



## **Department of Biology**

### **College of Science**

### **Salahaddin University -Erbil**

### **Subject: General BotanyII**

### **Course Book – (1<sup>st</sup> Year) Second semester**

**Lecturer's name Assistant Prof. Dr. Pakhshan M. Maulood**

**Lecturer's name Mahdi H. Ibrahim (practical)**

**Academic Year: 2022/2023**

## Course Book

1. Course name	General Botany
2. Lecturer in charge	Pakhshan M. Maulood (Theory) Mahdi H. Ibrahim (Practical)
3. Department/ College	Biology- Science
4. Contact	e-mail: <a href="mailto:pakhshan.maulood@su.edu.krd">pakhshan.maulood@su.edu.krd</a> e-mail: <a href="mailto:mahdi.ibrahim@su.edu.krd">mahdi.ibrahim@su.edu.krd</a>
5. Time (in hours) per week	Theory 2hr./week Practical 3hrs/week
6. Office hours	To be return to the schedule on the office door
7. Course code	SBIO305
8. Teacher's academic profile	<p><b>Mrs. Pakhshan Mustafa Maulood CV:</b> Attained BSc degree in Biology 1991, Salahaddin University, College of Science. Also, MSc in the same department in 1997. Attained Scientific title Assistant Prof. in 6-3-2012. Now I a PhD student in College of Science- Salahaddin University. I published more than 12 manuscript in local and international Journals, participate in local conference and workshops.</p> <p><b>M. Mahdi CV:</b></p> <p><b>EDUCATION</b></p> <p>1- Department of Biology, College of Science, Salahaddin University-Erbil, Erbil, Iraq. <b>MSc in Biology/Plant Physiology 2003-2006 Thesis project:</b> Effects of foliar application of Zinc , GA3 and their interaction on growth and development of pepper plants.</p> <p>2- Department of Biology, College of Science, Salahaddin University-Erbil, Erbil, Iraq. <b>B.Sc. in Biology 1992-1996 Research project:</b> Effects of light spectra on photosynthesis process.</p> <p><b>PROFESSIONAL EXPERIENCES</b></p> <p>1- Assistant Lecturer, College of Science, Salahaddin University-Erbil, Erbil, Iraq. <b>2006- 2022.</b></p> <p>2- Biology Assistant, College of Science, Salahaddin University-Erbil, Erbil, Iraq. <b>Feb. 1997 - March 2003</b></p>

	<p><b>TEACHING EXPERIENCES</b></p> <ol style="list-style-type: none"> <li>1- Practical Mycology</li> <li>2- Practical Algae and Archegoniate</li> <li>3- Practical Plant Physiology</li> <li>4- Practical General Botany</li> <li>5- Plant Physiology and Plant growth development (tishk university)</li> </ol>
<p><b>9. Keywords</b></p>	<p><b>Botany, plant cell, plant tissue</b></p>
<p><b>10. Course overview:</b>          Botany means the scientific study of plant life. The course includes the study of plant body in general also plant parts from the cells to the organs and the importance of plants in humans live. The effect of plants on the environment. Photosynthesis process which is the critical factor for the most life features on our planet. At the end of the course, the students be able to understand botany in general, the plant body, tissues, growth, and other important subjects concerning to good understanding plant biology.</p>	
<p><b>11. Course objective:</b>          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.</p>	
<p><b>12. Student's obligation</b></p> <p><b>*Exam policy:</b> Student Should take 3 exams during the course There will be no make-up exams for absences students without medical report.</p> <p><b>*Classroom polices:</b></p> <ol style="list-style-type: none"> <li>1- <b>Attendance:</b> Students are strongly encouraged to attend class on a regular basis.</li> <li>2- <b>Lateness:</b> Lateness to class is disruptive</li> <li>3- <b>Electronic devices:</b> All cell phones are to be turned off at the beginning of class and put away during the entire class.</li> <li>4- <b>Talking:</b> During class please refrain from side conversations. These can be disruptive to your fellow students and your professor</li> <li>5- <b>No Disrespectful to both the professor and to your fellow students.</b></li> </ol>	

**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, description the types of pollution and their sources and any other illustrations, besides worksheet will be designed to let the chance for practicing on several aspects of the course in the classroom.

Graduate students will be required to review a scientific paper that relates to one of the course topics. The review will consist of a paper that is at a maximum of five pages (typed) in length and an oral presentation of the review (15 minutes in length). The goal is to have each student relate to the ecology. The format for the paper and presentation will be discussed in class.

**14. Assessment scheme**

Component	Date	Percent
Exam 1		50
Exam 2		50

**15. Student learning outcome:**

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

- Define common terms used in botany.
- Identify structure and shape of plants.
- Identify plant parts.
- Understanding plant growth.
- Understanding the relationship between humans and plants.

**16. Course Reading List and References:**

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

<b>17. The Topics: (Theory)</b>	<b>Lecturer's name</b>
<b>Week one: Morphology of root.</b>	Lecturer's name
<b>Week Two: Anatomy of root</b>	
<b>Week Three: Structure of seed.</b>	
<b>Week Four: Examination.</b>	
<b>Week Five &amp; Six: Seed germination.</b>	
<b>Week Seven: Fruits.</b>	
<b>Week Eight: Types of fruit.</b>	
<b>Week Nine: Flower.</b>	
<b>Week Ten: Examination.</b>	
<b>Week Eleven: The stem</b>	
<b>18. The Topics: (Practical)</b>	<b>Lecturer's name</b>

<b>Week 1: Introduction</b>	
<b>Week 2: Root Morphology</b>	
<b>Week 3: Stem morphology</b>	
<b>Week 4: Leaves morphology</b>	
<b>Week 5: Flowers morphology</b>	
<b>Week 6: Algae</b>	
<b>Week 7: Bryophytes plant</b>	
<b>Week 8: Pteridophytes</b>	
<b>Week 9: Examination</b>	

Examination of practical botany

Name :

Group:

**Q11 Identify this samples**

1. Identify root in this picture



2. Identify Phylotaxy in this leaf



3. Identify venation in this leaf



4. Identify stem in this picture



5. Identify shape of flower



**Q2/ Answer the following**

1. Write differences between tap root and adventitious root?
2. Define Dioecious plant
3. By drawing differ between simple and compound leaf?
4. Write two characteristic of stem ?
5. Draw and label complete flower

**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**

**پیداچوونہوہی 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 كۆرسىبوو كە دەبىت لەلايەن ھاوئەلىكى ئەكادىمىيە سەير بىكرىت و ناوەرۆكى بايەتەكانى كۆرسەكە پەسەند بىكات و جەند ووشەيەك بنووسىت لەسەر شىاوى ناوەرۆكى كۆرسەكە و واژووى لەسەر بىكات.  
ھاوئەل ئەو كەسەيە كە زانىارى ھەبىت لەسەر كۆرسەكە و دەبىت پلەي زانستى لە مامۇستا كەمتر نەبىت.

