Jordan University of Science and Technology

Faculty of Pharmacy

Pharmacy Department

PHAR323 Pharmaceutical Instrumental Analysis

First Semester 2021-2022

Course Catalog
3 Credit Hours. This course aims to introduce the principles of instrumental analysis and its applications in pharmaceutical sciences. Emphasis is laid on the interpretation of the analytical data to extract useful information about the qualitative and quantitative properties of various pharmaceutical samples. The students will be taught to select optimal methods and appropriate procedures with regard to the nature of the analysed object and to realise the scope and limitations of instrumental methods. Satisfactory completion of this course will afford students a working knowledge of analytical instrumentation typically employed in pharmaceutical and biochemical research laboratories.

Text Book	
Title	Principles in Instrumental Analysis
Author(s)	Douglas Skoog, James Holler, Stanley Grouch
Edition	7th Edition
Short Name	Ref#1
Other Information	

Instructor	
Name	**Dr. Aref Zayed**
Office Location	-
Office Hours	Sun : 11:00 - 13:00 Mon : 11:30 - 13:00 Tue : 14:30 - 16:00 Wed : 14:30 - 15:30
Email	alzayed@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun : 13:00 - 14:30
Room: P1101

Section 2:
Lecture Time: Mon : 10:00 - 11:30
Room: NF25

Section 3:
Lecture Time: Tue : 13:00 - 14:30
Room: P1101

Section 4:
Lecture Time: Wed : 10:00 - 11:30
Room: NF25

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Integrate a fundamental understanding of the underlining principles and specific instrumentation used for UV, IR, mass spectrometry, magnetic resonance spectrometry and chromatography. [1SO1.1]	20%	
Understand and be able to apply the theory and operational basics of analytical instruments. [1SO1.1]	20%	
Distinguish between qualitative and quantitative measurements and be able to effectively compare and critically select methods for pharmaceutical analyses. [1SO1.1, 1SO3.1]	15%	
To competently interpret spectra and chromatograms [1SO1.1, 1SO3.1]	15%	
Learn about various instrumentations used in pharmaceutical research: components, mode of operation, etc. [1SO1.1]	15%	
To study the main applications of the modern analytical instruments in different aspects of pharmaceutical sciences in particular identification and quantification of pharmaceutical compounds. [1SO1.1, 1SO3.1]	15%	

Relationship to Program Student Outcomes (Out of 100%)														
SO1.1	SO2.1	SO3.2	SO3.3	SO2.2	SO2.3	SO2.4	SO3.1	SO3.4	SO3.5	SO3.6	SO4.1	SO4.2	SO4.3	SO4.4
77.50							22.50							

Evaluation	
Assessment Tool	**Weight**
MidTerm Exam	50%
Final	50%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the Dean of Faculty
Cheating	Prohibited; and in case of cheating the student will be subject to punishment according to the regulations.

Attendence	If the student was absent more than 20% of the lectures, the student will be dropped by system automatically.
Course withdrawal	There is a deadline for withdrawing the course through the student services. The student must follow up that deadline with the registration unit based on the academic year calendar.

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