

Ministry of Higher Education and Scientific research



Department of Earth sciences and petroleum / First class
College of Science /University of Salahaddin

Subject: General Biology (Theory and Practical)

Assist. Lect.: Natheer Jameel Yaseen

Assist. Lect.: Neveen Nawzad Rajab

Assist. Lect.: Kazhal Tofiq Ameen

Academic Year: 2022 / 2023

Course Book

1. Course name	General Biology
2. Lecturer in charge	Assist. Lect.: Natheer Jameel Yaseen Assist. Lecture: Neveen Nawzad Assist. Lecture: Kazhal Tofiq Ameen
3. Department/ College	Earth sciences and petroleum / Science
4. Contact	e-mail: natheer.yaseen@su.edu.krd neveen.rajab@su.edu.krd
5. Time (in hours) per week	Theory: 2 Practical: 6
6. Office hours	To be Return to the schedule on the office door
7. Course code	
8. Natheer Jameel Yaseen	<ul style="list-style-type: none"> • I graduate from Salahaddin University/ College of Science/ Biology department in 2008 (Ranked 1th in college). In 2009, I worked as assistant biology for two years and assisted in practical plant Physiology lab, Zoology lab., Histology lab., and Sewage Microbiology . • In 2013 I completed my M.Sc. degree & in 2014 started as Assistant Lecturer Teaching Practical Zoology, Genetics and Bacterial Genetics, Biology lab, Practical physiology and Ethics and safety. • I worked as head of pharmacy department in noble institute for 2 years (2017-2019).
Neveen Nowzad Rajab	I am an assistant lecturer in Biology department teaching practical modules of mycology, microbial physiology and general Biology for 3rd year Biology and 1st year Environmental science. I also performing a supervision on graduation projects.
Kazhal Tofiq Ameen	I am an assistant lecturer in Biology department teaching practical Entomology, General Biology.
9. Keywords	Biology, Cells and Tissues, Living organisms, Taxonomy, Protista, Fungi, Plants, invertebrate and vertebrate Animals, and fossils.

10. Course overview:

General Biology will cover main concepts in different fields of biology, the student's ability to cope general biology extending their general academic reading skills, and increasing their basic knowledge and understanding different life process and fine structure of component body of macro and microorganisms as well as their evolution.

The subject contributes to understanding the structure and life cycle of plenty number of organisms.

Different forms of teaching will be used to reach the objectives of the subject, power point presentations for the head titles and definitions and summary of conclusions, classification of organisms and any other illustrations, besides whiteboard classroom, furthermore students will be asked to prepare short report about one species of organism this encourage student to research to collection update information.

11. Course objective:

General Biology which involves the study of concept of Biology and deal with Micro and Macroorganism The course focuses on history, classification, organic and inorganic material that compose the bodies of organism also the course focus on photosynthesis in green plants and how the energy from plant moved to another organism by food chain. Topics to be covered include Introduction and Course Overview, fine Structure of plant cell and animal cells and the difference between them, also the course include the function of organelles, cell, tissue, organ, organ system and organism and also, we focus about the relationship between organism and the ecosystem. This course will expose student to Fossils Record

12. Student's obligation

*Exam policy: Student Should take at least 2 Mid-Term exams (one theoretical and one Practical) during the course.

*General Policies:

1- Attendance: You are strongly encouraged to attend class on a regular basis, as participation is important to your understanding of the material. You are responsible for obtaining any information you miss due to absence.

2- Lateness: Lateness to class is disruptive.

3-Talking: During class please refrain from side conversations. These can be disruptive to your fellow students and your teacher.

4-Electronic devices: All cell phones are to be turned off at the beginning of class and put away during the entire class.

***lab polices:**

- 1- Lab coat: you have to wear your lab coat to your protection.
- 2- Weekly Quizzes: every lab you should take quiz
- 3- Eating and drinking is prohibited inside the lab.
- 4- You should monitor and records your practical works and results and notes.

13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course: power point presentations for the head titles and definitions and summary of conclusions systematic of Animal Classification and any other illustrations, besides worksheet will be designed to let the chance for practicing on several aspects of the course in the classroom. There will be classroom discussions and the lecture will give enough background to translate, solve, analyse, and evaluate problems sets, and different issues discussed throughout the course.

14. Assessment scheme

To get the best of the course, it is suggested that you attend classes as much as possible, read the required lectures, teacher's notes regularly as all of them are foundations for the course.

The students are required to do one closed book exams (Practical and theoretical) at the mid of the semester besides other assignments. So that the final grade will be based upon the following criteria:

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| • Practical Mid-term Examination and assignments: | 35 |
| • Theory Mid-term examination: | 15 |
| • Final examination theory: | 50 |

General Biology / 100 marks

15. Student learning outcome:

After completion of this course, student will be able to:

- Define common terms used in general Biology
- Studying the fine structure of cells and Shapes of it.
- Studying different structure and shapes of organisms
- Studying of Classification of organisms.
- Studying the fossil record

16. Course Reading List and References:

References:

1. Raven Johnson, Biology. 6th edition, ISBN.2002.
2. Purves, Life- the science of biology. 7th edition

<p>3. Jack Truong, biology 12, Mc Craw –hill Ryerson, 2000</p> <p>4. Any other general biology books.</p>		
17. The Topics:	Lecturer's name	
<p>Theoretical Course program</p> <p>Week 1: Course-book and Introduction to Biology Week 2: Cells, and properties of life Week 3: Organism Classification, Kingdom: Protista Week 4: Kingdom Fungi Week 5: kingdom Plantae: Plant body, Non vascular plants Week 6: kingdom Plantae: Vascular plants Week 7: Kingdom Animalia: Porifera, Radiata Week 8: Kingdom Animalia: Platyhelminthes, and Nematodes. Week 9: Kingdom Animalia: Annelida ,Mollusca and Rotifera Week 10: Kingdom Animalia: Arthropoda and Echinodermata Week 11: Kingdom Animalia: Chordata Week 12: Paleontology: Biological fossils Week 13: Exam</p>	<p>Lecturer's name lecturer.: Natheer Jameel yaseen</p>	
18. Practical Topics (If there is any)	Teacher's academic profile	
<p>Practical Course program</p> <p>1. Week 1: Microscope 2. Week 2: Cells, structure and shapes 3. Week 3: Organism Classification, Kingdom: Protista 4. Week 4: Kingdom Fungi 5. Week 5: kingdom Plantae: Plant body, Non vascular plants 6. Week 6: kingdom Plantae: Vascular plants 7. Week 7: Kingdom Animalia: Porifera, Radiata 8. Week 8: Kingdom Animalia: Platyhelminthes, and Nematodes. 9. Week 9: Kingdom Animalia: Annelida ,Mollusca and Rotifera 10. Week 10: Kingdom Animalia: Arthropoda and Echinodermata 11. Week 11: Kingdom Animalia: Chordata 12. Week 12: Exam</p>	<p>Lecturer Neveen Nowzad Rajab</p> <p>Lecturer/Kazhal T. Ameen</p>	
19. Examinations:		
Question forms		
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Salahaddin University	Final Examination	First Class
College of science	General Biology	First course

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Q 1 \ Fill in the blanks: (15Mark)

- 1- ----- means that the process requires oxygen. 2- Plastids also act as storage containers for starches, -----, and -----.
- 3- Oil, fat and, wax, they contain one or more fatty acid subunits with a ----- at one end.
- 4-The cell wall doesn't -----the materials that can pass through it.

Q2 \ multiple choice questions: (10 Mark)

- 1- Viruses were first identified in
A - 1988 B – 1935 C – 2011 D - 1920
- 2- Chemical formula of Carbohydrates is
A- (CH₂O) n. B – (C₂ H₄O) n C- (CHO) n D – (C₂H₂O₂) n
- 3--The T4 virus infects
A- Fungi B- bacteria C – Human D – Plant
- 4 – one gram of lipid have a high concentration of chemical energy about
A - 12 .2 calories per gram B - 10.3 calories per gram C - 4.1 calories per gram D- 9.3 calories per gram
- 5- Specialized cells in the human pancreas secrete the hormone insulin by means of
A -Phagocytosis B- Pinocytosis C - exocytose. D - active transport

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Q3 : write the difference between Vascular and non-Vascular plants.

Q4: Write about general characteristics of chordates

20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

21. Peer review

پیداچونہوہی ھاوہل

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).

ئەم كۆرسىۋوكە دەبىت لەلايەن ھاوئىكى ئەكادىمىيەو سەير بىكرىت و ناوەرۆكى بابتەكانى كۆرسەكە پەسەند بىكات و جەند ووشەيك بنوسىت لەسەر شىاوى ناوەرۆكى كۆرسەكە و واژوى لەسەر بىكات. ھاوئى ئەو كەسەيكە كە زانىارى ھەبىت لەسەر كۆرسەكە و دەبىت پلەي زانستى لە مامۇستا كەمتر نەبىت.