Republic of Yemen

Ministry of Higher Education & Scientific Research

Emirates International University

Faculty of Medicine and Health Sciences

Department of Clinical pharmacy

Bachelor of Pharm-D

Course Specification of

Human physiology I

Course No. (HPH 109)

Prepared by:	Reviewed by:	Head of the Department:	Quality Assurance head	Dean
Dr. SadeqAbdulmogni	Dr. Al-Ghoury A.A			

I. Course Identification and General Information:

1	**Course Title:**	Human PhysiologyI			
2	**Course Code & Number:**	HPH 109			
3	**Credit Hours:**	**Credit Hours**	**TheoryHours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	-	2
4	**Study Level/ Semester at which this Course is offered:**	1st^nd^Level / 2^nd^Semester			
5	**Pre –Requisite (if any):**	Biology			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Bachelor of Clinical pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**	Faculty of medicine and health sciences			
12	**Prepared by:**	Dr.SadeqSaadAbdulmogni asdhod@yahoo.com			
13	**Date of Approval:**				

II. Course Description:

Physiology I familiarizes students with basic definitions and principles related to physiology .The course emphasizes the concept of internal environment and homeostasis and the concept of feedback in a biological system. It also helps students to understand body fluid and cellular physiology. The course gives an overview on the physiology and functions of blood.

III. Course Intended Learning Outcomes (CILOs) : (maximum 8) Upon successful completion of the course, students will be able to:		Referenced PILOs Learning out of program
A. Knowledge and Understanding:		I,A or E
a1	Describe the functions of the different organelles in the human cell, and describe the transport system across the cell membranes.	A1
a2	Knowledge the body fluids, compartments, composition & functions.	A1
B. Intellectual Skills:		
b1	Distinguish between physiological and pathological performance of body cells.	B1
b2	Integrate physiology with other sciences	B1
C. Professional and Practical Skills:		
c1	Choose and classify data obtained from physiological experiments.	C1
c2	Determine the requirements of homeostasis.	C9
D. Transferable Skills:		
d1	Work separately or in a team to research and prepare a scientific topic.	D1
d2	Present clearly and effectively scientific topic in a tutorial, a staff meeting or the yearly scientific day.	D3

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

a1	Describe the functions of the different organelles in the human cell, and describe the transport system across the cell membranes.	Lectures Presentation	-Quizzes -Midterm Exam -Final Written Exam
a2	Describe the body fluids, compartments, composition & functions.	Lectures Presentation	-Quizzes -Midterm Exam -Final Written Exam
a3			

(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
b1	Distinguish between physiological and pathological performance of body cells.	-Lectures - Discussion	-Quizzes -Midterm Exam -Final Written Exam
b2	Integrate physiology with other sciences	Lectures Presentation	- Midterm Exam -Final Written Exam -Final oral Exam -Final Practical Exam

(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
c1	Choose and classify data obtained from physiological experiments.	-Lectures -Lab Experiments	-Practical reports - Final Practical Exam
c2	Determine the requirements of homeostasis.	-Lectures -Lab Experiments	-Practical reports - Final Practical Exam

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Work separately or in a team to research and prepare a	- Discussion - Self Learning	Research Oral discussion.

	scientific topic.	- Presentation	Group work
d2	Present clearly and effectively scientific topic in a tutorial, a staff meeting or the yearly scientific day.	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Physiology definition & organization of the cell**	Functional morphology of the cell - Transport across cell membranes -Functional systems of the cell that make it a living organism.	2	4	a1
2	**Body fluids, compartments, composition & functions.**	– Distribution of body fluid – Functions of water – Osmosis, osmolality, isotonicity& body water balance. – Dehydration and hydration	3	6	a1,a2, b2,c1, d1
3	**1- Composition and functions of the blood.** **2- RBCs, Formation and general functions**	– Composition of blood: – Plasma – Blood elements – Functions of blood – Red blood corpuscles –	2	4	a1, a2 b1,b2
	Mid-Term Theoretical Exam	MCQs and essay questions	1	2	a1,a2, b1,
	1- Composition and functions of	– Erythropoiesis and factors affecting it	2	4	

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	the blood. 2- RBCs, Formation and general functions	– Most common types of normal and abnormal hemoglobin – Anemia: Types of anemia – RBCs functions			
5	**Homeostasis**	– Define the internal environment. – Understand the importance of homeostasis.	1	2	c2, d2
6	**1- WBCs: structures, classifications and functions** **2. Hemostasis and its disorders**	– White blood cells – Types of leucocytes – White blood cells functions – Platelets – Blood group – Blood transfusion mechanism of haemostasis – WBCs disorders	4	8	a1, a2, b1,b2, c1, c2
7	**Final Theoretical Exam**	MCQs and essay questions	1	2	a1,a2, b1, d2
Number of Weeks /and Units Per Semester			**16**	**32**	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	**Separation of the blood**	1	2	a1, a2 b1,b2, c1
2	**Measurement of the hemoglobin.**	1	2	a1, a2 b1,b2,c2,

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
3	Erythrocyte sedimentation rate (ESR)	1	2	a1, a2, b1,b2, c1,c2
4	The hematocrit (H)	1	2	a1, a2, b1,c1,c2
5	Bleeding time and Clotting time	2	4	a1, a2, b1,b2, c1,
6	Blood groups	3	6	a1, b1,b2, c1,c2
7	The white blood cells	2	4	a1, a2, b1, c1
8	Revision	1	1	a1, a2, b1, c1
9	Final practical test	1	2	b2,c1,c2
Number of Weeks /and Units Per Semester		13	26	

V. Teaching Strategies of the Course:

- Lectures

- Discussion
- Self Learning
- Presentation
- Seminars
- Lab Experiments

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Written Exam
- Final Oral Exam
- Final Practical Exam
- Research
- Homework
- Group work
- Oral discussion
- Practical report

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs(symbols)
1	Assignment 1: ----------			
2				
3				
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quizzes 1 & 2	10th	5	5 %	a1, a2
	assignment	6th /9th	5	5 %	
2	Mid-Term Theoretical Exam	8th	20	20%	a1, a2, b1, b2,
4	Final Practical Exam including Project Presentation& Evaluation	15th	20	20%	c1, c2,d1, d2
5	Final Theoretical Exam	16th	50	50%	a1, a2, b1, b2
Total			100	100 %	

IX. Learning Resources:

- *Written in the following order:* Author, Year of publication, Title, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two):

1- Guyton and Hall 2010, Text book of medical physiology, 12th Ed, Mississippi Medical Center, Jackson, Mississippi, USA

2- Laurie Kelly2005, , Essentials of Human Physiology for Pharmacy, 1st Ed. CRC Press, Pharmacy Education series

2- Essential References:

1- Kelly 2018 , Essential of Human physiology. 8th edition.

2- Fox Human physiology, 10th edition, 2010.

3- Kaplan Medical step 1 physiology, 6th edition, 2006.

4- Mader understanding Human anatomy and physiology, 5th edition, 2004.

3- Electronic Materials and Web Sites etc.:

Websites:

1- www.csun.edu/science/biology/anatomy/anatomy.html

2- www.cliffsnotes.com

3- www.innerbody.com
4- www.anatomyandphysiology.com/
5- www.mhhe.com/biosci2/anatomyrevealed

X. Course Policies: (Based on the Uniform Students' By law (2007)

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:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
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.

Faculty of Medicine and Health science

Department of Clinical pharmacy

Course Plan (Syllabus) of Human Physiology I

Course No.(HPH 109)

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:		**Office Hours**					
Location& Telephone No.:	**Sana'a 773609090**	**2 Hours Weekly**					
E-mail:	asdhod@yahoo.com	SAT 1	SUN 1	MON	TUE	WED	THU

II. Course Identification and General Information:

1	**Course Title:**	**Human PhysiologyI**			
2	**Course Code & Number:**	HPH 109			
3	**Credit Hours:**	**Credit Hours**	**TheoryHours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	-	2
4	**Study Level/ Semester at which this Course is offered:**	1stndLevel / 2ndSemester			
5	**Pre –Requisite (if any):**	Biology			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Bachelor of Clinical pharmacy			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester based System			
10	**Mode of Delivery:**	Full Time			
11	***Location of Teaching the Course:***	Faculty of medicine and health sciences			
12	**Prepared by:**	Dr.SadeqSaadAbdulmogni asdhod@yahoo.com			
13	**Date of Approval:**				

III. Course Description:

Physiology I familiarizes students with basic definitions and principles related to physiology .The course emphasizes the concept of internal environment and homeostasis and the concept of feedback in a biological system. It also helps students to understand body fluid and cellular physiology. The course gives an overview on the physiology and functions of blood.

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	A. **Knowledge and Understanding:**
a1	Describe the functions of the different organelles in the human cell, and describe the transport system across the cell membranes.
a2	Knowledge the body fluids, compartments, composition & functions.
	B. **Intellectual Skills:**
b1	Distinguish between physiological and pathological performance of body cells.
b2	Integrate **physiology with other** sciences
	C. Professional and Practical Skills:
c1	Choose and classify data obtained from physiological experiments.
c2	**Determine** the requirements of homeostasis.
	D. **Transferable Skills:**
d1	Work **separately or in a team** to research and prepare a scientific topic.
d2	**Present clearly and effectively** scientific topic in a tutorial, a staff meeting or the yearly scientific day.

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	**Physiology definition & organization of the cell**	Functional morphology of the cell - Transport across cell membranes -Functional systems of the cell that make it a living organism.	2	4
2	**Body fluids, compartments, composition & functions.**	– Distribution of body fluid – Functions of water – Osmosis, osmolality, isotonicity & body water balance. – Dehydration and hydration	3	6

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
3	**1- Composition and functions of the blood.** **2- RBCs, Formation and general functions**	– Composition of blood: – Plasma – Blood elements – Functions of blood – Red blood corpuscles –	2	4
	Mid-Term Theoretical Exam	MCQs and essay questions	1	2
	1- Composition and functions of the blood. 2- RBCs, Formation and general functions	– Erythropoiesis and factors affecting it – Most common types of normal and abnormal hemoglobin – Anemia: Types of anemia – RBCs functions	2	4
5	**Homeostasis**	– Define the internal environment. – Understand the importance of homeostasis.	1	2
6	**2- WBCs: structures, classifications and functions** **2. Hemostasis and its disorders**	– White blood cells – Types of leucocytes – White blood cells functions – Platelets – Blood group – Blood transfusion mechanism of haemostasis – WBCs disorders	4	8
7	**Final Theoretical Exam**	MCQs and essay questions	1	2
Number of Weeks /and Units Per Semester			**16**	**32**

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	**Physiology definition & organization of the**	– Functional morphology of the cell – - Transport across cell membranes	2	4

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
	cell	– -Functional systems of the cell that make it a living organism.		
2	**Body fluids, compartments, composition & functions.**	– Distribution of body fluid – Functions of water – Osmosis, osmolality, isotonicity& body water balance. – Dehydration and hydration	3	6
3	**1- Composition and functions of the blood.** **2- RBCs, Formation and general functions**	– Composition of blood: – Plasma – Blood elements – Functions of blood – Red blood corpuscles –	2	4
	Mid-Term Theoretical Exam	– MCQs and essay questions	1	2
	1- Composition and functions of the blood. 2- RBCs, Formation and general functions	– Erythropoiesis and factors affecting it – Most common types of normal and abnormal hemoglobin – Anemia: Types of anemia – RBCs functions	2	4
5	**Homeostasis**	Define the internal environment. Understand the importance of homeostasis.	1	2
6	**WBCs: structures, classifications and functions** **2. Hemostasis**	– White blood cells – Types of leucocytes – White blood cells functions – Platelets – Blood group	4	8

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
	and its disorders	– Blood transfusion mechanism of haemostasis – WBCs disorders		
7	Final Theoretical Exam	MCQs and essay questions	1	2
Number of Weeks /and Units Per Semester	16	– 32		

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours
1	Separation of the blood	1	2
2	Measurement of the hemoglobin.	1	2
3	Erythrocyte sedimentation rate (ESR)	1	2
4	The hematocrit (H)	1	2
5	Bleeding time and Clotting time	2	4
6	Blood groups	3	6
7	The white blood cells	2	4
8	Revision	1	1
9	Final practical test	1	2
Number of Weeks /and Units Per Semester		13	26

No.	Tasks/ Experiments	Week Due	Contact Hours
1	Separation of the blood	1	2

No.	Tasks/ Experiments	Week Due	Contact Hours
2	Measurement of the hemoglobin.	1	2
3	Erythrocyte sedimentation rate (ESR)	1	2
4	The hematocrit (H)	1	2
5	Bleeding time and Clotting time	2	4
6	Blood groups	3	6
7	The white blood cells	2	4
8	Revision	1	1
9	Final practical test	1	2
Number of Weeks /and Units Per Semester		13	26

VI. Teaching Strategies of the Course:

- Lectures
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- Quizzes
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- Final Practical Exam
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VIII. Assignments:

No.	Assignments	Week Due	Mark
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3			
Total			

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