



HELLENIC REPUBLIC
**National and Kapodistrian
University of Athens**
—EST. 1837—
**SCHOOL OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY**

Department of Pharmacy

M.Sc. Programme
"Pharmaceutical Analysis – Quality Control"

STUDY GUIDE



Academic Year 2022 - 2023

PREFACE

The main purpose of the present Study Guide is to inform the postgraduate students about the Postgraduate Studies Programme (M.Sc.) "Pharmaceutical Analysis – Quality Control" of the Pharmaceutical Chemistry Division of the Department of Pharmacy of the National and Kapodistrian University of Athens (N.K.U.A.), Greece, 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 MSc Programme

Prof. Mikros Emmanuel (Programme Director)
Prof. Eirini Panteri
Associate Prof. Ioannis Dotsikas
Associate Prof. Ioannis Loukas
Associate Prof. Konstantinos Georgakopoulos

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1. HISTORY AND ORGANIZATION OF THE NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

1.1. FOUNDATION – HISTORICAL NAMES

The "Hellenic University of Othon" was founded in 1837 and comprised of four Schools. The first appointed Rector was Professor of History, K.D. Schinas. "Semantors", *i.e.* Deans, were: Michael Apostolidis of the Faculty of Theology, Anastasios Lefkias of the Medical Faculty, Georgios Rallis of the Faculty of Law and Neophytos Vamvas of the Faculty of Philosophy. Later, in 1862, the University was renamed "National University".

In 1911, in order to fulfill a condition of the Ioannis Dombolis will, the great benefactor of the University, the "Kapodistrian University" was founded, encompassing the Faculties of Theology, Law and Philosophy. The other Faculties (Medicine and Physicomathematics), formed the "National University". These two institutions, each with a separate legal status, premises, seal and discrete role, were ran under a common administration. By the Statute of 1932 (Law 5343) the two Institutions were merged forming the "National and Kapodistrian University of Athens" under 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 the 1268/1982 Law, and today its operation is governed by the 4009/2011 Law, as amended.

1.2. PREMISES

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

The Faculty of Theology is housed in its own building on the University 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 at Goudi, also operating in a number of Hospitals, Clinics, etc, in various locations in Athens. The Faculty of Philosophy is housed in its own building on the University Campus. The Faculty of Natural Sciences and the Department of Pharmacy are mainly housed in their own buildings on the University Campus. Also, the Department of Physical Education and Sport Sciences is housed in the old N.A.P.E. buildings, 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 in 33 Ippokratous Street, the Department of Communication and Mass Media in 5 Stadiou Street, the Department of Theatre Studies and the Department of Music Studies in the University Campus.

1.3. UNIVERSITY CAMPUS (PANEPISTIMIOPOLIS)

In 1963, a forest area of approximately 1550 acres of land in the municipalities of Zografou and Kaisariani was ceded by the State to the University for the construction of the University Campus. Initially, the large Student House, the sports facilities, the Technical Support Services building and the Faculty of Theology were delivered.

In July 1981 the new buildings of the Departments of Biology and Geology of the Faculty of Sciences 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 Departments of Chemistry and Pharmacy premises was completed.

Today, many infrastructure projects have been completed (roads, lighting, water supply, car parking, restaurant, medical centre, study rooms, kindergarten). A bus service is in operation to transport staff and students to the University's buildings. However, many projects are still pending in order to complete the University Campus constructions, according to the original plans.

1.4. ADMINISTRATION

As a Higher Educational Institution, the University is, according to the Constitution, is a public law legal entity, fully self-governed and supervised and subsidised 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 (Law 4485/2017).

The Senate consists of: a) the Rector, b) the Vice Rectors, c) the Deans of the Faculties, d) the Presidents of the Departments, e) the student representatives (10% of the total number of the Senate members; minimum of one (1) representative from the undergraduates and one (1) in total from the postgraduates and doctoral candidates), f) three representatives, one per category from the members of the E.E.P. (Special Education Staff), E.D.I.P. (Laboratory Teaching Staff) and E.T.E.P. (Special Technical Laboratory Staff) of the Institution, and g) one (1) representative from the Administrative Officers of the Institution.

1.5. ACADEMIC UNITS AND STUDIES TITLES

Each Institution consists of Schools. A School covers a set of related disciplines and ensures an interdisciplinary approach, communication and coordination. The School supervises and coordinates the operation of the Departments, in accordance with their own Regulations.

The Schools are divided into Departments. The Department promotes science, technology or arts, in the relevant scientific field, organises teaching curricula and ensures the continuous improvement of learning.

The Departments are divided into Sections, which coordinate the teaching of discrete interdepartmental courses/fields of science.

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

In addition to the undergraduate degrees, the University also grants postgraduate and doctoral diplomas.

1.6. STAFF

The staff of the University consists of the Teaching Research Personnel (D.E.P.), the Special Education Staff (E.E.P.), the Laboratory Teaching Personnel (E.D.I.P.), the Special Technical Laboratory Staff (E.T.E.P.), and the Administrative Staff. The teaching personnel consists of Professors (Professors, Associate Professors, Assistant Professors) and Lecturers. The teaching staff of the University also includes non-PhD diploma holders, who are responsible for the co-supervision of doctoral theses, as well as research assistants and foreign language teachers.

1.7. STUDENTS

The students of the University are classified into two categories, undergraduates and postgraduates. Undergraduate students are those who follow the first cycle of studies (BSc), while the postgraduates are those who follow the second cycle (MSc) and doctoral students are those who follow the third cycle of studies (PhD).

1.8. STUDENT CARE

The student status is acquired upon enrolment at a higher education institution (H.E.I.) and is withdrawn on receipt of the respective diploma.

The students are entitled to use all the facilities with which the H.E.I. is equipped for the fulfilment of the educational work, in accordance with the internal regulations and the decisions of the authorised bodies of the H.E.I..

1.8.1. SERVICES TO STUDENTS

University Club

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

Medical Care

This care is provided by the Health Service located on the first floor (office 6-10) of the building of the University Club, 15 Ippokratous Street (tel. 210-3688216 / 210-3688218 / 210-3688228).

The Health Service involves three sections: medical, dental and nursing.

All undergraduate and postgraduate students, locals, expatriates and foreigners are entitled to the health care.

In detail, health care is provided to students as follows:

- a) Clinical Examination (tel. 210 3688208)
- b) Hospital treatment (tel. 210 3688208, 3688218)
- c) Pathology Clinics (tel. 3688241, 3688243)
- d) Paraclinical examinations (tel. 210 3688208, 3688241, 3688243, 3688210)
- (e) Physiotherapy (tel. 210 3688208, 3688241, 3688243)
- (f) Dental care (tel. 210 3688210, 210 3688211)
- (g) Orthopaedic equipment (tel. 210 3688208, 3688241, 3688243)
- (h) Psychosocial Intervention Unit (210 3688226)

If the student is directly or indirectly entitled to health care from another insurance provider, he/she chooses the provider he/she prefers, declaring his choice every academic year filling out a solemn declaration form.

The Health Service is located on the first floor of the University Club (Ippokratous 15); the telephone number of the secretariat is: 210 3688218.

For more information, *vide*: <http://lesxi.uoa.gr/foithtiki-merimna/ygeionomiki-yphresia.html>

Student Refectories

The National and Kapodistrian University of Athens is currently operating four restaurants: The restaurant at the Faculty of Philosophy, which serves students attending classes in the University Campus, the restaurant at Goudi, which serves students of Health Sciences, the restaurant in Dafni for the students of the Department of Physical Education and Sports Science, and the restaurant at 14 Lycabettus Street, for the students attending classes in the centre of Athens.

Free meals are provided to:

- a) All active students of the N.K.U.A., undergraduate, postgraduate and doctoral students, provided that they have not graduated.
- b) Students registered, as visiting students at the N.K.U.A., who come from other higher domestic education institutions or those involved in research cooperation programs, as defined in article 36, par. 2 a and b of Law 4009/2011 (A 195).
- 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 (A 195).
- d) Foreign scholarship holders of the Ministry of Education and Religious Affairs, who are pursuing undergraduate studies in the N.K.U.A.

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

Foreign Languages Courses

The School of Foreign Languages of the National and Kapodistrian University of Athens is an independent and autonomous academic unit, which provides higher level foreign languages teaching.

Today, 23 languages of all levels are taught: English, Albanian, Arabian, Bulgarian, Chinese, Czech, Danish, Dutch, Finnish, French, German, Hindi, Italian, Japanese, Korean, Norwegian, Persian, Portuguese, Russian, Serbian, Spanish, Swedish and Turkish

In addition, special programs are offered for anyone wishing to specialise in language translation of law or medicine terminology.

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 phone numbers: 210-3688232, 210-3688263, 210-3688265, 210-3688266, 210-3688267, 210-3688204, 210-3688270.

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

Music Department

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

The main aim of its operation and its participation in the university's 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 the University ceremonies, in concerts inside and outside the University, in Greece and abroad, attract the interest of the students and are a motivation for their participation in the Music Department, a place where, apart from practicing art, the interaction of persons is forged.

The Music Department has a large training room equipped with the necessary acoustic facilities, a classical music library, a discotheque with classical music records, a film library and various musical instruments.

The Music Department is located on the 4th floor of the University Club (Tel. 210-3688235, 210-3688229).

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

Gymnastics and Sports

The purpose of the University's Gymnasium is to organize and operate physical exercises and sports programs for students.

The University Gymnasium and its sports facilities at the University Campus - Ano Ilisia are at the disposal of all students of the National and Kapodistrian University of Athens, in order to participate in the various programs and sports sections.

Interested in sports students can choose from a variety of sports/activities, inside and outside the facilities of the University Gymnasium, such as tennis, basketball, volleyball, football, swimming, traditional dances, chess, hiking, etc.

Apart from their recreational participation in the activities, the participating students can join the representative teams of their Department or the University and take part, during the academic year in internal, inter-university and international student championships. Special awards are given by the Rectoral Authorities, in the context of a special ceremony after the end of the academic year.

For information, please call 210-7275551, 210-7275552, 210-7275557, 210-7275576 and 210-7275560.

Care for Accommodation and Work

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

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

- It receives applications from students who wish to work and facilitates them in finding a job. It also registers - codifies requests from the labour market by informing and contacting students who meet the requirements – individual criteria.

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

The Department is located on the 4th floor of the University Club (Ippokratous 15). Contact telephone numbers: 210-3688227, 210-3688251, 210-3688254

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

Liaison Office

The Liaison Office is the link between the University and industry, providing services to students and graduates of the University of Athens. The main objective of the Liaison Office is to inform new graduates about the jobs available per field, and to facilitate and support them in their professional orientation. The aim of the Liaison Office, through its career guidance services, is to support students-graduates in developing and continuously adapting their skills, in conjunction with the new and ever-increasing demands.

More specifically, the Liaison Office provides the following services:

1. Provision of advisory, career guidance, information and guidance services to students and graduates of the University of Athens, in order to facilitate their choices of the most suitable professional and educational directions. 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 personnel selection interviews, etc) through personal and group meetings, concerning the development of skills.

2. Development and enrichment of the existing website (<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 regarding the situation in the labour market and the jobs available in the market, for graduates. Occupational description guides and vocational guidance. Informing the departments of the University and the Senate on these issues.

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/ organises joint events with industries.

6. Supports the Youth Entrepreneurship Programme, which aims at developing the entrepreneurial spirit.

7. Developing links with the secondary education schools, the Counselling and Guidance Centres (CGCs) and the School Counselling and Guidance Offices (SCGOs).

8. International Careers/Liaison Unit: The International Careers Unit in the Regional Liaison Office of the Department of Political Sciences It aims at the timely and systematic collection of all job advertisements, and vacancies in European and international organisations, non-governmental organisations, international missions and activities, research centres and other related needs, either permanent or short-term. It also seeks to create a global network of Greek executives who serve or have served in international organizations and missions.

Contact details:

Central Liaison Office

Postal address: Department of Information Technology and Telecommunications
Office A22,

University Campus (Panepistimiopolis) – Ilisia Athens , 157 84

Telephone: 210-7275220, 210-7275190

fax: 210 -275214

E-mail: [gd\(at\)di.uoa.gr](mailto:gd@di.uoa.gr)

Regional Liaison Office at the Department of Political Sciences and Public Administration

Postal address: Themistokleous 6, Athens 10678

Telephone: 210-3688947

E-mail: [imeleas\(at\)pspa.uoa.gr](mailto:imeleas@pspa.uoa.gr)

Students' Residences

The University of Athens operates the Students' **Halls of Residence** (F.E.P.A.), which consists of 4 buildings, dormitories A, B, C and D, located in the University campus. The old F.E.P.A. was also located there.

Only students of the National and Kapodistrian University of Athens, and students of other universities and TEI, whose brothers and sisters already reside in the dormitory, are admitted to the halls of residence.

The admission criteria are social and are described in the Operating Regulations, which also contain all the accommodation 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's 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 Accommodation Secretariat is: **210-7258723**

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

The Student Cultural Club (P.O.F.P.A.)

For the entertainment and promotion of the students' artistic inclinations, the Students' Cultural Club has been created, providing access to Theatrical, Dancing, and Film/Photography facilities.

The Students' Cultural Club aims to support and promote the artistic activities of the students of the N.K.U.A. 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: a) Theatre, b) Dance, c) Film and Photography Sectors.

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

Contact phone numbers: 210-3688205, 210-3688275, 210-3688276.

The Student Cultural Club of the University of Athens is ran by a Coordinating Committee, elected by all the members of the Students' 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 Study Rooms

The student study rooms are located in the building of the University Club (15 Ippokratous Street).

There are two (2) Study Rooms in the premises of the Student Club (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 study rooms are open every day, except on Saturdays and Sundays, from 8 am to 9 pm; a study room is also open in the University Campus (8 am to 9 pm).

In the Study Rooms, the students can use their own books or books from the library, which can borrow by showing their student or police ID card and by filling out a library loan form (internal borrowing).

If the student has not yet been provided with a student ID card (newly enrolled students), the books can be borrowed by providing another ID card, along with their police ID.

Books are not borrowed outside the Student Study Rooms.

Contact phone numbers: 210-3688219 (2nd floor), 210-3688231 (4th floor).

LIBRARY OF SCHOOL OF SCIENCES

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 Library entrance *via* the corridor on the 3rd floor of the Department of Mathematics.

CONTACT

Information: ☎210 727 6599, Secretariat: ☎ 210 727 6525, fax: 210 727 6524
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 during the public holidays, as determined by the Rectoral 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 dissertations, doctoral theses, maps and other material in the following subject categories: Biology, Geology and Geoenvironment, Mathematics, Computer Science and Telecommunications, Pharmacy, Physics and Chemistry.

LIBRARY SERVICES

PERSONAL STUDY ROOMS/GROUP STUDY ROOMS

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

ACCESS TO JOURNALS

The Library has a room on the 3rd floor, where the latest issues of current journals' volumes (those that are available in print and for which subscriptions are still valid) are on display.

COMPUTER WORKSTATIONS (PCs)

In the Library of the Faculty of Sciences (3rd and 4th floor) there are special areas with computer workstations accessing the material of the University of Athens Libraries

in the Open Public Access Catalogue (OPAC: 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 LIBRARY

The right to borrow is granted to 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 issue of the loan card:

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

The application can be submitted to 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 file containing the above data is subjected to the Personal Data Protection Act.

For the categories of users who cannot borrow the material, access to the Library is permitted upon presentation of their police identity card, which is returned prior to their departure from the premises. The lending card is non-transferable and can only be used by its holder.

Users of each category are entitled to **renew** their request to borrow material up to two times. At the end of the last renewal and after 15 calendar days, the user may borrow the same item once 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 number for reserving material per user is two (2) items. If not requested within three working days, the right to reserve is lost. For material that has been reserved by more than one user, the borrowing period is reduced in order to better serve all applicants.

The detailed User Regulation is available at: <http://sci.lib.uoa.gr/>.

INTERLIBRARY LOANS

The Interlibrary Loan Office is responsible for spotting 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 collections.

WORKSTATION FOR PERSONS WITH DISABILITIES (PWDs)

On the 3rd floor of the Library, in a specially designed area, there are workstations for people with special skills. There are three workstations covering people with blindness, impaired vision, mobility disabilities and deafness. The workstations are equipped with special devices and software to facilitate access to the computers, the Internet and the Library's collections for all people with disabilities, especially for those who have problems handling printed material (print disability). They can also be used in the context of the writing of assignments by students with disabilities (SWSSs) or in the collaboration between SWSSs and fellow student volunteers, who support their studies.



TRAINING OF USERS

Every Monday, from 10:00-12:00 a guided tour to the Library and its services is provided. Those interested can register by filling in their name on the special forms (information at the Service Desk on the 3rd floor).

Accessibility Unit for Students with Disabilities

The mission of the Accessibility Unit for Students with Special Skills (SWSSs) is to ensure equal access to the academic activities to students with special skills and needs. The actions that have been taken are Adaptations to the Environment, Assistive Information Technologies and Access Services. The aim is to meet the basic needs and requirements of the SWSSs, such as: interpersonal communication with members of the academic community, writing assignments, access to university buildings, educational materials, classroom blackboard and projections, examinations and web-offered options.

The SWSSs Accessibility Unit includes:

- SWSSs Needs Registration Service.
- Electronic Accessibility.
- Accessibility in the Buildings.
- 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 under special terms (3%), but also for those admitted with regular or special examinations, as well as for those, who were faced with a disability during their studies.

The Unit provides assessment of competences of SWSS persons, using scientific-based methodologies, and depending on the specific needs of the student, proposes specialised *Assistive Technology* solutions. Moreover, the Unit provides assistance in the procurement of appropriate equipment and software and technical support, where/when needed.

The Accessibility Unit provides expertise, guidance and tools for *Internet Accessibility* and monitors the accessibility to the University's websites to ensure that they comply with international guidelines. In addition, the libraries of the N.K.U.A. are equipped with workstations and specialised facilities for blind students, with impaired vision and those with upper limb disabilities.

The main service of the Accessibility unit is the daily transport of the SWSSs from their residence to the university's auditoriums and back. The unit is equipped with a specially designed vehicle that can transport five SWSSs, at a time, two of whom are wheelchairs 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 routes are available in the new buildings under construction at the University of Athens and modifications are made to the existing buildings (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 organised and information leaflets have been published and are available in the secretariats of all departments of the University of Athens.

Contact

Telephone: 210-7275183

E-mail: [access\[at\]uoa\[dot\]gr](mailto:access@uoa.gr)

1.8.2. SCHOLARSHIPS - AWARDS

The University of Athens grants, on an annual basis, 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 awarded, according to the will terms of the testator of each endowment, subjected to certain conditions (competition or 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 of the Department of Pharmacy. More information can be obtained from the University of Athens Endowments Office (Christou Ladas 6, 6th floor).

Scholarships

- 1. Delliou or Nakidou:** Scholarships are awarded for excellent performance of two young scientists, in any science, other than Medicine, in Europe with preference given to those from Eastern Macedonia.
- 2. Theod. Manousi:** All students from Siatista, who attend any higher education institution in the country, are eligible for scholarships; a selection is made.
- 3. Sp. Baltatzi:** Scholarships are selectively awarded to students coming from the Syrrakos village in Ioannina (Primary, Secondary, Upper and Higher Education candidates are eligible).
- 4. Ant. Papadaki:** Scholarships are given to students of the University of Athens, on a competitive basis.
- 5. Ioannou Alevizatou-Kontou:** Scholarships are awarded to all graduates from all the Schools and Departments of N.K.U.A., for pursuing postgraduate studies in Greece and abroad.
- 6. Ioannou and Marigos Papadaki:** Scholarships are awarded on a competitive basis, to graduates of all Schools and Departments of the N.K.U.A., for postgraduate studies in Greece or abroad, coming from the island of Kassos in the Dodecanese.
- 7. TopouzoglouAristotelous:** Scholarships are awarded, on a competitive basis, to graduates from the N.K.U.A., Greek or from the Hellenic community of Turkey, for postgraduate studies abroad, with preference given to the ones in need.
- 8. Konstantinou Kriezi:** Scholarships are awarded on a competitive basis, for postgraduate studies abroad, for a period of three years, to the best doctoral students and/or graduates of the Faculty of Medicine, the Faculty of Dentistry and the Faculty of Law, Economics and Political Sciences, from all Greek Universities, and in the case where none is qualified, from all other Greek Faculties of all other Universities of Applied Sciences, who come from the Islands of Hydra and Spetses and speak English or French, preferring in case of a tie those who carry by blood the surname "Kriezis" from Hydra. In case there are no candidates from the islands of Hydra and Spetses, applicants from other regions of Greece are eligible (prerequisite: age up to 27 years old).
- 9. Marias Stai:** Scholarships are awarded to Kytherian graduates of all Schools and Departments of the Higher Education Institutions (University Sector), except the Military Schools, for postgraduate studies in Greece or abroad.

Awards

- 1. P. Mari-Kamara:** Award to the best students of all the Schools and Departments of the University.
- 2. Pantia Ralli:** Award to the best students of all the Schools and Departments of the University.
- 3. E.-F. Tsampoula:** Award of a prize to a student, with satisfactory performance in courses offered by, the Faculty of Medicine, preferably, otherwise of the Department of Dentistry, otherwise of any other relevant Faculty or Department, either from Megalo

Chorio Evritania, or from Karpenisi, or from the villages: MikroChorio, Voutiro, Aniada, Nostimo, Karitsa, Dermati.

4. Aspasia Papadaki-Valiraki: Awarded annually to one outstanding graduate of the Department of Pharmacy.

5. Evangelou Kostaki: Awarded annually to one outstanding graduate of the Department of Pharmacy.

2. DEPARTMENT OF PHARMACY

2.1. Historical background

Pharmacy is one of the first sciences taught in 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", a year prior to the Decree of 1836, which established "The University of Athens".

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

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" in the Faculty of Physics and Mathematics.

In 1982 it was attached as the "Department of Pharmacy" to the Faculty of Health Sciences. Since 1990 and until 2013, with the decision of the S.T.E. No. 32/90, which annulled 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 N.K.U.A..

The teaching of Pharmacy started in the Royal Pharmacy building, at the corner of Akademias and Vas. Sofias streets, while the first official Laboratory of Pharmaceutical Chemistry was established in 1837, which was located in the basement of the University's building, and in 1866 it was moved to rooms on the ground floor.

In 1869, the so-called "Pharmaceutical School" was founded, which was located in the three north-eastern basements of the University's building.

In 1870 the first Chemistry Department was built in the courtyard of the Papadopoulou House at the corner of Akademias and Massalias Streets and in 1928 it was moved to Solonos Street. This building, which was built in 1890, was 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 University 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 the Law 1268/1982, these chairs were renamed Sectors.

2.2. Premises of the Department of Pharmacy

The Department of Pharmacy is housed in the Sciences building complex on Campus. The Departments of Biology, Geology, Chemistry are co-located 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 shown on the following pages.

The Department has access to the other Departments in the complex, *via* a grid of corridors. The Secretariat of the Department is located in the same building complex.

The teaching and the examinations of the courses taught in the Department of Pharmacy are held in the following locations:

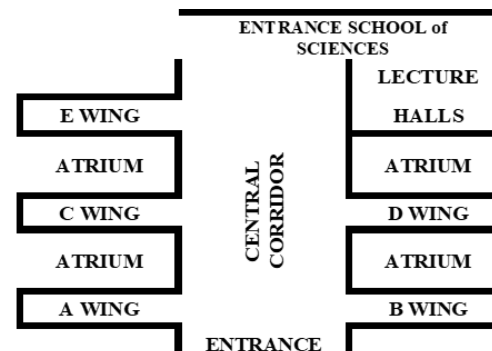
-Lecture halls FM2 and FM1.

-Teaching rooms D (D1, D4, D6, D7, D8), Pharmaceutical Technology Room (AFT), Pharmaceutical Chemistry Room (AFX)

The exact locations of the Department's Sectors are shown in the Table below.

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

ENTRANCE GROUND FLOOR PHARMACEUTICAL TECHNOLOGY DIVISION	
WING A	WING B
- Pharmaceutical Technology Animals Facility	- Pharmaceutical Technology small animals Laboratory



1st FLOOR PHARMACOGNOSY AND NATURAL PRODUCTS CHEMISTRY DIVISION			
WING A	WING B	WING D	MAIN CORRIDOR
- Staff Offices - Research Laboratories	- Staff Offices - Research Laboratories	- Conference Room - Education Laboratories	- Secretariat - Staff Offices - Auditorium

ATRIUM
- Telecommand room - Pharmaceutical Technology Division Laboratories

2nd FLOOR PHARMACEUTICAL TECHNOLOGY DIVISION			
WING A	WING B	WING C	WING D
- Secretariat - Staff Offices	- Research Laboratories	- Pharmaceutical Technology Laboratories - Pharmaceutical Technology Auditorium - Pharmaceutical Chemistry Auditorium	- Computer Rooms - Auditoriums D - Postgraduate Auditoriums

SoS ENTRANCE
- Department of Pharmacy Secretariat - Registrar Office

3rd FLOOR PHARMACEUTICAL CHEMISTRY DIVISION			
WING C	WING D	WING E	CENTRAL CORRIDOR
- Staff Offices - Research Laboratories	- Staff Offices - Research Laboratories	- Staff Offices - Education Laboratories	- Staff Offices - Secretariat

Access *via* bus to the University's Campus:

220 ANO ILISIA - AKADIMIA (CIRCLE LINE)

221 PANEPISTIMIOPOLIS - AKADIMIA (CIRCLE LINE)

235 ZOGRAFOU - AKADIMIA (CIRCLE LINE)

224 KAISARIANI – EL. VENIZELOU (POLYGONO)

250 PANEPISTIMIOPOLIS - EVANGELISMOS (CIRCLE LINE)

E90 PIRAEUS – PANEPISTIMIOPOLIS (EXPRESS LINE)

140 POLYGONO – GLYFADA (Bus stop «Students' Dormitories», Olof Palme street)

608 GALATSI - ZOGRAFOU

Bus time schedules and boarding/disembarking points on Campus are listed in the <http://www.oasa.gr> website.

3. POSTGRADUATE STUDIES IN THE DEPARTMENT OF PHARMACY

The Department of Pharmacy offers Postgraduate Studies Programmes, which lead to the award of a Master's Degree (M.Sc.) or a Doctoral Degree (PhD).

3.1. ORGANISATION AND OPERATION OF POSTGRADUATE PROGRAMMES

The Department of Pharmacy of the University of Athens has been organizing and operating, since the academic year 1993-1994, Postgraduate Studies Programmes (M.Sc.) in accordance with the provisions of articles 10 to 13 of the 2083/1992 Law, and the General Assembly's of Special Composition resolution of 12-5-1993.

The objectives of the postgraduate studies are the promotion of scientific knowledge and the educational, research and development contribution to the needs of the country in the field of the Pharmaceutical Sciences. In particular, postgraduate studies aim to offer specialisation to young scientists both in the broader area of the Pharmaceutical Sciences and in congeneric disciplines, with the aim of delivering scientists capable of contributing to the educational and economic development of our country. In addition, the postgraduate studies leading to the award of the Doctoral Degree aim at the emergence of scientists with a wide range of knowledge and research ability, who will contribute to the further development of Pharmaceutical Sciences and their applications covering more than one specialization.

In order to achieve the above objectives, the Department of Pharmacy seeks the cooperation with the Departments of the Faculty of Health Sciences and with other Departments of the University of Athens or other universities of higher education in Greece or recognised institutions abroad, as well as the connection of the Postgraduate Studies Programme with the Pharmaceutical Industry in Greece and abroad.

The Department of Pharmacy organizes six Postgraduate Programmes and awards the following Postgraduate Diplomas:

1. Drug Design and Development of new Bioactive Compounds

a. Direction: Medicinal Chemistry

b. Direction: Pharmacology

c. Direction: Radiopharmaceutical Chemistry

2. Pharmaceutical Analysis - Quality Control

3. Pharmacognosy and Chemistry of Natural Products

4. Industrial Pharmacy

5. Clinical Pharmacy

6. Cosmetics-Skin Pharmacology

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

3.2. POSTGRADUATE PROGRAMME “PHARMACEUTICAL ANALYSIS – QUALITY CONTROL”

3.2.1. COORDINATION COMMITTEE OF THE POSTGRADUATE PROGRAMME

(Resolution of the Departmental Assembly 16/03/2023)

- Director of the M.Sc. Programme: Mikros Emmanuel, Professor
- Panteri Eirini, Professor
- Dotsikas Ioannis, Associate Professor
- Loukas Ioannis, Associate Professor
- Georgakopoulos Konstantinos, Associate Professor

3.2.2. OBJECTIVES AND EXPECTED LEARNING OUTCOMES OF THE PROGRAMME

A. OBJECTIVES - PURPOSE

The aim of the M.Sc. Program “Pharmaceutical Analysis - Quality Control” is twofold, firstly the promotion and application of new scientific knowledge and technology with the participation and for the benefit of the graduate students, and secondly the creation of new scientists and executives capable to become experts in their professional fields dealing with problems of transfer and assimilation of new high-tech processes contributing to the economic and social development of the country. The proposed specialization aims to meet the needs of the industry, as they are shaped through the economic developments in Greece and in the wider region, in the field of Pharmaceutical Analysis and Quality Control of medicines and compounds of pharmaceutical interest.

The programme leads to the award of a Postgraduate Diploma in "Pharmaceutical Analysis-Quality Control", after full and successful completion of the studies based on the curriculum. The degrees are awarded by the Department of Pharmacy of the School of Health Sciences of the National and Kapodistrian University of Athens.

The graduates of the M.Sc. "Pharmaceutical Analysis-Quality Control" acquire high level training and will specialize in state-of-the-art techniques of Pharmaceutical Analysis and Quality Control procedures as well as in the regulatory framework of drug testing both at a theoretical level and in laboratory. Upon successful completion of the programme, graduates will have the background to continue to prepare a Doctoral Thesis in research academic laboratories or to work in Quality Control as well as in Research and Development (R&D) Departments of the Pharmaceutical Industries, in analytical laboratories for control of drugs, in bioanalytical laboratories (pharmacokinetic and bioequivalence studies, toxicological analyses, doping control, etc.) and in Public bodies. In addition, the advanced knowledge of analytical techniques qualifies the graduates of the programme to work in various other positions of the pharmaceutical companies e.g., control and preparation of dossiers for applications to the competent authority National Organisation for Medicines. The proposed specialization largely covers the requirements for the position of Qualified Personnel appointed by decision of the N.O.M. as managers of the Quality Control Departments of the pharmaceutical industries. Also, the provided knowledge in Quality Systems makes the graduates capable for the positions of Quality Manager, Quality Systems Inspectors (mainly ISO 17025) and Technical managers of laboratories and QA/QC departments.

B. EXPECTED LEARNING OUTCOMES

Graduates of the M.Sc. Programme “Pharmaceutical Analysis – Quality Control” upon successful completion of the programme, will be able to:

1. Have in-depth knowledge on:

- i. The correct and internationally accepted terminology and methodology concerning the scientific and technological fields that co-shape the teaching program and in the context of its interdisciplinarity.
- ii. The modern methods of R&D, production, control and quality assurance of the final pharmaceutical products, as they are applied in the pharmaceutical industry, in research, regulatory organizations and related service companies.
- iii. State-of-the-art analytical techniques as well as sample processing approaches.
- iv. The methodology of statistical-chemometric thinking, analysis and presentation of data in order to draw scientifically sound and therefore rational conclusions.
- v. The modern approaches and methods of analysis of biological samples.
- vi. The principles governing the stability of pharmaceutical preparations.
- vii. The basic principles of pharmaceutical legislation
- viii. The correct methodology, execution and writing of experimental works.
- ix. The techniques of public presentation of research results.
- x. The real demands of the working environment due to the mandatory internship and seminars by scientists working across the entire spectrum of the pharmaceutical value chain.

2. Necessary skills for the workplaces:

- i. The modern technologies and processes of R&D, quality control and quality assurance of the final pharmaceutical products.
- ii. The statistical analysis and evaluation of scientific data.
- iii. Regulatory procedures and statistical tools for method validations.
- iv. Analytical techniques required by regulatory authorities for the release of finished pharmaceutical products.
- v. The requirements for writing scientific articles and processes related to the fields developed at PMS.
- vi. The requirements of the regulatory authorities in the formulation of the approval file of the final medicinal product.
- vii. The principles and methods of critical thinking
- viii Business practices
- ix. The principles of effective communication and team spirit.

The principles of effective communication and team spirit.

3.2.3. M.Sc. PROGRAMME: STRUCTURE AND AUTHORIZED COORDINATION BOARDS

The authorities responsible for the operation of the M.Sc. Programme according to 4957/2022 Law are:

A. At the level of the Institution, the relevant authorities are:

A1. The Postgraduate Studies Committee

A2. The Senate

B. At the level of the Institution, the authorities are:

B1. The Assembly of the Department

B2. The Coordinating Committee (C.C.)

B.3 The Director of the M.Sc. Programme

C. M.Sc. Programme secretarial support

α) The Secretariat of the Department of Pharmacy is responsible for the secretarial and administrative support of the M.Sc. Programme. The Secretary of the Department has appointed an employee as responsible for the Postgraduate Programs of the Department (Ms. Aikaterini Nikolaidou, tel. 210 7274666)

b) Secretarial support for the M.Sc. "Pharmaceutical Analysis-Quality Control" is also provided by the secretariat of the Pharmaceutical Chemistry Division (Ms. Rachel Karpozilou, tel. 2107274523)

3.2.4. CATEGORIES OF ENTRANTS AND NUMBER OF ADMISSIONS

The M.Sc. Programme "Pharmaceutical Analysis-Quality Control" accepts for admission graduates of the Departments/Schools of Pharmacy, Chemistry, Chemical Engineering, Biology, Medicine, Nursing, Dentistry, Biomedical Sciences, Biochemistry and Biotechnology, Biological Applications & Technologies and Food Science & Technology (Higher Education Institutions, HEI) in Greece or similar Institutions accredited by the national competent authority.

The maximum number of students admitted to the Postgraduate Studies Programme "Pharmaceutical Analysis-Quality Control" is fifteen (15) in total. The maximum number of admissions is determined according to the number of faculty members of the M.Sc. Programme and the student/faculty ratio, the infrastructure, the number of classrooms, and the absorption of graduates by the labour market.

In addition to the number of admissions, one (1) member of the categories of Special Educational Staff (EEP), Laboratory Teaching Staff (EDIP) and Special Technical Laboratory Staff (ETEP) is admitted per year, provided that the work carried out in the home Institution is relevant to the subject of the M.Sc. Programme.

Scholarship holders of the IKY foundation, foreigners, scholarship holders, of the Greek state, of the same subject as the one of the M.Sc. Programme, are admitted to the M.Sc. Programme provided that the selection criteria mentioned in the Internal Regulations of the M.Sc. "Pharmaceutical Analysis-Quality Control" are fulfilled.

The M.Sc. "Pharmaceutical Analysis-Quality Control" can accept for admission a pharmacist army officer, scholarship holder of the Hellenic Army, every three years as a supernumerary following the proposal of the Coordination Committee and approval of the General Assembly of the Department, according to the Internal Regulations of the M.Sc.

The maximum number of postgraduate students admitted to the Pharmacy M.Sc. Programmes is approximately ninety (90) per year. It is noted that the number of undergraduate students is approximately one hundred and ninety (190) per year and the number of faculty members in the N.K.U.A Department of Pharmacy is forty-two (42).

The above figures are approximate and correspond to those recorded for the year in which this Study Guide was written.

The selection of students is made in accordance with the current legislation and the provisions of the Internal Regulations of the M.Sc. Programme "Pharmaceutical Analysis-Quality Control". The annual call for applications for admission in the M.Sc. Programme is posted on the website of the Department (June-July), according to the Department of Pharmacy General Assembly's relevant resolution.

The selection procedure is described in the Internal Regulations of the M.Sc. Programme.

3.2.5 STUDIES DURATION

The student status is acquired upon enrolment in the M.Sc. Programme “Pharmaceutical Analysis-Quality Control” of the Department of Pharmacy, N.K.U.A..

The duration of the M.Sc. Programme studies, which leads to the award of the Master’s Degree (M.Sc.), is four (4) academic semesters, including the time for the preparation of the dissertation.

In special cases, an extension is possible, following a reasoned request by the student and approval by the General Assembly of the Department of Pharmacy or the Committee, responsible for the Programme Studies. The extension should not exceed two (2) additional academic semesters, provided that the postgraduate student has made a written request to the General Assembly of the Department of Pharmacy, till the 31/5 of the fourth semester. In any case the maximum time allowed for completion of the studies is six (6) academic semesters.

Students who have not exceeded the maximum period of study, after a reasoned request to the General Assembly of the Department of Pharmacy, may interrupt their studies for a period not exceeding two (2) consecutive semesters. Suspension of studies is granted for serious reasons (military service, illness, maternity, absence abroad, etc.). Attending another postgraduate or other educational programme does not constitute a serious reason for granting a suspension.

The application must be reasoned and accompanied by all relevant documents from the competent public authorities or bodies proving the reasons for the suspension of studies.

The student status is suspended during the period of suspension and participation in any educational process is not permitted. The semesters of student suspension do not count towards the maximum period of the regular study.

At least two weeks before the end of the suspension period, the student must re-enrol in the program to continue his/her studies with the rights and obligations of an active student. Students may, upon request, terminate their suspension and return to the Programme only if they have applied for a suspension for two consecutive academic semesters. The request to discontinue the suspension must be submitted no later than two weeks before the beginning of the second semester of the suspension.

The duration of the suspension or extension of the period of study is discussed and approved on a case-by-case basis by the relevant Board, which makes a recommendation to the General Assembly of the Department of Pharmacy.

Part-time learning is not allowed.

3.2.6. CURRICULUM

The M.Sc. Programme begins in the winter semester of each academic year.

A total of one hundred and twenty (120) credit hours (ECTS) are required for the award of the degree. All courses are taught weekly and, where applicable, include and include laboratory exercises, writing and presenting papers and practical training in Industry.

The teaching language is Greek. In the case that a foreign lecturer is invited to give lectures/seminars, in the context of a course, the lecture will be given in English.

During their studies, the postgraduate students are required to attend and successfully complete all the requisite postgraduate courses, to engage in research and write scientific papers, as well as to prepare an M.Sc. dissertation. The language of the postgraduate dissertation is Greek with abstract in English. In exceptional cases, the English language is acceptable, if there are special reasons, provided that both the supervisor and the General Assembly of the Department of Pharmacy, are in agreement.

The preparation of the diploma thesis takes place in the 3rd and 4th semesters of studies and is credited with fifty (50) ECTS. Diploma work 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>) which governs the National and Kapodistrian University of Athens.

The Practical Training internship is carried out in pharmaceutical industries or companies or clinical laboratories or in the drug control laboratories of the NOM to acquire the required practical experience, under the supervision/collaboration of the course coordinator(s). The internship takes place during the 3rd semester of studies for 20 working days, is credited with ten (10) ECTS and is mandatory.

The teaching of the courses takes place via live or distance learning, in accordance with the current legislation and what is defined in article 7 of the Internal Regulation of Operation of the M.Sc.

The courses modules per direction for the academic year 2022-2023 are as follows:

1st Semester	Teaching hours/week	ECTS
Advanced Pharmaceutical Analysis I	2	6
Statistics-Chemometrics	2	6
Organic Spectroscopy I	2	6
Clinical Pharmaceutical Analysis	2	6
Stability of Pharmaceutical Products	2	6
Total	10	30
2nd Semester	Teaching hours/week	ECTS
Advanced Pharmaceutical Analysis II	3	8
Drug Quality Control	2	6
Quality Assurance Systems	4	10
Legislation-Regulatory Affairs	1	2
Computational Chemometrics	1	2
Literature Survey Methods	1	2
Total	12	30
3rd Semester	Teaching hours/week	ECTS
MSc Dissertation Implementation	-	20
Practical Training internship in Pharma Industry		10
Total		30
4th Semester	Teaching hours/week	ECTS
MSc Dissertation Implementation	-	30 ^b
Total		30

For the calculation of ECTS, apart from the net teaching hours, the tasks assigned per course were taken into account.

The number of 50 ECTS, accredited to the MSc Dissertation, is justified by the fact that its implementation is time consuming and laborious, as more than 1000 hours are required.

3.2.7 POSTGRADUATE COURSES CURRICULA

First Semester

Advanced Pharmaceutical Analysis I

- Spectroscopic methods of analysis- Principles, instrumentation, and applications in Pharmaceutical Analysis: UV-vis Spectrophotometry and derivative spectrophotometry, Raman Spectroscopy, IR Spectroscopy, Fluorimetry, Chemiluminescence, Atomic absorption spectrophotometry, Flame photometry, ICP Atomic emission spectrophotometry, Automated methods of analysis.
- Microbiological testing of pharmaceutical products (sterile and non-sterile) and active pharmaceutical ingredients (APIs): Tests of antimicrobial activity for pharmaceutical products. Quality control of water for pharmaceutical use (microbial activity testing). Test of viable (living microorganisms) particles in sterile and non-sterile critical areas.
- Wet-chemical analysis: Titrimetric methods
- Physical methods of analysis - Principles, instrumentation, and applications in Pharmaceutical Analysis: Refractometry, Polarimetry.
- Electrochemical methods- Principles, instrumentation, and applications in Pharmaceutical Analysis: Potentiometry, Coulometry, Voltammetry and related techniques.
- Application of analytical methods for the determination of physicochemical properties: Determination of n-octanol/water partition coefficient.

Statistics-Chemometrics

Chemometrics and Analytical Procedure. Basic statistical analysis of analytical results. Errors in analytical procedure, evaluation of precision and accuracy.

Calibration. Quality characteristics of analytical methods (reliability (precision and accuracy), drift, sensitivity, detectability (limit of detection and quantitation), selectivity / specificity, resolution, analytical range).

Validation of analytical methods. Signals and data. Correlation and regression methods. Response surfaces and models.

Optimization of analytical methods. Multi-parameter approach (Simplex Method). Cluster analysis/ Pattern recognition. Specific applications of chemometrics. Statistical programs packages. Experimental design. Neural networks.

Organic Spectroscopy I

Electromagnetic Radiation, General characteristics of spectra, Spectroscopic Methods. UV-visible spectroscopy: Basic principles. Woodward's Rules.

IR Spectroscopy: Brief review of Basic Principles. Absorption of functional groups. Factors affecting absorption frequency. Examples of structure determination, based on IR spectra. Special Topics: FT-IR (Michelson's interferometer, Fourier conversion), Near-IR (basic principles, methodology, examples), use of IR spectroscopy in Pharmaceutical Analysis and in the study of biopolymers.

NMR spectroscopy: Description of the phenomenon. Introduction to the FT-NMR technique. Basic parameters (Chemical Shift, Spin-Spin coupling), Study of chemical equilibria. ^1H NMR spectra. ^{13}C spectra. Examples of structure elucidation. Special topics: MRI, *in-vivo* spectroscopy.

Mass spectra: Description of the Mass Spectrometer: Sample introduction (GC, LC, DIP), Ionization techniques (EI, CI, FAB, ESI, APCI, MALDI), Analyzers (Quadrupole, Magnetic Sector, Electric sector, TOF, Ion Trap, Cyclotron, Tandem MS). High resolution mass spectrometry, theory and applications. Analysis of spectra.

Molecular ion, Metastable peaks, Isotope analysis, Determination of molecular formula, Fragmentation of organic compounds. Characteristics of fragments of various functional groups and classes of organic compounds, Examples.

Structure determination of organic compounds by a combination of spectroscopic methods.

The course also includes the students' involvement in a literature review on specific applications of spectroscopic techniques.

Clinical Pharmaceutical Analysis

Types of biological samples. Novel ways of storage, transport (dried blood spots on paper). Storage conditions of samples.

Validation of bioanalytical methods according to the latest EMEA and FDA guidelines.

Effect of parent material effect. Repeat analysis. Analysis of real samples.

Handling of biological samples for analysis (liquid-liquid extraction, protein precipitation, simultaneous purification with analysis)

Specific techniques for the treatment of biological samples: solid phase extraction, mobile phase extraction by dispersion of the mobile phase on the substrate, adsorptive agitation extraction, solid phase microextraction, molecularly imprinted polymers. Modern sample preparation techniques: large particle substrates, binders for direct sample preparation.

Immunochemical analytical techniques: radioimmunoassay, enzyme-, fluorescence-, nephelometry- immunoassay, liposome immunoassay, drug determinations.

Specific applications of the combined technique of liquid chromatography and mass spectrometry in the identification and quantification of banned substances for doping control.

Pharmacogenetic testing. Definition, use, applications. Chain Polymerase Reaction. Genetic testing.

Metabolomics and metabolism using mass spectrometry.

Stability of Pharmaceutical Products

Introduction to the concept of stability and shelf life of active ingredients and preparations. Definitions and prerequisite procedures for stability testing. Types of stability (physical, chemical, toxicological, microbiological, therapeutic). Effect of interactions with excipients.

Development and validation of analytical methods specific to stability testing.

Stability tests for new pharmaceutical compounds and products (ICH Q1A (R2)).

Study of pharmaceutical stress testing.

Hydrolytic drug degradations. Mechanisms of reactions in esters and amides.

Factors affecting the equilibrium of reactions. Inhibition of hydrolysis. The case of peptides-proteins.

Stabilization of drugs with the formation of encapsulation complexes in cyclodextrins.

Study of structure, properties and stability of complexes using various analytical techniques. Photostability. Photolytic solvent degradations and photoactivity of chemical groups. Side effects. Radiation sources and controls according to the regulation. Radiometric system. Ways to photo-stabilize drugs. Enzyme reaction kinetics: Michaelis-Menten theory. Kinetics and class of degradation reactions.

Thermodynamics - basic principles, Arrhenius theory, Eyring Polanyi theory. Oxidative degradations: Mechanisms. Free radical formation. Inhibition of reactions using antioxidants. Stability of cosmetic products: ingredients stabilization with preservatives, adverse reactions from preservatives, efficacy test of preservatives, preservative free, self-preserving cosmetics.

Second Semester.

Advanced Pharmaceutical Analysis II

A. CHROMATOGRAPHIC TECHNIQUES

Chromatographic theory – introduction: basic principles and concepts of chromatography, theoretical treatment of the peak broadening within a chromatographic column (Van Deemter equation).

Gas chromatography (GC): basic principles, instrumentation, and applications

High-performance liquid chromatography (HPLC): basic principles, instrumentation, and applications:

- Chromatographic separation mechanisms: adsorption, distribution, ion exchange, ion pair chromatography, ion exchange chromatography, chromatographic separation of enantiomers
- Hydrophilic interaction liquid chromatography (HILIC), Biomimetic chromatography
- Fluorescence derivatization for quantitative high-performance liquid chromatography (pre or post-column)
- Development and validation of analytical methods
- Ultra-high performance liquid chromatography (UHPLC)- basic principles, instrumentation, and applications
- Capillary electrophoresis- basic principles, instrumentation, and applications
- Planar chromatography- basic principles, instrumentation, and applications: Paper Chromatography, Thin Layer Chromatography (TLC)

B. HYPHENATED ANALYTICAL TECHNIQUES

Gas chromatography – mass spectrometry (GC-MS), Liquid Chromatography- Mass Spectrometry (LC-MS): basic principles, ion sources (EI, CI, MALDI, ESI, APCI, APPI), mass analyzers (single quadrupole, triple quadrupole, ion-trap, TOF-MS, FT-ICRMS), bioanalytical applications, testing of impurities, doping control.

C. BIONALYTICAL TECHNIQUES

MALDI-TOF imaging: basic principles, instrumentation, and applications

Affinity chromatography, Immobilized metal affinity chromatography (IMAC).

Quality Control of Medicines

Definitions. Legislation. Circulation of pharmaceutical products. Production and import of pharmaceutical products. Qualified persons. Quality Assurance (GMP). Chemical testing of pharmaceutical raw materials and excipients: identification tests, related substances, impurities, heavy metal (metal profile) and organic solvent testing, moisture and ash testing. Physical and physicochemical controls. Biological and microbiological controls. Chemical and pharmaceutical technology controls of preparations. Sampling. Out of Specifications process.

Quality control and quality assurance. Quality control laboratories for raw materials and pharmaceuticals (legislation). Pharmacopoeia and Pharmaceutical Codes.

Quality Assurance Systems

Introduction to Quality, ISO 9000, Good Laboratory Practice, Total Quality Management (TQM).

A. STUDY OF ISO 17025: General Requirements (impartiality, confidentiality), Structure Requirements, Resource Requirements (general, personnel, facilities and

environmental conditions, equipment, metrological traceability, external provided products and services), Process Requirements (Review of requests, tenders, and contracts, Selection, verifications and validation of analytical methods, Sampling, Handling of test or calibration items, Technical records, Evaluation of measurement uncertainty, Ensuring validity of results, Reporting of results, Complaints, Not conforming work, Control of data, Information systems), Management of System Documents (Control of records, Actions to address risks and opportunities, Improvement, Corrective actions, Internal audits, Management review). CASE STUDIES.

- B. Validation of analytical methods. Requirements of validation of methods for GMO, Pesticides residues, Clinical methods, Microbiological methods, Pharmaceutical methods. Examples for the determination of accuracy, precision, detection and quantification limits, calibration curves, intermediate precision using One Way ANOVA.
- C. Instrumentation: Calibration of instruments, Internal calibration, Calibration of: balances, volumetric equipment (pipettes, flasks, burettes), thermometers, heating equipment, HPLC, spectrophotometers.
- D. Quality Assurance: Control charts, Basic Capabilities of methods, Proficiency Testing.
- E. Determination of Uncertainty using GUM and NORDETEST methods.
- F. Rules of decision of compliance (theory and examples).
- G. Sampling (design and determination of uncertainty).
- H. ISO 15189 for clinical laboratories.

Legislation-Regulatory Affairs

The course deals with the Legislation governing the approval of Clinical Trials & New Drug Products for human use. Specifically, it refers to the legal regime that was in place historically and is still in force today.

- EU Medicines Agency – EMA/N.O.M. (National Organisation for Medicines).
- Clinical Trials, Interventional Clinical Trials, Bioequivalence Studies
- Ethical & Moral Issues in Clinical Trials, National Ethics Committee for Clinical Trials (NEC), The Consent Form.
- Non-Invasive Clinical Trials, Non-Commercial Clinical Trials, Amendments to Clinical Trials, Palliative Therapies.
- Need for Pharmaceutical Products' Regulation.
- New Pharmaceutical Legislation for the Approval/Adjustment of Marketing Authorisations for Medicinal Products for Human Use.
- Historical Evolution of Regulatory Requirements for the Marketing of Pharmaceutical Products for Human Use.
- Approval Procedures: Domestic Procedure, Central Procedure, Decentralised Procedure, Mutual Procedure.
- Pharmaceuticals of Plant Origin, Homeopathic Medicinal Products, Orphan Medicinal Products.
- Implementation of marketing authorization requirements.

Computational Chemometrics

Introduction MATLAB and R (statistical software's), code writing, variables, functions and structures.

MATLAB and R data analytics and machine learning (data sets: NMR, MS, etc.).

Literature Survey Methods

A brief description of the capabilities of Microsoft-Word 365 software is given. An analysis of scientific articles, books, reviews, the terms: impact factor, cite score, DOI is also provided. The main characteristics of a publication are pointed out: title, authors, abstract, introduction, materials-methods, results, conclusions, references. Students also learn how authors are assessed, based on recognized scientific indicators, such as impact factor and h-index. This is followed by a detailed description of three bibliographic classification software: endnote, Mendeley and Zotero with examples in Microsoft Word format files. In addition, the software for drawing chemical structures and inserting them into electronic documents, is shown. Last, a thorough account of the use of Microsoft - PowerPoint software and the rules governing a successful scientific presentation with detailed examples, is given.

3rd Semester

Practical Training in the Pharmaceutical Industry

The internship in the industry consists of the application and development of the theoretical knowledge during the previous two semesters and the further education of the students in the form of internships in pharmaceutical industries or companies or clinical laboratories or in the drug control laboratories of the EOF for 20 working days. Postgraduate students attend processes in certified testing laboratories related to Pharmaceutical Analysis-Quality Control.

3rd and 4th Semester

MSc Dissertation Implementation

In the 3rd and 4th semesters of the Programme, the students prepare a diploma thesis. The students conduct original experimental research on a topic proposed by a supervising faculty member.

Content: The topics of the theses are related to a wide range of scientific fields covered during the MSc. During the preparation of the diploma thesis, the students are requested to use the knowledge acquired from the theoretical courses, to demonstrate their skills, to use the international scientific literature, to apply the experimental techniques and methods they are instructed. At the same time, students are given the opportunity to develop individual initiatives and work as team members, in the laboratory environment in which the Diploma Thesis is prepared. In addition, they develop skills in writing and presenting their work.

3.2.8 EXAMINATIONS AND ASSESSMENT OF POSTGRADUATE STUDENTS

The educational work of each academic year is structured in two semesters of study, winter and spring, each of which lasts at least thirteen (13) weeks of courses teaching and two (2) to three (3) weeks of examinations.

In the event of reasoned impediments during the courses teaching period, the course(s) will be retaken. The time of the course retaking is posted in the e-class of the particular course(s) of the MSc Programme.

Attendance of the courses, workshops and seminars is compulsory. The postgraduate student is considered to have attended a course (and therefore is entitled to participate in the examinations) only if he/she has attended at least 80% of the course teaching hours. Otherwise, the postgraduate student is obliged to attend the course once

again in the following academic year. If the student's absence rate exceeds 20% of the total number of courses, the student will be expelled from the MSc Programme. The rejection of the student from the Programme should be proposed by the C.C. to the General Assembly of the Department of Pharmacy.

The assessment of the postgraduate students and their performance in the courses is carried out at the end of each semester by means of written or oral examinations or by preparing papers throughout the semester or rely on intermediate progress exams, written assignments, laboratory exercises or apply a combination of all of the above. The evaluation method is defined by the professor 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 professor and sent to the Secretariat of the MSc and the Department within four (4) weeks at the latest from the examination of the course. In the event that the above limit is repeatedly exceeded by a teacher, the Director of the M.Sc. informs the Assembly of the Department accordingly.

Information on alternative methods of assessment, in the case of emergencies or circumstances related to reasons of force majeure (students with disabilities and special educational needs, cases of illness or recovery from serious illness), is given in the Internal Regulations of the MSc Programme.

Grading is on a scale of 1-10. The results of the examinations are announced by the lecturer and sent to the Secretariat of the MSc Programme and the Department within five (5) weeks, at the latest, after the examination of the course.

If the student fails in one or more courses of the M.Sc. (grade below 5 or absent from the exam), the courses of the winter and spring semesters are re-examined during the September period. If the student also fails the re-examination of the September period in the same course(s), then he/she is invited to a second re-examination, one week after the end of the September examination period. In case of failure in the second re-examination of the same course, the procedure defined by the current legislation is followed. More specifically, the student may be examined, following his/her application to the Department's Assembly, by a three-member committee of Department faculty members, whose members have the same or a related subject to the course being examined and are appointed by the Department's Assembly. The person in charge of the course is excluded from the committee. Finally, if the student fails again even in one of the due courses, he is rejected from the M.Sc..

In order to obtain a Master's degree, each postgraduate student must attend and successfully pass all the courses offered in the MSc Programme and prepare a postgraduate level dissertation, in order to meet the one hundred and twenty (120) ECTS graduation requirement.

The MSc is obtained by the sum of (credits x course grade) plus (credits x thesis grade) divided by the total number of credits of the course and thesis.

Further information on these calculations is given in the Internal Regulations of the M.Sc. Programme.

3.2.9 PRACTICAL TRAINING

The Internship of the students of the programme "Pharmaceutical Analysis-Quality Control" takes place throughout the 3rd semester, is credited with ten (10) ECTS, is mandatory and is carried out in pharmaceutical industries or companies or clinical laboratories or in the drug control laboratories of the N.O.M. in order to obtain the required practical experience, under the supervision/cooperation of the course coordinator(s).

The internship has a duration of 20 working days.

3.2.10 PREPARATION OF DIPLOMA THESIS DISSERTATION

In the 3rd and 4th semesters of the Program, the student should prepare a postgraduate diploma thesis.

The candidate submits an application, in which he/she propose the title of the thesis, the supervisor and a summary of the proposed research, the C.C of the M.Sc. designates its supervisor and sets up the three-member examination committee for the approval of the work, one of whose members is the supervisor.

The Coordinating Committee, in its decision, considers the relative proposal of the Supervisor for the other two (2) members of the three-member examination committee, who can come from all categories of professors, in accordance with the current legislation.

The Diploma Thesis must be individual, contains original research results and be written according to the following guidelines.

The writing language of the master's thesis is Greek with an extended summary in English. Excluded are the special cases where the writing language can be in English with the agreement of the supervisor and approval of the Department General Assembly.

To write the master's thesis, candidates must follow the instructions below:

The cover page and title page must contain the following information:

- The National and Kapodistrian University of Athens logo in cyan (The “Athena Logo”, above and to the left of the words
- The words “Department of Pharmacy”.
- The words “M.Sc. Programme in Pharmaceutical Analysis-Quality Control”.
- The full title of the thesis.
- The full name of the candidate.
- The words “Diploma Thesis”.
- Title/Status of the postgraduate student (Pharmacist/Physician/Chemist/ Chemical Engineer/Biologist)
- In the lower half of the page, in the centre, the word “Athens” and the year of the thesis support.

The pagination should be in the following order:

- Title page
- Three-Member Examination Committee (Names, Titles).
- Foreword, Acknowledgements, Dedications (Optional)
- Contents, with a record of the numbering of the corresponding pages
- Abstract (Greek and English, 500 words minimum)
- List of Abbreviations/Symbol List
- Main body of the paper (including Introduction, Methodology, Results and Discussion/Conclusion)
- Bibliography
- Annexes (if available)

Page formatting:

- Line spacing: 1.5 line
- Font: Arial 11 or Times New Roman 12
- Margins 2 cm top bottom, 2.5 cm left and right.
- Maximum number of pages: 80

In order for the dissertation to be approved, the student must defend it before the Examination Committee. The Thesis is graded on a scale of zero to ten (0 - 10), the minimum passing grade being defined as “five” (5). At the end of the four semesters,

the postgraduate student must have completed and defended his/her thesis. There is a possibility of extension, after a reasoned application by the student and approval by the Assembly. The extension does not exceed two (2) additional academic semesters, to support the thesis, provided that the postgraduate student has made a written request to the Assembly by 31/5 of the 4th semester. In any case, the postgraduate student must have completed his studies by 6/30 of the 6th semester (cases of "extension" or "suspension" of studies are excluded).

In case of failure to successfully comply with the MSc requirements (average grade of less than five) or failure to complete the dissertation within the requisite period time, the postgraduate student is obliged to terminate his/her studies.

The postgraduate thesis, if approved by the examination committee, are posted in the Digital Repository "PERGAMOS", according to the relevant resolution of the Senate of the University of Athens.

If the dissertation includes original results, that have not been published, only the abstracts may be published on the website upon request of the supervisor, which is co-signed by the postgraduate student, and the full text may be published later.

POSTGRADUATE DISSERTATION: INTELLECTUAL PROPERTY RIGHTS

The research carried out, as part of the thesis requirements, is primarily aimed at educating the postgraduate student and gaining research experience.

The subject of the research may be part of ongoing and often long-term research carried out by research teams and supervisors in a specific field of science, often in the context of research projects.

Each postgraduate student shall diligently keep a research lab book. The lab book, as well as the relevant scientific data and information (spectra, recordings, electronic files, etc.) belong to the laboratory, where the student works and remain there when the student completes his/her studies.

The supervisor is responsible for the presentation of results to third parties (publications in journals, conference papers, reports to institutions, patents scripts, etc.), in accordance with the international practice and scientific ethics. Any form of exploitation of research results (including financial exploitation) will be governed by the regulations of the N.K.U.A. and the contracts that are drafted by the Institution with third parties.

3.2.11 TUITION AND FEES - TUITION AND FEES WAIVER

For their enrolment in the M.Sc. Programme "Pharmaceutical Analysis – Quality Control", the postgraduate students are obliged to pay tuition and fees of € 700 per semester. The fees are paid at the beginning of each semester.

The payment of the tuition and fees shall be made by the student himself/herself or by a third authorized person on behalf of the student, provided that this agreed *a priori* by both the M.Sc. Programme responsible personnel and the student.

The payment of tuition fees is carried out by the student himself/herself or by a third authorised person on behalf of the student, provided this is allowed by the regulation of the MSc

In the case that the students, for any reason, discontinue their studies, the fees already paid shall not be refunded.

Students who meet the financial or social criteria and the requirements for excellence in the first cycle of their studies, are exempted from their tuition and fees obligations, in accordance with the legislation in force. The exemption is granted in the case of participation in only one M.Sc. Programme. In any case, the number of students entitled for tuition and fees exemption shall not exceed thirty percent (30%) of the total number of students admitted to the M.Sc. Programme, per academic year.

The application for a waiver must be submitted after the completion of the selection process of the students of the M.Sc. Programme. The financial situation of an applicant is in no case a reason for not being selected for a M.Sc. Programme.

Those who receive a scholarship from another source are not eligible for exemption, nor are the non-EU citizens.

Members of the categories of E.E.P., E.D.I.P., E.T.E.P., who are admitted as supernumeraries, are exempted from the payment of tuition fees.

In the case of simultaneous attendance of members of the same family, up to the second degree of kinship, by blood or affinity, there is a possibility of a 50% reduction in the tuition and fees paid.

3.2.12 OBLIGATIONS AND RIGHTS OF THE POSTGRADUATE STUDENTS

1. Postgraduate students have all the rights and benefits provided for students of the first cycle of studies, until the completion of their studies, including any extension of studies granted, except for the right to free textbooks.

2. The Institution shall ensure that students with disabilities and/or special educational needs have accessibility to the proposed textbooks and teaching facilities (<https://access.uoa.gr/>).

3. The Liaison Office of the N.K.U.A. provides counselling to students, as to their studies and professional issues (<https://www.career.uoa.gr/ypiresies/>).

4. Postgraduate students are invited to participate and attend research group seminars, literature review discussions, laboratory visits, conferences/meetings of subjects related to the M.Sc. Programme, lectures or other scientific events, taking place in the context of the M.Sc. Programme, etc.

5. The General Assembly of the Department of Pharmacy, after the recommendation of the C.C., may decide to expel postgraduate students if:

- they exceed the maximum number of absences,
- they have failed the examination of a course or courses and have not successfully completed the programme, in accordance with the provisions of the relevant regulations,
- they exceed the maximum duration of study, as set out in the Regulation of the M.Sc. Programme,
- have violated the applicable provisions regarding the treatment of disciplinary offences by the authorized disciplinary authorities,
- fail to pay the requisite attendance fee,
- apply to voluntarily withdraw from the MSc Programme.

6. In the event that a postgraduate student is withdrawn from the M.Sc. Programme, he/she may request a certificate for the courses, which he/she has successfully passed.

7. Students may participate in international student exchange programmes, such as ERASMUS⁺ or CIVIS, in accordance with the relevant legislation. In this case the maximum number of ECTS that can be credited is thirty (30). More specifically, the dissertation can be carried out in a foreign university within the framework of the ERASMUS programme, according to the “Mobility Regulation” of the ERASMUS scheme (Erasmus_Programme_Guide2023_en, <http://www.interel.uoa.gr/erasmus.html>), which is underpinned by the National and Kapodistrian University of Athens. This possibility is provided after the first semester of their studies. Students should apply to the C.C. and conform to the terms of the programme.

8. The M.Sc. Programme can be attended by students from international student exchange programmes, such as the ERASMUS+ programme, according to the cooperation agreements agreed, provided that they are proficient with the Greek

language, which is proved by a language proficiency certificate of B2 level, or as indicated in the respective programme.

9. Postgraduate students of the N.K.U.A. may enrol the M.Sc. Programmes of the same or other Universities in Greece or foreign countries, in the framework of educational or research cooperation programmes, in accordance with the relevant legislation.

10. It is possible to concurrently conduct undergraduate and postgraduate studies in a Programme or in two (2) Postgraduate Programmes of study of the same or another Department of the same or another H.E.I.

11. At the end of each semester an evaluation of each course and each course instructor is carried out by the postgraduate student(s).

12. Postgraduate students may request the award of a diploma supplement in Greek and English.

13. For their participation in the M.Sc. “Drug Design and Development of new Bioactive Compounds”, the postgraduate students pay tuition and fees of 700 Euros per semester. The tuition and fees must be paid at the beginning of each semester.

14. In the event of a definitive discontinuation of studies or withdrawal of a postgraduate student from the Programme, for any reason, the fees already paid shall not be refunded.

3.2.13 RESOLUTION OF STUDENTS’ COMPLAINTS

All members of the Coordinating Committee of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control” are in full agreement about the steps followed in dealing with the resolution of issues arising from the submission of complaints and/or objections by students. This is an extremely critical process for the improvement of the services provided by the staff, at the educational and administrative level.

In this context, the staff members consider the complaints and/or objections, put forward by the students, as opportunities for the MSc course improvement. The sequence of steps taken in dealing with the students’ complaints and objections are clearly described in the "Regulations for the operation of the complaints and objections management mechanism" of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control”, which is posted on the website of the Department of Pharmacy, and the site of the M.Sc. Programme.

3.2.14 ACADEMIC ADVISOR

The successful implementation of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control” of the Department of Pharmacy relies on the student/faculty cooperation in good faith. On this basis, the Programme has established the educational post of the Academic Advisor for Studies.

The post of the Academic Advisor is based on article 35 (Law 4009/2011 GG A 195) where the following is stated: "The academic advisor guides and supports students in their study programmes. The Internal Regulation of each institution defines the assignment of duties of the study advisor and regulates the specific issues involved.

The educational post of the Academic Advisor has been created in order to facilitate undergraduate students to complete their studies in a more efficient way, aiming to reduce the number of "stagnant" students. The same applies to the postgraduate students, who are invited to make use of the services provided by the Academic Advisors to resolve any difficulties they may encounter. With the establishment of the Academic Advisor post, every postgraduate student is given the opportunity to have direct and effective communication with the professors responsible

for the courses taught. In this way, each student will be able to obtain reliable information on the issues that concern him/her regarding his/her personal goals and their harmonization with both the educational program of the M.Sc. Programme and the general framework of his/her integration into the work force, as a new scientist.

The role of the Academic Advisor is clearly described in the relevant “Regulation of the Academic Advisor Institution” of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control”, which is posted on the website of the Department of Pharmacy, M.Sc. Programme “Pharmaceutical Analysis-Quality Control”.

3.2.15 COURSES AND FACULTY OF THE POSTGRADUATE PROGRAMME “PHARMACEUTICAL ANALYSIS – QUALITY CONTROL”

The courses teaching syllabus of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control” is approved by the General Assembly of the Department of Pharmacy, following a relevant recommendation of the MSc's CC, according to the Internal Regulations of the M.Sc. Programme “Pharmaceutical Analysis-Quality Control”.

The courses titles and the teaching staff per course are listed in paragraphs 3.2.6 and 3.2.7.

The teaching staff per course for the academic year 2022-2023 is:

1st Semester

Advanced Pharmaceutical Analysis I

Panteri Eirini, Professor, Georgakopoulos Konstantinos, Associate Professor Tsopelas Photios Assistant Professor Chemical Engineering NTUA, Dr Chrysanthakopoulos Marios, Koupparis Michael Professor Emeritus NKUA, Tsantili Anna Professor Emeritus

Statistics-Chemometrics

Dotsikas Ioannis, Associate Professor, Loukas Ioannis, Associate Professor, Gikas Evangelos Professor Dept. Chemistry NKUA, Koupparis Michael Professor Emeritus NKUA, Kostakis Dept. Chemistry NKUA

Organic Spectroscopy I

Mikros Emmanuel Professor, Evangelos Professor Dept. Chemistry NKUA, Dr Benaki Dimitra EDIP

Clinical Pharmaceutical Analysis

Panteri Eirini, Professor, Georgakopoulos Konstantinos, Associate Professor, Dotsikas Ioannis, Associate Professor, Loukas Ioannis, Associate Professor, Gikas Evangelos Professor Dept. Chemistry NKUA, Papoutsis I Associate Professor School of Medicine NKUA

Stability of Pharmaceutical Products

Dotsikas Ioannis, Associate Professor, Panteri Eirini, Professor, Georgakopoulos Konstantinos, Associate Professor, Myriantopoulos Vasileios Assistant Professor, Varvaresou Anastasia Professor Biomedical Sciences Univ East Attica.

2nd Semester

Advanced Pharmaceutical Analysis II

Panteri Eirini, Professor, Georgakopoulos Konstantinos, Associate Professor, Dotsikas Ioannis, Associate Professor, Loukas Ioannis, Associate Professor, Tsantili Anna Professor Emeritus

Drug Quality Control

Koupparis Michael Professor Emeritus NKUA,

Quality Assurance Systems

Koupparis Michael Professor Emeritus NKUA, Thomaidis Nikolas Professor Dept Chemistry NKUA, Kostakis M. Dept. Chemistry NKUA

Legislation-Regulatory Affairs

Tzavellla Photini Professor Dept Nursing Univ of Peloponnese, Dr Ghirtis Konstantin N.O.M.

Computational Chemometrics

Gikas Evangelos Professor Dept. Chemistry NKUA, Dr Lambrinidis George EDIP, NKUA

Literature Survey Methods

Dr Lambrinidis George EDIP, NKUA

3.3 Oath given by the “PHARMACEUTICAL ANALYSIS – QUALITY CONTROL” PROGRAMME MSc Diploma Holder

“Having been awarded the Postgraduate Degree in Pharmaceutical Analysis-Quality Control of the Department of Pharmacy, I, before the President of the Department of Pharmacy give an oath of allegiance. I will diligently pursue the science and promote it to the fullest extent possible and will willingly do everything that is necessary and live out a life of piety and modesty, not to abuse the science, which I serve. This is my vow, and may God help me in my life.”

3.4 POSTGRADUATE STUDENTS' ASSOCIATION

The SY.ME.F.F.A. was founded in 1998, due to the need of the Postgraduate Students of the Department of Pharmacy of the National and Kapodistrian University of Athens for communication, initially among themselves and mainly with the Administrative Bodies of the Department and the University in general.

It has about 120 members and its activities concern all the Postgraduate Students of the Department of Pharmacy. It is governed by a 7-membered Board of Directors, elected on a single ballot, in the Elections held in the month of May, after its last General Assembly (to report on its work in the previous year). In these elections, a 3-membered Audit Committee (of 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. PHONE DIRECTORY DEPARTMENT OF PHARMACY:

M.Sc. Secretary:

- **Rachel Karpozilou**
Email: rkarpoz[at]pharm.uoa[dot]gr +30 210727-4523

FACULTY AND STAFF DIVISION OF PHARMACEUTICAL CHEMISTRY NKUA

- **Georgakopoulos Konstantinos Associate Professor** -4265
Email: konsgeo[at]pharm.uoa[dot]gr
- **Lambrinidis George EDIP** -4304
Email: lamprinidis[at]pharm.uoa[dot]gr
- **Loukas Ioannis Associate Professor** -4224
Email: loukas[at]pharm.uoa[dot]gr
- **Mikros Emmanuel Professor** -4813
Email: mikros[at]pharm.uoa[dot]gr
- **Benaki Dimitra EDIP** -4521
Email: dbenaki[at]pharm.uoa[dot]gr
- **Myriantopoulos Vasileios Assistant Professor** -4824
Email: vmyriant[at]pharm.uoa[dot]gr
- **Dotsikas Ioannis Associate Professor** -4696
Email: idotsik[at]pharm.uoa[dot]gr
- **PanteriEirini Professor** -4820
Email: ipanderi[at]pharm.uoa[dot]gr
&irenepanderi[at]gmail[dot]com
- **Tsantili Anna Professor Emeritus** -
Email: tsantili[at]pharm.uoa[dot]gr

FACULTY MEMBERS DEPARTMENT OF CHEMISTRY NKUA

- **Gikas Evangelos Professor** -4850
Email: gikas[at]chem.uoa[dot]gr
- **Thomaidis Nikolaos Professor**
Email: ntho[at]chem.uoa[dot]gr -4317

- **Koupparis Michael Professor Emeritus** -
Email: koupparis[at]chem.uoa[dot]gr

FACULTY MEMBERS SCHOOL OF MEDICINE NKUA

- **Papoutsis Ioannis Associate Professor** +3021074622414
Email: papoutsis[at]med.uoa[dot]gr

FACULTY MEMBERS FROM OTHER UNIVERSITIES

- **Varvaresou Athanasia Professor** +302105385887, 640
Email: avarvares[at]uniwa.gr
- **Tzavella Photini Assistant Professor** -
Email:tzavella{at}uop.gr
- **Tsopelas Photios Assistant Professor** +30210772 4022
Email: ftsop[at]central.ntua(dot)gr

EXTERNAL COLLABORATORS

Dr Girtis Konstantinos N.O.M. -
Email: kostadis[at]umich.edu

Dr Kostakis Marios PostDoc Department of Chemistry NKUA -
Email: makostak {at}chem.uoa[dot]gr

Dr Chrysanthakopoulos Marios VIANEX
Email: mchrysanth[at]gmail[dot]com

DEPARTMENT SECRETARIAT **(Fax : 727-4059)**

ADMINISTRATION STAFF:

Xesfiggi Maria (**Registrar**) -4193
Manou Olga (**administrative affairs**) -4355
Georgiou Freideriki (**administrative affairs / PhD level**) -4058

STUDENT AFFAIRS:

Undergraduate level:

Gouzias Evangelos -4093
Chatzipavlou Ioanna -4351

Postgraduate level:

Nikolaidou Aikaterini -4666

OTHER USEFUL PHONES

LIBRARY (School of Science)	-6599
JANITORIAL OF GEOLOGY (Internal Post Office)	-4219
BUILDINGS' SUPERINTENDENT	-4379, -4683
T.Y.P.A.	-4300, 4120, 4541
TELECOMMUNICATIONS	-4286, -4217
MEDICAL OFFICE (School of Science)	-4391
MEDICAL OFFICE IN THE FACULTY OF PHILOSOPHY	-7873

ANNEX
MODEL OF DIPLOMA SUPPLEMENT



HELLENIC REPUBLIC

**National and Kapodistrian
University of Athens**

—EST. 1837—

**SCHOOL OF HEALTH SCIENCES
DEPARTMENT OF PHARMACY**

DIPLOMA SUPPLEMENT

The Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international “transparency” and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgments, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s):

1.2 Given name(s):

1.3 Date of birth (*day/month/year*)– Place– Country of Birth:

1.4 Student identification number or code (*if available*):

2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and (*if applicable*) title conferred (*in original language*):

METAPTYCHIAKO DIPLOMA EIDIKEFSIS “PHARMAKEFTIKI ANALYSI _
ELEGHOS PIOTITAS” – Master’s degree (MSc) in “PHARMACEUTICAL
ANALYSIS – QUALITY CONTROL”

2.2 Main field(s) of study for the qualification: POSTGRADUATE STUDIES
PROGRAM IN PHARMACEUTICAL ANALYSIS – QUALITY CONTROL.

2.3 Name and status of awarding institution (*in original language*): ETHNIKON KAI KAPODISTRIAKON PANEPISTIMION ATHINON, EKPA (NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, NKUA)

2.4 Name and status of institution (*if different from 2.3*) administering studies (*in original language*):

2.5 Language(s) of instruction/examination: GREEK

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1 Level of qualification: SECOND CYCLE DEGREE, METAPTYCHIAKO DIPLOMA EIDIKEFSIS, equivalent to the MASTER'S DEGREE, MSc

3.2 Official length of programme: 4 SEMESTERS

3.3 Access requirement(s): The selection of the students is made in accordance with the law 4957/2022 and the provisions of the Internal Operation Regulations of the Postgraduate studies program in "PHARMACEUTICAL ANALYSIS – QUALITY CONTROL". In June/July of every academic year, by the relevant resolution of the Assembly General of the Department of Pharmacy, NKUA, an announcement is published and posted in the sites of the Department and the NKUA, for the admission of graduate students in the Postgraduate studies program in "PHARMACEUTICAL ANALYSIS – QUALITY CONTROL".

4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study: FULL

4.2 Programme requirements:

A) A total of 120 ECTS credits are required to complete the degree

B) Compulsory studies of at least 4 semesters

C) Master students are required to successfully attend and complete all modules (60 ECTS),

D) Master students are required to submit a postgraduate thesis in a subject related to the specialization (60 ECTS)

4.3 Programme details: (e.g. modules or units studied), and the grades/marks/credits obtained: (*if this information is available on an official transcript this should be used here*)

4.3.1. Module: Medicinal Chemistry

A/A	COURSE TITLE	Semester	ECTS Credits ^a	Grade	Academic Year
1	Advanced Pharmaceutical Analysis I	1st	6		

2	Statistics - Chemometrics	1st	6		
3	Clinical Pharmaceutical Analysis	1st	6		
4	Advanced Organic Chemistry I	1st	6		
5	Organic Spectroscopy I	1st	6		
6	Stability of Pharmaceutical products	1st	6		
7	Advanced Pharmaceutical Analysis II	2nd	8		
8	Medicines Quality Control	2nd	6		
9	Quality Assurance Systems	2nd	10		
10	Literature Survey Methods	2nd	2		
11	Legislation-Regulatory Affairs	2nd	2		
12	Computational Chemometrics	2nd	2		
13	Practical Training	3rd	10		
14	MSc Dissertation Implementation	3rd, 4th	50		

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

^b 20 working days of practical training with a daily presence of 8 hours.

^c The Diploma thesis includes research work, writing and presentation of the thesis.

Total ECTS: 120

4.4 Grading scheme and, if available, grade distribution guidance:

THE GREEK GRADING SYSTEM: THE GRADING SCALE SPANS FROM 1 TO 10 AND THE SUCCESSFUL EXAMINATION GRADES SPAN FROM 5 TO 10 AS FOLLOWS:

5 - 6,49 = GOOD

6,50 - 8,49 = VERY GOOD

8,5 - 10 = EXCELLENT

4.5 Overall classification of the qualification (*in original language*):

MSc in “PHARMACEUTICAL ANALYSIS – QUALITY CONTROL”

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study: to the third cycle leading to the doctorate degree (PhD),
DIDAKTORIKO DIPLOMA

6. ADDITIONAL INFORMATION

6.1 Additional information:

- a) PARTICIPATION IN CONFERENCES, SEMINARS ETC:
- b) ERASMUS MOBILITY PROGRAM:
- c) AWARDS, DISTINCTIONS:

6.2 Further information sources:

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS WEB SITE:
www.uoa.gr,

DEPARTMENT OF PHARMACY WEB SITE: www.pharm.uoa.gr

MINISTRY OF EDUCATION, RESEARCH AND RELIGIOUS AFFAIRS WEB SITE:
www.minedu.gov.gr

7. CERTIFICATION OF THE SUPPLEMENT

7.1 Date:

7.2 Signature:

7.3 Capacity: BY ORDER OF THE RECTOR, THE DIRECTOR OF EDUCATION AND
RESEARCH:

7.4 Official stamp or seal:

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

The Higher Education Level, in Greece, is comprised of two parallel sectors: a) the University sector, which includes the Universities, the Technical Universities and the School of Fine Arts and b) the Technological sector, which includes the Higher Technological Education Institutions and the School of Pedagogical and Technological Education (ASPETE). In Greece there are twenty-two (22) Universities and fourteen (14) Technological Education Institutions. According to article 16 of the Greek Constitution, higher education is public and exclusively provided by Higher Education Institutions, which are Legal Entities, under the Public Law, enjoying full self-administration and academic freedom, while they are subjected to State supervision and financed by the government. State supervision is carried out by the Ministry of Education, Research and Religious Affairs.

The admission of the students to the above Institutes depends on their performance at nationwide exams taking place in the 3rd grade of the upper secondary school (Lyceum). Entrance to the various Schools of the Universities and Technological Education Institutions depends on the general score obtained by the Lyceum graduates, the number of available places (*numerus clausus*) and on the candidates' ranked preferences among Schools and Departments.

The academic year begins on September 1st, of each year and ends on August 31st, of the following year. Each academic year is divided into two semesters. Each semester includes at least thirteen (13) weeks of teaching and two (2) weeks of examinations. The first semester begins in the second fortnight of September, and the second ends during the second fortnight of June. Throughout the year, there is a total of four weeks of Christmas and Easter holidays.

The majority of the first cycle programmes in the Universities is comprised of 8 semesters (4 years – at least 240 ECTS credits). There are certain first cycle programmes offered by the Universities, whose duration exceeds the 8 semesters. All first cycle University and TEI graduates can apply for admission to second cycle graduate programmes. The postgraduate programmes last one to two years (2/3 or 4 semesters, 60/90 or 120 ECTS credits) and lead to MA or MSc degrees.

In each semester course a number of credits is granted, as set by each Department. The course subjects and contents and the number of hours of classes per week are described in the study programme of every University Department; it also features the University's undergraduate programme leading to a first degree ("PTYCHIO"-ΠITYXIO), which lasts at least four years for most subjects. It lasts five years in the cases of Technical Universities, Departments of Applied Sciences (Agronomy, Forestry, Dentistry, Veterinary Medicine and Pharmacy) and certain Art Departments (e.g. Music Studies) and six years in the Medical Schools.

Students complete their studies and are awarded their degree when they have passed the necessary number of courses stipulated in the study programme and have accumulated the required number of credits.

Students who successfully complete their first cycle studies at Universities are awarded a *PTYCHIO* (first cycle degree). The *Ptychio* leads to employment or further study at the post-graduate level leading to the second cycle degree – *METAPTYCHIAKO DIPLOMA EIDIKEFSIS*, equivalent to the Masters degree – and the third cycle leading to the doctorate degree (PhD), *DIDAKTORIKO DIPLOMA*.

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

Detailed information on the Greek education system can also be found in the *Ministry of Education, Research and Religious Affairs* website: <http://www.minedu.gov.gr/>

