

School of pharmacy

Department

Course title: Pharmacology 1

Credit (Theory or Practical): 3 Theory

Prerequisite: physiology II, Biochemistry

Course Lecturers: Professors of Department of Toxicology and Pharmacology

Responsible Lecturer: Dr. Abdollahi

Student responsibilities:

1- Attendance and class activities (Seminars and projects, Exercises: oral/written exercises, Comprehensive Written Examination: Quiz): 40%

2- Final exam (multiple-choice questions, descriptive questions): 60%

The absence hours of a student should not exceed 4/17 in theoretical, 2/17 in practical and laboratorial. Otherwise, the score for that course or section will be considered as zero.

Note 1: allowed absences are accepted provided that students bring in documents for that and the related professor approves it. Acting against absences (either excused or not) will be the decision of the professor and agreement of the college.

Course Description: Considering that one of the most vital and important part of pharmacy education is familiarity with medications and how they work, Therefore, in this study the mechanism of action of drugs, Different groups of

drugs, The absorption and excretion of drugs, Medications interactions with other compounds in the body, Kinetics of drugs and their proper usage are discussed.

- Course objectives:

1) Generalities of Pharmacology (Definitions)

-Pharmacodynamics, Medical receptors and the mechanism of drug-receptor interactions.

-Pharmacokinetics: Absorption Distribution Metabolism and excretion.

-Basic and clinical assessment of drugs.

2) Medications affecting the autonomic system

-Introduction to Pharmacology autonomic system

-Cholinergic medications

-Anticholinergics

-Adrenergic medications

-Anti-adrenergic medication

3) Medications affecting neuromuscular transmission.

-Histamine and medications affecting it

-Serotonin and medications affecting it

-Eicosanoids: Prostaglandins, Thromboxane, Leukotrienes.

4) Local anesthetic

5) Narcotic pain medications and their antagonists.

6) Drug abuse

7) Medications affecting the central nervous system.

-Introduction to Central Nervous System Pharmacology.

-Sedatives and hypnotics

-Alcohols-Antiepileptic Drugs

- General anesthetics-Drugs used in parkinsonism and other movement disorders
- Antidepressants-Lithium and mania
- Anti-psychotic drugs

Student Learning Objectives:

Students should be able:

- To interpret generalities about receptors and secondary messenger pharmacodynamics.
- To explain the various stages of clinical assessment of drugs.
- To describe different drug groups and interpret their mechanisms.
- To explain the different types of chemical carriers and related drugs.-To list the uses of medications.
- To classify the medications and their uses.
- To explain the variety of side effects of drugs and how to avoid complications.
- To explain the effects of various diseases on the pharmacodynamics and pharmacokinetics.

Students are expected to:

Student will be able to successfully know the category, mechanism of action and adverse effects of drugs

Course Plan: Sunday and Tuesday 8-10

| نام مدرس | روش تدریس | عنوان مطلب | ساعت | تاریخ | شماره جلسه |
|----------------|---------------------|--|------|------------|------------|
| Dr. Kheradmand | Interactive lecture | Introduction To Pharmacology | 8-10 | 1402/11/15 | 1 |
| Dr. Kheradmand | Interactive lecture | Pharmacokinetics (Absorption & Distribution) | 8-10 | 1402/11/17 | 2 |
| Dr. Abdollahi | Interactive lecture | Pharmacokinetics(metabolism& elimination) | 8-10 | 1402/11/24 | 3 |

| | | | | | |
|------------------|---------------------|---|------|------------|----|
| Dr. Kheradmand | Interactive lecture | Drug Receptors & Pharmacodynamics | 8-10 | 1402/11/29 | 4 |
| Dr. Abdollahi | Interactive lecture | Introduction To Autonomic Pharmacology | 8-10 | 1402/12/01 | 5 |
| Dr. Aghsami | Interactive lecture | Cholinoceptor-Activating & Cholinesterase-Inhibiting Drugs | 8-10 | 1402/12/08 | 6 |
| Dr. Aghsami | Interactive lecture | Cholinoceptor-Blocking Drugs | 8-10 | 1402/12/13 | 7 |
| Dr.Kheradmand | Interactive lecture | Adrenoceptor Agonists & Sympathomimetic Drugs | 8-10 | 1402/12/15 | 8 |
| Dr.Kheradmand | Interactive lecture | Adrenoceptor Agonists & Sympathomimetic Drugs | 8-10 | 1402/12/20 | 9 |
| Dr.Aghsami | Interactive lecture | Adrenoceptor Antagonist Drugs | 8-10 | 1402/12/22 | 10 |
| Dr. Abdollahi | Interactive lecture | Histamine, Serotonin, & The Ergot Alkaloids | 8-10 | 1403/01/14 | 11 |
| Dr. Abdollahi | Interactive lecture | The Eicosanoids: Prostaglandins, Thromboxanes, Leukotrienes, & Related Compounds | 8-10 | 1403/01/19 | 12 |
| Dr. Abdollahi | Interactive lecture | The Eicosanoids: Prostaglandins, Thromboxanes, Leukotrienes, & Related Compounds | 8-10 | 1403/01/21 | 13 |
| Dr.shariatpanahi | Interactive lecture | Nonsteroidal Anti-Inflammatory Drugs , Disease-Modifying Antirheumatic Drugs, Nonopioid Analgesics , & Drugs Used In Gout | 8-10 | 1403/01/26 | 14 |
| Dr.shariatpanahi | Interactive lecture | Nonsteroidal Anti-Inflammatory Drugs , Disease-Modifying Antirheumatic Drugs, Nonopioid Analgesics , & Drugs Used In Gout | 8-10 | 1403/01/28 | 15 |
| Dr. Abdollahi | Interactive lecture | Introduction To The Pharmacology Of CNS Drugs | 8-10 | 1403/02/02 | 16 |
| Dr. Aghsami | Interactive lecture | Opioid Analgesics & Antagonists | 8-10 | 1403/02/04 | 17 |
| Dr. Aghsami | Interactive lecture | Drugs Of Abuse | 8-10 | 1403/02/09 | 18 |
| Dr. Aghsami | Interactive | General anesthetics | 8-10 | 1403/02/11 | 19 |

| | | | | | |
|------------------|---------------------|---|------|------------|----|
| | lecture | | | | |
| Dr.Kheradmand | Interactive lecture | Antiseizure Drugs | 8-10 | 1403/02/16 | 20 |
| Dr.Kheradmand | Interactive lecture | local Anesthetics | 8-10 | 1403/02/18 | 21 |
| Dr.shariatpanahi | Interactive lecture | Sedative-Hypnotic Drugs | 8-10 | 1403/02/23 | 22 |
| Dr.shariatpanah | Interactive lecture | Sedative-Hypnotic Drugs | 8-10 | 1403/02/25 | 23 |
| Dr.shariatpanahi | Interactive lecture | Antidepressant Agents | 8-10 | 1403/02/30 | 24 |
| Dr.shariatpanahi | Interactive lecture | Pharmacologic Management Of Parkinsonism & Other movement Disorders | 8-10 | 1403/03/01 | 25 |
| Dr.shariatpanahi | Interactive lecture | Pharmacologic Management Of Parkinsonism & Other movement Disorders | 8-10 | 1403/03/06 | 26 |
| Dr. Aghsami | Interactive lecture | Antipsychotic Agents | 8-10 | 1403/03/08 | 27 |
| Dr. Abdollahi | Interactive lecture | Reproductive & urinary tracts agents | 8-10 | 1403/03/13 | 28 |

References:

1- Basic and Clinical pharmacology. Katzung BG, Trevor AJ, McGraw-Hill Medical, The latest edition.

2- Rang and Dale's pharmacology. Rang HP, Ritter JM, Flower RJ, Henderson G, Churchill Livingstone, The latest edition