



SYLLABUS

Course title	INTRODUCTION TO PHARMACOGNOSY	
Course Code	PH115	
Course Credit	Lecture	: 3
	Practical	: 3
	Tutorial	: 0
	Total	: 6
Course Objectives		
<p>On the completion of the course, students will be able to:</p> <ul style="list-style-type: none">▪ Discuss different sources of crude drugs.▪ Discuss the basic morphology & microscopy of different plant parts.▪ Understand the adulteration of crude drugs and the role a pharmacognosist plays.▪ Address the technologies & practices involved in cultivation & collection of crude drugs & how it links to quality of crude drugs.		
Detailed Syllabus		
Sr. No.	Name of Chapter & Details	Hours Allotted
	Section-I	
1	Course Introduction: History, Scope and Development of Pharmacognosy	02

2	Classification of crude drugs	02
3	Sources of crude drugs: Crude drugs of Plant, Animal and Mineral origin	04
4	Different types of plant tissues and their functions	02
5	Morphological and Microscopical study: Leaf, root, stem, bark, wood, flower, fruit and seed	08
6	Modifications of leaf, root and stem	04
Section-II		
7	Study of medicinally important plants belonging to the families with special reference to: Solanaceae, Umbelliferae, Leguminosae, Liliaceae	05
8	Quantitative microscopy	02
9	Cultivation, collection and adulteration of crude drugs: Methods of cultivation, Factors influencing cultivation of medicinal plants, methods of collection and different types of adulteration	10
10	Role of medicinal plants in national economy	02
11	Plant Tissue culture: Type of cultures, nutritional and laboratory requirements, techniques and applications.	04

Introduction to Pharmacognosy (Practical)

1. Morphology of plant parts indicated in theory.
2. Microscopy of monocot and dicot root, stem and leaf.
3. Microscopic measurements of cell and cell contents: starch grains, calcium oxalate crystals and phloem fibres.
4. Preparation of herbarium sheets.
5. Determination of leaf constants.

Instructional Method and Pedagogy:

- Lectures will be conducted with the aid of multi-media projector, black board, OHP etc.
- Assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval.
- Surprise tests/Quizzes/Seminar/Tutorials will be conducted.
- The course includes language practices such as Group Discussion, Interviews etc to develop the communication skills of the students.

Students Learning Outcomes:

At the end of the course the students will be able to:

- Understand different sources of crude drug their cultivation, preparation and adulteration.
- Understand various aspects of basic morphology and microscopy of different parts of plant.
- Prepare herbarium sheets.
- Perform basic qualitative and quantitative microscopy.

Text Books:

1. Botany for Degree Student: A. C. Dutta; Oxford University Press, New Delhi.
2. Pharmacognosy: C. K. Kokate; Nirali Prakashan, Pune.
3. Practical Pharmacognosy: C. K. Kokate; Vallabh Prakashan, Delhi.
4. Practical Pharmacognosy: C. K. Kokate and S. B. Gokhale; Nirali Prakashan, Pune.

Reference Books:

1. Text book of Pharmacognosy: T. E. Wallis; CBS publishers, New Delhi.
2. The Ayurvedic Pharmacopoeia of India: Government of India, Ministry of Health & Family Welfare, 1st edition, Part-I, Vol. III, 2001.
3. Quality Control Methods for Medicinal Plant Materials: 2002, WHO, Geneva.
4. Trease and Evan's Pharmacognosy: W. C. Evans, 14th edition, 1997, W. B. Saunders Company, Singapore.
5. Cultivation of medicinal plants, C. K. Kokate, 4th edition, 2007, Nirali Prakashan, Pune.

Additional Resources

- <http://www.ayush.com/>
- <http://www.sci.sdsu.edu/plants/plantsystematics/index.html>