



## Course Syllabus

1st Semester 1439/1440

Course Number	Course name	credit hours	Communication hours
BIO 072	GENERAL BIOLOGY	3	4
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### Course's Objectives:

Upon completion of this course the student should be able to:

- 1- Explain the basic chemical principles that affect living things and how they obtain energy.
- 2- Describe the structure of eukaryotic and prokaryotic cell.
- 3- Describe how cell structures are adapted to their functions and explain the process of cell growth and division.
- 4- Analyze how cellular information is passed from one generation to another in particular the structure of DNA and how it functions in genetic inheritance.
- 5- Describe natural selection and explain how populations evolve to form new species.
- 6- Distinguish bacteria from viruses.
- 7- Describe the types of humane tissues and systems.
- 8- Understand the basis of immunity and types of immunoglobulins.
- 9- Define characteristics and traits of animals including how they collect information about their environments and interact with it and other organisms.

### Text Book:

- Campbell, 3. Wasserman, S.A., Reece, J.B. and etal.,–Pearson Biology 11th ed. (2017); international edition. ISBN-13: 978-1-292-17043-5.
- Campbell, 3. Wasserman, S.A., Reece, J.B. and etal.,–Pearson Biology 10th ed. (2017); international edition. ISBN-13: 978-1-292-17043-5
- Human Biology, Daniel D. Chiras, (2010). Jones & Bartlett Learning; 7 edition (December 23).

## Grading:

Parameters	Score
Quiz 1	10%
Mid-term	30%
Quiz 2	10%
Self learning	10%
Final exam	40%
<b>Total</b>	<b>100%</b>

## Attendance:

Attendance will be taken in the first 5 minutes of the lecture (lectures). If you came late, you should remind me at the end of the class to consider your attendance for the second lecture, otherwise, you will be marked absent for the two lectures. Accepted excuses for absence should be submitted within two weeks after the absent lectures.

## Course schedule (by Weeks):

No of Weeks	Lecture topics	Contact hours
<b>W1</b> 2/9/2018	<ul style="list-style-type: none"><li>▪ Introduction</li><li>▪ Characteristics of life - properties of living matter, differences between living and nonliving matter</li></ul>	<b>4</b>
<b>W2</b> 9/9/2018	<ul style="list-style-type: none"><li>▪ Fundamental Biology Skills and Knowledge:<ul style="list-style-type: none"><li>- Water's properties, Acids ,bases and buffers</li><li>- The importance of pH to living organisms</li></ul></li></ul>	<b>4</b>
<b>W3</b> 16/9/2018	<ul style="list-style-type: none"><li>▪ Macromolecules :<ul style="list-style-type: none"><li>- Carbohydrates – Lipids</li><li>- Proteins- Nucleic acids</li></ul></li></ul>	<b>4</b>
<b>W4</b> <b>Quiz 1</b>		
<b>W4</b> 23/9/2018	Cell structure and function	<b>2</b>
<b>W5</b> 30/9/2018	<ul style="list-style-type: none"><li>▪ Cell membrane</li></ul>	<b>4</b>

	<ul style="list-style-type: none"> <li>▪ Cell division ( Mitosis)</li> </ul>	
<b>W6</b> <b>7/10/2018</b>	<ul style="list-style-type: none"> <li>▪ Cell division (Meiosis )</li> <li>▪ Linkage and chromosomes</li> <li>▪ Genetic diseases</li> </ul>	<b>4</b>
<b>W7</b> <b>14/10/2017</b>	<ul style="list-style-type: none"> <li>▪ Nucleic acid and inheritance</li> <li>▪ review</li> </ul>	<b>2</b>
<b>W8</b> <b>21/10/2018</b> <b>Mid-term Exam</b>		
<b>W9</b> <b>28/10/2018</b>	<ul style="list-style-type: none"> <li>▪ Types of Tissues in human body</li> <li>▪ Enzymes and their roles</li> </ul>	<b>4</b>
<b>W10</b> <b>4/11/2018</b>	<ul style="list-style-type: none"> <li>▪ Photosynthesis, cellular respiration and fermentation.</li> </ul>	<b>4</b>
<b>W11</b> <b>11/11/2018</b>	<ul style="list-style-type: none"> <li>▪ Human Systems: Digestive and Circulatory system</li> </ul>	<b>4</b>
<b>W12</b> <b>18/11/2018</b>	<ul style="list-style-type: none"> <li>▪ Human Systems: Respiratory and Nervous system</li> </ul>	<b>4</b>
<b>W13</b> <b>25/11/2018</b>	<ul style="list-style-type: none"> <li>▪ Human Systems: Endocrine, excretory and reproductive system</li> </ul>	<b>2</b>
<b>W13</b> <b>Quiz 2</b>		
<b>W14</b> <b>2/12/2018</b>	<ul style="list-style-type: none"> <li>▪ Types of immunities in human</li> <li>▪ Structures and types of immunoglobulins.</li> </ul>	<b>4</b>
<b>W15</b> <b>9/12/2018</b>	<ul style="list-style-type: none"> <li>▪ Classification of bacteria and some related diseases</li> <li>▪ Types of body fluids</li> </ul>	
<b>W16</b> <b>16/12/2018</b> <b>Final Exam</b>		

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