Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED SCIENCES

Faculty of Laboratory Medicine

Department of Biochemistry and Molecular Biology

Course Specification of Body fluid

Course No. (03.01.319)

2023/2022

Course name : Body fluid

I. Course Identification and General Information:						
1	**Course Title:**	Body fluid				
2	**Course Code & Number:**	03.01.319				
3	**Credit Hours:**	**Theory Hours**				
		Lecture	**Exercise**	Practical	**Credit Hours**	
		2	0	2	3	
4	**Study Level/ Semester at which this Course is offered:**	4th Level / 1st Semester				
5	**Pre –Requisite (if any):**	Biochemistry1 ,2				
6	**Co –Requisite (if any):**	None				
7	**Program (s) in which the Course is Offered:**	Faculty 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.Nawal Al-Henhena				
13	**Date of Approval:**	2022-2023				

	A. II. Course Description:

	The course covers the routine laboratory investigations. It enable the students to perform analysis of body fluids including blood, urine, cerebrospinal fluid, sputum, pleural fluid, pericardial fluid, ascetic fluid, and semen.

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	**Demonstrate** features, principles and procedures of laboratory testing, interpretation of their finding, and research methodology for urine analysis and body fluids.	**A1**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	**Integrate** different body fluids laboratory test.	**B1**
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	**Interpret** results of body fluid analysis tests	**C1**
c2	**Perform** laboratory procedures concerning with body fluid analysis	**C2**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	Self learning skills and knowledge to new situations	**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	**Demonstrate** features, principles and procedures	Lectures	Exam

	of laboratory testing, interpretation of their finding, and research methodology for urine analysis and body fluids.		
(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** different body fluids laboratory test.	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** results of body fluid analysis tests	Lectures	Exam
c2	**Perform** laboratory procedures concerning with body fluid analysis	Practical session	Practical exam
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	**Self-learning** skills and knowledge to new situations	Lectures Practical session	Exam Practical exam

IV. Course Content:

A – Theoretical Aspect:

NO.	Units/Topics List	Sub Topics List	Number of Weeks	"contact hours"	Learning Outcomes (CILOs)
1	Introduction to body fluid analysis		1	2	a1
2	Blood		2	4	a1,b1
3	Urine analysis		3	6	a1,b1

4	Semen analysis		2	4	a1,b1
8	Med term		1	2	c1.c2
9	CSF analysis		2	4	a1,b1
10	Milk		1	2	a1,b1
11	Synovial fluids-		1	2	a1,b1
12	Pleural and Amniotic fluid		1	2	a1,b1
14	Aqueous and vitreous fluids		1	2	a1,b1
16	Final exam		1	2	c1.c2
	Number of Weeks /and Units Per Semester		16	32	

B - Practical Aspect: (if any)

Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1	**Urine examination**	**1**	**2**	**c1,c2,d1**
2	**Urine examination**	**1**	**2**	**c1,c2,d1**
3	**Urine examination**	**1**	**2**	**c1,c2,d1**
4	**Urine examination**	**1**	**2**	**c1,c2,d1**
5	**Blood examination**	**1**	**2**	**c1,c2,d1**
6	**Semen analysis**	**1**	**2**	**c1,c2,d1**
7	**Semen analysis**	**1**	**2**	**c1,c2,d1**
8	**CSF analysis**	**1**	**2**	**c1,c2,d1**

9	**Synovial Fluid**	**1**	**2**	**c1,c2,d1**
10	**Serous fluid**	**1**	**2**	**c1,c2,d1**
11	**Ascetic fluid**	**1**	**2**	**c1,c2,d1**
12	**Final practical exam**	**1**	**2**	**c1,c2,d1**
Number of Weeks /and Units Per Semester		**12**	**24**	

V. Teaching Strategies of the Course:	
1-	Lectures
2-	Practical session

VI. Assessment Methods of the Course:	
No	**Assignment**
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Midterm Exam**	8	20	20%	a1 ,b1 ,c1
2	**Practical exam**	14	30	30%	a1,b1,c1,d1
3	**Final Exam**	16	50	50%	a1 ,b1 ,c1
	Total	100		100%	

X. Learning Resources:

1- Required Textbook(s)	
1-	Harper's biochemistry 26th edition.
2-	Clinical biochemistry: metabolic and clinical aspects .third edition 2014.editied by Williams J. marta lapsley,Ruth M. Ayling.
2- Essential References.	
1-	**Endocrine Physiology by Patricia E. Molina. (Third Edition) A LANG Medical Book. ISBN 978-0-07-161301-9 Publishers McGraw Hill Companies, Inc. (2010).**
2-	**Guyton and Hall Textbook of Medical Physiology 12th edition (2010) by John E. Hall PhD, Pub. Saunders, pp. 840-949**
3- Electronic Materials and Web Sites *etc*.	
1-	http://www.vivo.colostate.edu/hbooks/pathphys/endocrine/index.html
2-	https://www.webteb.com/endocrine-system

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.
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