

T6. Course Specification (CS) توصيف المقرر

Endocrine System & Metabolism (363END-5) غدد-5 363

Coordinator: Elfatih Yagoub

6th level/3rd year

Course Specifications

Institution Najran University	Date 22/6/1438
College/Department College of Medicine	
A. Course Identification and General Information	
1. Course title and code: Endocrine System & Metabolism 363 END-5 5- غدد-363	
2. Credit hours 5(4+1)	
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs) Medicine and Surgery	
4. Name of faculty member responsible for the course: Coordinator: Elfatih Yagoub Co-coordinator: Mohamed Abdelrahim	
5. Level/year at which this course is offered 6 th level/3 rd year	
6. Pre-requisites for this course (if any) (Semester 3 & 4) Medical education, Medical ethics, Medical physics, Medical Biochemistry, Basic Anatomy & Histology, Basic Physiology Behavior sciences and communication skills, Introduction to pathology, Introduction to microbiology, Introduction to pharmacology & Human Growth & development (Block)	
7. Co-requisites for this course (if any) NON	
8. Location if not on main campus	
9. Mode of Instruction (mark all that apply)	
a. Traditional classroom	<input checked="" type="checkbox"/> Y What percentage? <input type="text" value="70"/>
b. Blended (traditional and online)	<input type="checkbox"/> What percentage? <input type="text"/>
c. E-learning	<input type="checkbox"/> What percentage? <input type="text"/>
d. Correspondence	<input type="checkbox"/> What percentage? <input type="text"/>
f. Other	<input checked="" type="checkbox"/> Y What percentage? <input type="text" value="30"/>
Comments:	

B Objectives

1. What is the main purpose for this course? 1) Acquire sound knowledge of Endocrine System structure and function. 2) Describe the major metabolic pathways and their inter-relationships. 3) Describe the symptoms and signs of some common diseases, injuries and disturbances of this system and their prevention. 4) Develop a problem solving approach to Endocrine and metabolic disorders. 5) Explain the pathogenesis of various Endocrine and or metabolic diseases categories and their presentation, investigations (laboratory, radiological, etc), and management. 6) Discuss the regulatory mechanism that regulates the different pathways of carbohydrates, lipids, protein and nucleic acid and their management.	
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field) 1) Continuous updating of the information, knowledge and skills included in the course through the continuous search for new knowledge and skills available in recent publications (books, researches, internet and others). 2) Continuous improvements in teaching methods to encourage the students to participate effectively in their various academic activities. 3) Continuous evaluation of the course content, student level and establish plans accordingly.	

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description: this course is intended to give the student knowledge about the basic biochemical reactions and metabolism, the structure and function of endocrine system and the abnormalities related to it.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Introduction To Endocrine Physiology	0.03	(1+0)
Gross anatomy of endocrine glands (thyroid & suprarenal) Practical	0.1	(0+3)
Histology of pituitary, thyroid, parathyroid & suprarenal glands	0.07	(2+0)
Respiratory chain	0.03	(1+0)
Role of hypothalamus in endocrine Regulation	0.03	(1+0)
Anterior Pituitary hormones	0.03	(1+0)
posterior Pituitary hormones	0.03	(1+0)
Histology of endocrine parts of pancreas , ovary & testes	0.03	(1+0)
Development & congenital anomalies of thyroid and parathyroid	0.03	(1+0)
Development & congenital anomalies of pituitary and suprarenal	0.03	(1+0)
Gross anatomy of endocrine glands (pituitary & parathyroid) Practical	0.1	(0+3)
Pituitary Pathology	0.07	(2+0)
Citric acid cycle	0.03	(1+0)
Hypothalamic and Pit. Hormones and anatogonists	0.1	(2+0)
Glycolysis	0.05	(1+0)
Histology of all endocrine glands Practical	0.2	(0+3)
Hexose monophosphates shunt	0.05	(1+0)
Thyroid disorders Seminar	0.1	(0+2)
Thyroid Hormones	0.05	(1+0)
Thyroid and anti-thyroid drugs	0.1	(2+0)
Glycogen metabolism	0.05	(1+0)
Thyroid Pathology	0.04	(1+0)
Thyroid disorders	0.04	(1+0)
Parathyroid Hormones and Calcium homeostasis	0.04	(1+0)
Galactose& fructose metabolism	0.04	(1+0)
Physiology of Adrenal Gland	0.09	(2+0)
Pathology of the adrenal gland	0.04	(1+0)
Gluconeogenesis	0.04	(1+0)
Beta oxidation of fatty acids	0.04	(1+0)
Adrenocorticosteroids and their antagonists	0.09	(2+0)
Pancreatic hormones	0.04	(1+0)
Adrenal disorders	0.04	(1+0)
Fatty acid synthesis	0.04	(1+0)
Metabolism of Ketone bodies	0.04	(1+0)
Adrenal disorders Seminar	0.09	(0+2)
Glucose Homeostasis	0.04	(1+0)
Phospholipid triglyceride metabolism	0.04	(1+0)
Metabolism of cholesterol and Lipoproteins	0.09	(2+0)
Thyroid Surgery	0.04	(1+0)
Protein turnover	0.04	(1+0)
Practical (Path)	0.3	(0+6)
Trans-amination & De-amination	0.03	(1+0)

Pathology of the Pancreas	0.03	(1+0)
Miscellaneous hormones	0.03	(1+0)
Diabetes Mellitus	0.03	(1+0)
Disposal of ammonia and urea cycle	0.07	(2+0)
Pancreatic hormones and antidiabetic drugs	0.07	(2+0)
Diabetes Mellitus (Seminar) Seminar	0.07	(0+2)
Normal Findings on CT and X-ray	0.03	(1+0)
Abnormal Findings on CT and X-ray	0.03	(1+0)
Conversion of amino acids to specialized products	0.07	(2+0)
Integration of metabolism	0.04	(1+0)
Metabolic rate Tutorial	0.08	(0+2)
Inborn errors of metabolism (seminar)	??	(0+2)
Endocrine disorders during pregnancy	0.04	(1+0)
Inborn errors of metabolism	0.04	(1+0)
Bedside Teaching (Surgery)	0.1	(0+3)
Bedside Teaching (Obstetrics)	0.1	(0+3)
Bedside Teaching (Medicine)	0.1	(0+3)
Bedside Teaching (Paediatrics)	0.1	(0+3)
Practical Laboratory Biochemistry Practical	0.2	(0+6)

2. Course components (total contact hours and credits per semester):

Learning Methods	Lecture	Tutorial	Laboratory or Studio	Practical	Other:	Total
Contact Hours	58	2	21	12	0	8
Credit	3.22	0.06	0.39	0.22	0	0.22

3. Additional private study/learning hours expected for students per week.

12

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Recognize normal structure, function, development and pathology and disorders of endocrine glands.	1) Lectures. 2) Seminars.	MCQs, OSPE, OSCE
1.2	Describe the various cellular metabolic processes for energy utilization and synthesis.	3) PBL sessions. 4) Practical classes.	
1.3	Describe the pharmacological role in the management of the endocrine disorders.	5) Bedside teaching.	
2.0	Cognitive Skills		
2.1	Interpret history, examination, radiological and lab results of a patient with endocrine disorder in an organized and informative manner.	1) Interactive lectures. 2) Seminars. 3) PBL sessions	MCQs, OSPE, OSCE

		4) Practical classes 5) Bedside teaching	
2.2	Discuss the management of various endocrine disorders.		
3.0	Interpersonal Skills & Responsibility		
3.1	Show a positive interaction between each other during seminars, PBL sessions, practical classes and bedside teaching.	1) Seminars. 2) PBL sessions 3) Practical classes. 4) Bedside teaching.	MCQs, OSPE, OSCE
4.0	Communication, Information Technology, Numerical		
4.1	Demonstrate efficiently the capacity to use the different available knowledge resources.	1) Group seminars. 2) PBL sessions. 3) Practical classes.	MCQs, OSPE, OSCE
5.0	Psychomotor		
5.1	Perform basic clinical assessment of the GIT system.	1) Practical classes.	MCQs, OSPE, OSCE
5.2	Perform the practical part of the basic medical sciences related to endocrine system and metabolism.	2) Bedside teaching. 3) Skills lab.	

5. Map course LOs with the program LOs. (Place course LO #s in the left column and program LO #s across the top.)

Course LOs #	Program Learning Outcomes (Use Program LO Code #s provided in the Program Specifications)								
	1.1	1.2		2.1		3.2		4.1	
1.1	✓	✓		✓		✓		✓	
1.2									
1.3	✓	✓		✓		✓		✓	
2.1	✓	✓		✓		✓		✓	
2.2	✓								
3.1		✓				✓		✓	
3.2		✓		✓					
4.1	✓			✓					
5.1						✓			
5.2	✓	✓						✓	

6. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	First quiz	2 nd	5 %
2	Second quiz	3 rd	5%
3	Third quiz	4 th	5%
4	Fourth quiz	5 th	5%
5	PBL sessions	first 5 weeks	5%
6	Seminars	2 nd , 3 rd , 4 th , 5 th weeks	5%
7	End of course exam MCQs	6 th week	50%
	OSPE/OSCE	6 th week	20%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

E Learning Resources

1. List Required Textbooks

1. Clinical anatomy by systems 13th edition 2006. Richard S Snell. Lippincott Wilkins and Williams. ISBN – 978078179164-9
2. Junqueira: Basic Histology 4th ed.
3. Text and atlas 2016 Antony L Mescher McGraw-Hill Companies Inc. ISBN-978-0-7-184270-9
4. Langman medical embryology 13th edition 2015. TW Saddler Wolters Kluwar Health ISBN- 978-1-4698-9780-6
5. Ganong review of medical physiology
6. Basic & Clinical Pharmacology by B.G. Katzung.
7. Lippincott's biochemistry.
8. Bailey & love's: short practice of surgery.
9. Davidson's principles and practice of medicine.
10. Robbins and Cotran pathological basis of disease. Kumar et al. 9th edition 2015

2. List Essential References Materials (Journals, Reports, etc.)

1. Gray's Anatomy for Medical Students 3rd ed 2004. R Drake, A Wayne Vogl, Adam W Mitchell. Churchill Livingstone ISBN-978070251319
2. Essential clinical anatomy 5th edition 2006 RL Moore, Arthur F Dalley, Lippincotts Williams and Walkins ISBN- 0-7817-3639-0.
3. The developing human: clinically oriented anatomy 13th edition 2015. R Moore, T V Perseud, Mark Terchia. Saunders. ISBN:9780323313384.
4. Harper illustrated biochemistry –28th edition-2009 by Mc Graw Hill ISSN 1043-9811
5. Bailey and Scott's Diagnostic microbiology. Latest edition.
6. Harrison's textbook of Medicine, 17th Edition.
7. Nelson Essentials of Pediatrics Author: Karen Marcdante MD Robert M. Kliegman MD ISBN: ISBN-13: 978-1455759804 ISBN-10: 1455759805 Publishing Year: 7th Edition; 2014
8. Muir's Textbook of pathology

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

1. Rang and dales pharmacology
2. Essentials of medical pharmacology by KD tripathi
3. Guyton Textbook of medical physiology

4. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

Saudi Digital Library

- WWW.WHO.org
- WWW.CDC.org
- WWW.ASM.org
- WWW.BSAC.org
- WWW.clsi.org
- WWW.microbelibrary.org
- WWW.pubmed.gov
- <http://www.uptodate.com/home/index.html>
- <http://www.jpeds.com>
- <http://pediatrics.aappublications.org>
- www.pathmax.com
- www.webpath.com

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
 - 1) Lecture room suitable for 40 students.
 - 2) Laboratory (dissection room-DR, physiology, biochemistry, microbiology, pathology, pharmacology and clinical skills) suitable for 40 students.
 - 3) Teaching hospital for bedside teaching.
2. Computing resources (AV, data show, Smart Board, software, etc.)
Computers, multimedia in lecture room, PBL room and laboratories.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
Library supplied with reference text books, electronic resources.

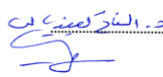
G Course Evaluation and Improvement Processes

- 1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching**
 - 1) Continuously throughout the block by direct interviewing of the students.
 - 2) End of block questionnaire
- 2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department**
 - 1) Feedback from colleagues.
 - 2) Class observation by supervisors
- 3 Processes for Improvement of Teaching**
 - 1) Continuous updating of course contents.
 - 2) Regular meetings where problems are discussed and recommendations made.
 - 3) Workshops on teaching methods.
 - 4) Review of recommended teaching strategies.
- 4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)**
 - 1) Arrange with another institution to have common test items included in an exam and compare marks given.
 - 2) Invitation of an external examiner on regular bases.
- 5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. There will be an evaluation at the end of the block to assess the course execution, outcome and feedback from different sources to arrive at an appropriate modifications needed if any.**

Name of Course Instructor: Dr. Mansour Elasmari

Signature: _____ Date Report Completed: 22/6/1438

Program Coordinator: Dr. Elfatih Yagoub Ali

Signature:  _____ Date Received: _____