



Course Description Template for Pharmacology fourth Year first Semester (practical)

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. University Department / Center	College of Pharmacy
3. Course Name / Code	Pharmacology practical/ PPCL 45
4. Programs in which it is included	Bachelor of Pharmaceutical Sciences
5. Available Forms of Attendance	Daily Attendance
6. Semester / Year	Second Semester / fourth year
7. Total Number of Study Hours	30 hours per semester
8. Date of preparing this description	2025-2026
Course Objectives: The course aims to develop an understanding of active compounds in plants by examining their chemical structure, the processes through which they are formed within the plant, and their medical effects on the human body. It also focuses on analyzing how these compounds interact with biological systems and pharmaceutical drugs. Additionally, the course highlights the importance of plant-derived substances in health and disease, supported by examples of plants commonly used in alternative medicine to demonstrate their practical applications.	
9. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

- Explain the fundamental principles of phytochemistry and the chemical diversity of natural products
- ▢ Classify secondary metabolites (alkaloids, flavonoids, terpenoids, glycosides, tannins, etc.) based on their structures and biosynthetic pathways
- ▣ Explain the biosynthesis, chemistry, and pharmacological activities of major classes of phytochemicals and natural drugs
- ▤ Application of plant tissue culture and molecular pharmacognosy

1. Subject-Specific Skills

- Developing proficiency in methods for extracting active compounds from plants.
- ▢ Acquiring skills in the isolation and purification of active compounds.
- ▣ Gaining the ability to identify and characterize separated compounds using analytical techniques.
- ▤ Developing skills in understanding drug interactions between herbal substances and pharmaceutical medications.

Teaching and Learning Methods

- Theoretical lectures.
- ▢ Scientific posters and interactive classroom activities.
- ▣ Field visits to herbal medicine centers, in addition to botanical gardens.
- ▤ Homework assignments (coursework).

2. Evaluation Methods

- Midterm and final examinations.
- ▢ Oral examinations.
- ▣ Classroom activities and homework assignments.

3. Thinking Skills

- Using modern methods to prepare and deliver lectures through PowerPoint presentations.
- ▢ Applying group discussion techniques to enhance understanding of the subject matter.
- ▣ Assigning homework and research tasks to develop analytical and critical thinking skills.

4. General and Transferable Skills

- Enabling students to apply the knowledge they have acquired in practical settings.
- ▢ Enhancing students' self-confidence through participation in discussions and seminars.
- ▣ Empowering students to apply what they have learned to their professional development.

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	٢	Knowledge	Handling and restraint of laboratory animals	whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
2	2	Knowledge	Routes of drug administration	whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
3	٢	Knowledge	Evaluation of anesthetic Drugs	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
4	2	Knowledge	Drug antagonist part 1 Histamine and its antagonist	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
5	2	Knowledge	Drug antagonist part 2 Diazepam and its antagonist	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
6	2	Knowledge	Effects of Narcotic Analgesic Drugs	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
7	2	Knowledge	Effects of Narcotic Analgesic Drugs part 2	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
8	2	Knowledge	Drugs affecting eye	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
9	2	Knowledge	Evaluation of Parasympathomimetic drugs	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments

10	2	Knowledge	Evaluation of anti-inflammatory drugs	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
11	2	Knowledge	Evaluation of pain killers (Aspirin) writhing test in mouse	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
12	2	Knowledge	Evaluation of antianxiety drugs clonidine plus maze	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
13	2	Knowledge	Evaluation of antipsychotic drugs haloperidol (catalepsy)	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
14	2	Knowledge	Effects of Narcotic Analgesic Drugs part 3 & seminar	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
15	2	Knowledge	Evaluation of anesthetic Drugs part2 & seminar	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments

12. Infrastructure	
Required Readings:	References: • Goodman & Gilman's • Katzung's Basic and Clinical Pharmacology • Lippincott Pharmacology • Practical Pharmacology Manuals
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: https://www.guidetopharmacology.org/
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates: • Drug addiction conference

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 lecturer Dr. Farah Ali Mahdi Aldabbagh & Dr. Montathar Zyara