TRINITY MEDICAL SCIENCES UNIVERSITY | SCHOOL OF BIOMEDICAL SCIENCES

INTRODUCTION TO PHYSIOLOGY
BIOS 210

Course Description

This course is designed to provide students with an understanding of the function and regulation of the organ systems of the body and physiological integration of the systems to maintain homeostasis. Students receive a quantitative and integrated concept of sub cellular, cellular and organ system functions.

Credit: 3 credits **Repeatable: No**

Course Structure

The course will be presented in different formats: Lectures with PowerPoints, self-directed learning, discussions and student assignments etc.

Competencies

This course emphasizes competencies to enhance skills essential for a future health care professional.

- Knowledge
  - **Demonstrate content knowledge and skills in foundational courses required by biomedical professionals**
  - **Demonstrate information literacy**
  - Demonstrate quantitative reasoning
  - **Demonstrate longitudinal learning through coursework**
- Critical Thinking
  - **Develop the skills of self-reflection and peer assessment to improve personal performance.**
  - **Demonstrate the ability to analyze literature and written material**
  - **Demonstrate the ability to distinguish between well-reasoned and poorly reasoned arguments**
- Communication Skills
  - **Demonstrate effective presentation skills to faculty and peers.**
  - **Demonstrate effective listening skills**
  - **Demonstrate effective written communication**

Objectives:

After completing BIOS 210 course, the students should be able to:

- Demonstrate a thorough understanding of the normal physiology of each organ system of the body.
- Apply a thorough understanding of the basic physiologic concepts in clinical scenarios.
- Identify basic abnormal physiologic conditions and to describe their nature.
- Approach the practice of medicine from a sound scientific perspective.

Schedule: Dates and times to be posted at the beginning of the term on the online calendar.

Course Topics / Outline

Activity #	**Lecture Topics**
Week 1	Introduction to Human Physiology, Cell Physiology
Week 2	Nerve
Week 3	Muscular Tissue
Week 4	Autonomic Nervous System, **Quiz 1**
Week 5	Endocrine System, Reproductive System
Week 6	Blood, Students' Presentation
Week 7	**Mid-Term Exam**
Week 8	Respiratory Physiology, Cardiovascular: Heart
Week 9	Cardiovascular: Hemodynamics, Gastrointestinal Physiology
Week 10	**Quiz 2,** Renal Physiology
Week 11	Fluid, Electrolyte & Acid-Base Balance
Week 12	Students' Presentation
Week 13	Pre Examination Review
Week 14	**Final Exam**

Assignments

Present seminar on physiology topics assigned by the respective faculty members.

Textbooks and Reference Materials

Gerard J. Tortora and Bryan H. Derrickson. Principles of Anatomy and Physiology. 14th Edition. Publisher: Wiley.

Linda S. Costanzo. BRS Physiology (Board Review Series). 7th Edition. Publisher: LWW.

Evaluation: Students are evaluated by two quizzes, a midterm exam, a final exam, assignments and their attendance.

	Percentage
Assignments	10%
Quizzes	10%
Mid Term	30%
Final exam	30%
Attendance	10%
Total points	100%

Grade:

Percent of Points	Letter Grade
95-100%	A(h)
90-94%	A
85-89%	B+
80-84%	B
75-79%	C+
70-74%	C
<70%	F

Attendance

The students must attend all the lectures, quizzes, and exams. Attendance counts to 20 points towards the final grade. A students' absence may adversely affect their academic status as specified in the evaluation. Any absenteeism due to illness or any other valid and justifiable reasons will be considered. Students should notify the concerned course director at proper time.

Policies:

Professional Demeanor

The student should be thoughtful and professional when interacting with faculty and other students. Inappropriate behavior includes the use of offensive language, gestures, or remarks with sexual overtones. Students should maintain a neat and clean appearance, and dress in attire that is generally accepted as professional.

Honesty

Students are expected to demonstrate honesty and integrity in all aspects of their education and in their interactions with faculty, administration, physicians, patients, and fellow students. They will not cheat, plagiarize, or assist others in the commission of these acts.

Faculty and Office Hours:

Dr. Yuliya Modna, Associate Professor, Course Director

Dr. Kathryn Murray, Physiology Fellow, Course Instructor

Student can schedule an appointment by email to respective faculty.