



# Course Specification

(Bachelor)

Course Title: **Biology 2**

Course Code: **162 - BIO -3**

Program: **Health track**

Department: **Preparatory Year**

College: **Science and Arts**

Institution: **Najran University**

Version: **1**

Last Revision Date: **4/1/2024**

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## A. General information about the course:

### 1. Course Identification

#### 1. Credit hours: ( 3hrs )

3hrs (2-Theoretical) (1-Practical)

#### 2. Course type

- A. ☐ University ☐ College ☐ Department ☒ Track ☐ Others
- B. ☐ Required ☐ Elective

#### 3. Level/year at which this course is offered: ( Preparatory Year)

#### 4. Course general Description:

This course includes knowledge of the glossary of physiological principle terms and, cell division. This course also includes the different technique fields for biologists, the variation, and the sexual reproduction of humans. It also, includes parasitism, experimentation, and critical evaluation of biological research. Finally, this course includes gene expression and gene regulation

#### 5. Pre-requirements for this course (if any):

#### 6. Co-requisites for this course (if any):

#### 7. Course Main Objective(s):

1. Determine the structure and function of human cell organelles.
2. Describe the principle concepts of molecular biology
3. Describe the differences between the different types of human tissues and their functions
4. Determine the fundamental information of the body systems and their functions, divisions and reproduction.
5. Determine the main principle of the anatomical and physiological aspects of nursing practice
6. Describe all types and functions of body fluids

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	%100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> <li>• Traditional classroom</li> </ul>		





No	Mode of Instruction	Contact Hours	Percentage
	• E-learning		
4	Distance learning		

### 3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	15
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		42

## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Determine the main terms and principles of physiology	K1	<ul style="list-style-type: none"> <li>- Academic lectures.</li> <li>- Scientific discussions.</li> <li>- Use of the library.</li> </ul> Practical Training	<ul style="list-style-type: none"> <li>- First semester exam</li> <li>- The second semester exam</li> </ul> The final test
1.2	Know the field techniques for biologists	K2	<ul style="list-style-type: none"> <li>- Academic lectures.</li> <li>- Scientific discussions.</li> <li>- Use of the library.</li> </ul> Practical Training	<ul style="list-style-type: none"> <li>- First semester exam</li> <li>- The second semester exam</li> </ul> The final test
2.0	Skills			
2.1	Describe the two types of cell division	S1	<ul style="list-style-type: none"> <li>- Academic lectures.</li> <li>- Scientific discussions.</li> <li>- Use of the library.</li> </ul> Practical Training	<ul style="list-style-type: none"> <li>- First semester exam</li> <li>- The second semester exam</li> </ul> The final test





Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
2.2	Describe the gene expression and gene regulation	<b>S2</b>	<ul style="list-style-type: none"> <li>- Academic lectures.</li> <li>- Scientific discussions.</li> <li>- Use of the library.</li> </ul> Practical Training	<ul style="list-style-type: none"> <li>- First semester exam</li> <li>- The second semester exam</li> </ul> The final test
2.3	Explain the variation and sexual reproduction	<b>S3</b>	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- solving problems</li> <li>--cooperative learning</li> </ul>	<ul style="list-style-type: none"> <li>- First semester exam</li> <li>- The second semester exam</li> </ul> The final test
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>			
3.1	Shows the ability and confidence to lead and take the lead in work.	<b>V1</b>	Discussion	Research and participations
3.2	Excels in analyzing information and making decisions in unexpected contexts that require action, self-learning, and innovation.	<b>V2</b>	Teamwork	Research and participation

### C. Course Content

No	List of Topics	Contact Hours
1.	A glossary of physiological terms and principles	2
2.	Cell division (mitotic and meiotic division)	4
3	Field techniques for biologists	4
4	Variation and sexual reproduction	4
5	parasitism	4
6	Experimentation	4
7	Critical evaluation of biological research	4
8	Gene expression and gene regulation	4
<b>Total</b>		<b>30</b>





## D. Practical Course Contents

No	List of Topics	Contact Hours
1	Digestive enzymes (Amylase, Pepsin, Renin, Trypsin, Lipase	2
2	Blood cell counts	2
3	ESR	2
4	Urine analysis	4
5	Blood pressure measurement	4
Total		15

## D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz or homework	continuous	5%
2.	Mid-term theory exam	6	20%
3.	Mid-term Practical semester exam	6	10%
4.	Notebook	continuous	5%
5.	Final Practical exam	7	10%
6.	Final theory exam	13	50%

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

## E. Learning Resources and Facilities

### 1. References and Learning Resources

Essential References	Textbook of biology 2023 and Human Physiology 2013 Wikibooks.org
Supportive References	General biology. Wikibooks.org 2013
Electronic Materials	Elbadry, M. et al., (2013). Introduction to Biology 101. 1 <sup>st</sup> Ed., Pearson Benjamin Cummings (Compiled Version).
Other Learning Materials	<a href="http://pdf.free-ebooks.net">pdf (free-ebooks.net)</a>

### 2. Required Facilities and equipment

Items	Resources
<b>facilities</b> (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1- The lecture hall is suitable for (50 students).





Items	Resources
<b>Technology equipment</b> (projector, smart board, software)	1- The projector 2- A laptop computer 3- Net connection point
<b>Other equipment</b> (depending on the nature of the specialty)	Laboratories equipped with projectors with a capacity of 30 students <ul style="list-style-type: none"> <li>• Glassware suitable for the number of students and experiments</li> <li>• Suitable places for storing chemicals</li> <li>• Appropriate quantities of usable chemicals</li> <li>• A cupboard containing first aid inside the laboratory</li> <li>• Laboratory Safety Guidelines Handbook.</li> </ul> A safe source of flame inside the laboratory

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students, program leaders, peer reviewer	Course Evaluation Questionnaires - Opinion polls through the university website - Learning Outcomes Assessment Poll
Effectiveness of Students assessment	Students, program leaders, peer reviewer	Course Evaluation Questionnaires - Opinion polls through the university website - Learning Outcomes Assessment Poll
Quality of learning resources	Students, faculty, program leaders, peer reviewer	Course Evaluation Questionnaires - Opinion polls through the university website - Learning Outcomes Assessment Poll
The extent to which CLOs have been achieved	Students, program leaders, peer reviewer	Course Evaluation Questionnaires - Opinion polls through the university website - Learning Outcomes Assessment Poll
Other		

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)





### G. Specification Approval

COUNCIL /COMMITTEE	PROGRAM COUNCIL
REFERENCE NO.	14450625-0540-00008
DATE	08/01/2024

