Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E

Study Plan No.	**2021/2022**		**University Specialization**		**Bachelor of Pharmacy**	
Course No.	**0201281**		**Course Name**		**Anatomy and Physiology Lab**	
Credit Hours	**1**		**Prerequisite *Co-requisite**		**Anatomy and Physiology (1) + *Anatomy and Physiology (2)**	
Course Type	☐ Mandatory University Requirement	☐ University Elective Requirement	☑ **Faculty Mandatory Requirement**	☐ Support course family requirements	☐ Mandatory Requirement	☐ Elective Requirement
Teaching Style	☐ Full Online Learning		☐ Blended Learning		☑ **Traditional Learning**	
Teaching Model	☐ 1 Synchronous: 1 Asynchronous		☐ 1 Face to Face: 1 Asynchronous		☑ **1 Traditional**	

Faculty Member and Study Divisions Information *(to be filled in each semester by the subject instructor)*

Name	Academic rank	Office No.	Phone No.	E-mail	
Office Hours (Days/Time)	**Sunday, Tuesday, Thursday ()**		**Monday, Wednesday ()**		
Division number	**Time**	**Place**	**Number of Students**	**Teaching Style**	**Approved Model**
				Traditional Learning	**1 Traditional**

Brief Description

This course focuses on experiments that explain the normal structure and function of human body systems (sensory, nervous, endocrine, renal, reproductive, respiratory, and cardiovascular system).

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Experiments in Physiology, David Woodman and Gerald Tharp, 2015, 11th edition, Pearson Education, Inc.			
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	1. Human Physiology, Stuart Ira Fox, 2019, 15th edition, Mc Graw Hill. 2. Human Physiology: concepts and clinical applications, Stuart I. Fox, 2011, 14th edition, McGraw Hill. 3. Essentials of Human Anatomy and Physiology, Elaine Marieb, 2015, 11th edition, Pearson Education, Inc.			
Supporting Websites	Online Learning Center: http://highered.mheducation.com/sites/0073403628/student_view0/index.html			
The Physical Environment for Teaching	✓ **Classroom**	☐ Labs	√ **Virtual Educational Platform**	☐ Others
Necessary Equipment and Software	Moodle			
Supporting People with Special Needs				

For Technical Support	E-Learning & Open Educational Resources Center. Email: elearning@zuj.edu.jo; Phone: +962 6 429 1511 ext. 425/362.

Course learning outcomes *(K= Knowledge, S= Skills, C= Competencies)*

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge **The student should be able to:**		
K1	Identify the structural components of the major body systems studied in this course: Sensory organs, Nervous, Endocrine, Cardiovascular, Respiratory, Renal and Reproductive systems.	**MK1**
K2	Describe the main function of the major body systems.	**MK1**
Skills **The student should be able to:**		
S1	Analyze experimental data to demonstrate physiological functions.	**MS2**
S2	Solve problems and work effectively in a group.	**MS3**
S3	Interpret the physiological laboratory results to distinguish between physiological and pathological conditions.	**MS2**
S4	Perform basic physiological tests such as: testing blood glucose levels, hemostasis, blood grouping, Urinalysis, Hearing and Visual tests, Reflex tests, Blood pressure measurement, and Pregnancy test.	**MS2**
Competencies **The student should be able to:**		
C1	Correlate between the knowledge acquired in the anatomy and physiology laboratory and clinical laboratory examination results.	**MC1, MC2**

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm Exam	30%	30%	30%	**0%**
Participation / Practical Applications	0%	0%	20%	**50%**
Asynchronous Interactive Activities	20%	20%	0%	**0%**
Final Exam	50%	50%	50%	**50%**

Note 1: *Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, and work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.*

Note 2: *According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).*

Schedule of Simultaneous / Face-to-Face Encounters and their Topics

Week	Subject	Learning Style*	Reference **
1	Introduction		
2	**Sensory Physiology: Hearing and Vision;** Ear Anatomy; Hearing tests (Weber test, Rinne test, Audiometer); Eye Anatomy; Visual tests (Near point of Accommodation, Blind spot, Visual Acuity, Astigmatism chart, Color blindness).	learning through experiments	Chapter 7 Chapter 8
3	**Nervous system:** Spinal reflexes, Eye reflexes.	learning through experiments	Chapter 6
4	**Endocrine system: Regulation of blood glucose;** Blood glucose testing meter (Glucometer); Random Blood test, Glucose tolerance test.	learning through experiments	Chapter 12
5	**Blood physiology: Blood components, Hemostasis and Blood typing;** CBC, Blood Hematocrit (Hct), Sahli method; Blood smear; Bleeding time; Clotting time, Blood typing.	learning through experiments	Chapter 19 Chapter 20
6	**Human Cardiovascular system function:** Anatomy and Physiology of the Heart and great vessels; Blood pressure measurement (Sphygmomanometer).	learning through experiments	Chapter 17
7	**Respiratory system:** Anatomy of the Respiratory organs, Muscles that function in respiration, Pulmonary function test "Spirometer".	learning through experiments	Chapter 18
8	**Renal Physiology:** Anatomy of urinary organs, Urinalysis with Labstix test.	learning through experiments	Chapter 3
9	**Reproductive Physiology:** Anatomy of the male and female reproductive organs; Pregnancy test.	learning through experiments	Chapter 9
10	**Digestive system:** Digestive system organs, amylase activity test.	learning through experiments	
11			
12			
13			
14			
15			
16	**Final Exam**		

** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.*

*** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.*

Schedule of Asynchronous Interactive Activities *(in the case of e-learning and blended learning)*

Week	Task / Activity	Reference	Expected Results
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