





Course Specifications

Course Title:	Endocrinology
Course Code:	23074482-3
Program:	BSc Biology
Department:	Biology
College:	Aljumum University College
Institution:	Umm Al-Qura University



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A. Course Identification

1. Credit hours: 3 hours			
2. Course type			
a. University College Department 🗸 Others			
b. Required Elective			
3. Level/year at which this course is offered: 4 th year / Level 8			
4. Pre-requisites for this course (if any):			
Animal physiology II (23073362-3).			
5. Co-requisites for this course (if any):			
None			

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		70 %
2	Blended		
3	E-learning		10 %
4	Correspondence		10 %
5	Other		10 %

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contac	t Hours	
1	Lecture	28
2	Laboratory/Studio	42
3	Tutorial	6
4	Practical/Field work/Internship	6
5	Others (specify)	10
	Total	<u>92</u>
Other Learning Hours*		
1	Study	
2	Assignments	
3	Library	
4	Projects/Research Essays/Theses	
5	Others (specify)	
	Total	

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

The course is designed to provide an understanding to structures and function of endocrine glands. It also provides an understanding of the common endocrine disorders, metabolic regulations, and metabolic abnormalities, and their management. Vast amounts of information and knowledge are accumulating rapidly concerning metabolism and endocrinology. Their tremendous importance is being increasingly recognized, especially in the light of new advances in medicine, because all diseases, including psychiatric and genetic abnormalities, are associated with metabolic changes. Furthermore, in all body cells, hormones influence the metabolism of nucleotides, proteins, lipids, carbohydrates, vitamins, water, and Therefore, knowledge of endocrinology and metabolism is important in every branch of medicine.

2. Course Main Objective

This course aims to study the endocrine system in terms of structure, function and

its role in regulating metabolism, growth and reproduction in different animals,

with reference to some disorders resulting from dysfunction.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	Knowledge:	
1.1	Students should know the chemical nature of hormones, the relationship between structure and function of hormones, quantitative aspects of hormonal action in relation to endocrine disorder, the role of hormones as a regulatory factor of a living system, the	
	neurotransmitters and their relation with some diseases and drug addiction.	
1.2		
1.3		
1.4		
1.5		
1.6		
2	Skills :	
2.1	By the end of this course, the students should be able to:	
	• Examine and describe glands.	
	• Determine hormonal impact and syndromes.	
	• The student should be able to draw sectors in the glands	
	• Use computers and internet. to search for the latest information in endocrinology and its applications.	
2.2		
2.3		
2.4.		
3	Competence:	



	CLOs	Aligned PLOs
3.1	By the end of this course, the students should be able to:	
	• Act as efficient team members.	
	Perform self-directed learning.	
	Participate in class discussion.	
	• Present a talk to their colleagues in the student seminars.	
	• Behave ethically in the lecture and practical classes with the staff,	
	colleagues and environment like instruments, and laboratory.	
3.2		
3.3		
3		

C. Course Content

List of Topics		Contact Hours
Introduction to endocrinology, location and structure of endocrine glands.	1	2
Hormones secreted by endocrine glands.	1	2
Physiological effects of hormones.	1	2
Abnormal levels of hormones.	1	2
Role of hypothalamus in regulation of endocrine glands, Anterior pituitary hormones, Intermediate and Posterior pituitary hormones, Assessment of function and disorders of anterior and posterior pituitary.	3	6
Thyroid hormones, Assessment of function and disorders of thyroid gland, Parathyroid hormones, Assessment of function and disorders of parathyroid gland, Calcium homeostasis.	2	4
Adrenal gland hormones, Assessment of function and disorders of adrenal gland, Pancreatic hormones, Glucose homeostasis.	2	8
Hormones of the gonads (ovary and testis).	1	2

D. Teaching and Assessment1. Alignment of Course Learning Outcomes with Teaching Strategies and **Assessment Methods**

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Students should know the chemical nature of hormones, the relationship between structure and function of hormones, quantitative aspects of hormonal action in relation to endocrine disorder, the role of hormones as a regulatory factor of a living system, the neurotransmitters and their relation with some diseases and drug addiction.	In-class lecturing where the previous knowledge is linked to the current and future topics. Homework assignments. Discussions (connecting what they learn in the class and applying this information in	Homework and Quizzes. Midterm and final written exams (theoretical and practical). Evaluation of reports. Oral presentations.



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
12		laboratory). Handout of lecture notes for each topic. Cooperative Education (Wiki). Link the subjects of the course scientific miracle contained in the Quran and Sunnah Directed discovery.	
1.2			
2.0	Skills		
2.1	 By the end of this course, the students should be able to: Examine and describe glands. Determine hormonal impact and syndromes. The student should be able to draw sectors in the glands. Use computers and internet. to search for the latest information in endocrinology and its applications. 	Interactive lectures, Seminars, Tutorials, and Practical classes that include brain- storming problem solving questions.	Continuous assessment and Observation. Course work reports Evaluation of the topics prepared by students according to the content, arrangement, and covering of the topic. Midterm and final exams. Checking the homework assignments. Evaluation of Student drawings.
2.2			
	Competence		
3.1	 By the end of this course, the students should be able to: Act as efficient team members. Perform self-directed learning. Participate in class discussion. Present a talk to their colleagues in the student seminars. Behave ethically in the lecture and practical classes with the staff, colleagues and environment like instruments, and laboratory. 	Engage student in carrying out internet search. Close monitoring while performing practical work. Using power point presentation and gland illustration. Writing group reports.	Oral exams. Evaluation of student essays assignments and search work. Observation of student ethical and moral behaviour. Students' attendance is recorded during lectures. • Assessment of the student reports. Grading homework assignments.
3.2			



Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Periodical Exam(s)	4	10%
2	Mid Term Exam (Theoretic)	8	20%
3	Mid Term Exam (practical)	9	10%
4	Reports and essay	11	5%
5	Final Practical Exam	15	15%
6	Final Exam	16	40%
7			
8			

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

• Two hours office per week

F. Learning Resources and Facilities

1.Learning Resources

0	
Required Textbooks	No textbook is designated. Course materials will be based on a combination of lecture notes, handouts, journal articles and various references. Following is a list of suggested (yet not required) references that you would further read as class topic(s) evolves.
	Recommended Books:
	- Endocrinology (6 th edition) by Mac E. Hadley, Prentice-Hall, New Jersey (2007).
Essential References Materials	 Comparative Vertebrate Endocrinology, by Bentley, Cambridge Univ. Press. Cambridge. (2000). Textbook of Endocrine Physiology, by Griffin, Oxford University Press (2004).
3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)	- Essential Endocrinology, Brook And Marshall, Blackwell Science, Oxford. (1996).

Electronic Materials	http://www.vivo.colostate.edu/hbooks/pathphys/endocrine/basics/inde x.html http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookEND OCR.h tml http://www.hormone.org/endo101/
Other Learning Materials	Microsoft office package.Multi-media associated with the text book and the relevant websites.

2. Facilities Required

Item	Resources	
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	 Lecture room suitable for 35 students. Lecture room equipped with a black board and Data show. Optically and electronically facilitated lecture rooms (smart rooms). Microscopically equipped laboratories. 	
Technology Resources (AV, data show, Smart Board, software, etc.)	Computers or internet connection.• • Active Board.	
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Microscopes – Hormones analysis Kits- incubators – autoclaves – titration equipment –water baths – digital lab	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Strategies for Obtaining Student Feedback on Effectiveness of Teaching	the Instructor or by the Department	 Questionnaires Discuss students Midterm and final tests. Former review.
Other Strategies for Evaluation of Teaching	the Instructor or by the Department	 Using presentations and movies. Undergraduate Committee will review deficiencies based on the student evaluation, faculty input, course file, and program assessment. Feedback from employers and alumni surveys and graduating students' input are used to identify any deficiencies in

Evaluation Areas/Issues	Evaluators	Evaluation Methods
		 students' ability in applying knowledge of properties and the use of structural materials. Organize workshop on effective teaching methods to enable instructors to improve their teaching skills. Teaching method will focus on students' learning and on course learning outcomes.

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify) Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	

Head of Department

Dr. Wessam M. Filfilan



