



**Jordan University of Science and Technology**  
**Faculty of Science & Arts**  
**Applied Biological Sciences Department**

BIO251 Cell Biology

First Semester 2017-2018

**Course Catalog**

3 Credit Hours. This a single semester course in cell biology that focuses on fundamental concepts such as the relationship between molecular structure and function, the dynamic character of cellular organelles, the use of chemical energy in running cellular activities and ensuring accurate macromolecular biosynthesis, the observed unity and diversity at the macromolecular and cellular levels, and the mechanisms that regulate cellular activities. Additionally, students will be exposed to the experimental approach in cell biology will gain some knowledge of how we know what we know in cell biology

**Text Book**

|                          |   |
|--------------------------|---|
| <b>Title</b>             | Cell and Molecular Biology  |
| <b>Author(s)</b>         | Gerald Karp   |
| <b>Edition</b>           | 6th Edition   |
| <b>Short Name</b>        | 1   |
| <b>Other Information</b> | Additional reading materials will be provided through the e-learning course website |

**Course References**

**Instructor**

|                 |  |
|-----------------|--|
| Name            | <b>Dr. Khaldon Bodoor</b>  |
| Office Location | -  |
| Office Hours    | Sun : 12:30 - 13:30<br>Mon : 10:00 - 11:00<br>Mon : 11:30 - 12:30<br>Tue : 12:30 - 13:30<br>Wed : 11:30 - 12:30<br>Thu : 12:30 - 13:30 |
| Email           | khaldon_bodoor@just.edu.jo   |

**Class Schedule & Room**

Section 1:

Lecture Time: Sun, Tue, Thu : 11:30 - 12:30

Room: M2202

**Tentative List of Topics Covered**

| <b>Weeks</b> | <b>Topic</b>  | <b>References</b>         |
|--------------|---|---------------------------|
| Week 1       | Introduction to the Study of Cell and Molecular Biology | <b>ch1</b> From <b>1</b>  |
| Week 2       | The Chemical Basis of Life                              | <b>ch2</b> From <b>1</b>  |
| Weeks 3, 4   | The Structure and Function of the Plasma Membrane       | <b>ch4</b> From <b>1</b>  |
| Weeks 5, 6   | Interactions Between Cells and Their Environment        | <b>ch7</b> From <b>1</b>  |
| Weeks 7, 8   | Cytoplasmic Membrane Systems                            | <b>ch8</b> From <b>1</b>  |
| Weeks 8, 9   | The Cytoskeleton and Cell Motility                      | <b>ch9</b> From <b>1</b>  |
| Weeks 9, 10  | The Cell Nucleus and the Control of Gene Expression     | <b>ch12</b> From <b>1</b> |
| Week 11      | Cellular Reproduction                                   | <b>ch14</b> From <b>1</b> |
| Week 12      | Cell Signaling and Signal Transduction                  | <b>ch15</b> From <b>1</b> |
| Week 13      | Cancer  | <b>ch16</b> From <b>1</b> |
| Weeks 14, 15 | Techniques in Cell and Molecular Biology                | <b>ch18</b> From <b>1</b> |

**Mapping of Course Objectives to Program Student Outcomes<sup>1</sup>**

**Assessment method**

|  |  |
|--|--|
| Understand the basic properties of cells and describe and the structure and function of cellular organelles [1A, 1D]         |  |
| Describe the interactions between cells and their environments and understand the molecular basis of cellular signaling [1C] |  |
| Understand the concept of cellular reproduction and the cellular basis of cancer [1C, 1E]                                    |  |
| Get a brief introduction to the tools and experiments related to cell biology [1B, 1D]                                       |  |
| Students should be able to discuss and analyze contemporary issue in cell biology [1F]                                       |  |

**Relationship to Program Student Outcomes (Out of 100%)**

| A     | B  | C  | D     | E  | F  |
|-------|----|----|-------|----|----|
| 12.50 | 10 | 30 | 22.50 | 10 | 15 |

**Policy**

|                         |   |
|-------------------------|---|
| <b>Class Attendance</b> | Your class attendance is mandatory. Absences in excess of 20% of the total lecture hours will result in your being dropped from the course with a failing grade |
|-------------------------|---|

|              |   |
|--------------|---|
| Makeup Exams | Make-up exam appeals should be filed within one week of the missed exam   |
| Cell phones  | Cell phones are completely prohibited during examinations according to the university regulations i.e. you are not allowed to bring your phone into the exam hall |
| Cell phones  | Cell phones must be turned off during lectures. No incoming or outgoing calls or text messages are allowed  |
| Cheating     | Unethical conduct, including cheating during examinations, will result in punishment by the university administration   |

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