ATTACHMENT 5.

T6. COURSE SPECIFICATIONS (CS)

Entomology (BIO 359)

هيئة تقويم التعليم
Education Evaluation Commission

Course Specifications

Institution: **University of Tabuk**	Date: 12/08/1440H
College/Department: **Science / Biology**	

A. Course Identification and General Information

1. Course title and code: **Entomology (BIO 359)**
2. Credit hours: **3**
3. Program(s) in which the course is offered: **Biology**
(If general elective available in many programs indicate this rather than list programs)
4. Name of faculty member responsible for the course: Dr. Nabawy Abdel Rahman Elkattan
5. Level/year at which this course is offered: **6th level**
6. Pre-requisites for this course (if any): **Zoology (BIO251)**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **N.A.**
9. Mode of Instruction (mark all that apply):

a. traditional classroom	√	What percentage?	75
b. blended (traditional and online)		What percentage?	
c. e-learning		What percentage?	
d. correspondence		What percentage?	
f. other (Lab work)	√	What percentage?	25

Comments:

B Objectives

1. What is the main purpose for this course?

At the end of this course should get to:

- Appreciate the value and importance of insects.
- Understand the need for good management practices.
- Learn about the classification, biology, ecology, behaviour, and control of insects.
- Identify major orders and families of insects.
- Acquire skills for collecting, mounting, and preserving insects for scientific study.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

- Annual review of course by departmental course planning committee.
- Annual review of the laboratory sessions and re-developed with recent specimens and prepared microscopic slides
- Updating course curriculum using internet materials.
- Comparison of course topics with equivalent local and international courses. The use of high-accuracy optical microscopes to examine insect specimens.
- Evaluation of the course content and its scientific benefit by students in practical ways.
- To encourage the student to the discussion during the lecture.

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

- The course includes 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 (digestive, respiratory, nervous, excretion and circulatory), their life cycle, growth and development, physiology of insects (Endocrine system), elements of insect behaviour, and their interaction with human and environment.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Importance of insects (Reasons for success).	1	3
Systematics and Taxonomy (Evolution and diversity).	1	3
Systematics and Taxonomy (Class Insecta, Taxonomic position).	1	3
External features: Head (antennae).	1	3
Head (Mouth-parts).	1	3
Thorax (Legs and Wings).	1	3
Abdomen (adult and immature stages).	1	3
Growth and development (Metamorphosis).	1	3

Internal Anatomy (Digestive System).	1	3
Internal Anatomy (Circulatory System).	1	3
Insect Physiology (Endocrine System).		
Revision and Pre Final Exam		
Insect Behavior (Elements of Behavior).	1	3
Insect Ecology (Trophic levels: herbivores).	1	3
Insect Ecology (Trophic levels: carnivores, decomposers).	1	3
Final Exam		

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planed	26	N.A.	26	N.A.	N.A.	52
	Actual	26	N.A.	26	N.A.	N.A.	52
Credit	Planed	2		1			3
	Actual	2		1			3

3. Additional private study/learning hours expected for students per week. **8**

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge** **The students should be able to:**		
1.1	- Outline the basic concepts of Entomology	- Lecture	- Written or oral questions.
1.2	- Recognize the external structure (morphology) of insects.	- Ordering of teaching assistants job interviews with students in office hours.	- Oral questions. - Practical Exam.

		- Practical lessons.	
1.3	- Describe the major components of the internal anatomy of insects.	- Research individually or collectively. - Connect through the internet.	- Group discussion and dialogue. - Activities and homework evaluations
1.4	- State the physiology of the internal systems of insects.	- Research individually or collectively. - Connect through the internet.	- Group discussion and dialogue. - Activities and homework evaluations
2.0	**Cognitive Skills** **The students should be able to:**		
2.1	- Classify insect specimens to the family level.	- Examining whole mount specimens - Examining microscopic specimens and insect parts. - Using key features for identifying insects classification. - Draw sketches and illustrations.	- Quizzes and direct questions during lectures. - Exams and homework which requires critical thinking. - Attendance and participation in classroom discussion.
2.2	- Explain the relationship between body structures and functions.		
2.3	- Differentiate the different types of metamorphosis in insects.		
2.4	- Describe the major structure of the internal organs of insects.		
2.5	- Describe the most important habits and habitats of insects.		
3.0	**Interpersonal Skills & Responsibility** **The students should be able to:**		
3.1	- Team work to conduct a specific project.	- Cooperative learning. - Work as part of a team. - Group field trips and writing group reports. - Participation of students in classroom discussion.	- Assessment of group projects. - Supervision student activities during lab works and field trips.
3.2	- Conduct projects with minimal supervision.		
3.3	- Communicate results of work to others.		
4.0	**Communication, Information Technology, Numerical** **The students should be able to:**		
4.1	- Work in a team to conduct a specific project.	- Homework project. - Homework activities. - Practical lessons	- Oral discussion. - Writing the reports and oral discussion. - Observation of student behavior in the lab.
4.2	- Use computers and internet efficiently.		
4.3	- Locate course reference on internet websites.		
4.4	- Communicate effectively with lecturer and colleague.		
5.0	**Psychomotor**		

	The students should be able to:		
5.1	- Draw samples of different insect stages thoroughly microscope .	- Practical lessons	- Practical exercises
5.2	- Prepare glass slides in laboratories.	- Practical lessons	- Practical exercises

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Short Quizzes	3	10%
2	Pre-final practical exam	8	10%
3	Pre-final theoretical exam	8	25%
4	Final practical exam	15	15%
5	Final Theoretical exam	16	40%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

- Office hours: 8 hours / week
- Academic Guidance for about 10 students as determined by admission and registration.
- Direct supervision of staff for lab works.
- Electronic communication through university web page and e-mail.

E Learning Resources

1. List Required Textbooks

- 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

2. List Essential References Materials (Journals, Reports, etc.)

- Adham, F. K. (2009) Medical and Veterinary Entomology. First Edition, A.R.E., ISBN: 977-17-6549-3.

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

- Websites on the internet those are relevant to the topics of the course.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

- Microsoft office package

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access,etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) - Lecture halls, containing white boards, and electronic monitors. The seats fit the number of students. Laboratories equipped with three tables and water sources, microscopes and animal samples.
2. Technology resources (AV, data show, Smart Board, software, etc.) - Well-equipped lab and lecture room with computers and display screens installed with curtains on the windows are required.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) - Prepared microscopic slides for the different types of insects and insect body parts. - Specimens for lab dissection. - Dissecting tools and dishes.

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching - Questionnaires. - Direct meetings between students and faculty members.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department - Peer consultation by departmental course committee
3. Processes for Improvement of Teaching - Discussion sessions with colleagues and the Quality Assurance Committee of the department and faculty. - Implementation of suggestions by the administration - Implementation of suggestions by departmental course committee.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) - Reviewing assessments by chairman, colleagues and the committee of development in the department.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. - Scheduled comparison with similar courses on the local and global level. - Review content periodically by the Committee on development of the department. - Using statistics of student questionnaires to assess course to improve the quality of course.

Name of Course Instructor: **Dr. Nabawy Abdel Rahman Elkattan**

Signature: *Nabawy Elkattan* Date Specification Completed: 12/08/1440H

Program Coordinator: **Dr. Omar Salem Obeid Bahattab**

Signature: *Omar Bahattab* Date Received:16/8/1440