

ATTACHMENT 2 (e)

Course Specifications

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

**Course Specifications
(CS)**

Course Specifications

Institution: University of Damman

Date: 15/7/1435

College/Department : College of Science in Damman/Biology Department

A. Course Identification and General Information

1. Course title and code: Chordates BIOL 222N - 7 (5943)			
2. Credit hours: 4 (3 Lecture +1 Practical)/week			
3. Program(s) in which the course is offered: (B.Sc. in Biological Sciences) Biology Department Program (If general elective available in many programs indicate this rather than list programs) Bachelor of Science degree in Biology			
4. Name of faculty member responsible for the course: A specific team from the Biology Department			
5. Level/year at which this course is offered: 4 th level - 2 nd year			
6. Pre-requisites for this course (if any): BIOL 113			
7. Co-requisites for this course (if any): No			
8. Location if not on main campus: College of Science/University of Damman			
9. Mode of Instruction (mark all that apply)			
a. traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="022"/>
b. blended (traditional and online)	<input type="text" value="-"/>	What percentage?	<input type="text" value="-"/>
c. e-learning	<input type="text" value=""/>	What percentage?	<input type="text" value="02"/>
d. correspondence	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value=""/>
f. other	<input type="text" value="-"/>	What percentage?	<input type="text" value="-"/>
Comments:			

B. Objectives

1. Summary of the main learning outcomes for students enrolled in the course:

- a.** Classification of Phylum Chordata and its different Subclasses.
- b.** Reorganization of the anatomy of the body plan in vertebrates, at the level of organs and systems.
- c.** Identification of the morphological and anatomical structure for the major groups of vertebrates from an evolutionary point of view.

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):

- a. The course content will be periodically reviewed by instructors and the undergraduate committee to include new materials as and when necessary.
- b. Update knowledge by focusing on recent research studies related.
- c. Encourage visiting libraries and reading accredited journals through activation of self-learning through weekly assignments and project learning.
- d. Weekly reports.

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

Course Description: Chordate Biology, 3 hr Lecture/week (15 weeks)

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact hours
Introduction to phylum chordate General characteristics of chordata Classification of Chordata . examples of each class	1 st week	4 hr
Protochordates: Hemichordata (Balanoglossus): <ul style="list-style-type: none"> • External features • W.M.Balanoglossus Urochordata(Ascidia): <ul style="list-style-type: none"> • External features and retrogressive metamorphosis of ascidian larva into adult • W.M. Ascidia 	2 nd week	4 hr
Protochordates: Cephalochordata (Amphioxus) <ul style="list-style-type: none"> • Structure of digestive system and mechanism of 	3 rd week	4 hr

Vertebrates <ul style="list-style-type: none"> • General characteristics, classification 	4 th week	4 hr
Agnatha (Cyclostomata) <ul style="list-style-type: none"> • General characteristics, classification • Example: Petromyzon and Ammocetes larva • External and internal features of Ammocetes • External and internal features of Petromyzon • Digestive and Respiratory system, mechanism of respiration • Circulatory system and blood circulation • W.M. Petromyzon 	5 th week	4 hr
Cartilaginous fishes (Chondrichthyes) Examples: Shark, Dog fish <ul style="list-style-type: none"> • Characteristics • External features • Structure of digestive, respiratory (mechanism of respiration), circulatory excretory, reproductive system • Nervous system (brain) • Tail region • Trunk region • Pharyngeal region • Types of scales 	6 th week	4 hr
Bony fishes (osteichthyes) Examples: Bolti <ul style="list-style-type: none"> • Characteristics • External features • Structure of digestive, respiratory (mechanism of respiration), circulatory excretory, reproductive system • Nervous system (brain) • Tail region • Trunk region • Pharyngeal region • Types of scales 	7 th week	4 hr

<p>Tetrapoda</p> <ul style="list-style-type: none"> • Characteristics • External features • Pentadactyl limb • Modifications <p>Class: Amphibia: Frogs and Toads</p> <ul style="list-style-type: none"> • General features • Internal systems digestive, respiratory, circulatory excretory, reproductive system, Excretory • Specific phenomena: • W.M. Frog 	<p>8th week</p>	<p>4 hr</p>
<p>Class: Reptilia Example: Lizard, Snake, Turtles, Crocodiles</p> <ul style="list-style-type: none"> • Characteristics • External features • Internal systems, digestive, respiratory, circulatory excretory, reproductive system, Excretory • Nervous system (brain) • Types of scales • Dissection of Lizard 	<p>9th week</p>	<p>4 hr</p>
<p>Class: Birds (Aves) Example: Pigeon, Ostrich, Duck</p> <ul style="list-style-type: none"> • General features: • Types of feathers • Internal systems (Structure of digestive, respiratory, mechanism of respiration, circulatory, Excretory • Nervous system (brain) 	<p>10th week</p>	<p>4 hr</p>
<p>Class: Mammalia: example: rabbit, herbivorous, carnivorous, omnivorous</p> <ul style="list-style-type: none"> • Classification of mammals • General features • Internal systems(Structure of digestive, respiratory, mechanism of respiration, circulatory, Excretory, reproductive 	<p>11th week</p>	<p>4 hr</p>
<p>REVISION and DISCUSSION</p>	<p>12th week</p>	<p>4 hr</p>

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

	Lecture	Tutorial	Laboratory or Studio	Practical	Other:	Total
Contact Hours	75 hours	Non		24 hours		99
Credit	45			12		57

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

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

Development of Learning Outcomes in Domains of Learning For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

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.)

Cod e	NQF Learning Domains	Course Teaching	Course Assessment
1.0	Knowledge		
1.1	At the end of the course the student should able to a. Define the main characteristics of chordates	a.Lectures	a.Quizzes
1.2	b. Recall the classification of Phylum Chordata	a.class discussion c.Weekly assignments and reports	b.Mid-term Examination
1.3	correlate vertebrate biology and ecology, with an emphasis on both species and tetrapods	d.Collaborative learning / team work	c.Final Examination
2.0	Cognitive Skills		
2.1	On completion of the course the student will gain a.Describe the different chordate animals (in lab).	Class discussions	Class participation

6. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, group project, examination,	Week Due	Proportion of Total
1	Quiz-1 (MCQ, Essay)	4 th week	5%
2	Mid-term practical	7 th week	10%
3	Mid-term (MCQ, Essay)	8 th week	15%
4	Quiz-2 + activities	12 th week	5+5%
5	Practical exam	13 th week	20%
6	Final examination	15 th week	40%
7	Total	_____	100%

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 (At least 6 hours/ week/semester).

E. Learning Resources

1. List Required Textbooks

1. Kardong, K.V. (2002). Vertebrates - Comparative Anatomy, Function , Evolution. 5rd edition. London, Mc Graw Hill.

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

1. Alexander, R. (1989). The Chordates. Cambridge University Press.
2. Mona, F.A. (1992). Vertebrates. Academic Bookshop.
3. Pough, F.H. Janis, C.M. and Heiser J.B (2005). Vertebrate Life. 7th edition Pearson Prentice Hall.

2. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

1. Web-CT learning program
2. Science Direct

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

1. <http://animaldiversity.ummz.umich.edu/site/accounts/information/Chordata.htm>

2. <http://www.ucmp.berkeley.edu/vertebrates/vertsy.html>.

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

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.)
<ul style="list-style-type: none">• Large laboratories should be enough to accommodate 50 students.
2. Computing resources (AV, data show, Smart Board, software, etc.)
<ul style="list-style-type: none">• Laptop computer.• Projector system.• Data show.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
<ul style="list-style-type: none">• No need.

G. Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching
<ul style="list-style-type: none">• Primitive and summative evaluation.• Evaluation of course by the students (to be collected by the department).• Discussions of exams assignments
2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department
<ul style="list-style-type: none">• Peer evaluation to asses ability of faculty members to work with their colleagues .• Peer critique for the course at the end of semester
3 Processes for Improvement of Teaching
<ul style="list-style-type: none">• Workshops to facilitate the exchange of experiences amongst faculty members.• Regular meetings where problems are discussed and solution given.• Discussion of challenges in the classroom with colleagues and supervisors.• Encouragement of faculty members to attend professional development conferences
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)
<ul style="list-style-type: none">• Check marking of a sample of examination papers either by resident or visiting faculty

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- member.
- Arrange with another institution to have two test items included on an exam and compare marks given.

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- Compare syllabi and course description with other similar colleges.
- Annual meeting of faculty members to discuss improvement.
- Have a curriculum review committee to review the curriculum periodically and suggest improvements.
- Regular assessment for the course and regular revising objectives, ILOs and goals.