

وصف البرنامج:

يهدف برنامج ماجستير العلوم الصيدلانية في الكيمياء الدوائية إلى أعداد صيادلة ذوي قاعدة علمية وخبرة عملية متطورة في مجالات تصميم وتشبيد الأدوية ، آلية المفعول الدوائي وأثر الكيمياء الجزيئية على تصريف الدواء داخل الجسم إضافة إلى أيضا وسميته وإزالته من الجسم . البرنامج يهيئ الخريج للتفاعل العلمي والمهني مع المتخصصين والباحثين في المجالات الطبية والصيدلانية المختلفة. ويشرف على هذا البرنامج قسم الكيمياء الصيدلانية . تبين الجداول التالية الساعات المعتمدة المطلوبة للحصول على درجة ماجستير العلوم الصيدلانية في الكيمياء الدوائية مع توضيح المقررات الدراسية و عدد الساعات المعتمدة وتوزيع درجات الإمتحان لكل مقرر.

الفصل الأول

Code	Course		Credit		Course Assessment			
			Lect	Pract	Course Work	Pract Exam	Written Exam	Total
PCR 801	Scientific Writing	Compulsory	1	0	10	-	40	50
PCR 802	Ethics of Scientific Research		1	0	10	-	40	50
PCR 803	Pharmaceutical Statistics		2	0	20	-	80	100
PHC 811	Spectral Analysis of Organic Compounds		3	0	30	-	120	150
PHC 812	Drugs Design and Drug Development		2	0	20	-	80	100
PHC 821	Advanced Chromatographic Analysis		3	0	30	-	120	150
Total Credits			12		Total Marks			600

الفصل الثاني

Code	Course		Credit		Course Assessment			
			Lect	Pract	Course Work	Pract Exam	Written Exam	Total
PHC 813	Advanced Chemical Synthetic Reactions	Compulsory	3	0	30	-	120	150
PHC 814	Special Topics in Medicinal Chemistry		1	0	10	-	40	50

PHC 815	Biopharmaceutical Reaction Mechanisms	Elective	2	0	20	-	80	100
PHL 854	Molecular Biology		2	0	20	-	80	100
PHC 900	Thesis		6					
Total Credits			12		Total Marks		300	

بالإضافة الى 24 ساعة معتمدة "رسالة" توزع على فصلين دراسيين إضافيين على الأقل .

PROGRAM COURSES

PCR 801: SCIENTIFIC WRITING (1+0)

Course Description

This course aims to demystify the writing process and teach the fundamentals of effective scientific writing. Instructions will focus primarily on the process of writing and publishing scientific manuscripts but grant writing will also be addressed. The course will be presented in two segments: Part (1) teaches students how to write effectively, concisely, and clearly and part (2) takes them through the preparation of an actual scientific manuscript or grant.

PCR 802: ETHICS OF SCIENTIFIC RESEARCH (1+0)

Course Description

The course is essentially intended for graduate students in the biomedical sciences. This course delineates important ethical issues of scientific investigation, including intellectual property, plagiarism, conflict of interest, human and animal subjects, and record keeping.

PCR 803: PHARMACEUTICAL STATISTICS (2+0)

Course Description

An intensive introductory course in statistical methods used in applied research. Emphasis is placed on the principles of statistical reasoning, underlying assumptions, and careful interpretation of results. Topics covered include descriptive statistics, graphical displays of data, introduction to probability, expectations and variance of random variables, confidence intervals and tests for means, differences of means, proportions, differences of proportions, chi-square tests for categorical variables, regression and multiple regressions, an introduction to analysis of variance.

PHC 811: SPECTRAL ANALYSIS OF ORGANIC COMPOUNDS (3+0)

Course Description

The main objective of this course is to assist in developing the ability of the students to interpret spectra with the study of the principles and advanced techniques of Mass Spectroscopy (MS), Infra Red (IR), Nuclear Magnetic Resonance (NMR), and their application in the identification and characterization of organic compounds. The practical part involves sample preparation, instrumental demonstration, spectral analysis of compounds containing various functional groups by mass, infra-red and NMR spectroscopic techniques. Practice problems involve interpretation of IR, MS and NMR spectra of selected medicinal organic compounds.

PHC 812: DRUG DESIGN AND DRUG DEVELOPMENT (2+0)

Course Description

This course deals with the principles and frameworks of basic, current and future drug design techniques. The approach should provide the student with an understanding of new developments as they become elaborated in future and will be of aid to the student whenever there is a need to appreciate the rationales behind the design of drugs. The course comprises the principles of drug design and drug development through Molecular Modeling aspects. The course includes training sessions on computer cheminformatics programs.

PHC 813: ADVANCED CHEMICAL SYNTHETIC REACTIONS (3+0)

Course Description

The course is designed to discuss some new reactions and mechanisms in organic chemistry with special emphasis on reactions related to synthesis of pharmaceutical compounds. The course is designed to expose the student to various synthetic and purification techniques in medicinal chemistry.

PHC 814: SPECIAL TOPICS IN MEDICINAL CHEMISTRY (1+0)

Course Description

This is a versatile course for providing the student with recent knowledge on relevant specialized topics in medicinal chemistry. The topics are selected and specifically-tailored to meet the needs and interests of the students.

PHC 815: BIOPHARMACEUTICAL REACTION MECHANISMS (2+0)

Course Description

The course is designed to relate chemical phenomena to biological activity and to provide the student with the present state of knowledge with respect to drug mechanism of action. It covers a wide range of enzyme and receptor-based mechanisms of drug action as well as stereo-chemical treatment of various medicinal agents and their targets.