



Department of plant protection

College of Agriculture

University of salahaddin-Erbil

Subject: botany

Course Book – (Year 1)

Lecturer's name: dr. Khalid M. Ahmed

MSc. Zhala Baqi Taha

Academic Year: 2022/2023

Course Book

1. Course name	Botany
2. Lecturer in charge	Dr Khalid M. Ahmed Zhala Baqi Taha
3. Department/ College	Plant protection – Agriculture Forestry / Agriculture
4. Contact	e-mail: khalid.ahmed@su.edu.krd Tel: +9647504633882 e-mail: zhala.taha@su.edu.krd Tel: +9647504857072
5. Time (in hours) per week	Theory: 2 Practical: 3
6. Office hours	Ten hours
7. Course code	
8. Teacher's academic profile	Born in 26/10 / 1974 in Erbil / , get BSc degree in department of biology in college of science of salahaddin University-Erbil in 1997. MSc degree in Botany (plant pathology)(A study of effect of mixed and single Infection with BYMV and <i>Alternaria alternata</i> on Broad bean)in 2006 And PhD degree in plant virology (DETECTION AND IDENTIFICATION OF THE VIRUSES ASSOCIATED WITH STONE FRUIT TREES IN ERBIL) AND DUHOK GOVERNORATES) in 2013 ,I am now a member of academic staff in college of Agriculture plant protection department /Salahaddin University, I was the dissection maker in plant protection department in (2006-2009) also member in Kurdistan biology syndicate , Iraqi society of biology , Arabic society for plant protection.
9. Keywords	Botany ,plant cell, plants ,
10. Course overview:	<p>• offers a study of the following principles and concepts as defined in The Academic Course Study of structure and function of plant cells, tissues, and organs. Includes an evolutionary survey and life histories of the following Representative groups: algae, fungi, mosses, liverwort s, ferns, and seed producing organisms. Plant reproductive and functional interactions with</p>

Their environment and with human.

11. Course objective:

Development and Importance of Plant Study

- 1.list ways in which plants are important to the "fabric of life
- 2-list the ways in which plants currently impact everyday life and how they might do so in the future Upon completion of this course, the student will be able to describe, identify and demonstrate an understanding of :
 1. The nature of science and life
 2. The chemistry of life, including basic and organic
 - 3.Cell composition and function including membrane structure and function
 4. Morphology and function of Plant Tissues .
 - 5.The morphology, function, and relationships of stems, roots, leaves, flowers, fruits, and Seeds.

12. Student's obligation

1. Do not talk to others in class while the instructor is lecturing. If you have a question, **ASK THE INSTRUCTOR!**
2. Keep hands, objects, and **NEGATIVE COMMENTS** to yourself.
3. Tardiness and early departure are distracting to your fellow classmates, and can negatively impact your grade.
4. Head/ear phones will **NOT** be permitted in class.
5. No Cell Phones will be used during class..
6. The instructor will taking the quiz weekly.

13. Forms of teaching

Teaching methods are , using data show ways , power point , white board , giving hand note

14. Assessment scheme

Breakdown of overall assessment and examination
25 marks for theoretical part

The marks is divided as follow :

- 10 marks for 1st monthly exam and 10 marks for 2nd
- 4 marks for daily quiz
- 1for class conversation

Final examination 20 practical part , 40 for theoretical par?

15. Student learning outcome:

- To help prepare students who wish to pursue upper division coursework in plant pathology or –plant virology and related fields.
- 2. To help students develop an appreciation for the history and development of science.
- 3. To help students become better informed citizens by providing opportunities to learn the differences between science as a way of knowing and other disciplines such as art, philosophy and religion

<p>4. To provide students an opportunity to understand and appreciate the complexity and relationships of living systems.</p> <p>5. To help students become better informed regarding the role of plants in the environment and the use of plants by humans.</p> <p>6. To make students aware of changing technologies in science and the responsibilities and ethical decisions that comes with the use of various technologies.</p> <p>7. To help students become better informed regarding environmental issues.</p>	
<p>16. Course Reading List and References:</p> <ul style="list-style-type: none"> ▪ 1-The cell cycle, Elisabeth back, Protein laboratory Department of neuroscience and pharmacology. http://www.plab.ku.dk/bock/index.htm link:the cell cycle. 2- Nath, Ravindra. (2003). Principles of Modern Botany. Kalyani Publishers. New Delhi. Indi 3- Taiz, Lincoln & Eduardo Zeiger. (2006). Plant Physiology. Sinauer Associates,inc publishers.USA. 4- Botany: An Introduction To Plant Biology 4th Edition by James D. Mauseth (Author) 	
17. The Topics:	Lecturer's name
Theoretical Topics (If there is any)	
<p>Lecture 1 Introduction to botany - (history - branches of botany - economic importance of plants - nutrition patterns in plants (autotrophic - non-autotrophic) - characteristics of living things</p> <p>Lecture 2-4 Cell theory - classification of living organisms - division of prokaryotes and eukaryotes - the exact cellular structure of the plant cell</p> <p>Lecture 5 plant kingdom and Classification</p> <p>Lecture 6</p> <p>Lecture 7 -8 Monthly examination + Parts of plant:The root, root Study the morphology of the root - the function - the root zones - the types of roots - the root mutations</p> <p>Lecture 9 Study the of the plant stem - the function - the division of the stem - the aerial stems modification - the modification of the ground stems.</p> <p>Lecture 11 Leaves (origin - composition - function - - leaf arrangement system on the stem - leaf modifications - types of leaves found in the plant</p> <p>Lecture 12 Flower and inflorescence definition - origin - function - structure - types of flowers and inflorescences</p> <p>Lecture 13 The fruit - its characteristics and types</p> <p>Lecture 14 The plant tissues: The types of plant tissues</p> <p>Lecture 15 Structures and functions of plant tissues.</p>	<p>Khalid M. Ahmed (2 hrs)</p>
18. Practical Topics (If there is any)	

<p>In this section The lecturer shall write titles of all practical topics he/she is going to give during the term. This also includes a brief description of the objectives of each topic, date and time of the lecture</p>	<p>Lecturer's name ex: (3-4 hrs)</p>
<p>19. Examinations: 19. Examinations: List only: A-The types of the leaves. Q2: What are the functions of: 1) Chloroplast. 2) The root. 3) The stem.-----. Q: How can you distinguish underground stems from roots. Q4: Define the following: Stem buds. 2-The root. 3-Histology 4- Q5: Draw the following with indicators: B-The chloroplast. Q6: What the characteristics of collenchyma tissue. Q7: Remark the following. Q8: Fill the blanks:1) The types of the underground stems are a-----b-----c-----d-----e---- Q9: Write true or falls: 1) Plants differs from animals in cell wall. 3. Multiple choices: In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase. Examples should be provided.</p>	
<p>20. Extra notes:</p>	
<p>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. <i>(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).</i></p>	