

School of pharmacy

Department of Pharmacognosy

Course title: Pharmacognosy 1

Credit (Theory or Practical): Theory

Prerequisite: Medicinal Plant

Course Lecturers: Dr. Sabernavaei, Dr.Pirali, Dr. Naseri

Responsible Lecturer: Dr. Mahsa Sabernavaei

Course Description:

This course provides a foundation in pharmacognosy. Students will explore the identification and determination of herbal compounds, learn the basics of research in pharmacognosy, prepare for herbal medicine quality control, and acquire extraction skills.

- Course objectives:

- ✓ Familiarizing students with the importance, scope, and applications of pharmacognosy in pharmaceutical sciences and drug discovery.
- ✓ Introducing students to extraction and isolation methods of natural compounds and their relevance in pharmaceutical preparations.
- ✓ Familiarizing students with the chemical nature, sources, properties, and applications of fats, oils, sugars, polysaccharides, gums, and mucilages.
- ✓ Providing knowledge about the classification, occurrence, chemistry, and pharmacological importance of alkaloids
- ✓ Enabling students to relate the chemical and pharmacological characteristics of natural products to their therapeutic applications and potential role in modern medicine.

-Student Learning Objectives:

- ✓ Understand the importance and scope of pharmacognosy in drug discovery and healthcare.
- ✓ Know the principles of extraction and isolation methods for natural compounds.

- ✓ Recognize the sources, properties, and applications of fats and oils.
- ✓ Identify the structure, occurrence, and pharmaceutical significance of sugars, polysaccharides, gums, and mucilages.
- ✓ Understand the classification and pharmacological roles of alkaloids
- ✓ Be able to connect the chemical nature of natural compounds to their therapeutic applications in medicine

Students are expected to:

- ✓ Understand the importance of pharmacognosy and its role in drug discovery and healthcare.
- ✓ Know the principles of extraction and isolation methods of natural compounds.
- ✓ Be familiar with the sources, properties, and pharmaceutical uses of fats and oils.
- ✓ Recognize the occurrence, structure, and applications of sugars, polysaccharides, gums, and mucilages.
- ✓ Identify the classification, sources, and pharmacological importance of alkaloids
- ✓ Relate the chemical nature of natural compounds to their therapeutic applications.

Course Plan

No	Date	Lecturer	Subject
1	5 th Oct	Dr. Nasserri	Importance of Pharmacognosy
2	12 th Oct	Dr. Nasserri	Extraction methods of natural compounds
3	19 th Oct	Dr. Nasserri	Isolation methods of natural compounds
4	26 th Oct	Dr. Nasserri	Fats and oils
5	2 th Nov	Dr. Nasserri	Fats and oils
6	9 th Nov	Dr. Pirali	The future of medicinal plants
7	16 th Nov	Dr. Pirali	Sugars and polysaccharides
8	23 th Nov	Dr. Pirali	Gums and mucilages
9	30 th Nov	Dr. Pirali	Pyrrole and pyrrolidine alkaloids
10	7 th Dec	Dr. Pirali	Pyrrolizidine alkaloids
11	14 th Dec	Dr. Sabernavaei	Tropane alkaloids

12	21 th Dec	Dr. Sabernavaei	Tropane alkaloids
13	25 th Dec	Dr. Sabernavaei	Isoquinoline alkaloids
14	28 th Dec	Dr. Sabernavaei	Indole-purine alkaloids
15	4 th Jan	Dr. Sabernavaei	Imidazole alkaloids, Steroidal alkaloids
16	Exam		

References:

1. Drug of Natural Origin: A Textbook of Pharmacognosy. Samuelsson G. Swedish Pharmaceutical Press, Latest Edition.
2. Trease and Evans Pharmacognosy. Evans WC. Saunders. Edinburgh. Latest Edition.
3. Pharmacognosy, Phytochemistry, Medicinal Plants. Bruneton J. Intercept Ltd., Latest Edition.