Ministry of Higher Education and Scientific research



**Department of: Field Crops**

**College of: Agricultural Engineering Sciences**

**University of salahaddin**

**Subject: Weed and Weed Control**

**Course Book - 4 th Stage/ Spring Semester**

**Lecturer's name: Kharman mohammed pirdawd**

**Academic Year: 2022 - 2023**

Ministry of Higher Education and Scientific research

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| **1. Course name** | **Spring semister** |
| **2. Lecturer in charge** | **Asst. Lecturer Kharman Mohammed Pirdawd** |
| **3. Department/ College** | **Field crops / Agriculture** |
| **4. Contact** | **e-mail:kharman.mohammed@su.edu.krd** |
| **5. Time (in hours) per week** | **Theory:2 hour**  **Practicaly:3 hour** |
| **6. Office hours** | **All days from 830 - 200** |
| **7. Course code** |  |
| **8. Teacher's academic profile** | **Education:**  **B.Sc: field crop /college of Agriculture (2010-2011) / University of Salahaddin /Kurdistan Region /Iraq**  **M.Sc: field crop / weed control /college of Agriculture (2017) / University of Salahaddin /Kurdistan Region /Iraq**  **Work History:**  **1-Field crop department /College of Agriculture/ University of Salahaddin /Kurdistan Region /Iraq (2011-2014)**  **2- Register Unit, College of Education /Makhmoor/ University of Salahaddin /Kurdistan Region /Iraq 2017-until date assistant lecture in 2019**  **3-, I worked at Scientific Affairs and postgraduate studies Unit ,college of Agriculture / University of Salahaddin /Kurdistan Region /Iraq(2021-2022)**  **As an assistant lecturer, I have teaching:**  **1. I was lecturer in Academic skill for first year student (Arabic department) at Education college / Makhmoor from 2019-2020**  **2. I was lecturer in Rainfed Cultivation for fourth year student (Horticulture department) at agriculture college / Rapareen Unversity from 2019-2020**  **3. I was assisting lecturer in Graduated Research Method for fourth year student ,from 2020-2021**  **4. I was assisting lecturer in weed and weed control for fourth year student ,from 2020-2021**  **5. I am assisting lecturer in Principle plant Production for second year student ,from 2021-2022** |
| **9. Keywords** | **weed, weed control , weed competition , allelopathy** |
| **,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  This should not be less than 200 words | |
| **11. Course objective:**   * Studying this course provides an opportunity for the student to understand the term of weed and weed control and its derivatives. * This course lead student to know and recognize most common weed in their around. * This course lead student to know how can prepare herbarium sample. * This course lead student to understand many harmful and beneficial aspects about weeds. * Other important of studying this course is to understand ecological aspects of weeds and weed control. * This course is to understand the methods for weed control. * This is to obtain adequate experience about herbicide and how we can safely work with harmful effect of herbicide. * Obtain enough information about selectivity of herbicide. * This course is to understand the type of herbicide and their formulations. * It is to learn the practical method of preparation of herbicides calibration. | |
| **2. Student's obligation**  The obligation of the student in this course includes attendance in the lectures and  listening teachers carefully, asking about new terms in the class The students must know the importance of quizzes, homework, reports and sample preparation., preparation for the exam  by studying the material, make a report about weeds and weed control and present it for  the other students at the class. | |
| **11. Course objective:** The course will cover texts on Weed plants and their Biology, ecology, weeds impact on crops and environment, weed identification, weed management and Control. Weed control is the segment of weed science that most people are familiar with and where the greater part of education and training is focused. The methods employed to manage weeds vary, depending on the situation, available research information, tools, economics, and experience. Weeds should be everybody’s business, as they affect everyone in one way or another. They not only reduce crop production and increase the cost of agricultural products, but they also cause problems for the general public in many other ways—for example, in regard to health and maintaining home landscaping recreational areas and other non-crop areas. Specific problems include lower crop and animal yields, less efficient land use, higher costs of insect and plant disease control, poorer-quality products, more water management problems, and lower human efficiency. In the future, weed control methods presently being intensively researched will allow expanded weed control options beyond herbicides and mechanical methods in both agricultural and nonagricultural weed management. Biological control by insects and plant disease organisms, predictive modeling of weed/crop interactions, and the use of herbicide antidotes, more competitive crops, allelopathy, and genetic engineering/genomics will become more common as their reliability is improved. The overall objective of additional approaches is to discover new, more environmentally acceptable weed management tools that not only control weeds effectively, but improve our understanding of weed ecology/biology and allow more sustainable management of the agro-ecosystem  13. Forms of teaching  Data show  White board  Video  Power point  Showing plant examples to recognize them and introduce their scientific name, family name, life cycle and reproduction methods..  Field trips to Grdarasha fields to survey the weed and discussing the types of weed.  Lecturing and discussions | |
| **14. Assessment scheme**  Breakdown of overall assessment and examination  Final grades for the course will be based on performance in the following areas:  **Item Total Possible Points**  Practical examination 30  Activity 5  Theory exams 15  Final Exam 60  **100 TOTAL POSSIBLE** | |
| **15. Student learning outcome:**   * Student will be able to distinguish between weeds and cultivars. * Students can familiar with weed terms and their relations. * Students can recognize some weed in their around. * Students understand the advantage and disadvantage of weed and weed control. * Student will be familiar with the scientific names of plants and the families. * Students can be able to prepare herbicide with considering their safety. | |
| **16. Course Reading List and References**  Weed ecology in natural and agricultural systems. 2003. Barbara D. Booth, Stephen D. Murphy, and Clarence J. Swanton.  Weed Management Handbook. 2002. Robert E.L. Naylor.  Fundamentals of weed science. 2007. Robert L. Zimdahl.  Weeds and Weed Management on Arable Land (An Ecological Approach). 2003. Sigurd Håkansson.  5. Weed science (Principles and practices).2002. Thomas J Monaco, Stephen C Weller, Floyed M Ashton. 6. Applied Weed Management. 2009. Merrill a. Ross & Carole A. Lembi, 3rd edition. Pearson Hall. USA | |

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| **17. The Topics:** | **Lecturer's name** |
| **Week 1**  Weed Identification and Weed Impact  **Week 2**  Classification of weed - example some common weed  - Practical part is just showing plant examples to recognize them and introduce their scientific name, family name, life cycle and reproduction methods.  **Week 3**  Weed competition- example for some common weed  Practical part is just showing plant examples to recognize them and introduce their scientific name, family name, life cycle and reproduction methods.  **Week 4**  Practical Examination (First Exam)  **Week5**  Allelopathy – example for some common weed  Practical part is just showing plant examples to recognize them and introduce their scientific name, family name, life cycle and reproduction methods.  **Week 6**  Integrated Weed Management- Mechanical Method  Cultural Control  Biological control  Chemical method  Example for some common weed  Practical part is just showing plant examples to recognize them and introduce their scientific name, family name, life cycle and reproduction methods.  **Week 8**  Sample preparation  **Week 9**  Practical Examination (Second Exam)  **Week 10**  Visit to Grdarasha field to see weed and survey weed  **Week 11**  Weed indices with some example about it  **Week 12**  Calibration  **Week 13**  Practical Examination (Third Exam)  **Week 14**  Making a trip to nature to demonstrate the identification of crops and collecting weed sample | **Lecturer's name**  **Miss. Kharman Mohammed**  **3 hours per a week for all three department** |
| 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. Compositional:*** In this type of exam the questions usually starts with Explain , definition, What are the reasons for…?, Why…?, How….?  With their typical answers  Examples should be provided  Q/Where is the pest place to collect sample and why?  A/edge of road ,field and river are the best place to collect sample because we can find most plant diversity  ***2.fill the blanket type of exams:***  *Rumex dentatuse* can contain high levels of ……….., which is gives the leaves lemon flavor.  Oxalic acid  . Examples should be provided  ***3. define the sample:***  Common name  Scientific name  Family  Life cycle | |
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| **21. Peer review** پێداچوونةوةی هاوةڵ  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).*  ئةم کۆرسبووکة دةبێت لةلایةن هاوةڵێکی ئةکادیمیةوة سةیر بکرێت و ناوةڕۆکی بابةتةکانی کۆرسةکة پةسةند بکات و  جةند ووشةیةک بنووسێت لةسةر شیاوی ناوةڕۆکی کۆرسةکة و واژووی لةسةر بکات .  هاوةڵ ئةو کةسةیة کة زانیاری ةةبێت لةسةر کۆرسةکة و دةبیت پلةی زانستی لة مامۆستا کةمتر نةبێت | |