



Department of Environmental Science

College of Science

University of Salahaddin

Subject: Botany, practical

Course Book – (First stage one course)

Lecturer's name MSc.Halala Rahman Qader

Mr. Abdulqader

Academic Year: 2022 - 2023

Course Book

1. Course name	Botany (Practical)
2. Lecturer in charge	Halala R. Qader & Abdulqader
3. Department/ College	Environmental Sciences / Science
4. Contact	e-mail: Halala.qader@su.edu.krd , abdulqader.@su.edu.krd

	Mob:07504163847
5. Time (in hours) per week	Practical: 2 hrs per week.
6. Office hours	3 hours per week.
7. Course code	
8. Teacher's academic profile	Halala: In year (2007-2008) took BSc degree in biology, salahaddin university, college of education. In 2013 got master degree in plant physiology at the same university. I was starting teaching as assistant lecturer in environmental science department since 2014.
9. Keywords	
<p>10. Course overview: Botany is the study of plants, and we need plants to survive. Plants provide an essential foundation for life on earth, the food we eat and the beauty of the natural environment and as a result botany is considered to be an extremely important science! Botany is no longer confined to the study of how and why plants survive in the way they do.</p> <p>This course provide an extended discussion botany, its means plant science or plant biology, covers wide range topics and will also provide the cells components non-living and living components (the nucleus, cytoplasm, mitochondria ...etc.) their shapes, compositions and functions. As well as all different plant tissues, types and functions, as well as each parts of plants and type of each of them and each part come in many different size and shape. This course focused on teaching student preparations of slide temporarily in different parts of plant such as leaves, stems, roots, flower and fruits.</p>	
<p>11. Course objective:</p> <ol style="list-style-type: none"> 1. Provide information on the plant cell structure and function. 2. Understanding the different types of parts of plant. 3. Methods for preparation of slides in plant parts 4. Drawing practical part in each lab 	
<p>12. Student's obligation</p> <p>A student must read the lecture hand-out before the class. Three classes in-between the semester is devote for examination, each student must prepare him/her good. Therefore,</p>	

each student must have three exam marks till the end of the course.

An absence from classes should be excused according to the general regulations (i.e. sick leave) soon after coming back to college otherwise the absence is recorded as an unexcused one, and marks were subtracted from the final grade. For each class, we recommend the students to take the lecture hand-out before attending the classroom.

The questions on the test will comprise a mixture of quantitative calculations and qualitative responses that provide interpretation of the results obtained. These will require the student to demonstrate of knowledge of ecological theory and may require some additional reading beyond the lecture material.

13. Forms of teaching

A student must read the lab lectures hand-outs before the class. In the class, different forms of teaching will be used to reach the objectives of the course: experimental about this subject, power point presentations and some time writing short phrases, summary of explanation of plant cell and structure, we take more samples of plant parts in each lab. , inconspicuous points are clear on whiteboard, difficult idioms and tough words are also clear for the students. Finally a slide of question mark is present in order the students to ask the teacher about inconspicuous points from each lecture. The lectures will be presented mainly in English language as well as Arabic and Kurdish language will be used if it's necessary in the Lab.

14. Assessment scheme

Grades are break down as follow:

monthly exam = points

The mean of the one examination will be taken. The final grade at the end of the year would be 35% of practical subject. While, the final examination would takes 35%. So the final grade would be passed upon the following criteria:

- Mean of one practical examination: %

- Lab activities: %
- Weekly quizzes: %

15. Student learning outcome:

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

- Identify and describe the functions of different types of (cells and their component, tissues, and organs) that make up a plant.
- Learning how plants are growth and reproduction throughout the cell.
- Identify and describe the content and functions of the plant parts (root, stem, leaves, flower, fruit and seed)
- Describe the major life processes in plants (photosynthesis, respiration, transpiration, growth and development, and reproduction) at the tissue, organ, cellular, and molecular level.
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16. Course Reading List and References:

1. Kathreine kleire. (2017). Plant botany an introduction to Botany.
2. Pandey, B. P. (2000). Modern Practical Botany. S. Chand & Company LTD. New • Delhi, India.
3. Glimn, J and Peter B. Kaufman. (2005). Botany Illustrated. Second edition. Springer com. USA.
4. www.flowersinisrael.com.
5. www.G:\Botany 2010\Botanical structure\botany notes 007 Chapter, html.
6. www.G:\Botany 2010\Botanical structure\Cell Biology Lesson Plans Organelles, Membrane, Mitosis Labs.htm.

17. The Topics:	Lecturer's name
semester Botany	
18. Practical Topics (If there is any)	
Week 1: introduction to botany Week 2: plant cell Week 3: cell division Week 3: plant tissue meristemtic tissue Week 4: plant tissue and types	Teaching staff: 1.Halala Rahman 2. Abdulqader

<p>Week 5: The root system: root in monocot plant, Root in Dicot plant</p> <p>Week 6: Shoot System: Stems, buds and types</p> <p>Week 7: leaves and types</p> <p>Week 8: flower structure and types of flower</p> <p>Week 9: fruits type</p> <p>Week 10: seeds types, color, size and shapes</p> <p>Week 11: inflorescences</p> <p>Week 12: The different between aquatic & dry plants.</p> <p>Week 1: cell division</p> <p>Week14:photosynthesis</p> <p>Week 15: exam</p>	
<p>19. Examinations:</p> <p>1. Compositional:</p> <ul style="list-style-type: none">• What is the pointed parts names?• Define the mitochondria• Identify the slide and write its scientific name.• Count the other types of this structure .• Write tow differences between plant & animal cells.• Write one Example for each structure : <p>1. Adventitious root /Hausterial roots</p> <p>2. Fleshy tap root /conical shape</p> <p>3.Stem tendrils</p> <p>4.Sub terranian stem/corms</p> <p>2.Draw and lable</p> <ul style="list-style-type: none">• Draw & label the types of vascular bundles in the root cross section .	

- Draw & label an aleuronic grain .

Exp. Write the type of modification for the following structures with the scientific name of plant :



1



2



3



4

20. Extra notes: