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**Department of Plant Protection**

**Salahaddin University**

**College of Agricultural Engineering Sciences**

**Subject: Principles of Horticulture – Theoretical part**

**Course Book – (2nd year students)**

**Lecturer: Mrs. Sabiha Salahaden Mustafa**

**Dr. Kharman Khalid Qader**

**Academic Year: 2021- 2022 (Second Semester)**

**Course Book**

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| **1. Course name** | **Principles of Horticulture** | |
| **2. Lecturers in charge** | **Mrs. Sabiha Salahaden Mustafa**  **Dr. Kharman Khalid Qader** | |
| **3. Department/ College** | **Plant protection /Agricultural Engineering Sciences** | |
| **4. Contact** | **e-mail: [kharman.qader@su.edu.krd](mailto:kharman.qader@su.edu.krd)**  **Sabiha.Mustafa@su.edu.krd** | |
| **5. Time (in hours) per week** | **2h/w** | |
| **6. Office hours** | **Sunday, Monday and Wednesday at Horticulture Department** | |
| **7. Course code** |  | |
| **8. Teacher's academic profile** | **https://academics.su.edu.krd/sabiha.mustafa**  **https://academic .su.edu.krd/kharman.qader** | |
| **9. Keywords** | **Branches of Horticulture, Classification of Horticultural Crops, Environmental factors** | |
| **10.Course objective:**  Studying (practical) is in introduce horticulture crops in this course the student must be known to the importance of **Principle of Horticulture** from scientific and economic point of and for the purpose of production and to preserve the species and learn the most important methods and materials and materials for the purpose of conducting the necessary tests to seeds of horticultures crops and seeds certification. Know lodgement about the vegetable seed production to the students and learn them who we can scientifically increase the yield and improve the quality of cultivated vegetables in our region. Students will be assessed for the above skill with quizzes, exercises, lecture exams, lab practical's.  **11. Course overview:**  -The aim of this subject is to provide within a relatively small compass an account of the structure of **Horticulture** the course includes the principles on which the modern plant propagation industry is based. Of **Principle of Horticulture**. Is a, **sexual and asexual propagation..**In addition, methods and techniques used for the mass production of plants, the fully description of seed (sexual) and vegetative (asexual) propagations, are analyzed. Moreover, The last lectures of the course will focus on the Branches of Horticulture, systems in place to planting fruit trees in the orchard and Classification of Vegetables.  **The importance of the course:**  The main problem of unemployment in the present situation can only be alleviated with self-employment. There are a lot of areas in agriculture to take up an enterprise and one of it is plant propagation by having a well-designed seed production containing necessary facilities. After completing the course, students should have enough information on basics **Principle of Horticulture** plant propagation, nursery management and entrepreneurship development. | | |
| **12. Course objective:**  The students will develop fundamental knowledge in **Principle of Horticulture** systems and techniques with emphasis on practical application. In brief, the course will:   * Introduce students to the **Principle of Horticulture** and its importance in the horticulture of agriculture. * Enable students to understand the purposes of **Principle of Horticulture**. * Make students be able to distinguish between different types of **Principle of Horticulture**. * Provide students adequate information for understanding the conditions of constructing **seed germination.** * Understand the types of plant propagation and their importance in the field of Forestry and Horticulture. * Be enable student to have adequate information on growth medium and the supplemented materials which can be added to strengthen medium of growth. * Provide a detailed knowledge on seed dormancy and the treatments of its elimination. | | |
| * 13. Student's obligation * All students are required to take notes or/and writing up lectures throughout the course as the instructor/lecturer will not provide any handout either in word or PowerPoint document. * After starting the course, the exam will be taken after four lectures. * The time and date of exams will not be changed after being fixed by the lecturer and the students’ representative. * Students are required to conduct two exams in fall semester in Principle of Horticulture practical part. | | |
| **14. Forms of teaching**:  Different forms of teaching conducted to gain the objectives of the course, such as:   1. Using white board to clarify any related subject. 2. PowerPoint presentation including video show. 3. Writing up | | |
| **15. Assessment scheme:**   |  |  |  |  | | --- | --- | --- | --- | | **Exam** | **Thioretical** | **practical** | **total** | | **During semester** | **15** | **35** | **50** | | **Final exam** | **50** | **-** | **50** | | **Total** | **65** | **35** | **100** | | | |
| **16. Course Reading List and References‌:**  **Text Books and Websites:**  1**. Abdel Moneim, A.** Technology for Producing Vegetables Fundamentals of Horticulture, 4th edition.  2. **Adams C.R., K.M. Bamford and M.P. Early**, 2008. Principles of Horticulture, fifth edition. Butterworth- Heinemann is an imprint of Elsevier Linacre House, Gordan Hill. Oxford OX2 8DP, UK30 Corporat Drive, Suite 400, and Burlington, MA01803, USA.  3. **Becker M.**, 2006. Sexual propagation: Effects of Growing Medium ON Seed Germination and Seedling Performance.  4. **Salunkhe, D.K., B.B. Desai, and N.R. Bhatt**, 1987. Vegetable and flower seed production. Agricore Publishing Academy. New Delhi, India. 144–150.pp.  5. Basics of Horticulture (2010).  6. Crop Production Science in Horti. Tropical Fruits (1999)  7.Fruit Growing (2003)  8.Horticulture ATA Glance (2005)  9.Plant Propagation Principles and Practices (1990)  10. Vegetable Gardening (2005).  11. Other sources of internet. | | |
| **17. The Topics:** | | **Lecturer's name** |
| In this section the lecturer shall write titles of all 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  Each term should include not less than 16 weeks | | **Sabiha Salahadden**  **Kharman Khalid** |
| **18. Practical Topics :** | |  |
| **1stweek:** 1. Introduction and Definition of Horticulture, Branches of Horticulture.  **2ndweek:** Classification of Horticultural Crops  **3rdweek:** Parts of plant  **4th week:** Parts of plant, leaves  **5th week: 1st\_ Examination**  **6th week:** Influence of Environmental Factors on Horticultural Crop Production  **7th week:** Establishment of an Orchard, propagation  **8th week:** Pruning, crop rotation and harvesting  **9th week:** The establishment of fruit orchards (Location ,Site ,Field preparation and cultural process)  **10th week:** Systems in place to planting fruit trees in the orchard and training system  **11th week:** 2nd Examination  **12th week:** Vegetable production    **13th week:** Hardening process and ways of hardening    **14th week:** Seed Germination    **15th week:** Seed Dormancy | |  |
| **19. Examinations and Style of Questions**   1. Define the following terms 2. What is the reason behind the following: 3. Put (T) for true statement and (F) for false statement then correct the false statements. 4. Compare between ………….. And …………… 5. Choose correct answer (single choice or multiple choice) 6. List or Describe two ways of ………….. 7. What are the advantages (pros) and disadvantages (cons) of ……? 8. Fill in the blanks with suitable terms: 9. Correct the underlined bold parts if they are false 10. Rearrange the wards in column A with the suitable wards in column B   **. Compositional*:*** In this type of exam the questions usually starts with Explain how, What are the reasons for…? Why…? How….?  With their typical answers  Examples should be provided  **.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  **. 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. | | |
| **20. Peer review** | | |