هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	*General Entomology*
Course Code:	*BIO1302*
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*

Table of Contents

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:					
The course includes a general introduction to Entomology, importance of insect, the reason of their success and economic importance, classification and systematic taxonomy of arthropods with emphasis on insects, the external morphology (head, thorax and abdomen appendages) and the internal anatomy of insects, growth and development, physiology of insects (Endocrine system), elements of insect behavior, and their interaction with human and environment.					
5. Pre-requirements for this course (if any)**:**					
Invertebrates (BIO1204).					
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: - Explain the evolution of insects, list the general characteristics of insects, and align them with factors that contribute to their success in the environment. - Explain the importance of insects as members of ecosystems. - Describe the basic morphology, anatomy, taxonomy, development, life histories and key characteristics of different insect groups. - Identify common orders and families of insects.					

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	Define key concepts and terms relating to insect biology, identification, and evolution	K1	-Lectures. -Class discussion. -Group discussion. -Case studies.	-Quizzes -Midterm examination. -Final examination. -Class discussion and participation. - Homework (Problem-solving).
1.2	Describe the basic external and internal	K1	-Lectures. -Class discussion.	-Quizzes

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	structures and organ systems of insects and how they function in relation to the environment.		-Group discussion. -Homework assignments. -Case studies.	-Midterm examination. -Final examination. -Class discussion and participation. -Homework assignments.
2.0	**Skills**			
2.1	Recognize, identify and classify common insects, using taxonomic keys to identify order and/or family.	S1	-Lectures. -Short essay -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. - Homework (Problem-solving).
2.2	Distinguish the structural and functional modifications which contribute to the success of insects.	S2	-Lectures. -Short essay -Class discussion. -Group discussion. -Brainstorming.	-Quizzes -reports -Final examination. -Class discussion and participation. - Homework (Problem-solving).
2.3	Describe basic insect physiology, including growth and development of	S3	-Lectures. -Short essay	-Quizzes -reports

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	different types of insects.		-Class discussion. -Group discussion. -Brainstorming.	-Final examination. -Class discussion and participation. - Homework (Problem-solving).
3.0	**Values, autonomy, and responsibility**			
3.1	Work in a team to conduct a specific project.	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 to Course.	2
2.	Importance of insects (Reasons for success).	2
3.	Systematics and Taxonomy (Evolution and diversity, Class Insecta, Taxonomic position).	2
4.	External features: Head (Antennae and Mouth-parts).	2
5	Thorax (Legs and Wings).	2
6.	Abdomen (adult and immature stages).	2
7.	Growth and development (Metamorphosis).	2
8.	Internal Anatomy (Digestive & Excretory Systems).	2
9.	Internal Anatomy (Circulatory System).	2
10.	Internal Anatomy (Respiratory System).	2
11.	Internal Anatomy (Reproductive System).	2
12.	Internal Anatomy (The Nervous System).	2
13.	Insect Physiology (Endocrine System).	2
14.	Insect Behavior (Elements of Behavior/ Insect Communication).	2
15.	Insect Ecology (Trophic levels: herbivores, carnivores, decomposers).	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
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	- Adham, F. K. (2009) Medical and Veterinary Entomology. First Edition, A.R.E., ISBN: 977-17-6549-3.
Supportive References	- Fundamentals of entomology, Richard J. Elzinga (2004), Pearson/Prentice Hall, 2004 - 512 pages. - Vincent H.R.; Ring T.C. (2009): Encyclopedia of Insects, second edition. Academic press. ISBN-10: 0123741440.
Electronic Materials	- Websites on the internet that are relevant to the topics of the course.
Other Learning Materials	- Microsoft office package.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	- Lecture halls, containing white boards, and electronic monitors. The seats fit the number of students.

Items	Resources
	- Laboratories equipped with three tables and water sources, microscopes, and animal samples.
Technology equipment (projector, smart board, software)	- Well-equipped lab and lecture room with computers and display screens installed with curtains on the windows are required
Other equipment (depending on the nature of the specialty)	- Prepared microscope slides for the different types of insects and insect body parts - Specimens for lab dissection - Dissecting tools and dishes

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