قائمة مقررات درجة دكتوراه الفلسفة في العلوم الصيدلية
قسم الصيدلانيات

١. مقررات تخصصية: **1- Specialized : (18 cr. h)**

Courses

First Semester (9 cr. h)

No.	Course code	Courses		Credit hours	
				L	P
1	0601801	Advanced Research in Drug Targeting	البحث المتقدم في تهديف الدواء	3	--
2	0601802	Seminar I	بحث القائي I	3	--
3		Elective Course	مقرر اختياري	3	--
Total				**9**	

Second Semester (9 cr. h)

No.	Course code	Courses		Credit hours	
				L	P
4	0601803	Advanced Therapeutic Medicinal Products (ATMPs): Current and Future Perspectives	المنتجات الطبية العلاجية المتقدمة: وجهات النظر الحالية والمستقبلية	3	--
5	0601804	Seminar II	بحث القائي II	3	--
6		Elective Course	مقرر اختياري	3	--
Total				**9**	

Elective Courses

No.	Course code	Courses		Credit hours	
				L	P
1	0601805	Targeted Nanomedicine for Cancer Therapy	تهديف العلاج النانومتري لعلاج السرطان	3	--
2	0601806	Microfluidic Devices for Drug Delivery Systems	أجهزة ميكروفلويديك لأنظمة توصيل الدواء	3	--
3	0601807	Advanced Topics in Mucoadhesive Drug Delivery Systems	مواضيع متقدمة في أنظمة توصيل الدواء اللاصقة للغشاء المخاطي	3	--
4	0601808	Advances in Nanobiotechnology	التقدم في التكنولوجيا النانوحيوية	3	--

وصف مقررات درجة دكتوراه الفلسفة فى العلوم الصيدلية
قسم الصيدلانيات

First Semester (9 cr. h)

Course Name	Credit hours		Code No.
	L	P	
Advanced Research in Drug Targeting **البحث المتقدم في تهديف الدواء**	3	--	0601801
Description: The course provides in-depth an overview on the newest strategies and achievements in the drug delivery and targeting field. Targeting strategies to different organs such as GIT, kidney, bone are covered. Targeting approaches include passive targeting (enhanced permeability and retention effect), and active targeting; namely, targeting organs, cells and intracellular organelles. Sandwich targeting, promoter targeting, indirect targeting and targeting by external stimuli are also covered. Intracellular drug delivery is also discussed. University of Utrecht, Germany • https://www.uu.nl/en/organisation/phd-programmes/phd-in-utrecht/about-phd-programmes			

Course Name	Credit hours		Code No.
	L	P	
Seminar I **بحث إلقائي I**	3	--	0601802
Description: The course topics covers targeting to other organs such as lung, liver, brain, eyes. Any other recent topics are also considered.			

Second Semester (9 cr. h)

Course Name	Credit hours		Code No.
	L	P	
Advanced Therapeutic Medicinal Products (ATMPs): Current and Future Perspectives **المنتجات الطبية العلاجية المتقدمة: وجهات النظر الحالية والمستقبلية**	3	--	0601803
Description: The course offers in-depth knowledge in the cutting edge and rapidly developing field of Advanced Therapy Medicinal Products (ATMP). It covers the basics in biomedical science, current and developing technologies and applications of Gene and Cell Therapies. The course introduces the principles and applications of stem cells and biomaterials related to tissue engineering and regenerative medicine. It also provides a general overview on the legal and ethical restrictions placed by the regulatory agencies for the development, production and delivery of novel ATMPs. Nanomedicine DPMP 738 Advanced therapies gene and cell based medicinal products – from the Workbench to the Clinic. UNIVERSIDADE DE LISBOA, Spain • http://www.ff.ul.pt/post-graduate-course-advanced-therapies-gene-cell-based-medicinal-products-workbench-clinic			

Course Name	Credit hours		Code No.
	L	P	
Seminar II **بحث إلقائي II**	3	--	0601804
Description: Students collect data, write review article and orally present the suggested recent topics in pharmaceutics.			

Elective Courses

Course Name	Credit hours		Code No.
	L	P	
Targeted Nanomedicine for Cancer Therapy **تهديف العلاج النانومتري لعلاج السرطان**	3	--	0601805
Description: The course offers an insight into molecular targeting approaches in anticancer drug delivery systems (DDS) and identifies new developments in these systems. A novel advanced proapoptotic anticancer DDS that utilizes several molecular targets is considered. Nanomedicine DPMP 738 The UNC Eshelman School of Pharmacy University of North Carolina at Chapel Hill, USA • https://pharmacy.unc.edu/divisions/dpmp/dpmp-phd-program/			

Course Name	Credit hours		Code No.
	L	P	
Microfluidic Devices for Drug Delivery Systems **أجهزة ميكروفلويديك لأنظمة توصيل الدواء**	3	--	0601806

Description: The course introduces students to microfluidic devices concept. Current developments and applications of microfluidic technology in nanoparticles drug delivery are covered. Application of microfluidic devices in treatment of retinal diseases is discussed.

Microfluidics and nanotechnology for pharmaceutical applications (MiNaPharmA)
University of Helsinki, Finland

- https://courses.helsinki.fi/en/prov-607

Course Name	Credit hours		Code No.
	L	P	
Advanced Topics in Mucoadhesive Drug Delivery Systems **مواضيع متقدمة في أنظمة توصيل الدواء اللاصقة للغشاء المخاطي**	3	--	0601807

Description: The course covers the biology of mucus and the technological strategies to overcome the mucus barrier. The role of mucus on drug transport and its potential to evaluate the diffusion of drugs and particles are discussed. The role of mucus in cell-based models used to screen mucosal drug delivery is explored. The various modifications techniques for nano-systems to enhance their diffusion in mucus are discussed.

PMST 6254 Advanced Drug Delivery System
University of Northeastern USA

- http://catalog.northeastern.edu/graduate/health-sciences/pharmacy/pharmaceutical-sciences-phd/#programrequirementstext

Advanced Pharmaceutics DPMP 862/890
The UNC Eshelman School of Pharmacy University of North Carolina at Chapel Hill, USA

- https://pharmacy.unc.edu/divisions/dpmp/dpmp-phd-program/

Course Name	Credit hours		Code No.
	L	P	
Advances in Nanobiotechnology **التقدم في التكنولوجيا النانوحيوية**	3	--	0601808

Description: The course provides students with basic knowledge on nanobiotechnology which involves the application of nanotechnology in solution of problems of life sciences, including biology and medicine. The course covers basic imaging techniques, biosensors and their importance in health care, nanoparticle interactions at the cellular level, the whole organism level and their fate in the environment. It also covers biologically inspired materials and nanostructures and their industrial applications. In addition, biomimesis which is the scientific method of learning new principles and processes based on systematic study, observation and experimentation with live animals and organism are introduced.

PHR382V Pharmaceutical Biotechnology University of Texas, USA

- http://sites.utexas.edu/pharmaceutics/degree-requirements/

PHARMACEUTICS 586
Biotechnology and Biopharmaceuticals
University of Washington, USA

- https://sop.washington.edu/department-of-pharmaceutics/graduate-education-training-programs/course-listings/