

Department ofBiology
College ofScience
University ofSalahaddin
Subject:Botany
Course Book – (Year 1)

Lecturer's name-Ardalan Ahmad Dzayee, PhD Academic Year: 2023/2024

Course Book

1. Course name	Botany		
2. Lecturer in charge	Dr.Ardalan Ahmad Dzayee		
3. Department/ College			
4. Contact	e-mailardalan.sulayman@su.edu.krd:		
5. Time (in hours) per week	2		
6. Office hours	Availability of the lecturer to the student during the week		
7. Course code	SBio106		
8. Teacher's academic profile	 Im graduated from Salahaddin University in 1986. In 1999 I got my MSc from Al-Mustanssiryah University, then in2002 I gained my PhD degree in botany from the same University. In 2007 I worked as a Member of the Examination Committee for College of Science. Between 2003-2009 I have teaching plant anatomy theory and supervising practical plant anatomy laboratory for the 2nd class students. Between 2003-2005 I have teaching plant physiology theory and supervising practical plant physiology laboratory for the 3rd class students. Between 2003-2006 I have teaching general biology theory and supervising practical laboratory for the 1st class students of geology department. From 2010 to 2015 I have teaching botany theory and supervising practical laboratory for the 1st class students of or the 1st class students. 		
9. Keywords	Botany, plant root,stem&leaf		

10. Course overview:

- What it is botany? How it developed, how it relates to our everyday lives. A brief introduction to some common questions about plants and their functions
- The cell theory. Differences between prokaryotic and eukaryotic cells are discussed, and observations on cell structure and communication follow. Descriptions are provided for the plasma membrane, nucleus, endoplasmic reticulum, ribosomes, dictyosomes, plastids, mitochondria, microbodies, vacuoles, and cytoskeleton
- A discussion of meristems (apical meristems, vascular cambium, cork cambium, intercalary meristems) and non-meristematic tissues

(parenchyma, collenchyma, sclerenchyma, secretory tissues, xylem, phloem, epidermis, periderm)

- Know the primary functions and forms of root.
- Know the tissues that develop from shoot apices and the meristems from which various tissue types are derived. Distinguish between primary tissues and secondary tissues.
 - Th e functions, morphology, of leaves

This is followed by descriptive information on basic leaf types and specific forms and arrangements. The internal structure of leaves, including epidermis and cuticle, stomata, glands, mesophyll, and veins.

- Photosynthesis
- The study of flowers and fruits.
- Plant growth
- Plant ecology

11. Course objective:

T Botany is an excellent way to introduce you to the world of biology. In this year, we will examine a wide range of topics related to the biology of plants. We will investigate how the individual plant works: how plant bodies are built, how plants obtain and transport food and water, and how plants reproduce themselves. Upon these, the course is covering topics like plant cell, plant tissues, photosynthesis, plant growth, and structure of monocot and dicot seeds, soil and soil profile, alternation of generations and many other topics related to the plant science.

12. Student's obligation

- Student Should take 3 exams during the course There will be no make-up exams for absences students without medical report.
- All cell phones are to be turned off at the beginning of class and put away during the entire class.
- **13. Forms of teaching** Course Book and PowerPoint.
- 14. Assessment scheme 3 exams

15. Student learning outcome:

- Understanding the following concepts:
 - Plant cells ,tissues and organs
 - Relationship between plants and their environment

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- Distinguish between monocot and dicot plants
- Water and plants
- Soil and plants
- Modified, stems roots and leaves
- Photosynthesis process

16. Course Reading List and References:

- Bendre A.,and P.C. Pande .2008. Introductory Botany,4th revised edition. New Delhi:Pastogi Publications.
- Raven P. H., R.F.Evert, and S.E. Eichhorn .2005. *Biology of Plants*, 7th ed. New York: W.H. Freeman and Company Publishers.
- Stern. K. R. 2006. *Introductory Plant Biology*,9th ed. New York: McGraw Hill.Higher Education.
- Botany Journals.
- Scientific google websites.

17. The Topics:	Lecturer's name
Int Week 1: Introduction	
Week 2: The Scientific Method	
Week 3: Cell Structure and Function	
Week 4: Respiration	
Trees in respiration	
Week 5:Plastids	
Week 6: Photosynthesis: Photosynthesis- Light	
Reactions	

Week 18: Growth Regulation (Hormones) Week 19: EXAM II Week 20: Nutrients and Vitamins Week 21:Dormancy and Quiescence Week 22: The Soil and Plant Nutrition Week 23:Gymnosperms Week 24: Angisperms Week 25: Alternatin of Generations Week 26:Evolution Week 27: **EXAM III** Week 28:Plant ecology Week 29: Biomes

Ministry of Higher Education and Scientific research Week 30:Economic botany 19. Examinations: **Examples of Questions** Q1- Describe the light-independent reactions in photosynthesis? Q2-Write an assay about "Soil particles and Soil profiles? Q3-Define the following terms: a-Chromoplast b-Guttation c-Multiple fruit Q4-The plant hormone that stimulates the enlagment of cells is: dc-Ethylene gas a-Gibberellins b-Auxins cytokinin 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.

يداچوونهوهي هاو هل Peer review

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).

ئەمكۆرسبووكەدەبنىتالھاليەن ھاوھانىكىئەكادىمىيەوەسەيربكرنىتوناوھرۆكىيابھتەكانىكۆرسھكەپەسەندىكاتو جەندووشەيەكىبنووسنىتالھسەر شياوىناوھرۆكىكۆرسھكەوواژووىلەسەربكات. ھاوەڵئھوكھسەيەكەزانيارىھھىنىتلھسەركۆرسھكەودھبيتېلھىزانستىلەمامۆستاكھمتر

