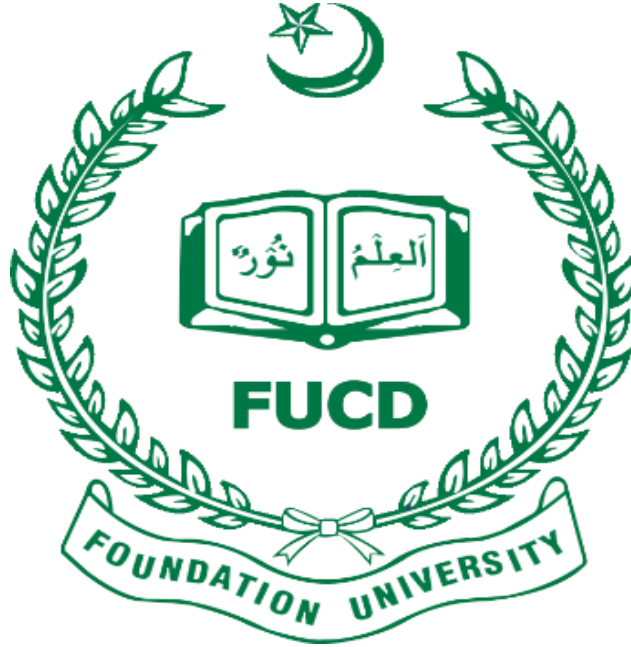


**FOUNDATION UNIVERSITY COLLEGE OF DENTISTRY
ISLAMABAD**



STUDY GUIDE
PHARMACOLOGY
2ND YEAR BDS

TABLE OF CONTENTS

S. No.	Topic
1.	Mission
2.	Broad Learning Outcomes
3.	Faculty of Department
4.	Teaching & Learning Methodologies
5.	Learning Resources
6.	Course Outline and Learning Objectives
7.	Assessment Structure

INTRODUCTION

Mission:

The department undertakes to impart basic and applied knowledge of subject of Pharmacology & Therapeutics to the undergraduate dental students so as to train them in scientific, rational and cost-effective use of drugs and develop them into safe, ethical and socially responsible prescribers for the patients.

Broad Learning Outcomes:

After completing the course of Pharmacology & Therapeutics, the student of 2nd Year BDS will be able to:

- Explain the terminologies and principles in characterization of therapeutic substances.
- Classify pharmacological drugs.
- Describe the mechanism of action, indications, contraindications and adverse effects of drugs.
- Justify the scientific and rational use of drugs in dentistry.
- Write a safe, ethical and socially responsible prescription.

Study Hours:

Name	Pharmacology & Therapeutics
Total Subject Hours	252 hrs
LGIS	118 hrs
Tutorials/SGDs	62 hrs
Practical	72 hrs

FACULTY OF DEPARTMENT OF PHARMACOLOGY AND THERAPEUTIC

Head of Department:

Prof M H Najmi [MBBS, M Phil, PhD, FRCP (Edin)]

PMDC Reg No: 1969-P

Publications: 39

BDS Coordinator:

Associate Professor Dr. Zarafshan Bader (MBBS, MPhil)

PMDC Reg No: 40774-P

Publications: 13

Faculty:

Dr. Ayeha Janjua (MBBS, M Phil), Professor

Dr. Wardha Mazhar Malik (MBBS, M Phil), Assistant Professor

Dr. Mehwish Nawaz (MBBS, M Phil), Assistant Professor

Demonstrator Dr. Ayesha Jawad Khan (for BDS students)

TEACHING AND LEARNING METHODOLOGIES

Teaching and learning methods are primarily focused more on promoting active learning through active participation of the learner. Actively learning students take charge of their own learning, actively seeking guidance and performance feedback from tutors, and routinely conducting self-assessment of their own learning needs.

Teaching and learning modalities

- Large Group Interactive Sessions (LGIS)
- Small Group Interactive Sessions (SGIS)
- Self-Directed Learning (SDL)

Following teaching modalities may be used for small group teaching:

- Practicals
- Students' presentations
- Discussions
- Peer learning
- Projects/ Assignments

Learning Resources:

Basic and clinical Pharmacology. *Betram G. Katzung 14th Edition.*

Lippincott Illustrated Reviews: Pharmacology. *Karen Whalen. 7th Edition*

COURSE OUTLINE

S.No.	Topic	Learning Objectives <i>By the end of the topic, students of 2nd year BDS will be able to:</i>	Teaching Strategy	Assessment Tool
1.	General Pharmacology	<ul style="list-style-type: none"> • Describe the basic and general aspects of pharmacokinetics and pharmacodynamics • Explain basic concepts of practicing rational drug therapy in clinical practice • Describe dosage forms of drugs • Compute pharmacological calculations • Explain concept of P-drugs • Write an appropriate prescription. • Identify dosage forms, sources and active principles of drugs 	LGIS Tutorial SGD/SDL Lab Demonstration	MCQs SEQs Quiz Structured Tutorials Practical
2.	Autonomic Drugs	<ul style="list-style-type: none"> • Describe the basic and general aspects of autonomic pharmacology including receptors and their distribution. • Explain peripheral neurotransmitters & steps involved in neuro-humoral transmission • Describe various groups of drugs which act on ANS. • Identify the drug group of a given unknown drug by studying its effects of on rabbit's eye. • Solve calculations based on stock and percentage solutions. 	LGIS Tutorial SGD/SDL Lab Demonstration	MCQs SEQs Quiz Structured Tutorials OSPEs Formative assessments

3.	Drugs used to treat Haematological disorders	<ul style="list-style-type: none">• Classify groups of drugs used in the treatment of hematological disorders like Antianemics, anticoagulants, Fibrinolytics and antihyperlipidemic drugs.• Describe the drugs' mechanism of action• Justify the rationale of their use.• Solve calculations based on molar and fractional solutions.• Identify appropriate drug and write rational Prescription for anemia.	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
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S.No.	Topic	Learning Objectives <i>By the end of the topic, students of 2nd year BDS will be able to:</i>	Teaching Strategy	Assessment Tool
4.	Cardiovascular-Renal Drugs	<ul style="list-style-type: none"> • Classify groups of drugs used for treatment of disorders affecting CVS. • Describe the drugs' mechanism of action, pharmacokinetic parameters, therapeutic uses and adverse effects. • Solve calculations based on equivalent solutions. 	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
5.	Respiratory System Drugs	<ul style="list-style-type: none"> • Describe pharmacokinetics and pharmacodynamics of drugs used for the treatment of respiratory tract illnesses. • Identify appropriate drug and write rational prescription for a patient of Allergic rhinitis. 	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
6.	Chemotherapeutic Drugs	<ul style="list-style-type: none"> • Explain the general principles of prescribing chemotherapeutic agents. • Reproduce the important terminologies regarding chemotherapy • Explain the determinants of rational dosing • Describe classification, pharmacokinetics and pharmacodynamics of antibacterial, antiviral, antifungal, antiprotozoal and anticancer drugs. • Identify appropriate drug and write rational prescription for periodontitis, dental caries, oral candidiasis, gingivitis, acute follicular tonsillitis, actinomycosis, acute necrotizing ulcerative gingivitis and osteomyelitis of jaw. 	LGIS Tutorial SGD/SDL	MCQs SEQs Quiz Structured Tutorials OSPEs

7.	Drugs acting on Central Nervous System	<ul style="list-style-type: none"> Define, classify and explain role of neurotransmitters, neuro modulators & neuro hormones. Describe classification, pharmacokinetics, 	LGIS Tutorial SGD/SDL	MCQs SEQs Quiz Structured Tutorials
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S.No.	Topic	Learning Objectives <i>By the end of the topic, students of 2nd year BDS will be able to:</i>	Teaching Strategy	Assessment Tool
		pharmacodynamics and therapeutic uses of drugs used for various CNS disorders. <ul style="list-style-type: none"> Describe classification, pharmacokinetics and pharmacodynamics of general and local anesthetics & skeletal muscle relaxants. Identify appropriate drug and write rational prescription for anaphylactic shock due to allergy to lignocaine 		OSPEs
8.	Analgesics	<ul style="list-style-type: none"> Describe classification, pharmacokinetics, pharmacodynamics and therapeutic uses of analgesics. Identify appropriate drug and write rational prescription for trigeminal neuralgia. 	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
9.	Endocrine Drugs	Describe classification, pharmacokinetics, pharmacodynamics and therapeutic uses of drugs used for various endocrine disorders.	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials

10.	Drugs acting on GIT	<ul style="list-style-type: none"> • Describe classification, pharmacokinetics, pharmacodynamics and therapeutic uses of drugs used for various gastrointestinal disorders. • Identify and write rational Prescription for acid peptic disease. • Show the antagonism of acetylcholine and adrenaline on piece of intestinal smooth muscles of rabbit's ileum and record its graph. 	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
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11.	Miscellaneous	<ul style="list-style-type: none"> • Define and explain drug interaction and adverse drug reactions. • Explain the concept and use of essential drugs. • Show the advantages and disadvantages of various routes of administrations of drugs. 	LGIS Tutorial SGD/SDL	MCQs SEQs Structured Tutorials OSPEs
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ASSESSMENT STRUCTURE

➤ **BDS 2nd Professional Examination:**

Theory:

Total Marks of MCQs = 40 Marks

Total Marks of SEQs = 50 Marks (Each SEQ of 5 Marks)

Internal Assessment: 10 Marks

Total Marks of Theory: 100 marks

Practical:

Total Marks of OSPE = 40 Marks

Total Marks of Viva = 50 Marks (25 Marks Internal Examiner, 25 Marks

External Examiner)

Internal Assessment: 10 Marks

Total Marks of Practical: 100 marks

FOUNDATION UNIVERSITY COLLEGE OF DENTISTRY & HOSPITAL

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