



**PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY,
PANIPAT
DEPARTMENT OF PHARMACY
Course: Diploma in Pharmacy**



LESSON PLAN

Faculty Name: Ms. Garima Mittal
Class: D. Pharmacy – Ist Year

Subject: Pharmacognosy
Subject Code: ER20-13T

Scope:

This course is designed to impart knowledge on the medicinal uses of various drugs of natural origin. Also, the course emphasizes the fundamental concepts in the evaluation of crude drugs, alternative systems of medicine, nutraceuticals, and herbal cosmetics.

Course Objectives:

This course will discuss the following aspects of drug substances derived from natural resources.

1. Occurrence, distribution, isolation, identification tests of common phytoconstituents
2. Therapeutic activity and pharmaceutical applications of various natural drug substances and phytoconstituents
3. Biological source, chemical constituents of selected crude drugs and their therapeutic efficacy in common diseases and ailments
4. Basic concepts in quality control of crude drugs and various systems of medicines
5. Applications of herbs in health foods and cosmetics

Course Outcomes:

Upon successful completion of this course, the students will be able to

1. Identify the important/common crude drugs of natural origin
2. Describe the uses of herbs in nutraceuticals and cosmeceuticals
3. Discuss the principles of alternative system of medicines
4. Describe the importance of quality control of drugs of natural origin.

Number of Lectures: 75

Each Lect. Time : 01 hour

Lecture No.	Particular	Remark/Date
Module -1:- Introduction (2 hrs)		
1.	Definition, History	
2.	Scope of Pharmacognosy	
Module -2:- Introduction (4 hrs)		
3.	Alphabetical	
4.	Taxonomical, Chemo-taxonomical	
5.	Morphological, Chemical	
6.	Pharmacological	

Module -3 :- Quality control of crude drugs (6 hrs)		
7.	Adulteration of crude drugs	
8.	Adulteration of crude drugs	
9.	Adulteration of crude drugs	
10.	Evaluation of crude drug	
11.	Evaluation of crude drug	
12.	Evaluation of crude drug	
Module - 4:- Brief outline of Occurrence, Distribution, Isolation, Identification tests, Therapeutic Effects and Pharmaceutical Application of (6 hrs)		
13.	Alkaloids	
14.	Terpenoids	
15.	Glycosides	
16.	Volatile Oils	
17.	Tannins	
18.	Resins	
Module- 5:- Biological source, chemical constituents and therapeutic efficacy of the following categories of crude drugs: (30hrs)		
19.	Laxatives- Aloes, Rhubarb	
20.	Laxatives- Castor oil, Ispaghula, and Senna	
21.	Cardiotonics- Digitalis, Arjuna	
22.	Carminatives & G.I. regulators- Coriander, Fennel	
23.	Carminatives & G.I. regulators- Cardamom	
24.	Carminatives & G.I. regulators- Ginger, Black pepper	
25.	Carminatives & G.I. regulators- Asafoetida, Nutmeg	
26.	Carminatives & G.I. regulators- Cinnamon, Clove	
27.	Astringents- Pale and Black Catecheu, Myrobalan	
28.	Drugs acting on nervous system- Hyoscyamus, Belladonna	
29.	Drugs acting on nervous system- Tea, Coffee seeds, Coca	
30.	Drugs acting on nervous system- Ephedra, Opium	
31.	Antihypertensive- Rauwolfia	
32.	Antitussives- Vasaka, Tolu balsam	
33.	Antirheumatics- Colchicum seed	
34.	Antitumour- Vinca, Podophyllum	

35.	Antileprotics- Chaulmoogra oil	
36.	Antidiabetics- Pterocarpus, Gymnema sylvestro.	
37.	Diuretics- Gokhru, Punarnava	
38.	Antidysenterics- Ipecacuanha	
39.	Antiseptics and disinfectants- Benzoin, Myrrh	
40.	Antiseptics and disinfectants- Neem, Turmeric	
41.	Antimalarials- Cinchona, Artemisia	
42.	Vitamins- Shark liver oil, cod liver oil	
43.	Enzymes- Papaya, pancreatin	
44.	Enzymes- Diastase, Yeast Oxytocics- Ergot	
45.	Pharmaceutical Aids - Kaolin, Lanolin, Beeswax, Acacia,	
46.	Pharmaceutical Aids – Sodium Alginate, Agar	
47.	Pharmaceutical Aids- Tragacanth, Guar gum, Gelatine	
48.	Miscellaneous- Squill, Galls, Guggul, Ashwagandha, Tulsi	
Module -6:- Plant fibres used as surgical dressings (3hrs)		
49.	Cotton, wool	
50.	Silk and regenerated fibres	
51.	Sutures – Surgical Catgut and Ligatures	
Module- 7:- Traditional systems of medicine and Method of preparation (8 hrs)		
52.	Basic principles involved in the traditional systems of medicine like: Ayurveda	
53.	Basic principles involved in the traditional systems of medicine like: Siddha	
54.	Basic principles involved in the traditional systems of medicine like: Unani	
55.	Basic principles involved in the traditional systems of medicine like: Homeopathy	
56.	Method of preparation of Ayurvedic formulations like: Arista, Asava, Gutika, Taila, Churna, Lehya and Bhasma	
57.	Method of preparation of Ayurvedic formulations like: Gutika, Taila	
58.	Method of preparation of Ayurvedic formulations like: Churna, Lehya	
59.	Method of preparation of Ayurvedic formulations like: Bhasma	
Module- 8:- Role of medicinal and aromatic plants (2hrs)		
60.	Role of medicinal and aromatic plants in national economy and their export potential	

61	Role of medicinal and aromatic plants in national economy and their export potential	
Module- 9:- Herbs as health food: Brief introduction and therapeutic applications of (4 hrs)		
62.	Nutraceuticals, Antioxidants	
63.	Pro-biotics, Pre-biotics	
64.	Dietaryfibres, Omega-3-fatty acids	
65.	Spirulina, Carotenoids, Soya and Garlic	
Module- 10:- Introduction to Herbal Formulations (4hrs)		
66.	Introduction to Herbal Formulations	
67.	Introduction to Herbal Formulations	
68.	Introduction to Herbal Formulations	
69.	Introduction to Herbal Formulations	
Module- 11:- Introduction to Herbal Formulations: Sources, chemical constituents, commercial preparations,therapeutic and cosmetic uses of: (4 hrs)		
70.	Aloe vera gel, Rosemary oil	
71.	Almond oil	
72.	Lavender oil	
73.	Olive oil, Sandal Wood oil	
Module- 12:- Phytochemical investigation of drugs (2hrs)		
74.	Phytochemical investigation of drugs	
75.	Phytochemical investigation of drugs	



Teacher in-charge

HOD

Principal