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**Department of Horticulture**

**College of Agricultural engineering science**

**University of Salahaddin**

**Subject: Plant Breeding**

**Course Book – 2nd Stage / Spring Semester**

**Lecturer's name: Soran Swar Aziz / MSc**

**Academic Year: 2022/2023**

**Course Book**

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| **1. Course name** | **Plant Breeding** | |
| **2. Lecturer in charge** | **SoranSwar Aziz** | |
| **3. Department/ College** | **Horticulture Department / Agriculture College** | |
| **4. Contact** | **e-mail:[Soran.aziz@su.edu.krd](mailto:Soran.aziz@su.edu.krd)** | |
| **5. Time (in hours) per week** | **Practical: 3** | |
| **6. Office hours** | **Monday 9 am to 1 pm/ Tuesday 9 am to 1 pm** | |
| **7. Course code** |  | |
| **8. Teacher's academic profile** | **BSc Plant Production, Salahaddin University, 2010**  **MSc Medicinal plants and functional foods, Newcastle University, England, United Kingdom, 2013)** | |
| **9. Keywords** | **Plant Breeding, Pollination, Fertilization, Hybrid, Genotype, Genetic Variation, Mutation.** | |
| **10. Course overview:**  ▪ Studying this course provides an opportunity for the students to understand the advantages and disadvantages of the Plant Breeding,  ▪ This course lead students to understand many aspects about plant Breeding including: what is plant Breeding Means, what are performance, Method of plant Breeding, where are they growing and condition of the plant growth  ▪ Other importance of studying this course is to understand how it is possible to improve the production of these plant in Kurdistan, to make them more effective than previous.  ▪ All these points make opportunities for the student to think about a perfect project to work in this subject and improve in both sides including agriculture and economic aspects to provide chance for our student t and worker to work on it and improve it. | | |
| **11. Course objective:**  The aim of this course is to give the students availability to improve the term of plant breeding and give them availability to cultivate and production of these plants, also give enough information about the plant components which they have an effective role in the agriculture projects.  Furthermore, another abject of this course understands the students in the term of breeding of the plant.  Moreover, this course provides a method of production and the requirement conditions for the plant breeding conditions including: time for cultivation, type of soil, ecological condition, agriculture practise, time of harvesting**.** | | |
| **12. Student's obligation**  The obligation of the students in this course includes attendance in the lectures and listening teachers carefully, asking about new terms in the class, preparation for the exam by studying the materials, make a report about plant breeding and present it for the other students at the class. | | |
| **13. Forms of teaching**  The form of teaching is including use of Microsoft PowerPoint at the class to present the lecture, using white board, sing data show, and give the lecture to the students by Microsoft word for each lecture. | | |
| **14. Assessment scheme**  Practical part: two exam 15 mark, quiz 2 mark, report and presentation 3 mark.  Total: 35+15= 40 mark‌ | | |
| **15. Student learning outcome:**  **The outcomes of this course includes:**  ▪ Understanding in the term of plant breeding.  ▪ Understanding the importance of plant breeding as an economic part to improve the economy of Kurdistan and exporting our product to the markets such as locally and globally.  ▪ Understanding method of breeding and their effects.  ▪ ability to improve plant species and varieties in the future  **The new things are includes:**  ▪ Method of plant breeding.  ▪ Factors that affects Method of breeding.  ▪ Method of pollination. | | |
| **16. Course Reading List and References‌:** | | |
| **17. The Topics:** | | **Soran Swar Aziz** |
| **18. Practical Topics (If there is any)** | |  |
| Introduction to plant breeding  Objectives of plant breeding, Sexual an Asexual reproduction | | 3 hours  12/09/2023 |
| Plant individuals , gametophyte, Pollination Process, Fertilization | | 3 hours  19/09/201 |
| Know essential terminology, Know some examples of traits targeted by breeding for genetic improvement of crops, Understand the foundations of plant breeding, Know breeding techniques | | 3 hours  26/09/2019 |
| Breeding Equipment, Cross-pollination | | 3 hours  03/10/2019 |
| Mutation and mutation breeding | | 3 hours  10/10/2019 |
| Self-incompatibility, Causes of S.I | | 3 hours  17/10/2019 |
| Selection methods, | | 3 hours  24/10/2019 |
| Hybrid, Principle of hybridization.. | | 3 hours  31/10/2019 |
| Genetic variation components | | 3 hours  07/11/2019 |
| Review & General Discussion ? | | 3 hours  14/11/2019 |
| **19. Examinations:**  **Q1.*What is plant breeding?***  Answer:  Plant breeding is the science, art and technology to improve the characters of cultivated verities. Genetically improve and develop a new verity regarding its yield, nutrition value, adaptation and consumption needs  ***Q2. Answer by true (T) and false (F) for the following sentences with correcting the false sentences?***  **Q3/ Select the correct words**  **Q4/ Write about the followings** | | |
| **21. Peer review پێداچوونه‌وه‌ی هاوه‌ڵ** | | |