



Department	Pharmacy
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<b>Course Name</b>	Pharmacognosy	<b>Course No.</b>	0201215
Prerequisite	Biology & Pharmaceutical Organic Chemistry-2-	Credit Hours	2
Number & date of course plan approval	2013-2014	Brief Description	See form QF02/0409

<b>Intended Learning Outcomes</b>	<p>The students would acquire the following knowledge:-</p> <ol style="list-style-type: none"> <li>1. Botanical nomenclature, general and Arabic names of most medicinal plants from which crude drugs are derived.</li> <li>2. Methods of cultivation, collection and preparation of medicinal plants intended as a source for crude drugs; and factors affecting their production.</li> <li>3. General macroscopical and microscopical characters of different plants.</li> <li>4. The main active constituents and uses of the crude drugs.</li> </ol>		
<b>Course Topics</b>	<ol style="list-style-type: none"> <li>1. Preparation of crud drug from Plants</li> <li>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.</li> </ol>		
<b>Text Books</b>	<ol style="list-style-type: none"> <li>1. Trease and Evans, " Pharmacognosy". 16<sup>th</sup> Edition, Published by Saunders-Elsevier. 2009</li> <li>2. T. E. Wallis, "Textbook of Pharmacognosy", 6<sup>th</sup> Ed., CBS Publishers, 2002</li> </ol>		
<b>References</b>	<ol style="list-style-type: none"> <li>1. Pharmacognosy by C. K. Kokate, A. P. Purohit and S.B. Gokhale, 19<sup>th</sup> Edition.</li> <li>2. Pharmacognosy by Makboul M A and Afaf A M, Dar Al-Hamed,1998.</li> <li>3. Mohammed Ali, "Text book of pharmacognosy", 2<sup>nd</sup> Ed., CBS Publishers ,1993</li> </ol>		
<b>Grade Determination</b>	<input type="checkbox"/> 1 <sup>st</sup> Exam = 25% <input type="checkbox"/> 2 <sup>nd</sup> Exam = 25% <input type="checkbox"/> Final Exam = 50%	<input type="checkbox"/> Practical Course <input type="checkbox"/> Grade Determination	<input type="checkbox"/> Course Work = 50% <input type="checkbox"/> (Reports, Term Papers, Quizes) <input type="checkbox"/> Final Exam = 50%



<b>Course Outline</b>				
<b>Week</b>	<b>Hours</b>	<b>Subjects</b>	<b>Chapters in Textbook</b>	<b>Notes</b>
1		<b>Introduction.</b> 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	
2		<b>Ergastic cell contents.</b> 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		<b>Cell Differentiation.</b> - 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		<b>Adulteration of crude drugs.</b> - 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		<b>Evaluation of drugs.</b> Quality control and standardization of natural products	Trease and Evans Chapter 3	
6		<b>The Leaves.</b> - The leaf. - Phyllotaxy and types of leaves. - Macroscopical characters of leaves. - Microscopical characters of leaves.	Trease and Evans Chapter 5  T. E. Wallis Chapter 8	
7		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, Hyoscamus .....etc.	Trease and Evans Chapter 5  T. E. Wallis Chapter 8	
8		<b>Flowers &amp; inflorescences.</b> - 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	



Course Detailed Description – Procedures of the Course Plan Committee /Faculty of Pharmacy

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Week	Hours	Subjects	Chapters in Textbook	Notes
		<b>The Seeds.</b> - 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	
10		<b>The fruits.</b> Complete pharmacognostical studies of Fennel, Anise, Caraway, Coriander, Ammi visnaga, Ammi majus, Star anise, Capsicum, Vanilla pod, Colcynth, Poppy capsule, Tamarind, Blanitis and Nigela sativa.....etc.	Trease and Evans Chapter 5  T. E. Wallis Chapter 11	
11		<b>The Roots &amp; Rhizomes ( Subterranean organs).</b> - 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	
12		<b>The barks &amp; woods.</b> - 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	
13		<b>The Herbs.</b> - Herbs. - Complete pharmacognostical studies of Ergot, Ephedra, and Indian Hemp ...etc.	Trease and Evans Chapter 5  T. E. Wallis Chapter 12	
14		<b>Unorganized drugs.</b> - 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	
15		- Gums. - Dried juice ( Aloe ). - Dried extract( Agar- Agar, Gelatin ). - dried latex ( Opium ).	Trease and Evans Chapter 5  T. E. Wallis Chapters 14, 15 & 16	
16		<b>Final Exam.</b>		

Approved by Dept. Chair

Date of Approval

**Extra Information:** (Updated every semester and filled by course instructor)

<b>Course Instructor</b>	
<b>Office No.</b>	
<b>Extension Email</b>	
<b>Office hours</b>	