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**Department of Biology**

**College of Science**

**University of Salahaddin**

**Subject: Plant taxonomy theory**

**Course Book – (2nd year student -General Biology )**

**Lecturer's name:**

**Assis.Prof.Dr. Shireen Abdulkarim Amin**

**Practical Taxonomy: lecturer Bnar Khalid Bakir**

**Academic Year: 2022/2023**

**Course Book**

| **1. Course name** | **Plant taxonomy** | |
| --- | --- | --- |
| **2. Lecturer in charge** |  | |
| **3. Department/ College** | **Biology / science** | |
| **4. Contact** | Shireen.amin@su.edu.krd | |
| **5. Time (in hours) per week** | **For example Theory: 2**  **Practical: 6** | |
| **6. Office hours** | **To be Return to the schedule on the office door** | |
| **7. Course code** | **254** | |
| **8- Teacher's academic profile** | * **I was graduated in the College of Education University of Salahaddin (Ranked 4th in the collage). In 1999 and obtained my MSc degree in Plant Physiology in the College of Education University of Salahaddin in 2002.** * **My first employment was in 2002 as Assistant Lecturer in the College of Science/ University of Salahaddin.** * **In 2002 I taught practical plant anatomy and practical botany in College of Science / University of Salahaddin.** * **In 2003 I taught practical plant physiology in the college of Science / University of Salahaddin.** * **In 2003 I started for PhD in Almustansiriyah University and got the degree in plant tissue culture in 2007.** * **Between 2007-2008 I taught plant anatomy and taxonomy theory and supervised Practical anatomy and taxonomy Laboratory in the College of Science University of Salahadin.** * **Since 2008 I teach plant taxonomy and plant anatomy till now.** * **A Member of the Examination Committee for College of Science in 2009.** * **I have 11 published researches in my field.** | |
| **9. Keywords** | **Plant taxonomy, plant systematics, the flowers , type of roots, type of stems, the leaves.** | |
| **10. Course overview:**  In this section the lecturer shall write an overview about the subject he/she is giving. The course overview must cover:  ▪ The importance of studying the subject ▪ Understanding of the fundamental concepts of the course ▪ Principles and theories of the course ▪ A sound knowledge of the major areas of the subject ▪ Sufficient knowledge and understanding to secure employment | | |
| **11. Course objective:**  **The course is comprised of lectures, discussions, laboratories, guided and independent investigations, and presentations. The focus of the course is on the taxonomy and plant orang systematics. The primary objective of the course is understanding the important of taxonomy plants. The assurance will be on the type of root, vegetative parts and modification of these parts. Furthermore objectives are to discuss how classify the plants according to characteristics of the organs, the plant taxonomy is help the another disciplines of plant science.** | | |
| **12. Student's obligation**  **\*Exam policy: Student Should take 2 exam during the course. \*Classroom polices:**  **1- Attendance: You are strongly encouraged to attend class on a regular basis, as participation is important to your understanding of the material. This is your opportunity to ask questions. Regular and punctual attendance is each student’s responsibility. Although I may not take roll at every class meeting, I do keep a record of your general attendance behavior. Because class participation does have a bearing on your grade, it is important not to cut class. If you must miss a class, please contact me as soon as possible to find out how to make up the work.**  **According to University policy “students must attend a minimum of 75 percent of all scheduled classes**  **2- Lateness: Lateness to class is disruptive**  **3- Electronic devices: All cell phones are to be turned off at the beginning of class and put away during the entire class.**  **4-Talking: During class please refrain from side conversations. These can be disruptive to your fellow students and your professor**    **5- No Disrespectful to both the professor and to your fellow students.** | | |
| **13. Forms of teaching ; Course Book and PowerPoint** | | |
| **14. Assessment scheme**     | **Component** | **Date** | **Percent** | | --- | --- | --- | | **Exam1** | **2023** | **10 %** | | **Respecting Classroom Policy** |  | **5%** | | **Total** |  | **15%** |   **Mean of two examinations: 15%**  **Practical Examination 35%**  **Final examination only theory: 50 %** | | |
| **15. Student learning outcome: After completion of this course, you will be able to:**     * **Understand the classification of plants.** * **Recognize and be able to describe features of plant morphology.** * **Use microscopy tools to investigate the features of plants** * **Critically read literature in the field of plant taxonomy.** * **Apply research skills, both to literature reviews and in independent investigations** * **Differentiate between the basic systematic groups of plants** * **Compare among different taxa of plants by morphological characters.** * **Describe some of the ways in which the classify the plants.** | | |
| **16. Course Reading List and References‌:**  **▪ Key references:**  **▪ Useful references:**  1-Hutchinson, J. 1964. The Families of Flowering Plants. Oxford press.  2-Ravindra, N. 2003. Principal of Modern Botany. New Delhi  3-Wilson, C. L. and Loomis, W. E. 1967. Botany. 4th edition.  4-James, C.2006. Practical Plant Identification. Cambridge University Press.  5-Nels, R. L. 2004. Flowering Plant Embryology. Blackwell Publishing Ltd.  **▪ Magazines and review (internet):** | | |
| **17. The Topics:** | | **Lecturer's name** |
| | **Week:1** | | --- | | **Week2** | | **Week3** | | **Week4** | | **Week5** | | **Week6** | | **Week7** | | **Week8** | | **Week9** | | **Week10** | | **Week11** | | **Week12** | | **Week13**  **Week 14** | | | | Introduction to plant taxonomy, classification systems | | --- | | Herbarium | | **Flower** | | types of flower | | Androecium | | gynoecium | | fruits | | pollination | | monocot family | | dicot family | | poisonous plants | | **Root** | | **Stem**  **exam** | |
| **18. Practical Topics (If there is any)** | |  |
| **19. Examinations:**  **1. Compositional: In this type of exam the questions usually starts with Explain how, What are the reasons for…?, Why…?** | | |
| **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 پێداچوونه‌وه‌ی هاوه‌ڵ**  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).*  ئه‌م کۆرسبووکه‌ ده‌بێت له‌لایه‌ن هاوه‌ڵێکی ئه‌کادیمیه‌وه‌ سه‌یر بکرێت و ناوه‌ڕۆکی بابه‌ته‌کانی کۆرسه‌که‌ په‌سه‌ند بکات و جه‌ند ووشه‌یه‌ک بنووسێت له‌سه‌ر شیاوی ناوه‌ڕۆکی کۆرسه‌که و واژووی له‌سه‌ر بکات.  هاوه‌ڵ ئه‌و که‌سه‌یه‌ که‌ زانیاری هه‌بێت له‌سه‌ر کۆرسه‌که‌ و ده‌بیت پله‌ی زانستی له‌ مامۆستا که‌متر نه‌بێت.‌‌ | | |

**Department of …Biology…..**

**College of ……Science…………………. University of ……Salahhadin…..**

**Subject: Plant Anatomy and Taxonomy practical**

**Course Book – Year 2**

**Lecturer's name: Bnar Khalid Bakr**

**Academic Year: 2022/2023**

**Course Book**

| **1. Course name** | **Plant anatomy and taxonomy** |
| --- | --- |
| **2. Lecturer in charge** | **Lecturer Bnar Khalid Bakr** |
| **3. Department/ College** | **Biology/Science** |
| **4. Contact** | **e-mail:** [**bnarkhalid@yahoo.com**](mailto:bnarkhalid@yahoo.com)  **Tel: (optional)** |
| **5. Time (in hours) per week** | **Practical: 6** |
| **6. Office hours** | **5 hours** |
| **7. Course code** | **SBio 204** |
| **8. Teacher's academic**  **profile** | **\* I garudate from Salahaddin Univeristy in (2005)(ranked**  **2nd in collage) worked as Assistant biology for three years**  **in various Lab. As in General biology lab. , in histology and embryology lab. , in anatomy and taxonomy lab. ,**  **…… In 2008 started in MSc till 2011 finished my MSc**  **degree in plant taxonomy(Participate in teaching method training ) then started worked as assistant lecturer in**  **2012 …. I teaching practical general biology in year 1 for one course after that I started teaching practical plant anatomy and taxonomy in year 2 till now.**  **\* During these five year I supervising 8 student in year**  **6 at three research project .**  **\* For 3 year became head of Herbarium committee.**  **\* Now I am planning to make scientific research for better scientific performance in my field.** |
| **9. Keywords** | **Plant , Plant anatomy , Plant taxonomy , Plant tissue , Plant parts , Plant morphology feature ….** |
| **10. Course overview:**  The importance of studying these subjects to understanding different plant parts anatomically and identified functional morphology of photosynthetic organisms both aquatic and terrestrial systems .  In first course (plant anatomy) understanding the anatomy of plants at the cell, tissue and  organ levels and recognize and describe feature of plants part anatomically with details. In second course (plant taxonomy)focused on morphological features of plant parts started from (root, stem, leaves, flower parts with details , inflorescence, fruit and family identification).  Generally student have ability to identified the plant family morphologically.  The importance side of plant anatomy student can able anatomically differences between the plant parts such as ( shape of cells, shape of vascular bundle, number of vascular bundle, arrangement of layers in plant parts.  In plant taxonomy student can able to identified the plant family by having the morphological information about the plant parts during the course subject.  The most importance point in these two courses differentiation between monocot and Dicot plant. | |

| **14. Assessment scheme**  - One main examination …………………………………………………………………………………… %75  - Copybook (Draw and label), home work and activity of student in lab & Quiz.... %25 |
| --- |
| **15. Student learning outcome:**  After completing this course, students will be able to:  ❖ Understanding what is the plant anatomy and morphology of plant parts. |

| **Date** | **Lab topics of plant Taxonomy** |
| --- | --- |
| **Week1** | The processes of plant taxonomy with terminology of plant taxonomy |
| Week2 | Root classification |
| Week3 | Stem classification |
| **Week4** | Leaf classification |
| **Week5** | Flower parts classification |
| Week6 | Flower symmetry |
| Week7 | Androcieum and Gynocieum |
| Week8 | Inflorescence classification |
| Week9 | Fruit classification |

| Week10 | Family identification (F:  Cruciferae and F: Palmae) |
| --- | --- |
| Week11 | Family identification (F:  Malvaceae and F: Convolvulaceae) |
|  |  |

***3. True or false type of exams:***

In this type of exam a short sentence about a specific subject will be provided, and then students will comment on the trueness or falseness of this particular sentence. Examples should be provided

***4. 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.

***5. Draw and label*** : in this type question nedd to draw picture scineifically and labelling all parts of darwing.

Head of biology department

Muhammad Ali Saleem