



UNIVERSITY OF
PATRAS
ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ

DEPARTMENT OF PHARMACY

SCHOOL OF HEALTH SCIENCES

Postgraduate Studies Program

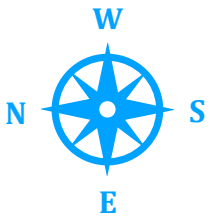
“Drug Discovery & Development”


2023-2024

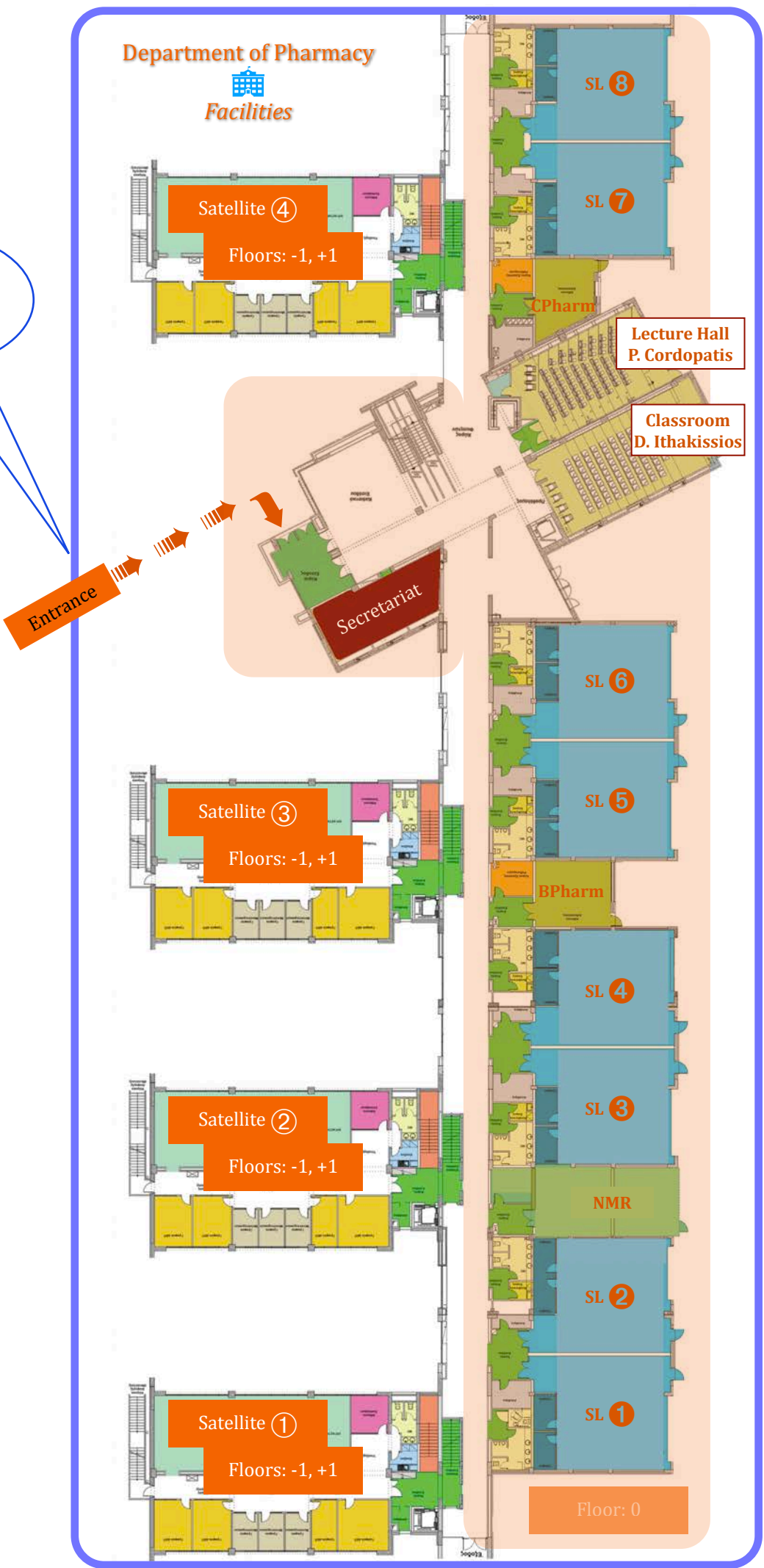
Study
Guide



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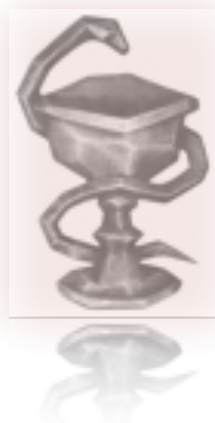


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UNIVERSITY OF PATRAS
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DEPARTMENT OF PHARMACY
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Postgraduate Studies Program
“Drug Discovery & Development”
Study Guide
Academic Year 2023 - 2024

PATRAS 2023



SYMBOLS [links, bookmarks, files' downloading]

-  Internet Hyperlink
-  Internal bookmark
-  Hyperlink to a file download

Html & email references are active !

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Departmental Postgraduate Program

“Drug Discovery & Development”

a. Outline

The Drug Discovery and Development (DDD) Master of Science (MSc) degree is an 18-months curriculum offering a high quality and multidisciplinary training in modern fields of Pharmaceutical Sciences, including all stages required from the discovery of a new bioactive compound until its release as a drug, as well as the strategies followed for the discovery of bioactive compounds. The program aims at:

- Training young scientists in modern fields of Pharmaceutical Sciences to create appropriate human resources that will support the country's participation in international scientific developments and contribute to the assimilation of the introduced technology and its penetration into new disciplines of Science.
- Linking the research effort to business development, enhancing technology transfer mechanisms to Greek pharmaceutical companies' production units and meeting specific professional needs related to the business design, development and distribution of pharmaceutical products.
- The production of scientists capable of pursuing doctoral studies in related scientific fields.
- Providing theoretical and practical knowledge to postgraduate students in order to successfully meet the requirements of positions of responsibility in the pharmaceutical and related industries, Regulatory Organizations, as well as diagnostic and research laboratories, in Greece and internationally.

Graduates from Health Sciences and other related subject areas are admitted. The maximum number of enrolled students shall be no more than forty (40). English language proficiency is a main requirement. Total ECTS credits required for obtaining the degree amounts to 90, distributed in three (3) semesters (30 ECTS per semester). MSc students are required to successfully attend and complete all courses, compulsory or elective, of the specialization in which they have enrolled, to participate as tutors in laboratory courses and tutorials, to attend seminars and study courses and draw their MSc thesis in subject related to the specialization they study. Lessons and writing the thesis will be in Greek and in specific cases in English.

b. Awarded Title - Specializations

The Postgraduate Studies Program "Drug Discovery and Development" leads to the award of a Master of Science (MSc) Degree in "Drug Discovery and Development" on the following Specializations:

1. Medicinal Chemistry – Natural Products
2. Industrial Pharmaceutics
3. Molecular Pharmacology and Biotechnology



c. Learning Outcomes

The MSC “Drug Discovery and Development” aims at the following Learning Outcomes:

1. Understanding of the basic preclinical and clinical processes and stages which are followed towards the identification, evaluation and development of a new drug
2. Development of the ability to find, analyze, chose and use tools (e.g. methods, data bases, literature, etc) that contribute to the drug development process
3. Development of the ability to design, chose, apply and improve experimental methods in order to address specific problems
4. Development of the ability to analyze and crirtically evaluate eperimental data and results, whether these derive from the literature/other laboratories or from the experimental work of the same student
5. Development of the ability to display in written or present orally results with clarity, including their consequences and the next steps to be followed, that derive from these



d. Curriculum: Courses Outlines & Teaching Assignments in web links
[x]: ECTS

The courses are semestral, divided into fall and spring semesters. Total credit points (ECTS) required for obtaining the MSc amount to 90 ECTS, distributed in three semesters (30 ECTS per semester). Courses' attendance is mandatory.

A. Core Courses (1st semester)

Graduate students must choose three (3) out of four (4) courses among DPHA_1, DPHA_2, DPHA_3 & DPHA_4. Courses DPHA_5 και DPHA_6 are mandatory for all.

- DPHA_1 [Design and Discovery of Bioactive Compounds \[8\]](#) ⇔
- DPHA_2 [Design and Development of Pharmaceutical Products \[8\]](#) ⇔
- DPHA_3 [Pharmaceutical Analysis-Biospectroscopy \[8\]](#) ⇔
- DPHA_4 [Preclinical and Clinical Drug Evaluation \[8\]](#) ⇔
- DPHA_5 [Research Methodology and Ethics \[4\]](#) ⇔
- DPHA_6 [Literature-based seminar \[8\]](#) ⇔

B. Specialization Courses (2nd semester)

Students should choose two (2) courses from the **specialization** they have enrolled in and one (1) from any specialization. ECTS credits for all specialization courses are 5.

1. Medicinal Chemistry - Natural Products

- DPHA_A01 [Natural Products in Drug Discovery \[5\]](#) ⇔
- DPHA_A02 [Modern methods in drug synthesis \[5\]](#) ⇔
- DPHA_A03 [Biomolecular NMR and protein architecture \[5\]](#) ⇔

2. Industrial Pharmacy

- DPHA_B01 [Nanomedicines and special systems for administration and/or targeting of drugs/imaging agents \[5\]](#) ⇔
- DPHA_B02 [Statistics and quality management in Pharmacy \[5\]](#) ⇔
- DPHA_B03 [Applied pharmaceutical analysis and characterization of pharmaceutical formulations \[5\]](#) ⇔

3. Molecular Pharmacology and Biotechnology

- DPHA_C01 [Molecular Targets of Drug Action \[5\]](#) ⇔
- DPHA_C02 [Applied Biotechnology & Bioinformatics \[5\]](#) ⇔
- DPHA_C03 [Precision Therapeutics \[5\]](#) ⇔

C. Diploma Thesis (2nd & 3rd semesters)

- DPHA_DIP1 [Diploma Thesis \(2nd semester\) \[15\]](#) ⇔
- DPHA_DIP2 [Diploma Thesis \(3rd semester\) \[15\]](#) ⇔

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