

## Course Description Form

1. Course Name: General biology (Theory)	
2. Course Code:	
3. Semester / Year: first 2025/2026	
4. Description Preparation Date:2025	
5. Available Attendance Forms: Live attendance in the classroom	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours/2	
7. Course administrator's name (mention all, if more than one name)	
Name: abbas ghali hamad Email: abbas.ghali@mohers.gov.iq	
8. Course Objectives	
<b>  Course Objectives</b>	
<ol style="list-style-type: none"> <li>1. Understand the level of organization among living organisms.</li> <li>2. Be able to recognize and describe cell morphology and components.</li> <li>3. Understand the Nucleic acid structure and role.</li> </ol>	
9. Teaching and Learning Strategies	
<b>Strategy</b>	<b>Discription</b>
Interactive Lectures	Delivering content via modern presentation tools
Case-Based Learning	Studying the, cells, and tissues
Project-Based Learning	Assigning students to prepare research and reports on disease-related topics and cell responses
Group Discussions	Organizing discussions on disease-cell-tissue relationships to enhance critical thinking
E-Learning	problem-solving
Formative Assessment	Providing digital resources via university platforms; students watch educational videos submit reports
	Short quizzes during the semester to trackn progress and reinforce understanding

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method
first	2	Knowledge	<b>Introduction to Biology</b> -History and General concepts of Biology -Cell theory -Comparing Prokary and Eukaryotic Cells	Giving a lecture using modern presentation methods
second	2	Knowledge	Introduction to the Chemistry of Life -Cells chemistry and Chemical bonds Water -pH, Salts and ions	Giving a lecture using modern presentation methods
third	2	Knowledge	<b>Biologically Important Molecules:</b> -Carbohydrates -Lipids-Proteins -Nucleic Acids	Giving a lecture using modern presentation methods
fourth	2	Knowledge	Introduction to Cell Structure and Function- Plasma Membrane , Passive transport, active transport, factors effect on permeability - Cytoplasm	Giving a lecture using modern presentation methods
fifth	2	Knowledge	<b>Introduction to Cell Structure and Function</b> - Cytoskeleton -Microfilaments, Intermediate Filaments, Microtubules, Flagella and Cilia	Giving a lecture using modern presentation methods
sixth	2	Knowledge	<b>Eukaryotic cell organelles:</b> - Mitochondria (morphology, structure), -lysosomes (types, function).	Giving a lecture using modern presentation methods

seventh	2	Knowledge	<b>Eukaryotic cell organelles:</b> - Golgi complex (morphology, function)	Giving a lecture using modern presentation methods
eighth	2	Knowledge	<b>Eukaryotic cell organelles:</b> -Endoplasmic reticulum (smooth & rough) and their function. -Vesicles and Vacuoles -Ribosome (protein synthesis).	Giving a lecture using modern presentation methods
ninth	2	Knowledge	<b>Eukaryotic cell organelles:</b> - The nucleus, nuclear envelope.	Giving a lecture using modern presentation methods
tenth	2	Knowledge	<b>Eukaryotic cell organelles:</b> - Chromosome structure changes (duplication, translocation, inversion)	Giving a lecture using modern presentation methods
eleventh	2	Knowledge	Neoplasia– Phase II	Giving a lecture using modern presentation methods
twelfth	2	Knowledge	<b>DNA Replication and protein synthesis-The structure of the DNA</b>	Giving a lecture using modern presentation methods
thirteenth	2	Knowledge	<b>DNA Replication and protein synthesis-Transcription</b>	Giving a lecture using modern presentation methods
fourteenth	2	Knowledge	<b>DNA Replication and protein synthesis-Transcription</b>	Giving a lecture using modern presentation methods

fifteenth	2	Knowledge	<b>Introduction to Reproduction at the Cellular Levels</b> -Meiosis -Prokaryotic Cell Division	Giving a lecture using modern presentation methods
<b>exam</b>				
<b>11. Course Evaluation</b>				
Distributing the score out of 40 marks according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc				
<b>12. Learning and Teaching Resources</b>				
Required textbooks (curricular books if any)		1. Elizabeth o Grady, Jason Cashmore, Marsha, Carol Wismer(2018). <i>Principles of Biology- An introduction to Biological Concepts</i> . second Edition. 2. Peter Raven (2016) <i>Biology</i> . Elven Edition. 3. VJ. Bekish, Yu.T. Nikulin (2006) <i>Practical Book on Medical Biology</i> .		
Main references (sources)		Curriculum approved by sectoral committees		
Recommended books and references (scientific journals, reports...)		1. Elizabeth o Grady, Jason Cashmore, Marsha, Carol Wismer(2018). <i>Principles of Biology- An introduction to Biological Concepts</i> . second Edition. 2. Peter Raven (2016) <i>Biology</i> . Elven Edition. 3. VJ. Bekish, Yu.T. Nikulin (2006) <i>Practical Book on Medical Biology</i> .		