Course E-Syllabus

1	**Course title**	**Vertebrate Anatomy Lab**
2	**Course number**	**5503353**
3	**Credit hours**	1 hour
	Contact hours (theory, practical)	Practical
4	**Prerequisites/corequisites**	5501356 or Concurrently
5	**Program title**	Vertebrate anatomy lab
6	**Program code**	
7	**Awarding institution**	
8	**School**	Basic and Marine Biology
9	**Department**	Marine Biology
10	**Level of course**	3rd year
11	**Year of study and semester (s)**	Second semester 2019-2020
12	**Final Qualification**	Bachelor
13	**Other department (s) involved in teaching the course**	
14	**Language of Instruction**	English
15	**Teaching methodology**	☒Blended ☒Online
16	**Electronic platform(s)**	☐Moodle ☐Microsoft Teams ☐Skype ☒Zoom ☒Others……
17	**Date of production/revision**	

18 Course Coordinator:

Name: Prof. Dr. Maroof Khalaf
Office number:
Phone number:0791695905
Email:m.khalaf@ju.edu.jo

19 Other instructors:

Name: Prof.Dr. Maroof Khalaf
Office number:
Phone number: 0791695905
Email: khalaf@ju.edu.jo

Name:
Office number:
Phone number:
Email:

20 Course Description:

As stated in the approved study plan.

Anatomy of some models of vertebrates in the laboratory and the comparison between the evolutions of vertebrates organs according to of structure and function.

21 Course aims and outcomes:

A- Aims:

To Understand the Know Lab Safety General Guideline's and to know the *Typical positional terms used in case of vertebrates. To focus* on External and Internal Anatomy of various Vertebrate groups starting from Amphioxus, Tunicates. To know how to dissect and expose various systems digestive, respiratory, excretory and reproductive system of each of the following vertebrate group: cartilaginous fish (e.g. shark), bony fishes (e.g. Tilapia), Amphibian (e.g. frog), Avians (e.g. birds) and mammals (e.g. rat).

B- Intended Learning Outcomes (ILOs):

Upon successful completion of this course, students will be able to:

- **Knowledge and understanding**
  At the end of this module, students will be able to:

- Understand the Know Lab Safety General Guideline's and to know the *Typical positional terms used in case of vertebrates.*
- Know the external and internal Anatomy of various Vertebrate groups starting from Amphioxus, Tunicates. Their characteristics and habitat.
- To know how to dissect and expose various systems digestive, respiratory, excretory and reproductive system of each of the following vertebrate group: cartilaginous fish (e.g. shark), bony fishes (e.g. Tilapia), Amphibian (e.g. frog), Avians (e.g. birds) and mammals (e.g. rat).
- Draw and learn the parts of each system what are the organs, what is the function for each of the above mentioned organ.

22. Topic Outline and Schedule:

Week	Lecture	Topic	Teaching Methods*/platform	Evaluation Methods**	References
1	1.1	Lab Safety General Guideline's and to know the *Typical positional terms used in case of vertebrates.*	Lectures at the university campus, PPt, videos	Reports and Participation	Comparative Vertebrate Anatomy: A Laboratory Dissection Guide 7th Edition by Kenneth Kardong (Author), Edward Zalisko (Author)
	1.2	,			
	1.3				
2	2.1	External and internal Anatomy of Amphioxus	Lectures at the university campus, PPt, videos	Reports and Participation	
	2.2				
	2.3				
3	3.1				
	3.2	External and internal Anatomy of Tunicates	Lectures at the university campus, PPt, videos	Reports and Participation	
	3.3				
4	4.1				
	4.2	Bony fish dissection in order to expose various systems such as integumentary, digestive, respiratory, excretory and reproductive system.	Lectures at the university campus, PPt, videos	Reports and Participation	
	4.3				
5	5.1				
	5.2	Shark dissection in order to expose various systems such as integumentary, digestive, respiratory,	Lectures at the university campus, PPt, videos	Reports and Participation	

		excretory and reproductive system			
	5.3				
6	6.1				
	6.2	Shark brain dissection			
	6.3				
7	7.1				
	7.2	Frog dissection in order to expose various systems such as integumentary, digestive, respiratory, excretory and reproductive system Amphibian (e.g. frog)	Lectures at the university campus, PPt, videos	Reports, quiz and Participation	
	7.3				
8	8.1				
	8.2	Birds dissection in order to expose various systems such as integumentary, digestive, excretory and reproductive system	Zoom, PPt, E-learning and facebook	Report, Participation and quiz	
	8.3				
9	9.1				
	9.2	Birds dissection in order to expose the respiratory system	Zoom, PPt, E-learning and facebook	Participation and quiz	
	9.3				
10	10.1				
	10.2	Rat dissection in order to expose various systems such as integumentary, digestive, respiratory, excretory and reproductive system	Zoom, PPt, E-learning and facebook	Reports, Participation and quiz	
	10.3				
11	11.1				
	11.2	Rat dissection in order to expose reproductive	Zoom, PPt, E-learning and facebook	Reports, Participation and quiz	

		system			
	11.3				
12	12.1				
	12.2				
	12.3				
13	13.1				
	13.2				
	13.3				
14	14.1				
	14.2				
	14.3				
15	15.1				
	15.2				
	15.3				

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz…etc

23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Amphioxus and urochordata report	10 marks	Amphioxus and urochordate demonstration		In the university lab
Shark and bony fish Report	10	Shark and bony fish dissection lab		In the university lab
Frog Report and birds Report	10	Frog and birds dissection		In the university lab and via zoom
Rat report	10	Rat dissection		Via zoom
Participation and hoe work	20			
Final Exam	40			

24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform…etc):

25 Course Policies:

A- Attendance policies: students attendance have not been taken into consideration in the evaluation.

B- Absences from exams and submitting assignments on time: Have been taken with serious consideration,

C- Health and safety procedures: Not applicable

D- Honesty policy regarding cheating, plagiarism, misbehavior: Cannot be controlled in electronic exams

E- Grading policy: As have been agreed upon during our department meeting. Lab reports, home made exam and participation 60 marks and final exam 40 marks.

F- Available university services that support achievement in the course: Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean, the student shall be considered to have withdrawn from the course. Because of Corona virus many lectures were given through Zoom programme.

26 References:

A- Required book(s), assigned reading and audio-visuals:

Comparative Vertebrate Anatomy: A Laboratory Dissection Guide 7th Edition
by Kenneth Kardong (Author), Edward Zalisko (Author)

Title: Text book I. Vertebrates: Comparative anatomy, function and evolution. 2012
Author(s): Kenneth V. Kardong, Ph.D.

Washington State University
Publisher: Published by McGraw-Hill
Support material (s): homework, video clips

B- Recommended books, materials and media:

27 Additional information:

1- Support material (s): homework, video clips, homework exams
2- Lectures were given online via zoom, lectures were uploaded via university E-learning and face book page. Communications were carried out via face book, whatsApp and Elearning.
3- Videos were also give to the students

Name of Course Coordinator: Prof. Dr. Maroof Khalaf----------Signature: ----------
Date: -6-6-2020----------

Head of Curriculum Committee/Department: -Marine Biology---------- Signature: ----------

Head of Department: ---------- Signature: ----------

Head of Curriculum Committee/Faculty: ---------- Signature: ----------

Dean: ---------- Signature: ----------