DEREE COLLEGE SYLLABUS FOR: BI 3240 HUMAN ANATOMY AND PHYSIOLOGY

UK LEVEL: 5
UK CREDITS: 20
US CREDITS:3/2/4

(Updated Fall 2022)

PREREQUISITES:	BI 1000 Introduction to Biology I BI 1101 Introduction to Biology II
CATALOG DESCRIPTION:	An integrated exploration of the fundamentals of human anatomy including tissues, organs and systems with an emphasis on their pathophysiology.
RATIONALE:	This module will consider the anatomy and function of normal tissues, organs and systems and then describe their major pathophysiological conditions. It will consider the aetiology of the condition, its biochemistry and its manifestation at the level of cells, tissues and the whole patient. It may also cover the diagnosis and treatment of the disease condition.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Explain the main physiological systems of the body and the basic anatomical structure and histology of the principal organs in these systems. 2. Interpret the role of the main physiological systems in the maintenance of whole body homeostasis. 3. Demonstrate and identify the consequences of alteration of normal physiological states and the evolution of disease. 4. Develop and demonstrate skills for interpreting and retrieving information. 5. Develop and demonstrate laboratory practical skills and laboratory teamwork in several methods of human anatomy and physiology.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: Class lectures, interactive learning (class discussions, group work) video presentations, and practical problems solved in class. Exercises and primary source documents are assigned as homework, the solutions of which are reviewed in class Laboratory work (laboratory reports). Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions, see their exam paper, and/or go over lecture/lab material. Use of a blackboard site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.
ASSESSMENT:	**Summative:**

First assessment In-class midterm examination (1-hour) (Multiple choice, short answers, matching, essay questions, combination, problem solving)	**30%**
Second assessment In-class final examination (2-hour, comprehensive), (Essay questions, multiple choice, short answers, problem solving)	**45%**
Third assessment Lab report, 1000-1500 words	**25%**

Formative:

Multiple "diagnostic on-line" tests Multiple choice, short answers	0
essay questions	0

	The **formative MC (on-line) and written essays** aim to prepare students for the examination. Students are expected to submit feedback on their performance. The lab report tests mainly the learning outcomes 1, 2, 5, 6. The midterm examination tests Learning Outcomes 3, 4, & 7 The final examination tests all learning outcomes and it is comprehensive. *The final grade for this module will be determined by averaging all summative assessment grades, based on the predetermined weights for each assessment. If students pass the comprehensive assessment that tests all Learning Outcomes for this module and the average grade for the module is 40 or higher, students are not required to resit any failed assessments.*
INDICATIVE READING:	REQUIRED READING: Human Physiology-An integrated approach (8th edition, 2018) D. Silverthorn Essential of Anatomy and Physiology (7th edition 2019) McGraw &Hill
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	REQUIRED MATERIAL: N/A McGraw and Hill A&P Digital Labs (2019) Laboratory Manual for Human Anatomy & Physiology (2019) Version 4th Edition, Terry Martin and Cynthia Prentice-Craver
COMMUNICATION REQUIREMENTS:	N/A
SOFTWARE REQUIREMENTS:	Microsoft Word, Microsoft PowerPoint, Blackboard CMS
WWW RESOURCES:	1. https://www.visiblebody.com/anatomy-education-resources 2. http://blogs.cornell.edu/cibt/labs/physiology/ 3. https://www.biologycorner.com/anatomy/ 4. https://www.biopac.com/education-curriculum/ 5. https://www.biopac.com/discipline/animal-physiology-and-intro-human-physiology/
INDICATIVE CONTENT (LEC):	Indicative topics will include: 1. Basic cell processes: integration and coordination (introduction to physiology, cells and tissues) 2. Homeostasis and control (endocrine, nervous and musculoskeletal system) 3. Integration of function (cardiovascular, respiratory and urinary system) 4. Metabolism, growth, and aging (digestive, immune, reproductive and development system)
INDICATIVE CONTENT (LAB):	Anatomy: 1. Cells and tissues 2. Nervous system 3. Cardiovascular system 4. Respiratory system 5. Immune system 6. Reproductive system 7. Urinary system 8. Digestive system 9. Forensics methods Physiology: 1 Electroencephalography I and II 2 Electrocardiography I and II and heart rate variability 3 Sciatic Nerve and resting potential 4 Signal Averaging ECG