Course Specification

(Bachelor)

Course Title:	Biology for Health Specialties
Course Code:	105BIO-4
Program:	All Health Programs at Jazan University
Department:	Biology
College:	Science
Institution:	Jazan University
Version:	First Version
Last Revision Date:	18 August 2024

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A. General information about the course:

1. Course Identification

1. Credit hours: (4 C.H.)					
(4 C.H.)					
2. Course type					
A.	☐University	☒ College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (1st Year, 2nd Semester)					
4. Course General Description:					
This course includes basic knowledge of biological organizations, biological molecules, cell biology, body tissues, and organ systems of the human body. In addition, it offers information on molecular biology and basic genetics.					
5. Pre-requirements for this course (if any)**:**					
English (Engl-181)					
6. Co-requisites for this course (if any)**:**					
None					
7. Course Main Objective(s):					
By the end of this course the student will **A. Have a good understanding of the basic concepts of human biology, which will help them understand concepts in medical health sciences.** **B. Explain basic information in biological organizations, cell biology, body tissues, structure and functions of human body systems, molecular biology, and basic genetics.**					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	72	100%
2	E-learning	-	-
3	Hybrid • Traditional classroom • E-learning	-	-
4	Distance learning	-	-

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3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	48
2.	Laboratory/Studio	24
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
Total		72

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding (Upon completion of the course, the student will be able to)			
1.1	Define structures, features, processes, mechanisms, modes of action, and theories of all topics related to the Principles of Biology.		Lectures, Group discussions, Lab work.	Direct (formative and summative): In-class interactive questioning, quizzes, written exams Indirect: student survey
1.2	Recall all processes, mechanisms, modes of actions, and theories of all topics relevant to the Principles of Biology.		Lectures, Group discussions, Lab work.	Direct (formative and summative): In-class interactive questioning, quizzes, written exams Indirect: student survey
1.3	Identify different structures, functions, and mechanisms related to principles of biology.		Lectures, Group discussions, Lab work.	Direct (formative and summative): In-class interactive questioning, quizzes, written exams Indirect: student survey
2.0	Skills (Upon completion of the course, student will be able to)			
2.1	Examine theoretically or practically the slides, photos, diagrams, or statements related to principles of biology.		Lectures, Group discussions, Lab work.	Direct (formative and summative): In-class interactive questioning, quizzes, written exams Indirect: student survey

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C. Course Content

No	List of Topics	Contact Hours
1.	**Introduction to Biology:** Characters of living organisms, Biological Organization, Principles of Biology, Scientific investigation, biological diversity. **Biological Molecules:** Carbohydrates, Lipids, Proteins, Nucleic Acids	7.5
2.	**Organization of the human body:** The Cell: Cell size, Prokaryotic / Eukaryotic Cell, Plant / Animal Cell, Cell shape. Cell constituents: Nucleus, Ribosomes, Endomembranous System.	3
3.	Mitochondria, Cytoskeleton, Centrosomes, Motile Cilia, Flagella, and Cell Junctions.	3
4.	**Cellular Reproduction and Genetics:** (Cell cycle and DNA replication).	1.5
5.	**Cell division**: Mitosis, cell cycle control & Meiosis.	3
6.	Heredity: Mendel's principles	3
7.	The flow of Genetic Material from DNA to RNA to Protein	3
8.	Genetic Mutations	1.5
9.	Digestion and Digestive System	1.5
10.	Gas Exchange and Respiratory System	1.5
11.	Circulatory & Lymphatic Systems	3
12.	Immune System	1.5
13.	Hormones and the Endocrine System	3
14.	Urinary System	1.5
15.	Nervous System	1.5
16.	Tissues of the Human Body: Epithelial and Connective Tissues, Bones, Cartilage, Muscular and Nervous Tissues	3
17.	Reproductive System (Female)	1.5
18.	Reproductive system (Male)	1.5
19.	Tutorial, Presentations, and Projects,	3
	Total	**48**
II. Practical Part		
1.	Laboratory Safety Measures and Microscopy	2
2.	Cell Organelles and Inclusions	2
3.	Mitosis and Meiosis	2
4.	Epithelial Tissue	2
5.	Connective Tissue, Bone, Cartilage.	4
6.	Nervous & Muscular Tissues	2

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7.	Human Skeletal System	2
8.	Sense Organs	2
9.	Human Brain	2
10.	Human Blood (Composition and Grouping)	2
11.	Dissection Techniques and Anatomy of Relevant Mammalian Experimental Animals.	2
	Total	**24**
Total		**72**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	6th week	5%
2.	Midterm Practical Exam and Activities	7th week	10%
3.	Midterm Theory Exam	8th week	20%
4.	Final Practical Exam	14th week	15%
5.	Final theory Exam	17th week	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	**Biology (concepts and connections),** 9th Edition by Neil A. Campbell, Jane B. Reece, Martha R. Taylor, Eric J. Simon, and Jean L. Dickey. Pearson Benjamin Cummings, San Francisco, CA 94111, 2011.
Supportive References	**Biology,** 6th edition by Eldra P. Solomon, Lina R. Berg, and Diana W. Martin. Publisher: Brooks/Cole, Thomson Learning, 2002, ISBN: 0-03-033503-5. **Basic Genetics: Textbook & activities;** 2nd Edition by A. Abouelmagd & H. M. Ageely. Publisher: Universal Publishers: Boca Raton, Florida, USA, 2009.
Electronic Materials	https://www.ck12.org/book/CK-12-Biology/
Other Learning Materials	

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2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	- Lecture halls with an adequate number of seats and audio-visual facilities - Small group classes - Laboratory labs for biology provided with microscopes, computers
Technology equipment (projector, smart board, software)	- Audio-visual facilities in lecture halls and laboratory lab of Medical Biology - Smart board for all classes and labs. - Student library
Other equipment (depending on the nature of the specialty)	- Student compound microscopes - Stereomicroscopes - Dissecting tools - Glassware for sample maintenance - Balances - Human tissue sections - Human skeleton

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students, Faculty	Direct assessment of CLOs, Indirect surveys.
Effectiveness of Students assessment	Students, Faculty	Direct / Indirect
Quality of learning resources	Students, Faculty	Indirect
The extent to which CLOs have been achieved	Instructor	Direct / Indirect
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**BIOLOGY DEPT. COUNCIL**
REFERENCE NO.	
DATE