



UNIVERSITY OF NICOSIA

ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

Course Code PHAR-310	Course Title Drug Discovery and Development/Ανακάλυψη και Ανάπτυξη Φαρμάκων	Credits (ECTS) 4
Department Life & Health Sciences	Semester Fall	Prerequisites PHAR104
Type of Course Required	Field Pharmacy	Language of Instruction Greek/English
Level of Course 1 st Cycle	Year of Study 3 rd year	Lecturer Christos Petrou /Michalis Petrides/Nicolas Stylianides/Zacharia Lefteris
The course objectives are to introduce the various phases involved in drug discovery and development and to give an insight and understanding of the dynamics and interdisciplinary nature of the development process.		

Objectives of the Course:

The aims of this module are to enable students to:

- use/apply modern approaches for the identification of lead compounds and therapeutic targets. Be aware of the methods used in identifying natural products of potential pharmaceutical use
- gain an appreciation of preclinical and clinical observations in relation to the identification of novel biological targets and potential therapeutic use.
- apply computational techniques in drug design
- rationalise the development of a pharmaceutical compound.
- be able to formulate a pharmaceutical into an appropriate format

Learning Outcomes:

On successful completion of this students should be able to demonstrate an understanding / knowledge of the following:

- the principal steps in drug discovery
- the complete development plan (pharmaceutical, non-clinical and clinical) according to the proposed therapeutic indication
- the pertinent issues involved in the undertaking of clinical research
- the regulation of medicines in the various global markets
- the management of drug safety issues pre-and post marketing authorisation
- development and review of product-related information to ensure adherence to ethical and legal provisions
- the principles of health economics and their application in the development

- and marketing of medicines
- the management of all lifecycle activities (regulatory and marketing) of a medicine

Course Contents:

The process of drug discovery and development, from validation of a drug target, identification of a lead structure leading to development of a drug, encompasses various disciplines and elements. To promote the ability to understand and communicate across the different fields of the process the following topics will be covered during the course:

- Target identification, evaluation and identification of lead structures
- Medicinal Chemistry: Lead optimization and synthesis
- Pharmacology and Non Clinical Safety
- Pre-formulation
- Pharmaceutical Formulation, Production and Quality systems.
- Clinical Trials
- Regulatory affairs and Patents

Learning Methods and Teaching Methods:

Lectures, class discussion, assignments

Assessment Methods:

Final Examination, Course work

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Smith and O'Donnel	The Process of New Drug Discovery and Development			

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Rick Ng	Drugs: From Discovery to Approval			