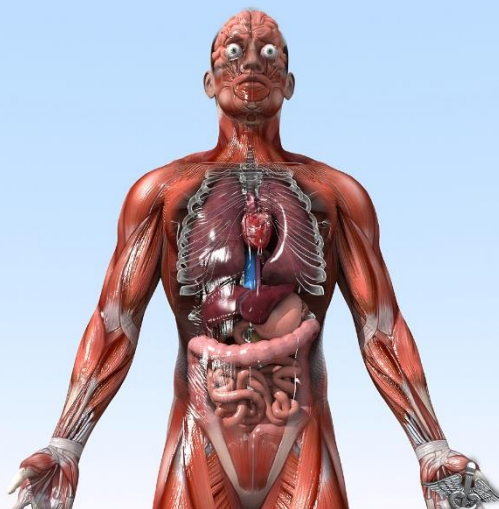


General Animal Biology

Zoo-109

علم الأحياء

109- حين



For Pre-Medical Students



Common First Year

السنة الأولى المشتركة - المسار الصحي

1444-H - 2023

Reference: Campbell, N. A. and Reece, J. B. (2014). *Biology (10th edition)*. Pearson Education. Inc. USA.

عمادة التعليم الإلكتروني والتعلم عن بعد
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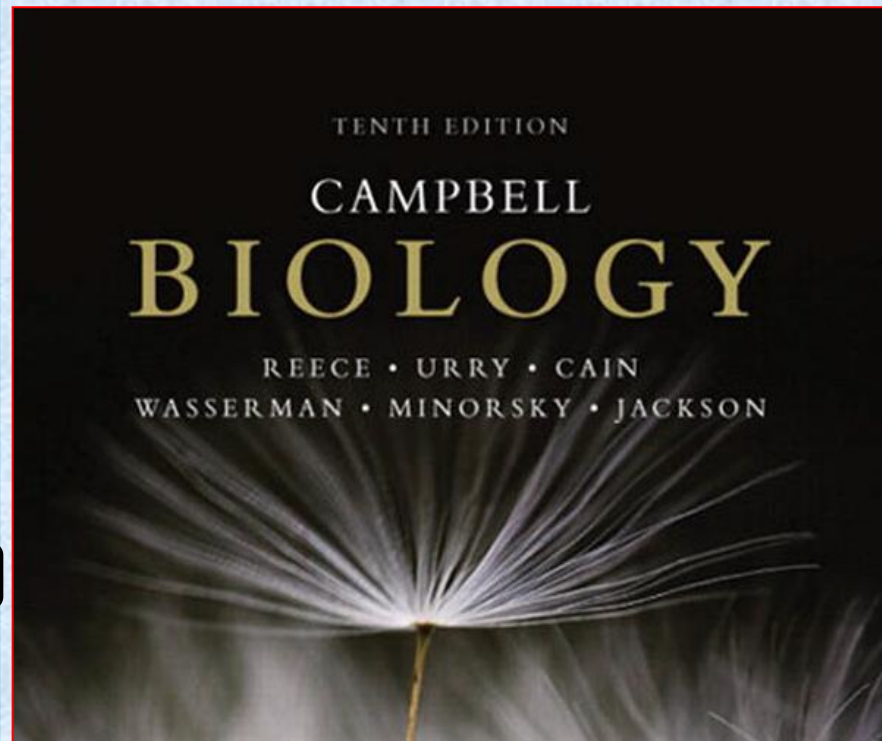
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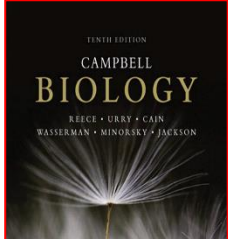
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Teaching Strategy



A)- Description:

(أ)- الوصف:

Course Designation	Zoo-109	109 حين	رقم المقرر ورمزه
Course Name	General Animal Biol.	بيولوجيا الحيوان العام	اسم المقرر
No. of Credits	3 (2 + 1)	3 ساعات (2 + 1)	عدد الوحدات الدراسية المعتمدة
Prerequisites	None	لا يوجد	متطلب سابق
Co-requisite Course	None	لا يوجد	متطلب مصاحب

B)- Assessments Timetable

(ب)- الجدول الزمني لمهام التقويم

Items	Assessment tasks	Weeks (approximate)	Assessments	Total marks	30 Marks
1	1 st laboratory exam	Week 6	15/100	30 marks	
2	Final laboratory Exam	Week 10/11	15/100		
3	1 st Theoretical Exam	Week 5/6	15/100	15 marks	
4	2 nd Theoretical Exam	Week 9/10	15/100	15 marks	
5	Final Theoretical Exam	Week 13/14	40/100	40 marks	
Total			100/100		

Detailed Syllabus of Theoretical Zool-109

1) Macromolecules:

- Carbohydrates
- Lipids
- Proteins
- Nucleic acids

2) Viruses

3) Prokaryotes

- Bacteria & Archaea

4. Eukaryotes (Basics of cell Biology):

4. Cell types (plant & animal cell).
5. Cell organelles (animal cell)

5. Cellular transport (active & passive)

6. Enzymes and metabolic control

Detailed Syllabus of Theoretical Zool-109

7. Cellular respiration (production of ATP)

8. Cell division (cell cycle)

7. Mitotic division

8. Meiotic division (and sexual life cycle)

9. Molecular Biology (information codes and genes):

7. DNA and DNA-replication

8. RNA and RNA-transcription

9. From gene to protein (RNA translation)

10. Mendel and the gene idea:

7. First law of Mendel

8. Second law of Mendel

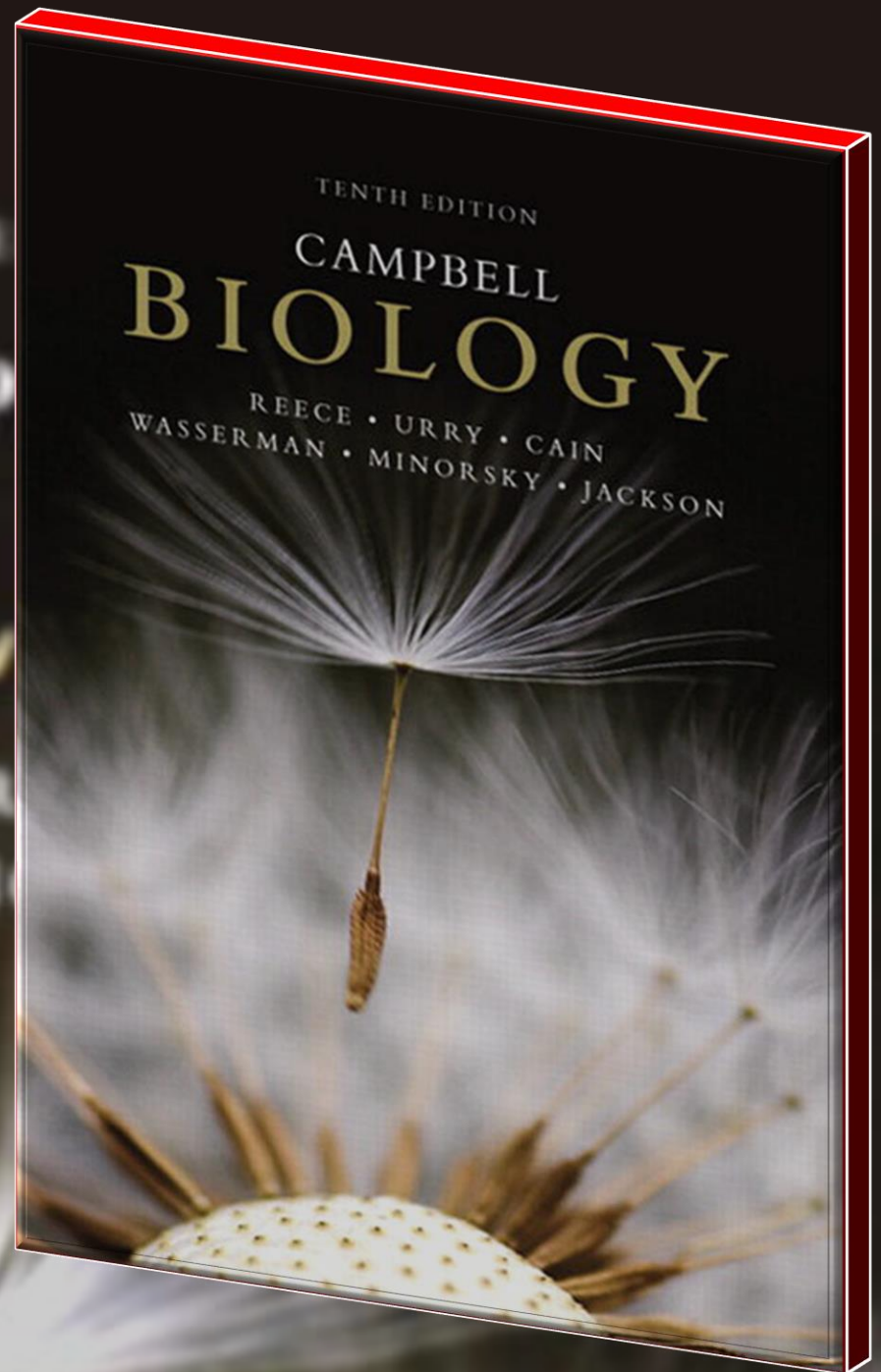
9. The genetic diseases, sex-linked disorders and mutations

10. The chromosomal bases of inheritance

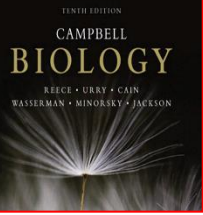
11. Chemical signals in animals (endocrine system and hormonal regulation).

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(2014). Biology (10th edition).
Pearson Education. Inc. USA.*



F)- Syllabus of Practical Zoo-109



Weeks	Description of exercise
1	<ul style="list-style-type: none"> Microscope: To acquaint the student with the use and care of microscope. Preparation of slides to observe the animal and plant cells.
2	<ul style="list-style-type: none"> Cell Structure: To familiarize the students with the general structure of the cell seen through the light microscope and acquaint them with some of the variations existing among cells (Size and shape).
3	<ul style="list-style-type: none"> Mitosis: To aid the students in recognizing chromosomes and various stages in mitotic division.
4	<ul style="list-style-type: none"> Meiosis: To study meiosis and compare it with mitosis with special emphasis on chromosome number and to explain the necessity for meiotic division in sexually reproducing organisms.
Histology	
5	<ul style="list-style-type: none"> Striated muscle, cardiac muscle, hyaline cartilage, neuron, T.S. in the spinal cord, artery and vein.
6	<ul style="list-style-type: none"> Detail structure of: T.S. in the oesophagus stomach and liver of experimental rat.
7	<ul style="list-style-type: none"> Detail histology of: T.S. in the testis ovary and kidney of experimental rat.
8	<u>FIRST EXAM</u>
Dissection of the experimental rat and blood groups	
9	<ul style="list-style-type: none"> To introduce the student to blood group serology in determining the ABO and Rhesus blood group systems. Determine the genotypes of different blood groups.
10	<ul style="list-style-type: none"> External features and general viscera with special reference to alimentary canal.
11	<ul style="list-style-type: none"> The reproductive system (male and female) including supporting glands.
12	<ul style="list-style-type: none"> The venous circulatory system.
13	<ul style="list-style-type: none"> The arterial circulatory system.
14	<ul style="list-style-type: none"> Nervous system & endocrine glands (if there is time)
15	<u>SECOND (Final) EXAM</u>

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**College of Science,
Zoology Department**

**General Animal Biology
(Zoo-109)**

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Thank you very much

شكرا جزيلاً

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