

قائمة مقررات درجة دكتوراه الفلسفة في العلوم الصيدلانية
قسم العقاقير

1- Specialized : (18 cr. h)

١. مقررات تخصصية:

Courses

First Semester (9 cr. h)

No.	Course code	Courses	Credit hours	
			L	P
1	0606801	Advanced Topics in Chromatography and Separation Techniques موضوعات متقدمة في تقنيات الفصل و الكروماتوجرافيا	3	--
2	0606802	Selected Topics in Natural Products موضوعات مختاره في النواتج الطبيعية	3	--
3	0606803	Seminar بحث إقائي	3	--
Total			9	

Second Semester

No.	Course code	Courses	Credit hours	
			L	P
4	0606804	Recent Approaches in Spectral Analyses دراسات حديثة في التحاليل الطيفية	3	--
5	0606805	Advanced Natural Products-Based Drug Discovery مقرر متقدم في اكتشاف الأدوية من النواتج الطبيعية	3	--
6		Elective Course مقرر اختياري	3	--
Total			9	

Elective Courses

No.	Course code	Courses	Credit hours	
			L	P
1	0606806	Plant Genomics and Metabolomics علم الجينوم و الأيض النباتي	3	--
2	0607805	Chemometrics and Laboratory Intelligence Methods الطرق القياسية الكيميائية و طرق الذكاء الاصطناعي المعمل	3	--

وصف مقررات درجة دكتوراه الفلسفة في العلوم الصيدلانية
قسم العقاقير

First Semester (9 cr. h)

Course Name	Credit hours		Code No.
	L	P	
Advanced Topics in Chromatography and Separation Techniques موضوعات متقدمة في تقنيات الفصل و الكروماتوجرافيا	3	--	0606801
<p>Description: This course will give an overview of the various modern instrumental chromatographic techniques used in analysis of complex plant matrices through education of graduate students of advancements in chromatographic techniques. The course is designed to provide analysts with theoretical foundation of and practical experience with modern chromatographic techniques. Students will learn to use state-of-the-art instrumentation to develop, optimize, validate and apply methods for qualitative and quantitative determinations of natural products.</p> <ul style="list-style-type: none"> • https://courses.cit.ie/index.cfm/page/module/moduleId/7644 <i>CHEA8001 - Advanced Chromatography</i> <i>Cork Institute of Technology (CIT), Ireland.</i> 			

Course Name	Credit hours		Code No.
	L	P	
Selected Topics in Natural Products موضوعات مختاره في النواتج الطبيعية	3	--	0606802
<p>Description: The course deals with the different adopted scientific routines and approaches in investigation of drugs from natural sources including terrestrial and marine ones regarding the main biological streams (e.g. anticancer, hepato-protective, anti-neurodegenerative or anti-hypertensive) targeted in the routine search for bioactive compounds and their structural requirements. The course will also throw some light on evaluation of drug-targeted studies. Meta-analysis and evidence-based reviews will be explained. The health-impact and forms of the different marketed nutraceuticals and nutritional products will be also displayed. The course will also enlighten the students on additional herbal issues of concern like herb-drug interactions and forensic Pharmacognosy.</p> <ul style="list-style-type: none"> • https://www.coursicle.com/osu/courses/PHR/8390/ <i>PHR 8390 – Recent Advances in Pharmacognosy</i> Division of Medicinal Chemistry and Pharmacognosy College of Pharmacy, Ohio State University. 			

Second Semester (9 cr. h)

Course Name	Credit hours		Code No.
	L	P	
Recent Approaches in Spectral Analyses دراسات حديثة في التحاليل الطيفية	3	--	0906804
Description: The course provides students with a more detailed exposure to the theoretical and applied aspects of the spectroscopic techniques used in structure-elucidation of natural compounds. The students will be also exposed to spectroscopic techniques as fingerprinting tools in natural products identification and quality assessment procedures. This course would enable the student to interpret 2-dimensional ^1H and ^{13}C spectra of organic molecules and to identify complex natural products structures from their NMR spectra. The course will also help students to "Solve" and work-out the structure of unknown natural products using a combination of UV, IR, 2D-NMR spectroscopy and Mass Spectrometry. The students are required to use the chemical literature (library journals, internet, etc) to explore practical ways of using instruments to solve relevant chemical problems. • http://www.wiu.edu/users/mftkv/CHEM500/ Chem 500 Special Topics (NMR Spectroscopy) Western Illinois University			

Course Name	Credit hours		Code No.
	L	P	
Advanced Natural Products-Based Drug Discovery مقرر متقدم في اكتشاف الأدوية من النواتج الطبيعية	3	-	0606805
Description: Drug discovery based on natural products has a long successful history. To further advance the identification of new drugs from compounds of natural origin, natural product research is increasingly being combined with computer-aided drug design techniques. This course covers, in an integrated fashion, basic information and case studies from all the disciplines needed to gain a comprehensive understanding of the computer-aided natural products drug discovery process (NPDD). • https://www.coursicle.com/osu/courses/PHR/7350/ PHR 7350 Drug Discovery and Drug Design Division of Medicinal Chemistry and Pharmacognosy College of Pharmacy, Ohio State University.			

Elective Courses

Course Name	Credit hours		Code No.
	L	P	
Plant Genomics and Metabolomics علم الجينوم و الأيض النباتي	3	--	0606806
<p>Description: In this course the student will learn about the 'omics' technologies in medicinal plants, including aspects of experimental design, analysis and interpretation. The new 'omics' technologies allow the holistic analysis of the different components of plants and provide new insights into the complexities of plant matrices. Genomics and transcriptomics give insight about the structure and expression of the genome, whilst metabolomics seeks to identify and quantify the diversity of metabolites and metabolic networks within plant matrices. A series of case studies will be used to illustrate how these technologies can be integrated.</p> <ul style="list-style-type: none">• https://www.sheffield.ac.uk/aps/currentug/level2/aps268 APS 268 Genomics, Proteomics and Metabolomics The University of Sheffield, UK.			

