy.

b. The correct application in their workplace of:

i. Modern R&D methods and processes for the individualization and monitoring of pharmacotherapy, as well as problem solving techniques in the areas of Clinical Pharmacy.

ii. The statistical analysis and evaluation of scientific data.

iii. The analytical techniques required for the implementation and monitoring of individualized pharmacotherapy.

iv. The procedures developed within the MSc program and the publication of scientific articles.

v. The principles and methods of critical thinking

vi. The principles of effective communication and team spirit

c. Learning skills that will allow them to continue their studies at a PhD level in the field of Clinical Pharmacy.

ARTICLE 2. ADMINISTRATION AND MANAGEMENT OF THE CLINICAL PHARMACY PROGRAM

Administrative bodies for the running of the MSc program according to the law 4957/2022 are:

2.1 At the Institution level, the administrative bodies are the Postgraduate Studies Committee and the Senate.

2.2 At the Department level, the administrative bodies are:

2.2.1 The Assembly of the Department.

The powers of the Assembly are to:

- a) make recommendations to the Senate, proposed by the Postgraduate Studies Committee, regarding the necessity of amending or extending the duration of the postgraduate program,
- b) appoint the Director and the members of the Coordinating Committee of each postgraduate studies program of the Department,
- c) recommend representatives for the Study Program Committees of the postgraduate programs in which the Department participates,
- d) set up Committees to evaluate the applications of prospective postgraduate students and approve their registration into the postgraduate program,
- e) assign the teaching work to members of the teaching staff of the program as well as auxiliary teachers from the doctoral candidates of the Department, who work under the supervision of a member of the teaching staff,
- f) set up examination committees for the examination of postgraduate student' theses and appoint the supervisor for each thesis,
- g) ascertain the successful completion of the studies and award the Diploma of Postgraduate Studies,
- h) approve the report of the postgraduate studies program, following the recommendation of the Coordinating Committee (SE),
- i) assign postgraduate students to carry out auxiliary teaching work for the Department's first-cycle study program,
- j) exercise any other legal authority.

By decision of the Assembly of the Department, the responsibilities of paragraphs d) and f) are transferred to the SE of the postgraduate program.

2.2.2 The Coordinating Committee (SE)

The SE consists of the Director of the postgraduate program and four (4) members of the teaching staff of the Department and emeritus professors, whose field of study is related to that of the postgraduate program and undertake some of the teaching work. The members of SE are appointed by the Department Assembly. The committee is responsible for monitoring and coordinating the running of the program and in particular:

- a) prepares the initial annual budget of the program and its amendments and recommends its approval to the Research Committee of the Special Account for Research Funds
- b) draws up the financial report of the program and recommends its approval to the Assembly of the Department,
- c) authorizes the expenditure of the postgraduate program,
- d) recommends to the Assembly of the Department the distribution of teaching work, as well as the assignment of teaching work,
- e) recommends Visiting Professors to the Assembly of the Department to cover the teaching needs of the program,
- f) draws up a plan for each amendment to the curriculum, which is then submitted to the Assembly of the Department,
- g) recommends to the Assembly of the Department the redistribution of courses between academic semesters, as well as issues related to upgrading the curriculum.

2.2.3 The Director of the postgraduate program

The Director of the postgraduate program is a member of the teaching staff of the Department. Priority is given to those members who have the rank of professor or deputy professor, and the appointment of the director is decided by the Department's Assembly for a two-year term, which can be extended without limitation.

The Director of the postgraduate program has the following powers:

- a) presides over the SE, prepares the agenda, and convenes its meetings,
- b) advises the Assembly of the Department about issues concerning the organization and operation of the program,
- c) suggests ways to effectively run the program to the SE and the other committees of the Postgraduate Studies Program and the university,
- d) is the Scientific Manager of the program and is responsible for those activities relating to its management of the program,
- e) monitors the implementation of the decisions of the committees of the Postgraduate Studies Program and the Internal Regulation of postgraduate and doctoral study programs, as well as the implementation of the budget of the program,
- f) exercises any other authority, defined in the decision to establish the postgraduate program.

The Director of the program as well as the members of the SE are not entitled to any form of remuneration or any compensation for carrying out the responsibilities assigned to them and related to the performance of their duties.

2.3 Secretarial support for the postgraduate program.

- a) The Secretariat of the Department of Pharmacy is responsible for the secretarial and administrative support of the postgraduate program.
- b) The Secretary of the Department appoints an employee or employees - depending on the number of postgraduate study programs and the workload – to be responsible for the Postgraduate Programs of the Department. The Secretariat of the Department of Pharmacy is assisted by the administrative employees of the Program Secretariat, which is in the Department of Pharmacy, and is under the supervision of the Department Secretariat.
- c) The Postgraduate Studies Program, may hire, in accordance with current legislation, external collaborators for secretarial and administrative support, who are again under the supervision of the Department's Secretariat.

ARTICLE 3. CATEGORIES AND NUMBER OF ENTRANTS

3.1 For the postgraduate program in "Clinical Pharmacy", holders of a degree in Pharmacy from the Departments of Pharmacy of universities within the country or of similar, recognized by the D.O.A.T.A.P. (the Greek Accreditation Centre for foreign university degrees) foreign institutions, are accepted.

3.2 The postgraduate program in "Clinical Pharmacy" accepts a maximum of 10 (ten) students each academic year. However, the maximum number of admissions is also determined by the number of lecturers and the student-teacher ratio for the MSc program, as well as the logistical infrastructure, lecture halls and the absorption of graduates by the labor market.

3.3 In addition to the number of admissions, one (1) member of the Special Educational Staff (EEP), Laboratory Teaching Staff (EDIP) and Special Technical Laboratory Staff (ETEP) categories is accepted each year, if the work carried out by the applicant is related to the field of Clinical Pharmacy.

3.4 The scholars of the State Scholarships Foundation (IKY) and the foreign scholars of the Greek state, with studies within the same field as that of the study program, may be enrolled, if they meet the criteria in paragraphs 3.1, 4.2, and 4.4.

3.5 The "Clinical Pharmacy" program can accept a pharmacist, awarded a scholarship from the Hellenic Army, every three years as a supernumerary, upon recommendation of the SE and

approval of the Assembly of the Department. The pharmacist officer who is enrolled into the postgraduate program will follow all other provisions of this Regulation.

ARTICLE 4. METHOD OF ENTRY

4.1 Student selection is made in accordance with the current legislation and the provisions of the NKUA Postgraduate and Doctoral Studies Regulations and the provisions of this Regulation.

4.2 The date for application submissions is posted on the website of the Department of Pharmacy of the NKUA in the period of June-July, following the approval of the Assembly of the Department of Pharmacy. The relevant applications together with the necessary supporting documents are submitted to the Department's Secretariat, within a deadline specified in the announcement, which may be extended by the Department's Assembly.

4.3 The Assembly of the Department assigns the selection of candidates for the postgraduate program to the SE.

4.4 Necessary supporting documents are:

- Application form
- Curriculum vitae
- a photocopy of both sides of the Identity card
- A clear photocopy of the degree or certificate of completion of studies showing the final grade, as well as the average grade obtained for the degree within the year that the candidate graduated.
- Grades obtained for all undergraduate courses
- Certificate of English language proficiency, level B2 or higher
- Two (2) letters of recommendation
- Scientific publications if any
- Evidence of professional or research activity if any
- A greek language certificate, certified by the SE of the Postgraduate Studies Program, knowledge of the Greek language for foreign candidates (Greek language proficiency of at least C1 level), unless they are graduates of a Greek educational institution.
- Recognition of a foreign academic degree by D.O.A.T.A.P.

4.5 For students from foreign institutions, who do not present a certificate of recognition of their academic degree from D.O.A.T.A.P., the following procedure is followed:

The Assembly of the Department appoints a committee responsible for determining whether the foreign institution or the type of foreign institution title is recognized. For a degree to be recognized:

- it must be awarded by an institution included in the list of foreign institutions, which is kept and updated by D.O.A.T.A.P.,
- the student must present a certificate issued and sent by the foreign university verifying that he/she studied in that institution. If the institution is located on Greek soil, the degree is not recognized, unless at least part of the degree was obtained at an institution for Higher Education in Greece.

4.6 The evaluation of the candidates and the selection of those to be admitted, is based on the following criteria:

A/A	CRITERIA	% OF FINAL SCORE
1	FINAL GRADE FOR DEGREE ^{1,2}	40
2	UNDERGRADUATE DISSERTATION	10
3	ADDITIONAL DEGREE OR POSTGRADUATE DIPLOMA ³ (GRADE)	10

4	SPECIAL COURSES ^{4,5,6} PHARMACOLOGY I, PHARMACOLOGY II, TOXICOLOGY I, TOXICOLOGY II, PHYSIOLOGY I, PHYSIOLOGY II, BIOPHARMACEUTICS-PHARMACOKINETICS I (OR BIOPHARMACEUTICS), INTRODUCTION TO CLINICAL PHARMACY (OR CLINICAL PHARMACOKINETICS), PATHOPHYSIOLOGY OF DISEASES / BIOPHARMACEUTICS- PHARMACOKINETICS II	10
5	-NUMBER OF PUBLICATIONS IN JOURNALS OR PRESENTATIONS AT CONFERENCES -NUMBER OF SEMINARS RELATED TO THE FIELD OF STUDY -WORK EXPERIENCE RELATED TO THE FIELD OF STUDY	10
6	INTERVIEW	20

1. The grade for a foreign university degree will be appropriately adjusted on the 0-10 scale as follows:

1a. Grades on a 'nominal' scale (e.g., A, B, C etc.)

The adjusted grade of the candidate will be calculated as: a) number of points (k) between the degree grade and the lowest grade (not including the lowest grade), b) total number of points (λ) i.e., between the highest and lowest grades, c) the corresponding grade on a scale of 0-10 will be: $5 + (10-5) * k/\lambda$.

Example: if the grade is B and the lowest grade is D, then: B, C $\rightarrow k=2$, A, B, C $\rightarrow \lambda=3 \Rightarrow$ score: $5 + 5 * 2/3 = 5 + 3.33 = 8.33$.

1b. Scores on a 'continuous' scale that consider a 'pass mark' other than '5'

The adjusted grade of the candidate will be calculated in accordance with paragraph 1a using the differences instead of the number of points, i.e., with the help of the equation:

Adjusted grade = $5 + (10-5) * (\text{grade} - \text{pass mark}) / (\text{highest grade} - \text{pass mark})$

Example: if the degree is 6.5 and the base is 4, then: $5 + (10-5) * (6.5-4) / (10-4) \rightarrow 7.08$.

2. Degree grade of at least 6.5 (or equivalent grade on another scale) from a local or foreign Institution. The degree grade will be weighted in terms of the grade point average of the academic year that the candidate graduated. The average value of the degree will be officially requested by the secretariat of the Department of Pharmacy NKUA.

3. If there is more than 1 degree/postgraduate diploma, then their average is used (appropriately weighted according to '1a', '1b' and '2' above).

4. With a foreign university degree, the grade of each "special course" will be calculated according to '1a' and '1b' above.

5. With candidates from Departments of Pharmacy (domestic or foreign) other than NKUA, the selection of the "special courses" corresponding to those mentioned for the Department of Pharmacy, NKUA, is done by the SE. If more than one course of the candidate's institution corresponds, then the average grade for these courses is considered. If there is no corresponding course from the candidate's institution, then the "Special Course" shown in the above table is not included in the calculations.

6. If one of the "Special Courses" ceases to exist, it will be withdrawn from the calculation.

4.7 Based on the overall criteria, the SE prepares a detailed written student evaluation and submits it for approval to the Department Assembly.

Successful applicants must register at the Department's Secretariat within five (5) working days after the decision of the Department's Assembly.

If two or more candidates have an equal overall score, the candidates with the same grade are admitted, but the number of candidates must not exceed 10% of the maximum number of admissions.

If one or more students fail to register, the runner-up candidates (if any), will be invited to register in their place.

The replacement of a candidate is allowed up to one day before the start of the "Clinical Pharmacy" postgraduate program.

ARTICLE 5. DURATION OF STUDIES

5.1 The period of study for the Postgraduate Diploma is defined as 3 (three) academic semesters, during which time the diploma thesis must also be completed.

5.2 In special cases, an extension can be granted, if the student submits a written application detailing the reasons for requesting the extension, which must then be approved by the Assembly. The extension may not exceed 1 (one) additional academic semester, to support the thesis, provided that the written application is made at least two months before the end of the 3rd semester. Thus, the maximum time allowed to complete the postgraduate program is set at four (4) academic semesters.

5.3 Students who have not exceeded the 4-semester upper limit allowed for completion of the program, may apply to the Department Assembly for a suspension of their studies for a period that does not exceed two (2) consecutive semesters. Suspension of studies is granted for serious reasons (military service, illness, pregnancy, absence abroad, etc.). Attending another postgraduate or other educational program does not constitute a serious reason for granting a suspension.

The application must be justified and accompanied by all relevant supporting documents from public authorities or organizations, which attest to the reasons for suspension of studies. Student status does not apply during the suspension and participation in any educational process is not allowed. The duration of the suspension is not added to the maximum time allowed for the study program.

At least two weeks before the end of the suspension, the student must re-enroll in the program to continue his/her studies with full active student status. Students may apply to interrupt their suspension of studies and return to the program only if they have requested suspension of studies for two consecutive academic semesters. The request to stop the study suspension must be submitted no later than two weeks before the start of the second semester of the suspension.

5.4 The duration of the suspension or extension of the study period is discussed and approved on a case-by-case basis by the SE, which then makes the appropriate recommendation to the Department Assembly. Part-time or distance learning is not allowed.

ARTICLE 6. PROGRAM OF STUDY

6.1 The postgraduate program starts in the winter semester of each academic year.

6.2 A total of ninety (90) credits (ECTS) are required to obtain the diploma. All courses are organized in semesters, taught weekly and additionally include laboratory exercises, clinical practice, seminars, and the preparation of a diploma thesis.

6.3 The language of instruction is Greek. If a foreign lecturer is invited as part of a course, the lecture is given in English.

6.4 During their studies, postgraduate students are required to attend and pass all postgraduate courses, complete the clinical practice course and their research project for their postgraduate thesis. The language of the master's thesis is Greek or English with the supervisor's consent.

6.5 The preparation of the diploma thesis takes place in the 1st, 2nd and 3rd semesters of the study program and is credited with twenty-six (26) ECTS. Course work for the diploma may be carried out at a foreign University within the framework of the ERASMUS program in accordance with the "Mobility Regulation" of the ERASMUS program, (Erasmus_Programme_Guide2023_en, <http://www.interel.uoa.gr/erasmus.html>) which governs the National and Kapodistrian University of Athens.

6.6 The clinical internship is carried out in selected hospitals of the Attica Region, under the supervision/cooperation of the course coordinator(s). The clinical internship takes place throughout the 3rd semester of studies, is credited with twenty-eight (28) ECTS and is mandatory.

6.7 Lessons are taught live.

6.8 The indicative program of the courses is structured as follows:

First Semester	Teaching hours / week^a	ECTS^β
Clinical Pharmacology I / Pathology/Pathophysiology I	4	6
Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients	3	5
Statistical Methods and their applications in Pharmaceutical Sciences	2	4
Advanced Biopharmaceutical-Pharmacokinetics	2	4
Application of Pharmacokinetics in Therapeutics	2	3
Diploma thesis ^c	13	8
Total	26	30
Second Semester	Teaching hours / week^a	ECTS^β
Clinical Pharmacology II / Pathology/Pathophysiology II	5	8
Investigation of interesting case studies in therapeutics and poisonings	3	5
Seminars ^d	2	1
Diploma thesis ^c	25	16
Total	35	30
Third Semester	Teaching hours / week^a	ECTS^β
Clinical Practice ^e	25	28
Diploma thesis ^c	3	2
Total	28	30
Total Number of Credit Units		90

^a the number of hours for the diploma thesis corresponds to the hours a student is occupied with research work.

^β the number of credits was calculated assuming that one (1) credit corresponds to twenty (25) hours of total work (teaching, workshops, and personal study).

^c Includes research work, writing and presentation of the thesis.

^d the total number of seminars includes twenty (20) teaching hours distributed over three semesters.

^e Five (5) months of clinical practice with daily attendance in hospital clinics for (5) hours. In addition, processing, evaluation, and presentation of interesting clinical cases.

6.9 An indicative content/description of the courses is shown below:

First Semester

Clinical Pharmacology I/ Pathology – Pathophysiology I

Content: Reference to Clinical Pharmacology, basic pathophysiology, etiology, symptomatology, and differential diagnosis of the following diseases:

- Digestive System Diseases
- Esophageal Diseases and Disorders: Gastroesophageal reflux, esophagitis, Barrett's esophagus, motility disorders, achalasia, polyps
- Diseases of the stomach and duodenum: gastritis, ulcer, Zollinger-Ellison syndrome
- Cardiac Diseases
- Hypertension
- Arrhythmias centered on Atrial Fibrillation
- Neurological Diseases
- Epilepsy
- Parkinson's disease
- Multiple Sclerosis

- Vascular Strokes
- Psychiatric Diseases
- Mood disorders - antidepressants
- Antipsychotics
- Anxiolytics, hypnotics, psychotropic drugs, CNS drugs
- Infectious diseases
- Recording a patient history
- Classification of microorganisms/ Microbiological diagnosis
- The phenomenon of antimicrobial resistance
- Pharmacokinetics-Pharmacodynamics of antimicrobials
- Infections treated with: β -lactams, aminoglycosides, cephalosporins, carbapenems, macrolides, quinolones, glycopeptides-, colistin, linezolid, tigecycline, daptomycin
- The pathogenesis of infections
- Upper respiratory infections
- Community-acquired pneumonia
- Urinary tract infections
- Hepatitis
- Gastroenteritis
- Hygiene in the Hospital
- Rational use of antibiotics
- Epidemic outbreaks

Application of Laboratory and Analytical Methods in the Diagnosis and Therapeutic Monitoring of Patients

Content:

- Biological Fluids. Sample pretreatment for the analysis of drugs in biological fluids (protein removal, liquid-liquid extraction, solid phase extraction).
- Selection and Optimization of a high-performance liquid chromatography method and biological sample pretreatment based on bibliographic references.
- Laboratory exercise: Determination of ketoconazole in plasma with high performance liquid chromatography and UV detector.
- Introduction to Medical Laboratories
- Analytical Evaluation of Laboratory Measurements
- Characteristics and evaluation of analytical methods
- The concept of quality in Medical Laboratories
- Quality control of laboratory results
- Internal – IQC
- External - EQA-PT
- Clinical evaluation of laboratory results
- Evidence-Based Laboratory Medicine
- Reference values and their determination
- Hematology and Medical Laboratory
- Coagulation and hemostasis
- Hematology and coagulation analyzers
- Organization of Medical Laboratories
- Organization of Medical Laboratories
- Certification-Accreditation of Medical Laboratories
- Introduction to POCT
- POCT Analyzers
- The quality in the "small" laboratory

- Management of POCT results
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (1):
 - Metabolism, Carbohydrates, Proteins, Kidneys, Lipids, Electrolytes, Acid-Base Balance, Liver and Enzymes, Cardiac Markers, Immunoglobulins and Hematopoiesis, Vitamins.
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (2):
 - Thyroid, Bone diseases, Neoplasms, Targeted anticancer therapy, Reproductive hormones, Autoimmune diseases,
 - Pituitary gland and Development
- Laboratory Examinations in the routine of Diagnosis and Therapeutic monitoring (3):
 - Trace elements, Medicines, Autoimmune diseases,
 - TORCH, Hepatitis, Cardiovascular Risk & Inflammation

Statistical methods and their applications in pharmaceutical sciences

Content:

- Descriptive Statistics (measures of centrality and dispersion).
- Probability Distributions (Binomial, Poisson, normal, standard normal). Examples and Applications
- Probabilities (Definitions-actions, bounded probability, Bayes Theorem. Prior and posterior probability. Examples and Applications.
- Statistical Inference: Introduction, Variables, Categories of statistical methods, Procedure for choosing the most appropriate
- Statistical Inference: Statistical Estimation, One Sample, Examples and Computer Application
- Statistical Inference: Statistical Estimation, Two Samples, Examples and Computer Application
- Statistical Inference: Hypothesis Testing, One and Two Samples, More than Two Samples, Examples and Computer Application
- Linear Regression and Correlation (I): Linear Regression Analysis
- Linear Regression and Correlation (II): Correlation
- Linear Regression and Correlation (III): Numerical examples, Student-solved exercises - Discussion, PC application
- Special cases of linear regression analysis (I): Type II regression and Weighted regression analysis
- Special cases of linear regression analysis (II): Outliers - outlying observations a) in a continuous variable and b) in linear regression and correlation problems
- Non-linear regression analysis

Advanced Biopharmaceutics - Pharmacokinetics

Content:

- Mathematical processing of the process of absorption Wagner – Nelson method. Reference to the Loo – Riegelman method
- Multicompartment Pharmacokinetic Models: Introduction, Reference to the mathematical Laplace transform, Fundamentals of a General Method for Solving Multicompartment Pharmacokinetic Models
- Non-compartmental pharmacokinetic analysis: Convolution - Statistical moments
- Nonlinear kinetics: Applications in pharmacokinetics (biotransformation and carrier-mediated transport), Emphasis on fundamental parameters: Clearance, half-life, AUC
- Gastrointestinal absorption models: Partition pH hypothesis–Absorption potential– Macroscopic approach–Microscopic approach-BCS–BDDCS. FDA, EMA guidelines for biorelease

- Physiological Pharmacokinetic Models: Definition – Principles – Objectives of Physiological Pharmacokinetic Models, Development of the model: Types of Physiological Pharmacokinetic Models - Processes considered - Evaluation of the model / Advantages – Disadvantages of Physiological Pharmacokinetic Models Examples
- Dynamic models of gastrointestinal absorption: Dispersion model - Remaining length for absorption, Mixing reservoir model, Compartmental model of passage and absorption
- Identification of problems related to per os administration in the stage of discovery and early stages of the development of new drugs
- Per os administration: Optimizing the process of drug arrival in the general circulation (I), Addressing problems not related to the arrival in the portal vein
- In vivo methodologies to assess the absorption of drugs administered per os (I)
- Dealing with problems related to the arrival of the drug in the portal vein, Experiments on experimental animals
- In vivo methodologies to assess the absorption of drugs administered per os (II)
- Human experiments – Bioequivalence studies (I) – Design and implementation of the clinical part, Bioequivalence studies – Pharmacokinetic analysis of the data – Statistical analysis of the data
- Pharmacokinetic/Pharmacodynamic models:
- Coupling Model - Pharmacodynamic compartment, Direct coupling, Indirect coupling
- Drug kinetics in the pharmacodynamic compartment, FK-FD model coupling
- Examples – Exercises

Application of Pharmacokinetics in Therapeutics

Content:

- Influence of the criticality of the patient's condition on pharmacokinetics
- Effect of pregnancy on pharmacokinetics
- Clinical pharmacokinetics in burn patients
- Effect of smoking on pharmacokinetics
- Effect of liver function on pharmacokinetics
- Effect of renal function on pharmacokinetics
- Pharmacokinetics in the elderly
- Pharmacokinetics in children
- Effect of food on pharmacokinetics I: General part
- Effect of food on pharmacokinetics II: Special part - examples
- The role of gender in Pharmacokinetics
- The use of Pharmacokinetics to establish the therapeutic equivalence of drugs
- Population pharmacokinetics and Bayesian dose personalization with NONMEM: Theory
- Population pharmacokinetics and Bayesian dosage personalization with NONMEM: Laboratory

Second Semester

Clinical Pharmacology II / Pathology – Pathophysiology II

Content:

Reference to Clinical Pharmacology, basic pathophysiology, etiology, symptomatology, and differential diagnosis of the following disorders/diseases:

Cardiac Diseases

- Coronary artery disease
- Myocardial infarction
- Heart failure
- Eye Diseases

Nephrological Diseases

- Acid-base balance
- Cardiorenal syndrome
- Chronic kidney failure
- Water-electrolyte disorders

Skin diseases

- Psoriasis,
- Atopic dermatitis
- Acne
- Aging - Photoaging

Diseases of the Digestive System - Liver

- Diseases of the small intestine
- Colon diseases: Ulcerative colitis-Crohn's disease
- Liver diseases: Acute viral hepatitis, Drug-induced hepatitis, Chronic hepatitis (simple reference)
- Pancreatic diseases

Respiratory System Diseases

- COPD
- Asthma

Rheumatic diseases

- Differential diagnosis of rheumatic diseases
- Autoimmune Connective Tissue Diseases, Systemic Lupus Erythematosus, Rheumatoid Arthritis

Endocrinological diseases

- Diseases of the anterior and posterior lobe of the pituitary gland
- Diseases of the hypothalamus
- Thyroid diseases
- Diseases of the adrenal glands
- Diseases of the male and female reproductive system
- Osteoporosis

Pediatric Diseases

- Vaccines in children and adolescents
- Infections in pediatric and adolescent medicine - urinary tract infections, vulvovaginitis
- Child-Adolescent gynecology-andrology

Malignant diseases

- General facts about Cancer
- Melanoma
- Gastrointestinal cancer
- Head & Neck Cancer
- Sarcomas
- Early Breast Cancer
- Metastatic Breast Cancer
- Lung cancer
- Gynecological Cancer
- CNS cancer

Other Topics

- Pharmacotherapy of acute and chronic pain
- Enteral Nutrition and Enteral Nutrition Solutions
- Parenteral Nutrition Clinical Decision System

- Pharmaceutical errors and Anticoagulants in Clinical Practice
- Pharmaceutical support for seriously ill patients
- Chemotherapy, Targeted therapy, Immunotherapy in Clinical Practice

Investigation of interesting case studies of Therapeutics and Poisoning

Content:

- Analysis and presentation of interesting cases
- Differential diagnosis of poisonings
- Interaction of ethyl alcohol with drugs and food
- Problems that arise when giving medicines to children
- Investigation of poisoning incidents

Third Semester

Clinical Practice

Content:

Clinical practice involves the application and development of the theoretical knowledge acquired during the two previous semesters and the further training of the students in the form of real-time practice in selected hospitals of the Attica region, with clinical rotations in pathology, oncology, surgery, intensive care units, etc. Activities during clinical practice include- monitoring the clinical and therapeutic progress of patients, participation in ward rounds, etc. and the preparation and writing of reports of interesting clinical cases in which students are required to critically evaluate each patient's drug therapy. Each interesting clinical case assignment is corrected and graded. In addition, at the end of the academic semester, after the completion of the "Clinical Practice" course, there are written exams.

1st, 2nd, 3rd Semester

Bachelor's thesis

In the first, second and third semesters of the Program, students are required to plan, complete, interpret, and present their postgraduate thesis.

Content: The topics for each thesis come from the wide range of scientific fields covered during the course program. A thesis typically consists of a thorough investigation of an original research topic, based either on the application of theoretical knowledge to already available clinical data, or to new clinical data collected by the student, or in vitro work where data is collected through laboratory processes.

Layout and content of the thesis

- The cover and title page should contain the following:
 - The emblem and logo of the NKUA (cyan)
 - SCHOOL OF HEALTH SCIENCES
 - DEPARTMENT OF PHARMACY
 - PHARMACEUTICAL TECHNOLOGY DIVISION/SECTOR
 - POSTGRADUATE DIPLOMA "CLINICAL PHARMACY"
 - TITLE of the thesis
 - The words "Diploma Thesis"
 - Full name of the postgraduate student
 - Title/Qualification of the postgraduate student (Pharmacist)
 - Postgraduate Student Registration Number (#)
 - The word "Athens" and the date of the public support of the thesis (at the bottom of the page)
- Pagination must be done in the following order:

- Initial pages, with Latin numbering (small letters):
 - Title Page (without visible numbering)
 - Three-member Examination Committee (names, ranks)
 - Preface, Acknowledgments (Dedications, optional)
 - Summary, Keywords (Greek and English)
 - Contents index
 - List of Abbreviations / List of Symbols (optional)
- Main text separated into sections, with regular numbering starting from 1
 - 1 Introduction
 2. Methodology
 3. Results – Discussion
 4. Conclusions
 - References
 - Appendixes (if any)

The content, titles and timetable of the courses are updated and/or modified by the SE of the postgraduate program, after a relevant recommendation by the lecturers, considering the educational needs and scientific developments in each subject. All course updates/modifications are approved by the Department Assembly and are accessible to anyone interested through the "Study Guide" of the postgraduate program, which is posted on the website of the Department of Pharmacy, Postgraduate Studies Program in Clinical Pharmacy.

ARTICLE 7. DISTANCE LEARNING

7.1 Modern distance learning

The educational process may be conducted using modern distance learning methods exclusively in the following cases:

- with force majeure or extraordinary circumstances, where it is not possible to carry out the educational process or to use the infrastructure of the NKUA to carry out its educational, research and other activities,
- organization of in-depth courses and tutorial exercises, in addition to the mandatory hours of teaching work per course.

Responsible for the support of the distance learning process, as well as for issues related to the protection of personal data, is the Digital Governance Unit of NKUA.

ARTICLE 8. EXAMINATIONS AND EVALUATION OF POSTGRADUATE STUDENTS

8.1 The educational work for each academic year is organized within two study semesters, the winter, and the spring, each of which includes at least thirteen (13) weeks of teaching and three (3) weeks of exams. The courses of the winter and spring semesters are reviewed repeatedly during the September term.

8.2 If a lecture does not take place, it is replaced by another, and students are informed of the date and time on the eclass site.

8.3 The attendance of courses/laboratories, clinical practice, etc. is mandatory. A postgraduate student is considered to have attended a course (and therefore has the right to sit for the exam) only if he/she has attended at least 90% of the course hours. If the percentage of student absences exceeds 10% of the total number of courses, there is a question of his/her being dropped from the program. The matter in question is examined by the SE, which issues an opinion on the matter at the Department's Assembly.

8.4 The evaluation of postgraduate students and their performance in the courses they are required to attend within the framework of the postgraduate program, takes place at the end of each semester with written or oral exams. In addition, the preparation of assignments and laboratory or clinical exercises may be evaluated throughout the semester. The evaluation method is defined by the teacher of each course. When conducting written or oral examinations, as evaluation methods, the integrity of the process must be ensured. Grading is done on a scale of 1-10. The results of the exams are announced by the teacher and sent to the Secretariat of the postgraduate program and the Department within two (2) weeks at the latest after the examination of the course. If the above limit is repeatedly exceeded by a teacher, the Director of the program informs the Assembly of the Department accordingly.

8.5 In order to deal with extraordinary needs or circumstances resulting from force majeure, alternative assessment methods may be applied, such as the conduct of written or oral examinations using electronic means, provided that the integrity of the assessment process is ensured.

8.6 Alternative methods may be applied for the assessment of students with disabilities and special educational needs following a decision by the SE and a recommendation of the Department's Day Care Center for the Disabled (AmeA) committee and considering the relevant instructions of the Accessibility Unit for Students with Disabilities.

8.7 In cases of illness or recovery from a serious illness, the teacher is recommended to facilitate, in whatever way he/she considers appropriate, the student (e.g., remote oral examination). During the oral exams, the teacher ensures that he/she will not attend the examination with the student being examined, alone.

8.8 Grade correction is allowed, if an obvious mistake or cumulative error has occurred, after an appropriate recommendation is made by the lecturer and approved by the Department Assembly.

8.9 If the student fails the same course three (3) times, the procedure defined by the current legislation is followed.

8.10 The examination papers are kept mandatorily and under the care of the person(s) in charge of the course for two (2) years. After the expiry of the 2-year period, the examination papers cease to be valid and, under the responsibility of the Assembly of the Department, relevant minutes are drawn up and destroyed - unless relevant criminal, disciplinary or any other administrative procedure is pending.

8.11 For the calculation of the final grade for the degree, the weight of each course in the study program is considered and is expressed by the number of credits (ECTS). The number of credits (ECTS) for a course is also the weighting factor of the course. To calculate the final grade for the degree, the grade for each course is multiplied by the corresponding number of credit units (for the course) and the total sum of the individual products is divided by the total number of credit units required to obtain the degree. This calculation is expressed by the following mathematical formula:

$$\text{Βαθμός πτυχίου/διπλώματος} = (\sum_{k=1}^N \text{BM}_k \cdot \text{ΠΜ}_k) / \text{SPM}$$

where:

N = number of courses required to obtain the corresponding degree

BM_k = grade for the course k

ΠΜ_k = credit units of the course k

SPM = total credits for obtaining the corresponding degree

For the acquisition of the postgraduate diploma, every postgraduate student must attend and be successfully examined in all the courses offered by the postgraduate program and prepare a postgraduate diploma thesis, thus accumulating ninety (90) ECTS.

ARTICLE 9. PREPARATION OF POSTGRADUATE THESIS

9.1 The assignment of a postgraduate diploma thesis is done by the Coordination Committee of the postgraduate program.

9.2 The diploma thesis must be individual, original, have a research character and be prepared in accordance with the writing instructions posted on the postgraduate program website.

9.3 An application must be made by the candidate, in which the proposed title of the thesis is indicated, the supervisor and a summary of the proposed thesis is attached. Then, the Assembly of the Department, following a relevant recommendation from the SE of the postgraduate program, appoints its supervisor and sets up the three-member examination committee for the approval of the work, one of whose members is the supervisor. The writing language of the master's thesis can be Greek or English, with the consent of the supervising professor, and is decided together with the definition of the topic of the thesis.

9.4 The title of the thesis can be finalized following the student's application, and the supervisor's consent, to the Postgraduate Studies Program Coordinating Committee. The application must also include a brief justification for the change.

9.5 Every postgraduate student keeps a research diary. This diary, as well as the related data (spectra, graphs, electronic files, etc.) belong to the Laboratory where the student works and remain there after the student completes his/her studies.

9.6 The supervising professor is responsible for the presentation of the results to third parties (publications in journals, announcements at conferences, reports to institutions, patents, etc.), where the name of the postgraduate student will also be mentioned, according to the international practice and scientific ethics. The use of the results of the research in any way (including financial exploitation) is regulated based on the regulations of the NKUA and the institution's contracts with third parties.

9.7 In order for the work to be approved, the student must support the thesis before the three-member examination committee.

9.8 If the diploma thesis is not prepared appropriately (the average grade of the diploma thesis is less than five) or the thesis is not completed within the prescribed time, the postgraduate student is obliged to stop his studies.

9.9 The Supervisor and the members of the three-member examination committee of the postgraduate thesis are appointed from the following categories of teaching staff who have undertaken teaching work within the postgraduate program:

a) members of the Teaching Research Staff (D.E.P.), Special Educational Staff (E.E.P.), Laboratory Teaching Staff (E.D.I.P.) and Special Technical Laboratory Staff (E.T.E. P.) of the Department or other Departments of NKUA or another Higher Educational Institution (A.E.I.) or Higher Military Educational Institution (A.S.E.I.), with additional work beyond their legal obligations,

b) Emeritus Professors or retired members of the Faculty of Education of the Department or other Departments of NKUA or other Higher Education Institutions,

c) cooperating teachers,

d) authorized teachers,

e) visiting professors or visiting researchers,

f) researchers and special functional scientists of research and technical bodies of article 13A of Law 4310/2014 (A' 258) or other research centres and institutes of the country or abroad.

By decision of the Assembly of the Department of Pharmacy, following a relevant recommendation from the SE of the postgraduate program, the supervision of diploma theses may also be assigned to members of D.E.P., E.E.P., E.T.E.P. and E.D.I.P. of the Department, who have not undertaken teaching work within the program.

9.10 Postgraduate theses, once approved by the examination committee, must be uploaded onto the "PERGAMOS" Digital Repository, in accordance with the decisions of the NKUA Senate.

9.11 Since the diploma thesis contains unpublished original results, upon request of the supervisor, which is co-signed by the postgraduate student, only the abstracts may be published in the "PERGAMOS" Digital Repository, and the full text may be published later.

ARTICLE 10. OBLIGATIONS AND RIGHTS OF POSTGRADUATE STUDENTS

10.1 Postgraduate students have all the rights and benefits provided for students of the first cycle of studies, until the end of any granted extension of study, except for the right to receive free textbooks.

10.2 The institution ensures that students with disabilities and/or special educational needs have access to the proposed literature, notes, and teaching courses(<https://access.uoa.gr/>).

10.3 The NKUA Liaison Office provides advisory support to students in matters of study and professional rehabilitation (<https://www.career.uoa.gr/ypiresies/>).

10.4 Postgraduate students are invited to participate in and attend seminars of research groups, literature review discussions, laboratory visits, conferences/workshops with a subject related to that of the postgraduate program, lectures, or other scientific events organized by the postgraduate program etc.

10.5 The Assembly of the Department of Pharmacy, after the proposal of the SE, may decide to permanently suspend a student's studies if he/she:

- exceeds the maximum number of absence days allowed,
- fails the examination of a course or courses and has not successfully completed the program, in accordance with the current regulation,
- exceeds the maximum duration of the study program, as defined in by the regulation,
- has violated the written provisions regarding the treatment of disciplinary offenses,
- does not pay the tuition fees,
- requests a cessation of studies.

10.6 If a postgraduate student is suspended from the program, he/she may request a certificate acknowledging that he/she has attended certain courses and has successfully passed the examination of those courses.

10.7 Students may participate in international student exchange programs, such as the ERASMUS + or CIVIS program, according to current legislation. The maximum number of ECTS recognized for these programs is thirty (30). This option is provided after the first semester of their studies. Students should apply to the SE and follow the terms of the program.

Students from international student exchange programs, such as the ERASMUS+ program, can also attend the postgraduate studies program, in accordance with the agreements made between the University and other institutions, with a proviso that they have at least a B2 Certificate in Greek Language.

10.8 The postgraduate students of the NKUA can enrol in the postgraduate program of the same or other Higher Education Institution of the country or abroad in the context of educational or research cooperation programs in accordance with current legislation.

10.9 It is possible to attend, in parallel, another undergraduate or postgraduate study program or two (2) Postgraduate Studies Programs of the same or another Department, in the same or another Higher Education Institution.

10.10 At the end of each semester, an evaluation of each course and each teacher is carried out by the postgraduate students (see article 16).

10.11 Postgraduate students can request the issuance of a diploma supplement in Greek and English.

10.12 For their participation in the Postgraduate Studies Program in "Clinical Pharmacy", postgraduate students are required to pay tuition fees amounting to €800 per semester. The fee is paid at the beginning of each semester.

10.13 In the event of permanent cessation of studies or suspension of a postgraduate student, for any reason, the study fees that have already been paid are non-refundable.

ARTICLE 11. TUITION EXEMPTION

11.1 The postgraduate students who meet the financial or social criteria and the conditions for excellence during the first cycle of studies, in accordance with the current legislation, are exempt from tuition fees. This exemption is granted for participation in a single postgraduate program. The number of students with exemption must not exceed thirty percent (30%) of the total number of students admitted to the program per academic year.

11.2 An application for exemption from tuition fees is submitted after the completion of the selection process of the students for the postgraduate program. The financial situation of the candidate is under no circumstances a reason for non-selection to the program.

11.3 Those receiving a scholarship from another source are not entitled to exemption, nor are citizens of non-EU countries.

11.4 Examination of the criteria for exemption from tuition fees is carried out by the Assembly of the Department and a reasoned decision is made for either acceptance or rejection of the application, following the recommendation of the SE of the Postgraduate Studies Program.

11.5 Since the current legislation sets an age criterion, it is recommended, for reasons of good administration and equal treatment, that the date of birth of the students be considered the 31st of December of the year of their birth.

11.6 The members of the E.E.P., E.D.I.P., E.T.E.P. categories, who are accepted as supernumeraries in accordance with provision 3.3 of this regulation, are exempt from paying tuition fees.

11.7 In the event that members of the same family, up to the second degree, are simultaneously studying at the same institution and Postgraduate Studies Program, a 50% reduction in the tuition fees may be allowed.

ARTICLE 12. INFRASTRUCTURE AND FINANCING OF THE POSTGRADUATE STUDIES PROGRAM

12.1 For the proper operation of the postgraduate program, lecture rooms, seminar rooms and auditoriums are equipped with audio-visual media, and laboratories of the Department of Pharmacy are available.

13.2 The administrative and secretarial work for the postgraduate studies program is done by the Secretariat of the Department of Pharmacy and assisted by the Secretariat of the Program, under the supervision of the Secretariat of the Department and staffed by administrative employees of the Department.

12.3 The financing of the postgraduate studies program can come from:

- a) tuition fees,
- b) donations, sponsorships, and all kinds of financial aid,
- c) legacies,
- d) resources from research projects or programs,
- e) other resources of the Higher Educational Institution and
- f) the state budget or public investment program,
- g) any other legal source.

12.4 The payment of tuition fees is carried out by the student him or herself or by a third natural or legal representative on behalf of the student, if this is provided for in the decision establishing the program.

12.5 The management of the resources of the postgraduate studies program of the higher education institution is carried out by the Special Research Funds Account (ELKE) of the NKUA.

12.6 The resources of the postgraduate studies program are distributed as follows:

- a) an amount corresponding to thirty percent (30%) of the total income derived from tuition fees is withheld by ELKE. This amount includes the percentage withheld for the financial management of the program by ELKE. When the revenues of the postgraduate studies program come from donations, sponsorships and other kinds of financial support, legacies or resources from research projects or programs, the percentage withheld in favour of ELKE applies to income from corresponding sources of funding,
- b) the remaining amount of the total income of the postgraduate studies program is available to cover its operational costs.

ARTICLE 13. ASSIGNMENT OF TEACHERS FOR THE POSTGRADUATE STUDIES PROGRAM

13.1 The teaching work of the Postgraduate Studies Programs is assigned for the following categories of teachers, by the Assembly of the Department of Pharmacy, following a relevant proposal by the SE of the program:

- a) members of Teaching Research Staff (D.E.P.), Special Educational Staff (E.E.P.), Laboratory Teaching Staff (E.D.I.P.) and Special Technical Laboratory Staff (E.T.E. P.) of the Department or other Departments of NKUA or another Higher Education Institution or Higher Military Educational Institution (A.S.E.I.), with additional work beyond their legal obligations, if the programs have tuition fees,
- b) emeritus professors or non-serving teaching and research staff of the Department or other Departments of NKUA or other Higher Education Institutions,
- c) collaborating professors,
- d) authorized teachers,
- e) visiting professors or visiting researchers,
- f) researchers and scientists of research and technological organizations of article 13A of Law 4310/2014 (A' 258) or of other research centres and institutions at home or abroad,
- g) scientists of recognized prestige, who have specialized knowledge and relevant experience in the subject matter of the Postgraduate Studies Programs.

13.2 All categories of teachers may be paid exclusively from the resources of the Postgraduate Studies Programs. Financial compensation or other benefits from the state budget or public investment program is not permitted. The Assembly of the Department of Pharmacy determines the amount of each teacher's fee, following a relevant recommendation from the SE of the Postgraduate Studies Program. Lecturers who are members of the teaching staff of the department may be paid additionally for the work they offer to the program if they fulfil their minimum legal obligations, as defined in par. 2 of article 155 of the Law 4957/2022. The last paragraph also applies for the members of the E.E.P., E.D.I.P. and E.T.E.P., if they fulfil their minimum legal obligations.

13.3 The Assembly of the Department of Pharmacy, following a relevant recommendation from the SE of the Postgraduate Studies Program, may assign an auxiliary teaching project to PhD candidates of the Department, under the supervision of the Postgraduate Studies Program.

13.4 The Assembly of the Department of Pharmacy assigns the teaching work, following a relevant recommendation from the Coordinating Committee of the Postgraduate Studies Program. The decisions of the Department Assembly regarding the distribution of the teaching work must include the following elements:

- a) the full name of the teacher,
- b) his/her status (e.g., member of D.E.P., E.E.P., E.D.I.P., E.T.E.P. etc.),

- c) the type of teaching work assigned to the teacher (course, seminar, or workshop),
- d) the number of teaching hours per course, seminar, or workshop.

13.5 The assignment of teaching work takes place before the start of the academic year for both the winter and spring semesters. If the teaching work cannot be assigned simultaneously for both academic semesters, it will be assigned before the start of each academic semester. Following a relevant recommendation from the SE of the Postgraduate Studies Program, the assignment of teaching work may be modified by the Assembly of the Department of Pharmacy during the academic year.

13.6 The lecturers, during the period that they are on educational leave or suspended from duties, may contribute to the teaching work of the Postgraduate Studies Program, if they consider that the program allows it, and if it is essentially and practically possible, a matter which must be decided on a case-by-case basis.

ARTICLE 14. AWARD OF POSTGRADUATE DIPLOMA

14.1 The postgraduate diploma is awarded when the student completes the number of courses and credits required by the program, as well as the postgraduate thesis. The Assembly of the Department verifies the completion of studies to grant the Diploma of Postgraduate Studies.

14.2 Upon completion of the above procedure, the postgraduate student is granted a certificate verifying completion of studies, his/her student status is lost and his/her participation in the collective administrative bodies of the University ceases.

14.3 The Diploma of Postgraduate Studies certifies the successful completion of the Postgraduate Studies Program and displays the final grade, rounded to two decimal places, according to the following scale: Excellent (8.5 to 10), Very Good (6.5 to 8.5 not included) and Good (5 to 6, 5 not included).

14.4 The type of Diploma is common to all Departments and Schools of NKUA and is included in the Postgraduate and Doctoral Studies Regulations of the Institution.

14.5 In the context of the Postgraduate Studies Program a Postgraduate Diploma in "Clinical Pharmacy" is awarded.

ARTICLE 15. THE OATH

15.1 Being sworn in or taking the oath is not essential for the successful completion of studies but is a necessary for the diploma title document to be granted. The certification takes place within the framework of the Assembly of the Department of Pharmacy and in the Department or School, in the presence of the Director of the Department of Pharmacy, the President of the Department or his/her Deputy, the Dean of the School or his/her Deputy and, if possible, a representative of the Rector.

15.2 Requests for the swearing-in ceremony of postgraduate students in the Great Hall of Ceremonies of the Central building are decided on a case-by-case basis by the Rector, based on an assessment of the number of students required to participate declared by the Secretariat of the postgraduate program to the Directorate of Education and Research.

15.3 Postgraduate students, who have successfully completed the Postgraduate Studies Program, in exceptional cases (studies, residence or work abroad, health reasons, etc.), may apply to the Department Secretariat for an exemption from the attestation obligation. Exemption from the obligation is approved by the Chair of the Department and the Vice Chancellor of Academic Affairs and Student Affairs.

ARTICLE 16. EVALUATION OF THE POSTGRADUATE STUDY PROGRAM

16.1 Evaluation by the National Higher Education Authority

The Postgraduate Studies Program is evaluated within the framework of the periodic evaluation/certification of the Department organized by the National Authority of Higher

Education (ETH.A.A.E.). The overall evaluation of the program is carried out by the Postgraduate Studies Program, to determine the fulfilment of the goals set from its onset, its sustainability, the absorption of graduates within the labour market, the degree of its contribution to research, its internal evaluation by postgraduate students, the feasibility of extending its operation, as well as other data regarding the quality of the work produced and its contribution to the national strategy for higher education.

If the Postgraduate Studies Program during the evaluation stage does not meet the required conditions for continuing its operation, it will be allowed to operate until the graduation of those students who have already registered, in accordance with the decision made from its inception and the regulation of postgraduate and doctoral study programs.

16.2 Internal Evaluation

The internal evaluation of the Postgraduate Studies Program is carried out on an annual basis by the Quality Assurance Unit (QAU) of the University. All those involved in the implementation of the actions and activities of the Postgraduate Studies Program participate in the internal evaluation process. and more specifically, the students, the members of the teaching staff, the administrative and technical support staff, and the members of the Coordination Committee of the postgraduate program.

The internal evaluation process is carried out in accordance with current legislation, the Institution's Internal Quality Assurance System, the guidelines, and standards of the ETHAAE. The internal evaluation of the Postgraduate Studies Program includes the evaluation of the teaching work, as well as all its academic functions and actions.

The following are evaluated in more detail:

- a) the content of the Study Program according to recent research within the specific subject of the Postgraduate Studies Program, so as to ensure the modern character of the program,
- b) the workload of the courses, as well as the progress and completion of postgraduate studies by the students,
- c) the degree of satisfaction of the students' expectations from the Study Program, the services offered to support their studies and the learning environment,
- d) the courses of the Program on a six-monthly basis through questionnaires completed by the students of the Postgraduate Studies Program.

The use of the results of the evaluation and their notification, as defined in the relevant Regulations, aim at the sustainability of the Program, the high level of its study courses, the improvement of its benefits and the efficiency of its teachers. More specifically:

1. The results of the student evaluations through the course/teacher evaluation questionnaires are provided by the OMEA of the Pharmacy Department to the Course Coordinators for their corrective actions and are taken very seriously by the teachers.
2. The results of the internal evaluation of the Postgraduate Studies Program as a whole, are analysed by the Coordinating Committee and the Certification Control Group of the postgraduate program in "Clinical Pharmacy", in collaboration with the OMEA of the Department of Pharmacy and are reflected in the annual internal evaluation report of the Postgraduate Studies Program, which is submitted to the MODIP, NKUA.
3. The results of the annual internal evaluation of the Postgraduate Studies Program from MODIP, NKUA are posted on the website of the Department of Pharmacy (Postgraduate Studies Program in Clinical Pharmacy)

ARTICLE 17. DURATION OF OPERATION OF THE POSTGRADUATE STUDY PROGRAM

The Postgraduate Studies Program will operate until the academic year 2027-2028 as long as it meets the criteria of the internal and external evaluation, in accordance with the current legislation.

ARTICLE 18. TRANSITIONAL PROVISIONS

Already registered students complete their studies in accordance with these Regulations. For all matters not defined in the current legislation, in the Regulations for Postgraduate and Doctoral Studies NKUA or in this Regulation, the bodies of the Postgraduate Studies Program are competent to decide.

This pronouncement will be published in the Government Gazette.

The Rector

Meletios-Athanassios Dimopoulos