

Course Detailed Description – Procedures of the Course Plan Committee /Faculty of Pharmacy	QF02/0408–2.1E
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Department	Pharmacy
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Course Name	Pharmacognosy	Course No.	0201215
Prerequisite	Biology & Pharmaceutical Organic Chemistry-2-	Credit Hours	2
Number & date of course plan approval	2016-2017	Brief Description	See form QF02/0409

Course Objective	<p>This course will provide students with general knowledge of crude drugs associated with allopathic medicine.</p> <p>Have sufficient knowledge in plant morphology and plant anatomy to be able to read and understand scientific literature in pharmacognosy with scientific descriptions of plants and crude drugs.</p> <p>Special emphasis is made on study of crude drugs derived from medicinal plants:- their morphological organs, origin, history, cultivation, collection, preparation, morphological and histological characters, constituents, adulterants, allied drugs and uses.</p>
Intended Learning Outcomes	<p>Upon completion of the course, the student shall be able to know.</p> <p>1-Botanical nomenclature, general and arabic names of most medicinal plants from which crude drugs are derived.</p> <p>2-Methods of cultivation, collection and preparation of medicinal plants intended as a source for crude drugs; and factors affecting their production.</p> <p>3-The general macroscopical and microscopical characters of the different morphological organs from plants.</p> <p>4-Ability to identify and differentiate between crude drugs, based on their, macroscopical and microscopical characters with limited knowledge on their chemical nature.</p> <p>5-The main active constituents and uses of crude drugs.</p> <p>6- The basis for the identification of plant drugs and from this the detection of adulterated and poor quality (Quality Control of Plant Drugs) using the microscope.</p>
Course Topics	<ol style="list-style-type: none"> 1. Preparation of crude drug from Plants. 2. Special emphasis is made on study of crude drugs derived from medicinal plants, their morphological organs, origin, history, cultivation, collection, preparation, morphological and histological characters, constituents, adulterants, allied drugs and uses.

Text Books	1. Trease and Evans, " Pharmacognosy". 1 st Edition, Published by Saunders-Elsevier. 2009. 2. T. E. Wallis, "Textbook of Pharmacognosy", 6 th Ed., CBS Publishers, 2002.		
References	1. Pharmacognosy by C. K. Kokate, A. P. Purohit and S.B. Gokhale, 19th Edition. 2. Pharmacognosy by Makboul M A and Afaf A M, Dar Al-Hamed,1998. 3. Mohammed Ali, "Text book of pharmacognosy", 2 nd Ed., CBS Publishers ,1993.		
Grade Determination	1 st Exam = 25% 2 nd Exam = 25% Final Exam = 50%	Practical Course Grade Determination	Course Work = 50% (Reports, Term Papers, Quizes) Final Exam = 50%

Course Outline

Week	Hours	Subjects	Chapters in Textbook	Notes
1	1 1	Introduction. Definition of pharmacognosy. Scheme for pharmacognostic studies of natural drugs. Crude drugs, Herbalist, Medicinal and Aromatic plants.	Trease and Evans Chapter 1 T. E. Wallis Chapter 1	
2	1 1	Ergastic cell contents. Cellulose, Hemicellulose, Lignin, Cutin, Suberin, Mucilage, Starch, Protein, Calcium carbonate, Fixed oils & Fats, Volatile oils and Resins, Tannins, Alkaloids, Glycosides and Calcium oxalate crystals.	Trease and Evans Chapter 8	
3	1 1	Cell Differentiation. - Tissue and tissue systems. - Dermal tissue system (Epidermis, Stomata, Trichomes and Cork). - Vascular tissue systems (Xylem and phloem [Vessels, Fibers, Tracheids, Sieve tube & companion cells and Secretary glands]) - Ground tissue system (Parenchyma, Collenchyma and Sclerenchyma).	Trease and Evans Chapter 8	
4	1 1	Adulteration of crude drugs. - Reasons behind adulteration of crude drugs 1. Faulty of collection. 2. Imperfect preparation. 3. Incorrect storage. -Methods Of adulteration of crude drugs (Sophistication,Substitution,Admixture,Deterioration, Inferiority and Addition of worthless heavy materials).	T. E Wallis Chapter 19	
5	1 1	The Leaves. - The leaf. - Phyllotaxy and types of leaves.	Trease and Evans Chapter 5	

		- Macroscopical characters of leaves. - Microscopical characters of leaves.	T. E. Wallis Chapter 8	
6	1 1	Complete pharmacognostical studies (Origin, Family, Habitat, History, Cultivation, Collection, Processing for market, Morphological & Microscopical characters, Chemical constituents, Pharmacological action and Commercial varieties, Substitutes and Adulterants of some medicinal plants like: Senna, Digitalis, Buchu, Eucalyptus, Coca, Hamamelis, Tea, Mate, Sage, Melissa, Thymus, Peppermint, Belladonna, Datura, Hyoscamusetc.	Trease and Evans Chapter 5 T. E. Wallis Chapter 8	
7	1 1	Flowers & inflorescences. - Flowers and Inflorescence. - Complete pharmacognostical studies of Clove flower bud, Chamomile, Santonica, Pyrethrum & Saffron ...etc.	Trease and Evans Chapter 5 T. E. Wallis Chapter 9	
8	1 1	The Seeds. - The seed. - Complete pharmacognostical studies of Nux-vomica, Strophanthus, Linseed, Funegreek, Cocoa, Nutmeg, and Colchicum ...ets.	Trease and Evans Chapter 5 T. E. Wallis Chapter 10	
9	1 1	The fruits. Complete pharmacognostical studies of Fennel, Anise, Caraway, Coriander, Ammi visnaga, Ammi majus, Star anise, Capsicum, Vanilla pod, Colcynth, Poppy capsule, Tamarind, Blانيتis and Nigela sativa.....etc.	Trease and Evans Chapter 5 T. E. Wallis Chapter 11	
10	1 1	The Roots & Rhizomes (Subterranean organs). - Subterranean organs. - Complete pharmacognostical studies of Liquorice, Ginger, Rhubarb, Ipecacuanha, Aconite, Rowalfia, Ginseng, Turmeric, Squill, Garlic and Onion.....etc.	Trease and Evans Chapter 5 T. E. Wallis Chapter 13	
11	1 1	The barks & woods. - Complete pharmacognostical studies of Cinchona, Cinnamon, Cascara, Frangula, Wild cherry, Quillaia, Cassia, Salix, Guaicum & Quassia ...etc.	Trease and Evans Chapter 5 T. E. Wallis Chapters 6&7	
12	1 1	The Herbs. - Herbs. - Complete pharmacognostical studies of Ergot, Ephedra, and Indian Hemp ...etc.	Trease and Evans Chapter 5 T. E. Wallis Chapter 12	
13	1 1	Unorganized drugs. - Unorganized drugs. - Resins (Asafetida, Myrrh, Ammoniacum, Galbanum - Balsams(Benzoin, Sumatra benzoin, Storax, Balsam tolu, Balsam peru)	Trease and Evans Chapter 5 T. E. Wallis Chapters 14, 15 & 16	
14	1 1	- Gums. - Dried juice (Aloe). - Dried extract(Agar- Agar, Gelatin). - dried latex (Opium).	Trease and Evans Chapter 5 T. E. Wallis Chapters 14, 15 & 16	
15	1 1	Final Exam.		



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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	Iyad ahmad yamin
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