



Department of General Science

College of Basic Education

Salahaddin University-Erbil

Subject: Cytology

First Semester

Lecturer's name: Dr.Suhaira Waleed Abdullah

Academic Year: 2022/2023

Course Book

1-Course name	Cytology (First Semester)
2. Lecturer in charge	Lecturer Dr. Suhaira Waleed Abdullah
3. Department/ College	General Science Department / Collage of Basic Education
4. Contact	e-mail: suhaira.abdullah@su.edu.krd Tel: (optional) 07512240145
5. Time (in hours) per week	Theory: (2)hours Practical:
6. Office hours	
7. Course code	
8. Teacher's academic profile	<p><i>MSc. Degree: In Biology (Biology DEPARTMENT)</i> <i>Working as an assistant lecturer in Dohuk University I worked as a lecturer in college of Veterinary (1st stage teaching Zoology & Histology) and college of Education (2nd stage teaching Histology & Embryology) , also member in Biology syndicate in Hawler, Taking a course on teaching method in 2001.</i> <i>2013 PhD.Biology /Entomology</i> <i>Since 2006-2019 I worked as lecturer in Agriculture College teaching undergraduate & postgraduate students (General Biology and Physiology)</i> <i>a lecturer in Physiotherapy department /Health Technical College from 2019-2021</i> <i>1st physiotherapy students (Human physiology)</i> <i>2nd physiotherapy students (Pathology)</i> <i>4th MLT Clinical microbiology.</i> <i>Now I am a lecturer and academic staff of General Sciences/Basic Education college/Salahhadeen University.</i></p>
9. Keywords	Cell, Cell cycle, Cell division, Apoptosis, Cell components, Eukaryotics and prokaryotics.
10. Course overview: Cell and molecular biology is the study of the cell, definition of it ,the relation between this science and another science , studying the theory of this science .	
11. Course objective: The objective of this subject is to learning the students what is the meaning of the cell ,its components ,its division ,cell cycle	

12. Student's obligation. The role of the students is hum works and examinations.

13. Forms of teaching : 1- Data show ,explaining on data show in English and Kurdish language
3-White board

14. Assessment scheme

The whole course having a rank of%40 for two examinations one of them is the first exam and the second examination , and the final examination have %60 the total is 100.

15. Student learning out: By the end of the course students will be able to:

1-Defination of cell and molecular biology.

2-Theory of this science.

3-The important of this science in our life

16. Course Reading List and References:

1. *Cell Movements and the Shaping of the Vertebrate Body* in Chapter 21 of *Molecular Biology of the Cell* fourth edition, edited by Bruce Alberts (2002) published by Garland Science.
2. Campbell, Neil A.; Brad Williamson; Robin J. Heyden (2006). *Biology: Exploring Life*. Boston, Massachusetts: Pearson Prentice Hall. [ISBN 0-13-250882-6](#).
3. Karp, Gerald (19 October 2009). *Cell and Molecular Biology: Concepts and Experiments*. John Wiley & Sons. p. 2. [ISBN 9780470483374](#). Hooke called the pores cells because they reminded him of the cells inhabited by monks living in a monastery.
4. Schopf, JW, Kudryavtsev, AB, Czaja, AD, and Tripathi, AB. (2007). "Evidence of Archean life: Stromatolites and microfossils." *Precambrian Research* 158: 141–155.
5. Michie K, Löwe J (2006). "Dynamic filaments of the bacterial cytoskeleton". *Annu Rev Biochem.* **75**: 467–492. [doi:10.1146/annurev.biochem.75.103004.142452](#). [PMID 16756499](#)
6. Alberts, Bruce; Johnson, Alexander; Lewis, Julian; Morgan, David; Raff, Martin; Roberts, Keith; Walter, Peter. *Molecular Biology of the Cell, Sixth Edition*. Garland Science. pp. 1–10. [ISBN 9781317563754](#).
7. Harvey Lodish ... [et; Berk, Arnold; Zipursky, S. Lawrence; Matsudaira, Paul; Baltimore, David; Darnell, James (2000). *Molecular cell biology* (4th ed.). New York: Scientific American Books. [ISBN 0716731363](#).
8. "[Polymerase Chain Reaction \(PCR\)](#)". www.ncbi.nlm.nih.gov. Retrieved 31 December2016.

17.. Practical Topics

18-The Topics

- 1- Introduction & definition of the cell.
- 2- Plant cell &Animal cell the differences between them
- Preparation of the cells animal cell, plant cell.
- 3- Eukaryotic cell & Prokaryotic cell the comparative between them.
- 4- The cell components
- 5- Cell wall
- 6- Cell membrane

7- Protoplasm

8- Endoplasmic reticulum i-Rough E.R ii-Smooth E.R

9- Mitochondria

10- Plastids

11- Vacuoles ' Lysosome

12- Genetic materials DNA

13- RNA

14-Golgi body

15- Centrosome.

16-Cell division mitosis & Meiosis division, the comparative between them.

17- Kind of the cell according to the size, shape, Function.

18- Preparation of the cells animal cell, plant cell

19- Preparation of autosomal cell &sexual cell in plant &animal.

20- Apoptosis or programed cell death

21- DNA packaging

Grade Weighting نمره‌ی هئوسهنگاندن

Examination	Practical degree %	Seasonal Exam.
1 st Examination		20
2 nd Examination		20
Final Exam.		60
Total 100%		

Type of questions

Q1: Correct the following then write the true answer.

Q 2 : Complete the following .

Q3-:Choose the suitable answer from the following.

Q4-Answer by images only.

Q5-Compare between the following.

Q6- Count the following.

Q7- Define the following