

توصيف مقرر دراسي

١ - بيانات المقرر		
المستوى: الثالث	اسم المقرر: Physiology	الرمز الكودي: Es307
عدد الوحدات الدراسية: 3 نظري 2 تمارين 0 عملي 2		التخصص: علوم البيئة

<p>٢ - هدف المقرر:</p> <p>For students undertaking this course, the aims are to:</p> <p>1 - The course comprises: (A), nutrition & metabolism and (B), endocrine glands, which together provide an intellectual stimulant lectures covering various subjects in physiology sciences more advanced than the previous course. The lectures are also supplemented by practical lessons related as possible to the subject matter of the provided lectures.</p> <p>2 - Course A: (nutrition & metabolism): 1- Explain the principles of nutrition and balanced food components. 2- Recognize and understand the digestion processes of different types of food and its absorption. 3- Acquire an appreciation of the mechanisms of cellular metabolism, and how food stuffs can provide energy and other health status.</p> <p>3 - Course B: (endocrine glands): This course aims to: 1- Explain the major differences between the endocrine system. 2- Acquire deep understanding of the structural components of endocrine system in mammals including human. 3- Identify the chemical structure of different hormones and mechanisms of their action, as well as the various effects of hormones on their target tissues.</p>	
<p>٣ - المستهدف من التدريس المقرر:</p>	
<p>a- Knowledge and Understanding : On completing this course, students will be able to:</p> <p>a1. Acquire general information about food and enzymes required for metabolism of different food stuffs as well as the site and methods of their action in the cell.</p> <p>a2. Provide a deep-rooted knowledge of the principles of cellular metabolism of different food sorts and energy production.</p> <p>a3. Know the meeting point of the metabolism of different food stuffs.</p> <p>a4. Know the adverse effect of high fat diet and how to treat.</p> <p>a5. Describe the structural components of endocrine system.</p> <p>a6. Describe the mechanism of hormone action.</p> <p>A7. Know the abnormalities resulted from hormone disorders.</p>	<p>أ - المعلومات والمفاهيم:</p>
<p>b- Intellectual Skills: On completing this course, students will be able to:</p> <p>b1. Recognize health problems resulted from abnormal metabolism.</p> <p>b2. Distinguish the different pathways of glucose metabolism.</p> <p>b3. Conclude the association between carbohydrate, lipid and protein metabolism.</p> <p>b4. Develop their capacity to argue and think in the relation between the endocrine system & other body systems.</p> <p>b5. Illustrate the protein and steroid hormone actions.</p> <p>b6. Recognize hormonal abnormalities.</p>	<p>ب - المهارات الذهنية</p>

c-Professional and Practical Skills: On completing this course, students will be able to: c1. Work in selected groups using physiological and biochemical instruments. c2. Identify the energy released from metabolism of different food stuffs. c3. Gain practical skills of measuring of glucose, lactose, urea and enzymes. c4. Investigate the normal structure of some endocrine glands. c5. Define the abnormal levels for each hormone.				ج- المهارات المهنية الخاصة بالمقرر:
d-General and Transferable Skills: On completing this course, students will be able to: d1. Develop transferable skills through communication and management skills through individual and group activities. d2. Observe, interpret, record and present the results of the practical experiments. d3. Share information through team work and oral discussions. d4. Use computers for communication, data handling and word processing.				د- المهارات العامة :
<p>Course A: Nutrition requirements & importance, balanced food. <u>Metabolism of Carbohydrates</u>: cell metabolism, metabolic rate, respiratory chain, fate of absorbed glucose, glycolysis, Krebs cycle, hexose monophosphate shunt, glycogen (synthesis, sources and importance). glycogenolysis. Factors regulating blood glucose levels. <u>Fat metabolism</u>: Fate of absorbed fat, βoxidation of fatty acids, fate of active acetate, keton bodies and fatty liver. <u>Protein metabolism</u>: fate of absorbed amino acids, deamination, transamination, fate of amino acid group and non-nitrogenous residue, urea cycle, glucogenic and ketogenic amino acids. Course B: Components of endocrine system.-Chemical structure & mechanism of action of hormones. Pituitary gland.-Thyroid gland. Parathyroid glands.-Islets of Langerhans. Adrenal glands.-Gonads. Abnormalities in each gland.</p>				٤- محتوى المقرر:
4 - Teaching and Learning Methods 4 -١. Lectures. 4 -٢. Practical training and research in lab. 4 -٣. Home work (preparing a report on some topics related to the course). 4 – 4 Library and online research.				٥- أساليب التعليم والتعلم:
As normal students.				٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة:
				٧- تقويم الطلاب :
5 - Student Assessment Methods				أ- الأساليب المستخدمة :
5-1.	Final exam	to assess	a1,a2,a3,a4,a5,a6-b1,b2,b3,b4,b5,b6	
5-2.	Oral exam	to assess	a1,a2,a3,a4,a5,a6-b1,b2,b3,b4,b5,b6-d1,d2,d3,d4	
5-3.	Practical exam	to assess	c1,c2,c3,c4,c5-d1,d2,d3,d4	
5-4.	Written projects	to assess	d1,d2,d3,d4	
Assessment Schedule				ب- التوقيت :
Assessment 1	Week #	14		

Assessment 2	Week #	14	
Assessment 3	Week #	13	
Assessment 4	Week #	6	
<i>Weighting of Assessments</i>			ج- توزيع الدرجات :
Final-Term Examination	60		
Oral Examination	10		
Practical Examination	20		
Semester work	10		
Other types of assessment	0		
Total	100		
٨- قائمة الكتب الدراسية والمراجع :			
Course notes (available for all students).			أ- مذكرات:
William & Ganong, medical book, 16th ed.), 2000 Physiology, David Levay 196			ب- كتب ملزمة
Biology the unity and diversity			ج- كتب مقترحة :
Web sites			د- دوريات علمية أو نشرات..

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Nutrition requirements & importance, balanced food	1	a1,a2	b1,b2	c1	d2,d3
Metabolism of Carbohydrates	2	a2,a3	b2,b3	c1,c2	d1, d2,d4
Glycolysis, Krebs cycle	3	a1,a2	b3	c1,c2	d1, d3
Glycogen (synthesis, sources and importance). glycogenolysis.	4	a3	b1,b2	c3	d1, d4
Fat metabolism	5	a1,a4	b1, b3	c2	d4
Protein metabolism	6	a2	b1,b3	c2,c3	d1,d3,d4
Components of endocrine system	7	a5	b4	c4	d2,d3
Chemical structure & mechanism of action of hormones	8	a6,a7	b6	c5	d1, d2,d4
Pituitary gland	9	a5	b5	c4	d1, d3
Thyroid gland. Parathyroid glands	10	a5,a7	b4	c5	d1, d4
Islets of Langerhans. Adrenal glands.	11	a5	b5	c4,c5	d4
Gonads. Abnormalities in each gland	12	a5,a7	b6	c4,c5	d1,d3,d4
Practical according to the course content.	2-11			c1,c2,c3, c4,c5	

أستاذ المادة: أ.د./ وفاء محمد الخولى

رئيس مجلس القسم العلمى: أ.د. هناء على

حسن

