

Course Detailed Description – Procedures of the Course Plan Committee /Faculty of Pharmacy	QF02/0408–1.0E
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Department	Pharmacy
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Course Name	phytochemistry	Course No.	0201315
Prerequisite	Pharmacognosy	Credit Hours	2
Number & date of course plan approval	2013–2014	Brief Description	See form QF02/0409

Intended Learning Outcomes	<p>UPON COMPLETION OF THE COURSE, THE STUDENT IS EXPECTED TO BE:</p> <ol style="list-style-type: none"> 1. Familiar with medicinally active constituents (essential oils, Hydrocarbons, Carbohydrate, Phenols, Glycosides, Alkaloids) 2. Familiar with the main used extraction, detection and identification methods of medicinally active constituents (essential oils, Hydrocarbons, Carbohydrate, Phenols, Glycosides, Alkaloids) 3. Familiar with the main biosynthetic methods of medicinally active constituents (essential oils, Hydrocarbons, Carbohydrate, Phenols, Glycosides, Alkaloids) 		
Course Topics	<p>Provide the students with accurate information about:</p> <ol style="list-style-type: none"> 1. The properties of natural products (Chemical and physical) which have physiological activities. 2. Biosynthetic pathways of the main active compounds. 3. Extraction methods and the identification and determination of the active compounds. 		
Text Books	<ol style="list-style-type: none"> 1. Trease and Evans Pharmacognosy. 16th edition, saunders Elsevier.2009 		
References	<ol style="list-style-type: none"> 1. Pharmacognosy and Phytochemistry. 2nd edition Bruneton Jean, Springer verlag, 2008, ISBN: 1898298637 2. Drugs of natural Origin, 6th edition 2010 Gunnar Samuelsson: Swedish Pharmaceutical Press, ISBN 9186274813 3. HBP – Pharmacopoeia 4. PDR 5. النباتات الطبية والعطرية في الوطن العربي، أكساد، دمشق-سوريا 2012، تأليف أ.د.محمد عصام حسن آغا، أ.د.وسيم الحكيم، أ.د.عماد القاضي وغيرهم 6. العقاقير، ترجمة عن كتاب Trease and Evans Pharmacognosy. 16th edition، المركز العربي للترجمة والتعريب، دمشق – سوريا. ترجمة: أ.د. محمد عصام حسن آغا، أ.د. عبد النصر عمري وغيرهما 		
Grade Determination	<p>1st Exam = 25% 2nd Exam = 25% Final Exam = 50%</p>	<p>Practical Course Grade Determination</p>	<p>Course Work = 50% (Reports, Term Papers, Quizes) Final Exam = 50%</p>

Week	Hours	Subjects	Chapters in Textbook	Notes
1	1 1	Introduction in the general identification and determination methods of the active compounds		
2	1 1	Hydrocarbons; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties.		
3	1 1	Carbohydrate; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
4	1 1	Phenols; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
5	1 1	Tannins; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
6	1 1	Flavonoids; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
7	1 1	Anthraquinons; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical		
8	1 1	Saponins; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
9	1 1	Cardiac glycosides; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
10	1 1	Alkaloids; classification, Chemical structure, identification, isolation and extraction. Chemical and physical properties		
11	1 1	Alkaloids of tropan, Purin and amino alkaloids; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
12	1 1	Alkaloids of indol and quinolein; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
13	1 1	Alkaloids of Phenanthren; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
14	1 1	Alkaloids of indol; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		
15	1 1	Cannabinoids, hallucinogenic and other compounds; Chemical structure, biosynthesis, identification, isolation and extraction. Chemical and physical properties		



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Approved by Dept. Chair		Date of Approval	
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Extra Information: (Updated every semester and filled by course instructor)

Course Instructor	Prof. Dr. Mohamed Isam Hasan Agha
Office No.	220
Extension	
Email	
Office hours	