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**University of Salahaddin**

**College of Science of Engineering Agricultural**

**Department of Horticulture**

**Subject: Pome and Stone fruits**

**Stage: Third stage**

**Lecturer's name: Dr. Parween Muhammad,**

 **Dr. Jihad Shareef**

**Academic Year: 2021/2022**

**Course Book**

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| **1. Course name** | **Pome and Stone fruits** |
| **2. Lecturer in charge** | **Dr. Parween Muhammad Kareem** |
| **3. Department/ College** | **Horticulture/ Science of Engineering Agricultural / Third stage** |
| **4. Contact** | **Tel: (optional)**  |
| **5. Time (in hours) per week**  |  **Theory: 2 hours per week** **Practical: 3 hours per week**  |
| **6. Office hours** | Availability of the lecturer to the student during the weekProbably from three to four times per week if I have not lecture, or /and if the students asked me always I will be at office as I could. |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | PERSONAL DATA• Sex: Female• Nationality: Iraqi• Marital Status: Married EDUCATIONScientific Degree: Year / Research Subject / University • B.SC: Year / Research Title / University2005/ plant production / College of Agriculture/ University of Salahaddin/ Iraq.• M.SC: Year/ Research Title / University2010/ Horticulture / College of Agriculture/University of Salahaddin/ Iraq.• PhD: Year/ Research Title / University2020/ Horticulture/ College of Agriculture/University of Salahaddin/ Iraq. MEMBERSHIP OF PROFESSIONAL ASSOCIATION:• Teachers Association• Agricultural Engineers Syndicate• لێره‌ مامۆستای وانه‌بێژ پرۆفایلێک ده‌نووسیت له‌سه‌ر ژیانی ئه‌کادیمی خۆی (ته‌نها ئه‌کادیمی) |
| **9. Keywords**  | Pome and Stone fruit trees, description, Environmental requirement , cultural method, variety. |
| 10. Course overview:  This course book is designed to familiarize the students with importance of deciduous fruit trees especially the most popular deciduous fruit trees (pome and stone fruits) that found or can grow with environment of our country properly, and the relationship with other disciplines. The basic principles of tree growth and development will be addressed that include the environmental conditions which consist of climatic factors and soil factors which have a great role in growth and development and other principle is plant care and what plant need and also choosing the variety or cultivar is other important principle when we talk about fruit tree in general and specially when we talk about deciduous fruit tree because these type of trees have rest period or dormancy stage which the trees need enough chilling hours (chilling requirement) to break this dormancy stage and start the growth when the temperature increase relatively. To know the important propagation methods of deciduous fruit trees as we know there are two main methods first one is sexual (by seed) by using this way the resultant plant will be never true to type, and asexual method (by any part of the plant except the seeds) in this way the new plant (the resultant plant) will be true to mother plant, also it is important to know which way is the best, low cost and easy of each different tree. Subject of culture practices is other important thing when we talk about fruit trees because these culture practices that include (Irrigation, fertilization, weed control, pest control and training and pruning etc.) and the time of practicing each practices is very important because each one have different rate and different time or date to do it in an orchard or in permanent place due to having direct effect on plant growth and on quality and quantity of production.  |
| 11. Course objective:The aim of this subject to know the type of deciduous fruits that aptness to the Kurdistan conditions.* Knowledge the student to know the important of nature and commercial of different fruit types.
* Definition the student to the kinds of stable rootstock, them characterizes and their compatibility with different fruit types.
* Study climatic and environmental requirements of these types of fruit, also to know the nature of their blooms and bearing.

Study the ways of harvest and symbols of harvest to these kinds of fruit |
| **12. Student's obligation**In this section the lecturer shall write the role of students and their obligations throughout the academic year, for example the attendance and completion of all tests, exams, assignments, reports, essays…etc. The student should be attendant for all lectures and comply of all tests or theory that done and shall comply the exams and assignments. The student also shall participate in class activities and present reports on subjects that I choose or they choose by their selves. لێره‌ مامۆستا به‌رپرسیارێتی قوتابی خوێندکار ڕوونده‌کاته‌وه‌ سه‌باره‌ت به‌ کۆرسه‌که‌ بۆ نموونه‌ ئاماده‌بوونی قوتابیان له‌ وانه‌کاندا، له‌ تاقیکردنه‌وه‌کاندا، راپۆرت و ووتار نووسین... هتد.  |
| **13. Forms of teaching**Generally, data show will be used with power point, white board and paper of the lecture is also use. لێره‌ مامۆستا ڕێگه‌ی وانه‌‌ ووتنه‌وه‌ ده‌نووسێت، بۆ نموونه‌:‌ داتاشۆ و پاوه‌رپۆینت، ‌سه‌ر ته‌خته‌ڕه‌ش، ته‌خته‌ی سپی، سمارتبۆرد یان‌ مه‌لزه‌مه‌... هتد |
| **14. Assessment scheme**Breakdown of overall assessment and examinationThere are two monthly examinations and every week there is a quiz at the beginning of the lecture or sometimes at the end of the lecture. At the end of the course the students shall present a report. Classroom participation and assignments (Total: 15%), exam 10% and 5% for quizzes and student participation and attendance, and practical 35%. Final exam: 40%لێره‌ مامۆستا جۆری هه‌ڵسه‌نگاندن (تاقیکردنه‌وه‌کان یان ئه‌زموونه‌کان) ده‌نووسێت بۆ نموونه‌ تاقیکردنه‌وه‌ی مانگانه‌، کویزه‌کان، بیرکردنه‌وه‌ی ڕه‌خنه‌گرانه (پریزه‌نته‌یشن)، ڕاپۆرت نووسین، ووتار نووسین‌ یان ئاماده‌نه‌بوونی خوێندکار له‌ پۆلدا...هتد. ئامانه‌ چه‌ند نمره‌ی له‌سه‌رده‌بێت و مامۆستا چۆن نمره‌کان دابه‌شده‌کات؟‌ |
| **15. Student learning outcome:**EXPECTED LEARNING OUTCOMES: Upon completion of Deciduous Fruit Production students will… 1. Identify different families of deciduous fruit tree and most important groups, varieties or cultivars of each family. Describe the importance and uses of different type of fruits. 2. Identify the major differences between deciduous fruit trees according to method of training and pruning method of harvesting and quality and quantity of fertilizer that the tree needed.3. Discuss the need of market to these productions of fruit trees and how to arrive them to the market with high quality at write time and how to store them.پڕکردنه‌وه‌ی ئه‌م خانه‌یه‌ زۆر گرنگه‌، مامۆستا ده‌رئه‌نجامه‌کانی فێربوون ده‌نووسێت. بۆ نموونه‌: ڕوونی ئامانجه‌ سه‌ره‌کیه‌کانی کۆرسه‌که‌ (بابه‌ته‌که‌) بۆ خوێندکار‌گونجاندنی ناوه‌ڕۆکی کۆرسه‌که‌ به‌ پێویستی ده‌ره‌وه‌ و بازاڕی کارقوتابی چی نوێ فێرده‌بێت له‌ ڕێگه‌ی پێدانی ئه‌م کۆرسه‌وه‌؟This should not be less than 100 words  |
| **16. Course Reading List and References‌:**▪ Key references:▪ Useful references:▪ Magazines and review (internet): |
| **17. The Topics:** | **Lecturer's name** |
| **1.** General description of deciduous fruits, pome fruits.2. Apple-Introduction- economic and nutrient importance --Climatic requirements - Soil preference–chilling requirement - Pollination -Alternate Bearing - harvest and storage.3. Pear – Introduction- economic and nutrient importance -- Climatic requirements - Soil preference–chilling requirement, harvesting methods. 4- Quinces - Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.**5. First mid semester exam**6. General description of deciduous fruits, stone fruits.7. Apricot -Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.8. Peach– Introduction- economic and nutrient importance -- Climatic requirements - Soil preference–chilling requirement, harvesting methods.9. Plum – Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.**10. Second mid semester exam**10. Cherries - Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.11.Nectarines- Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.12.Almond- Introduction- economic and nutrient importance - Climatic requirements - Soil preference–chilling requirements –harvesting methods.12. Visiting A pome or stone fruits orchard. **13. Second mid semester exam****14.** Presentation a seminar by students.  | 4/9/2022 11/9/202218/9/202225/9/20222/10/20229/10/202216/10/202223/10/202230/10/20226/11/202213/11/202220/11/202227/11/20224/12/202211/202218/2022 |
| **18. Practical Topics (If there is any)** |  |
| * Planting of different trees to know how to prepare the soil and how to plant the tree the depth and diameter of the hole that the tree planted in and what we must do after planting a tree.
* Cutting: the student should make cutting to familiarize the types of cutting and time for producing cuttings and how to plant or store the cuttings.
* Visiting some local orchards to see different types of trees and how they planted and cared.
* Pruning of the tree: students must practice pruning process to know different systems of pruning.

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  |  |
| **19. Examinations:**1. Explain Climate of apple trees.Q2) Explain orchard establishment of the apricot. Q3) Talk about environmental factors pear.Q4) What you know chilling requirements of Quinces.  |
| **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.‌‌  |