The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Human Anatomy and Physiology
2	Course number	0308231
3	Credit hours (theory, practical)	3, 1
	Contact hours (theory, practical)	Monday - Wednesday
4	Prerequisites/co-requisites	Histology
5	Program title	Bachelor of Medical Laboratory Sciences
6	Program code	0308
7	Awarding institution	University of Jordan
8	Faculty	Science
9	Department	Medical Laboratory Sciences
10	Level of course	Second Year
11	Year of study and semester (s)	First Summer Semester 2016/2017
12	Final Qualification	B.Sc. in Medical Laboratory Sciences
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	2017

16. Course Coordinator:

Mahmoud Abu-Samak , PhD
Office: 214 Biology building
Phone number: 22228
Email: m_abusamak@asu.edu.jo

Office hours: by appointment : during lab sessions : Sunday, Monday and Wednesday (3-4) and

17. Other instructors:

None

18. Course Description:

This course is designed to provide medical laboratory students with an understanding of the structure, function, regulation, and integration of the major organ systems of the body. The course will cover the basis of structure and function, control of neural and hormonal homeostatic mechanisms, and basic relationships between the systems of the human body, namely the nervous, endocrine, circulatory, respiratory, digestive, urinary, muscular, and reproductive system.

19. Course aims and outcomes:

A- Aims:

The aim for this course includes: To correlate human anatomy with body functions via understanding homeostatic regulatory mechanisms on the basis of physiological concepts . Via this aim medical laboratory students will be prepared for more in-depth learning about abnormal changes in pathology, endocrinology, haematology and clinical chemistry courses.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to …

A. Knowledge and understanding*:*

1. know physiological concepts as based on scientific laws .
2. know the homeostatic mechanisms in normal and abnormal conditions .
3. identify abnormal changes in physiological regulatory mechanisms on the basis of physiological laws .
4. know the effects of some bioactive substances on human body systems : Nervous, endocrine, cardiovascular, respiratory , renal and digestive.
5. Correlate abnormal levels of some bioactive substances with their pathophysiological changes .

B. Subject specific skills:

1. To apply scientific laws on physiological mechanisms .
2. To apply constructivism method of knowledge on physiology course topics
3. To develop student's skills of identifying, describing and using course concepts in related courses of medical laboratory sciences they need .
4 . To develop student's skills of analyzing and evaluating in relation to reflective practice in physiology lab as well as in real-life contexts **(**medical laboratory field)

C. Cognitive and Intellectual skills:

1 **Problem solving** based on a constructivism method of thinking: The ability to conceptualise, apply ,analyze, synthesize and/or evaluate information gathered from, or generated by, observation experience reflection, reasoning or communication .

2 **Critical thinking:** The ability to analyse critique and synthesise information in order to solve problems on the basis of constructivism and physiological laws (group discussion in the lab sessions).

3 **Promotion of intrinsic motivation** via encourage alternative methods of assessment : (group discussion in the lab sessions).

D. Transferable Skills:

1. To have constructivism method of knowledge and thinking: Help students to transfer skills to the real world (medical laboratory field).

20. Topic Outline and Schedule:

Topics to be covered ***Theory**
Topic
Concepts of physiology laws and constructivism method of thinking
Neurophysiology I:Cell Membrane and Membrane Potentials Electrical Signals and Synaptic Transmission
Neurophysiology II: Synapses and NMJ
Neurophysiology III:ANS
Neurophysiology IV: CNS
First Hour Exam
Endocrine System I: Hypothalamic- pituitary axis physiology
Endocrine System II: Thyroid Gland ,Adrenal Gland,Caciotropic Hormones and Gonads
Endocrine System III : Pancreas and Diabetes Mellitus .
Cardiovascular Physiology I: Blood Physiology
Cardiovascular Physiology I: Heart Physiology
Cardiovascular Physiology I: Vascular Physiology
Second Hour Exam
Respiratory physiology I: ventilation and lung volumes and capacities
Respiratory physiology II: control of pulmonary function.
Respiratory physiology III: Obstructive vs restrictive PD.
Respiratory physiology III: Adaptation to hypoxia
Renal physiology I : GFR and regulation of renal function
Renal physiology II :Renal regulation of blood pressure and blood volume ; Diuretics
Renal physiology III :Renal regulation of acid-base, potassium , calcium balance
Renal physiology IV : Renal regulation of erythropoiesis
GIT physiology I: Anatomy of GIT
GIT physiology II: Functions GIT parts.
GIT physiology III: Mechanisms of digestion and absorption
GIT physiology IV: Abnormal changes in GIT physiology.
*** Practical**
Introduction to human anatomy and physiology and safety rules
Skeleton anatomy (I and II) : Axial and Appendicular : Models
Nervous system anatomy : models :Human and animal muscle reflexes (physiology)
Muscles anatomy : models : NMJ (physiology)
Endocrine anatomy : OGGT (physiology)
Blood ; ABO types (physiology)
Heart anatomy : ECG (physiology)
Blood pressure measurement and related factors (physiology)
Pulmonary system anatomy : PFTs : spirometry (physiology)
Kidney , GIT anatomy

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21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Interactive lecture using data show and overhead projector
Office hour discussions
Quizzes
Lab reports

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Short answer questions during the lectures
Quizzes
Exams

23. Course Policies:

A- Attendance policies: Regular class attendance is expected, attendance by seating number.

B- Absences from exams and handing in assignments on time: Reporting a valid reason of absence is accepted.

C- Health and safety procedures: All students should comply with the university health and safety procedures

D- Honesty policy regarding cheating, plagiarism, misbehaviour: All students should comply with the university Honesty policy regarding cheating, plagiarism, misbehaviour

E- Grading policy: Depends on average

First Hour Exam	17%
Second Hour Exam	18%
Lab Final Exam	15%
Reports, quizzes, and evaluation	10%
Final Exam	40%

F-

24. Required equipment:

Available university services that support achievement in the course:

Data Show Projector, internet access

Human anatomy models and charts ,microscopes, ECG and spirometry device/s , Blood pressure devices : digital and sphygmomanometer , gluco-check devices and glucostrips, clinical hammer.

25. References:

1. **Principles of Human Anatomy and Physiology: Gerard J. Tortora. 13 th edt.2011. John Wiley and Sons Inc.** 2-Human anatomy and physiology: Marieb E.N. and Hoehn K. N.: Benjamin Cummings, 8th Edition. 2010. 3- Anatomy & Physiology: The Unity of Form and Function: Saladin K..: McGraw-Hill; 6 edition 2011. 2.

26. Additional information:

Name of Course Coordinator: Prof. Mahmoud Abu-Samak Signature: ----------

Date: 10/01/2018

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: ……. Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------

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Head of Department
Assistant Dean for Quality Assurance
Course File