



الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية
كلية الطب المخبري
قسم الكيمياء الحيوية
وحدة التطوير وضمان الجودة

Republic of Yemen
Ministry of Higher Education & Scientific Research
21 SEPTEMBER UMAS
Faculty of Faculty of Laboratory medicine.
Department of Biochemistry
Unite of Development & Quality assurance

Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIED SCIENCES



Faculty of Laboratory medicine..

Department of Biochemistry and Molecular Biology
Course Specification of Hormones

Course No. (03.01.318)

2023/2022

I. Course Identification and General Information:

1	Course Title:	Hormones		
2	Course Code & Number:	03.01.318		
3	Credit hours:	C.H		Total
		Theory	practical	
		2	2	3
4	Study Level and Semester:	3 year and 2 nd semester		
5	Pre –requisite (if any):	General Biochemistry		
6	Co –requisite (if any):	None		
7	Program (s) in which the course is offered:	Bachelor in 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:
This is a comprehensive study of the endocrine system which will allow the student to integrate and better understand the functions of the other systems of the body. Also, the pathological conditions associated with endocrine imbalance are investigated

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 Discuss all principals, concepts, theories and aspects concerning with endocrinology	A1
B. Intellectual Skills: Upon successful completion of the course, students will be able to:	
b1 Integrate the theoretical knowledge with laboratory report	B1
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:	
c1 Apply practices of life-long learning in endocrinology for their professional career	C2
D. Transferable Skills: Upon successful completion of the course, students will be able to:	
d1 Self learning skills and knowledge to new situations	D2

C. 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	Discuss all principals, concepts, theories and aspects concerning with endocrinology	Lectures:	Exams
(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 the theoretical knowledge with laboratory report	Lectures Practical session	Exams Practical Exams
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	Apply practices of life-long learning in endocrinology for their professional career	Lectures: Practical session;	Exams Practical Exams
(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	Exams Practical Exams

III. Course Content:					
A – Theoretical Aspect:					
Order	Units/Topics List	Sub Topics List	week	contact hours	Learning Outcomes
1	General introduction	- Chemistry of hormones -Types of hormones -Characterization of hormones - Synthesis of hormones -Mode of action of hormones - Regulation of hormone secretion	1	2	a1
2	Endocrine glands:	Hypothalamus - Pineal gland	1	2	a1.,b1
3	- Pituitary gland		1	2	a.1.b1
4	Thyroid gland		1	2	a1
5	- Parathyroid gland - Thymus gland		1	2	a1, b1
6	Adrenal gland		2	4	a1 ,b1
7	- Pancreas		2	4	a1
8	MIDTERM		1	2	
9	Gonadal hormone	Genital glands	2	4	d1

	Genital glands Sex hormones	Sex hormones			
10	Other endocrine organs	- Kidney - heart - fat tissues - stomach - duodenum)	1	2	b1, d1
14	Final exam		1	2	a1 ,b1,d1
	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	Introduction of hormones	1	2	a1	
2	Methods of hormones measurement	1	2	a1	
3	ELISA Enzyme linked immunosorbent assay	1	2	a 1,b1,c1	
4	RIA Radioimmun assay	1	2	a1 ,b1 .c1	
5	Growth Hormone	1	2	b1 ,c1	
6	Cortisol	1	2	b1 ,c1	
7	Prolactin	1	2	b1 ,c1	
8	LH &FSH	1	2	b 1,c1	
9	T3 &T4	1	2	b 1,c1	
10	TSH	1	2	b1 ,c1	
11	Testosterone	1	2	b1 ,c1	
12	Final Exam	1	2		
Number of Weeks /and Units Per Semester		12	24		

IV. Teaching Methods of the course:	
1-	Lectures
2-	practical session
3-	Seminars



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- Endocrinology, 6th ed 2007. MAC E. HADLEY and JON E. LEVINE, PEARSON

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