

Ministry of Higher Education and Scientific research



**Department of Physics/Medical physics**

**College of Science**

**Salahaddin university-Erbil**

**Subject: Cell and Human Biology**

**Course Book – 2<sup>nd</sup> Year-2<sup>nd</sup> semester**

**Lecturer's name: Awat Yaseen Hasan**

**Lecturer (Practical): Natheer Jameel Yaseen**

**Academic Year: 2022-2023**

## Course Book

<b>1. Course name</b>	<b>Cell and Human biology</b>
<b>2. Lecturer in charge</b>	<b>Awat Y.Hasan</b> <b>Natheer Jameel Yaseen</b>
<b>3. Department/ College</b>	<b>Department of Physics/Medical physics /College of Science</b>
<b>4. Contact</b>	<b>e-mail: <a href="mailto:awat.hasan@su.edu.krd">awat.hasan@su.edu.krd</a></b> <b>E-mail : <a href="mailto:natheer_jameel@yahoo.com">natheer_jameel@yahoo.com</a></b> <b>G-mail: natheer.yaseen@su.edu.krd</b>
<b>5. Time (in hours) per week</b>	<b>Theory: 3</b> <b>Practical: 2hrs./week</b>
<b>6. Office hours</b>	<b>To be Return to the schedule on the office door</b>
<b>7. Course code</b>	
<b>8. Teacher's academic profile</b>	<p><b>Awat Y.Hasan</b></p> <p>graduated from Salahaddin University in 2012.</p> <p>In the same year I permanently employed in college of science Department of Biology as assistant Biology till 2014.</p> <p>I completed my masters in cell physiology in February 2017,and achieved my academic title as assistant lecturer in August 2018, and started teaching in my department till now.</p> <p><b>Natheer Jameel Yaseen</b></p> <ul style="list-style-type: none"> <li>I graduated from Salahaddin University/ College of Science/ Biology department in 2008 (Ranked 1<sup>th</sup> in college). In 2009 I worked as assistant biology for two years and assisted in practical plant physiology lab., Zoology lab., Histology lab., sewage</li> </ul>

	<p>Microbiology lab., and plant communities lab. In 2013 I completed my M.Sc. degree and after a year in 2014 started as Assistant Lecturer Teaching Practical Zoology, Genetics, Biology lab and hematology in the same college. For about 8 years I worked as a Member of the Examination Committee for College of Science. I worked as head of pharmacy department in noble institute for 2 years (2017-2019), and as a department coordinator for about 2 years (2016-2017), In 2022 I get a scientific promotion to lecturer in Cytogenetics.</p>
<p><b>9. Keywords</b></p>	<p><b>Cell physiology, Neurophysiology, Muscle physiology etc.....</b></p>
<p><b>10. Course objective:</b> The purpose of taking this course is to learn the basic concepts and principles of cell and human biology.</p>	
<p><b>11. Student's obligation</b> Attendance in lecture is expected. You are responsible for everything covered, mentioned, discussed and displayed in class. If you miss a class, get a classmate's notes as my notes will not be available. You cannot excel in this course if you do not come to class.</p>	
<p><b>12. Forms of teaching</b> Coursebook, PowerPoint, board and video.</p>	
<p><b>13. Assessment scheme</b> Assessment will be in the form of three in-class midterm exams, a final comprehensive exam, a series of unannounced quizzes and homework assignments.</p> <p><b>Theory      15    (Exam 13 + Quizzes 2 )</b></p> <p><b>Practical    35    (exam: 30 marks + Quizzes: 5 marks)</b></p>	

**Total marks 50**

**14. Examinations:**

**1. Compositional:** In this type of exam the questions usually starts with Explain how, What are the reasons for...?, Why...?, How....?

**2. fill the blanks:**

**3. Practical: Sample, Slide and Block identifying:**

Example: identify the sample

**Lectures**

Introduction to Cell and Human Biology

Human tissues

Skeletal System

Overview of the Skeletal System

Bones of the Axial Skeleton

Bones of the Appendicular Skeleton Articulations

Bone Growth and Homeostasis

Muscular System

Overview of the Muscular System

Skeletal Muscle Fiber Contraction

Whole Muscle Contraction

Muscular Disorders

Nervous System

Overview of the Nervous System

The Central Nervous System 289

The Limbic System and Higher Mental Functions

The Peripheral Nervous System

Drug Therapy and Drug Abuse

Senses

Overview of Sensory Receptors and Sensations

Somatic Senses

Senses of Taste and Smell

Sense of Vision

Sense of Hearing

Sense of Equilibrium

Cardiovascular System: Heart and Blood Vessels

Overview of the Cardiovascular System

The Types of Blood Vessels

The Heart Is a Double Pump

Features of the Cardiovascular System

Two Cardiovascular Pathways

Exchange at the Capillaries

Cardiovascular Disorders

Cardiovascular System: Blood

Blood: An Overview

Red Blood Cells and Transport of Oxygen

White Blood Cells and Defence Against Disease

Platelets and Blood Clotting

Human Blood Types
Respiratory System The Respiratory System The Upper Respiratory Tract The Lower Respiratory Tract Mechanism of Breathing Control of Ventilation Gas Exchanges in the Body Respiration and Health
Digestive System and Nutrition Overview of Digestion The Mouth, Pharynx, and Esophagus The Stomach and Small Intestine The Accessory Organs and Regulation of Secretions The Large Intestine and Defecation Nutrition and Weight Control
Cancer Overview of Cancer Causes and Prevention of Cancer Diagnosis of Cancer Treatment of Cancer
<b><i>Practical course program</i></b> <b><i>Week 1:</i></b>

Course book and Introduction to human Biology

**Week 2:**

Microscope

**Week 3:**

Diversity of the Cells

**Week 4:**

The cell cycle and mitosis

**Week 5:**

Meiosis Division in human cells

**Week 6:**

Human tissues

**Week 7:**

Human blood group

**Week 8:**

Human Blood sugar and Diabetes

**Week 9:**

Human Blood pressure

**Week 10:**

Human Fingerprints

**Week 11:**

Transport of Substances across Membranes

**Week 12:**

A Nuclear Bioassay: Micronucleus test

