Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED

SCIENCES

Faculty of Laboratory medicine..

Course Specification of Drug Monitoring and Interference
Course No. (03.02,310)

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality affairs	Dean of College:
Dr Abdulsalam Alsubari	Dr\Ghamdan Ahmed Altahish		Dr\Gamil Taher Abdul Mughni	Associate Prof. Dr. Ebtesam Al-Zabedi

I. Course Identification and General Information:						
1	**Course Title:**	Drug monitoring and interference				
2	**Course Code & Number:**	02.03.310				
3	**Credit Hours:**	**Theory Hours**				
		Lecture	**Exercise**	Practical	**Credit Hours**	
		2	0	0	2	
4	**Study Level/ Semester at which this Course is offered:**	2nd Level / 1st Semester				
5	**Pre –Requisite (if any):**	General Biology				
6	**Co –Requisite (if any):**	None				
7	**Program (s) in which the Course is Offered:**	Faculty of Laboratory medicine				
8	**Language of Teaching the Course:**	English				
9	**Study System:**	semester				
10	**Mode of Delivery:**	Regular				
11	**Location of Teaching the Course:**	University Campus				
12	**Prepared by:**	Dr. Abdulsalam Alsubari				
13	**Date of Approval:**	2023				

II. Course Description:

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This course is intended as a basic concept to prepare students for understanding the information of general pharmacology, routes of drug administration, drug- laboratory interferance. It will help them to understand the underlying general pharmacology and how they can affect laboratory test. This course will be provide as interactive lectures.

III. Alignment Course Intended Learning Outcomes with program outcomes		
III. Course Intended Learning Outcomes (CILOs)		**Referenced PILOs**
A. Knowledge and Understanding: ***Upon successful completion of the course, students will be able to:***		
a1	**Discusses** the general pharmacology and how they can affect laboratory test.	**A1**
a2	**Define** the different terms in pharmacology and drugs.	**A3**
a3	**Classify** the different types of drug interaction and drugs effects on laboratory tests and **list** the group of drugs affecting laboratory test	**A1**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	**Integrate** between drugs and the role of the laboratory in the diagnosis and treatment.	B1
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	**Interpret** the rationale for choosing the lab- drug effect	**C1**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	Work alone or within a team efficiently	D1

IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods:

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	**Discusses** the general pharmacology and how they can affect laboratory test.	Lectures	Exam
a2	**Define** the different terms in pharmacology and drugs.	Lectures	Exam
a3	**Classify** the different types of drug interaction and drugs effects on laboratory tests and **list** the group of drugs affecting laboratory test	Lectures	Exam
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	**Integrate** between drugs and the role of the laboratory in the diagnosis and treatment	Lectures	Exam
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	**Interpret** the rationale for choosing the lab- drug effect	Practical session	seminars
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	Work alone or within a team efficiently	Practical session	seminars

V. Course Content:

A – Theoretical Aspect:

NO.	Units/Topics List	Number of Weeks	contact hours	Learning Outcomes (CILOs)	
1	**Introduction (basic pharmacology)** pharmacodynamics & Drug receptors, Pharmacokinetics: absorption, distribution, metabolism and excretion, Route of drug administration Some important pharmacological terms	5	10	a1,a2,a3	
2	**Drug interaction** Drug- drug interaction Drug- food interaction Drug –laboratory test interaction Drug- disease interaction Mechanism of interaction	2	4	a1,a2,a3,b1,d1	
3	MED TERM	1	2		
4	**Drug lab effect DLE** Introduction, mechanism Examples: antibiotics, antihypertensive, antipsychotics, hormones anticancer, cardiovascular drugs	2	4	a1,a2,a3,b1.c1,d1	
5	**Therapeutic drug monitoring** The indication and normal level of common drug monitoring	1	2	a1,a2,b1,d1	
6	**Drug abuse and monitoring** Common drug abuse and method of detection	1	2	a1,a2,a3,b1	
7	**Drug induce hematological disease (anemia, thrombocytopenia, hepatotoxicity, nephrotoxicity, allergic autoimmune disease**	1	2	a1,a2,a3,	
8	**Effect of disease on lab test Hemolysis**	1	2	a1,a2,d1	

9	FINAL THEORTICAL	1	2	A1,A3,B1,C1,D1	
	Total	**15**	30		

V. Teaching Strategies of the Course:

1-	Lectures
2-	Seminars

VI. Assessment Methods of the Course:

No	Assignment
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Midterm Exam**	8	30	30%	a1,a2,a3,b1,c1,d1
2	**Final Exam**	16	70	70%	a1,a2,a3,b1,c1,d1
	Total	100		100%	

IX. Learning Resources:

Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality affairs	Dean of College:
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1- Required Textbook(s)	
1-	Katzung B G, Masters SMJ and Trevor (2015). Basic and Clinical Pharmacology, 13th ed. Mc Graw Hill. India.
2- Essential References.	
1-	1. Rang HP, Dale MM and Ritter JM (2012). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE. London **2.** Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London **3**.Hardman JG and Limbird LE (2010). Goodman & Gilman's the pharmacological basis of Therapeuti Tenth ed. McGraw Hill. London **4**. Harvey RA. Pharmacology (2012). 5th ed. Lippincott Williams & Wilkins. Republic of China **5**. Tripathi KD (2010). Essentials of Pharmacology. 6th ed. JAYPEE. India
3- Electronic Materials and Web Sites *etc.*	
1-	British Journal of Pharmacology (2013)
2-	The Lancet infectious diseases (2013).
3-	http://www.PubMed.com/

XI. *Course Policies:*	
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** -If the student dose not attend for more than 6 times, the student will be obligated to withdrew from the course
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.

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4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration