هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	*Animal Physiology*
Course Code:	*BIO1306*
Program:	*Bachelor of Science in Biology*
Department:	*Department of Biology*
College:	*Faculty of Science*
Institution:	*University of Tabuk*
Version:	***Course Specification Version Number***
Last Revision Date:	*September 2023*

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A. General information about the course:

1. Course Identification

1. Credit hours:					
3 Credit (2 theoretical + 1 practical) hours					
2. Course type					
A.	☐University	☐ College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (5th Level / 3rd year)					
4. Course general Description:					
This course covers topics on an introduction to general concepts of animal anatomy & physiology, animal tissues & organization of a living system, structure, and functions of blood and various systems of animals (integumentary system, nervous system, endocrine system, digestive system, urinary system, reproductive system, cardiovascular system, and reproductive system). In addition, this course includes topics on body fluids, thermoregulation, and metabolism.					
5. Pre-requirements for this course (if any)**:**					
Vertebrates (BIO1207).					
6. Co-requirements for this course (if any)**:**					
None					
7. Course Main Objective(s):					
By the end of this course, the students should be able to: - Demonstrate the basic concepts of animal anatomy & physiology. - Understanding the different anatomy and function of animal organ systems. - Have an enhanced knowledge and appreciation of mammalian physiology. - Explain the basic principles of thermoregulation and metabolism. - Define the essential terms related to each animal organ system. - Explain the form & function of different body fluids. - Perform, analyze, and report on experiments and observations in physiology.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2	50%
2	E-learning		

No	Mode of Instruction	Contact Hours	Percentage
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		
5	**Others (Lab work)**	2	50%

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		**60**

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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Describe the basic concepts of animal physiology.	K1	-Lectures. -Class discussion. -Group discussion. -Case studies.	-Quizzes -Midterm examination. -Final examination. -Class discussion and participation. - Homework (Problem-solving).
1.2	Recognize the structure, function of	K1	-Lectures. -Class discussion.	-Quizzes

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	animal organ systems and the basic principles of thermoregulation and metabolism.		-Group discussion. -Homework assignments. -Case studies.	-Midterm examination. -Final examination. -Class discussion and participation. -Homework assignments.
2.0	**Skills**			
2.1	Summarize the structures and functions of organs and organ systems.	S1	-Lectures. -Short essay -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. - Homework (Problem-solving).
2.2	Interpret the causes of defects in organ system function and the methods of treatment.	S3	-Lectures. -Short essay -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. - Homework (Problem-solving).
3.0	**Values, autonomy, and responsibility**			

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
3.1	Show a teamwork attitude or work independently	V1	-Short essay -Class discussion. -Group discussion.	-Class discussion and participation. -Homework (Problem-solving).

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction & concepts of animal anatomy & physiology	2
2.	Cellular communications and membrane transport.	2
3.	Animal tissues & organization of living system	2
4.	Digestive system: structure & function.	2
5	Digestive system: mechanism of digestion, absorption, and role of enzymes in digestion and metabolism	2
6.	Endocrine system & disorders.	2
7.	Cardiovascular system & thermoregulation.	2
8.	Muscular system & body heat.	2
9.	Nervous system: structure & function.	2
10.	Nervous system: sensory mechanism (Eyes, Noses Ears and Taste buds; how they work.	2
11.	Kidneys and fluid regulation.	2
12.	Respiratory system: structure.	2
13.	Respiratory system: Mechanisms of respiration, exchange of gases, mechanism of Inspiration and exhalation.	2
14.	The reproductive male system.	2
15.	The reproductive female system.	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Class Participation	During whole teaching period	5

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
2.	Homework (Problem-solving)	3 to 13	5
3.	Short Exams (Quizzes)	During whole teaching period	5
4.	Midterm Theoretical Examination	8-9	20
4.	Reports (For Practical)	During whole teaching period	10
5.	Final Practical Examination	15	15
6.	Final Theoretical Examination	17	40

*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	- Randall, D., Burggren, W. and French, K. (2015). Eckert Animal Physiology: Mechanisms and Adaptations, 6th edition. New York W.H. Freeman and Co., USA. ISBN-10: 0-7167-8630-3.
Supportive References	- Rastogi, S. C. (2007). Essentials of Animal Physiology, 4th edition. New Age International Pvt. Ltd., Publisher, ISBN: 978-81-224-2429-4.
Electronic Materials	- Websites on the internet that are relevant to the topics of the course. - www.sciencedirect.com - www.plantphysiol.org.
Other Learning Materials	Multimedia associated with the textbook and the relevant websites.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	- Well-equipped classrooms and laboratories that accommodate a sufficient number of students. Ecology and Environment Laboratory is required.
Technology equipment (projector, smart board, software)	- Projectors required in each lecture room and laboratory.

Items	Resources
Other equipment (depending on the nature of the specialty)	- Instruments required for conducting the animal physiology experiments like microscopes, hemocytometer, PH meter, electronic balance, spectrophotometer, centrifuge, electrophoretic unit, spirometer, physiography.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	- Students. - Faculty members.	Indirect & direct: - Questionnaires. - Meetings.
Effectiveness of Students assessment	- Quality and development committee. - Department chair.	- Course report. - Program annual report.
Quality of learning resources	- Plan and program committee. - Students. - Staff members.	Indirect & direct: - Questionnaires. - Meetings. - Reports.
The extent to which CLOs have been achieved	- Quality and development committee. - Peer Reviewer. - Program leaders.	Indirect & direct: - Questionnaires. - Meetings. - Reports.
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**PROGRAMS AND STUDY PLANS COMMITTEE**
REFERENCE NO.	
DATE	**SEPTEMBER 2023**