

Course Description Template for Pharmacognosy Second Year/Second Semester (Theoretical)

Performance Review of Higher Education Institution ((Academic Program Review))

Course Description

This course description provides a summary of the main characteristics of the course and the learning outcomes expected from the student to achieve, demonstrating whether they have made the maximum use of the available learning opportunities. It must be linked to the .program description

1. Educational Institution	Ministry of Higher Education and Scientific Research / Al-Zahrawi University
2. College	Pharmacy
3. Course Name / Code	Pharmacognosy I PPCG 21
4. Programs in which it is included	Bachelor of Pharmaceutical Sciences
5. Available Forms of Attendance	Daily Attendance
6. Semester / Year	Second Semester / Second year
7. Total Number of Study Hours	3 hours weekly/Total 45 per semester
8. Date of preparing this description	2025-2026
9. Course Objectives: Learn about the basics and principles of pharmacology and phytochemistry from the beginning of this science and the developments taking place at present. The program also includes plant examination and classification methods, in addition to the general methods used to extract herbal materials and laboratory examination. In addition to the quality control of herbal materials	
10. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

1. Knowledge and Understanding

- Studying the principles of pharmacology, plant classifications, and scientific nomenclature of plants.
- Demonstrate knowledge of taxonomy, morphology, and plant collection of medicinal plants.
- Roles of medicinal plants and their active constituents.
- Explain the biosynthesis, chemistry, and pharmacological activities of major classes of phytochemicals.
- Explain the extraction, separation, isolation, and identification of bioactive natural products

A. Subject-Specific Skills

- Acquire skills in extraction methods.
- Acquire skill in isolating active compounds.
- Acquire skill in identifying separate compounds.
- 4. Acquire skills in using microscopy to identify different cells

Teaching and Learning Methods

- Theoretical lectures
- Seminars and reports
- Posters and classroom activities.
- Field visits to herbal centers in addition to the botanical garden

B. Evaluation Methods

- Semi-semester exams and final exams.
- Oral exams
- Classroom activities and assignments

C. Thinking Skills

- The use of modern methods in the preparation of lectures and presentations in the form of PowerPoint
- The use of group discussion to understand the article
- Giving homework that stimulates and activates thinking and linking information

D. General and Transferable Skills

- The student should be able to employ the knowledge he has received.
- Giving confidence to the student through the discussion of seminars.
- The student should be able to embody what he has acquired in professional development.

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	3	Knowledge	General Introduction: The Scope of Pharmacognosy, definitions, and basic principles	Use of the blackboard and display screen	Daily exam and oral questions
2	3	Knowledge	Drugs from natural sources, crude drugs, official and non-official drugs.	Use of the blackboard and display screen	Daily exam and oral questions
3	3	Knowledge	Classification of natural products.	Use of the blackboard and display screen	Daily exam and oral questions
4	2	Knowledge	Plant nomenclature and taxonomy.	Use of the blackboard and display screen	Daily exam and oral questions
5	2	Knowledge	Production of crude drugs: Cultivation, collection, drying, and storage	Use of the blackboard and display screen	Daily exam and oral questions
6	2	Knowledge	Deterioration of crude natural products.	Use of the blackboard and display screen	Daily exam and oral questions
7	3	Knowledge	Quality control: Evaluation of natural products; macroscopical evaluation; physical evaluation; chemical evaluation; biological evaluation; spectroscopical evaluation	Use of the blackboard and display screen	Daily exam and oral questions
8	3	Knowledge	Phytochemical investigation of herbal products: Extraction of the plant material; Separation and isolation of constituents; characterization of the isolated compounds.	Use of the blackboard and display screen	Daily exam and oral questions

9	3	Knowledge	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique	Use of the blackboard and display screen	Daily exam and oral questions
10	3	Knowledge	paper chromatography	Use of the blackboard and display screen	Daily exam and oral questions
11	3	Knowledge	Thin layer chromatography	Use of the blackboard and display screen	Daily exam and oral questions
12	3	Knowledge	Column chromatography	Use of the blackboard and display screen	Daily exam and oral questions
13	3	Knowledge	Ion-exchange chromatography and Gel filtration chromatography	Use of the blackboard and display screen	Daily exam and oral questions
14	3	Knowledge	Gas chromatography	Use of the blackboard and display screen	Daily exam and oral questions
15	3	Knowledge	High performance liquid chromatography	Use of the blackboard and display screen	Daily exam and oral questions
16	3	Knowledge	Electrophoresis and Affinity chromatography	Use of the blackboard and display screen	Daily exam and oral questions
Total	45				

12. Infrastructure	
Required Readings:	References: • Trease and Evans Pharmacognosy; 16th ed., 2009 • Textbook of Pharmacognosy and Phytochemistry by Biren Shah, 2010 • Chromatographic Analysis of Pharmaceuticals by John A. Adamovics: Second Edition, 2021
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: https://www.researchgate.net/publication/236229645 Modern extraction methods for preparation of bioactive plant extracts https://www.researchgate.net/publication/357660512 A REVIEW ON DIFFERENT EXTRACTION METHOD OF PLANTS INNOVATION FROM ANCIENT TO MODERN TECHNOLOGY
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops visit to herbal shops and Medical Garden

13. Admission:	
Prerequisites	Admission according to the central plan
Minimum Number of Students	/
Maximum Number of Students	Admission exceeds the capacity plan

Name of the Instructor:

Assistant Professor Dr. Suhad Humadi