



**University of Benghazi**  
**Faculty of Medicine**  
**Pharmacology Course Specification**



## **Pharmacology Course Description**

The pharmacology course covers the basic principles about commonly used drugs and chemotherapeutic agents in medicine. Students will acquire knowledge, skills to report the clinical usage, adverse effects, contraindications and drug interactions of drugs. As well as to predict the risk/benefit ratio as a base to initiate, discontinue or avoid drug administration. Furthermore, students will acquire decision making and critical thinking skills as lifelong learners. Course duration is 186 contact hours, and it is taught in year 3 / Bachelor of Medicine and Surgery (MBBCh).

### **Learning outcomes:**

#### **Knowledge and understanding**

1. Analyze the mode and mechanism of action of known drugs on various biological tissues and systems.
2. Calculate accurately the dosage of drugs bioavailability, plasma half-life and volume of distribution in different patient populations.
3. Relate clinical and investigational data with evidence-based knowledge for clinical problem solving.
4. Design a Pharmacotherapeutic plan for management of common diseases and emergencies.

#### **Practical and professional skills:**

1. Calculate accurately the dosage of drugs, bioavailability, plasma half-life and volume of distribution in different patient populations and work out drug dosage based on patient's criteria and health condition.
2. Recommend safe prescriptions for selected common and important diseases and predict and report drug adverse reactions.
3. Design rational therapeutic strategies for both acute and chronic conditions that take into account the various variables that influence these strategies.
4. Observe and record the effect of drugs on biological tissues.
5. Practice enteral, parenteral, inhalation; including the use of nebulizers; and topical methods for drug administration and monitor the effectiveness and toxicity of therapy in laboratory animals.

#### **General and transferable skills:**

1. Use electronic devices effectively in reaching biomedical information to remain current with advances in knowledge and practice.

2. Present information clearly in written, electronic and verbal forms.
3. Effective communication with other members.
4. Handle animals for testing drugs and research purposes.

### **Teaching and Learning Methods:**

1. Illustrated and interactive lectures
2. Practical sessions: small groups discussion.
3. Tutorials, TBL, Guided self-learning

### **Methods of evaluation**

1. MCQs, True/False questions, problem solving questions, and short essay
2. Oral exam
3. Tutorial

### **References**

- Katzung's Pharmacology: Examination and Board Review. Anthony J. Trevor, Bertram G. Katzung, Susan B. Masters. 2018.
- Lippincott's illustrated reviews. Michelle A, Clark Richard Finkel, Jose A. Rey, Karen Whalen. 2018
- Pharmacology 8th edition by H.P. Rang and M.M. Dale. H.P. Rang and M.M. Dale. 2015