



UNIVERSITY OF NICOSIA

ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

Course Code PHAR-110	Course Title Introduction to Physics for Pharmacy/ Εισαγωγή στη Φυσική για τις Φαρμακευτικές Επιστήμες	Credits (ECTS) 3
Department Life & Health Sciences	Semester Fall/Spring	Prerequisites None
Type of Course Required	Field Pharmacy	Language of Instruction Greek/English
Level of Course 1 st Cycle	Year of Study 1 st year	Lecturer Marios Nestoros/Anastasia Hadjiafxenti
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Introduce students to the physical laws governing phenomena that are related to the science of Pharmacy and more specifically to Physical Pharmacy and Instrumental Analysis
- Help students develop an understanding of the principles taught as well as analytical problem-solving ability.

Learning Outcomes:

After completion of the course students are expected to:

- Apply the laws and principles of Hydrostatics
- Apply Bernoulli's principle and explain Poiseuille's law
- Evaluate the effect of surface tension
- Analyze and apply the laws governing the heat transfer mechanisms.
- Explain and calculate the emission and absorption spectra of gases based on Bohr's model
- Explain the features of an absorption spectrum
- Explain the modes of radioactive decay
- Calculate the activity of radioactive samples using appropriate equations

Course Contents:

- Review of Force and Motion, Work and Energy
- Hydrostatic and atmospheric pressure, Buoyancy, Fluids in motion

- Surface Tension
- Kinetic Theory of gases, Heat as a form of energy, Calorimetry,
- Heat Transfer phenomena
- Bohr's atomic model, atomic spectra, absorption and emission of light
- Nuclear physics-radioactive decay

Learning Activities and Teaching Methods:

Lectures, tutorials, class problems and discussion

Assessment Methods:

Homework, Midterm Exam, Final Examination

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Raymond A. Serway, John W. Jewett	Φυσική για Επιστήμονες και Μηχανικούς - Μηχανική, Ταλαντώσεις και μηχανικά κύματα, Θερμοδυναμική, Σχετικότητα	Κλειδάριθμος		9789604615087
Raymond A. Serway, John W. Jewett	Φυσική για Επιστήμονες και Μηχανικούς - Ηλεκτρισμός και μαγνητισμός, Φώς και οπτική, Σύγχρονη φυσική	Κλειδάριθμος		9789604615094
Lecturer's Notes				

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Lindfeld, Peter and White Brahmia, Suzanne	Physics: The First Science	New Brunswick, NJ : Rutgers University Press	2011	9780813549378
Cutnell and Jonson	Physics	Μετάφραση στα Ελληνικά (2 τόμοι) Παπαζήση		