







| Course Description For | rm | | | |
|----------------------------------|--|--|--|--|
| Course Name: | | | | |
| Weeds and methods of con | trol | | | |
| Course Code: | - 12-16 B | | | |
| WECO303 | المخلية الزيري المهرية | | | |
| Semester / Year: | الما الما الما الما الما الما الما الما | | | |
| 2024 / 2025 autumn | | | | |
| Description Preparation Da | ite: | | | |
| 1/2/2025 | المستغربة المستغرب المستغربة المستغربة المستغربة المستغربة المستغربة المستغر | | | |
| Available Attendance Forms | , in the state of | | | |
| Attended | | | | |
| Number of Credit Hours (To | tal) / Number of Units (Total) | | | |
| (75 hours) (3.5 units) | | | | |
| Course administrator's na | me (mention all, if more than one name) | | | |
| Name: Dr. Mohammed Akra | ım Abdulateef | | | |
| Email: mohammed.akram19 | 85@uomosul.edu.iq | | | |
| Course Objectives | | | | |
| Course Objectives | Enabling the student to understand, understand and identify the nature of the life of the bush, the benefits and harms of the bush, ways to combat them, including agricultural, mechanical, biological and chemical methods, in addition to an extensive study on the totals of herbicides and methods of adding them to combat the weeds | | | |
| Teaching and Learning Strategies | | | | |
| Strategy | 1- Education strategy teamwork planning. | | | |
| | 2- Brainstorming education strategy and discussions. | | | |

3- E-learning strategy.

Course Structure

| Course Struct | uie | | | | |
|---------------|--------------|-------------------|---|-------------------------|----------------------|
| Week | Hours | Required | Unit or subject | Learning method | Evaluation method |
| | | Learning | name | | |
| | | Outcomes | | | |
| 1 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | A1 b1: Defines, | The weed and | Auditory methods. | assignment of |
| | | enumerates and | its definitions | Style of writing on the | homework, |
| | | explains the | | blackboard. | discussions, student |
| | | jungles, their | Practical: | Direct dialogue style. | attendance |
| | | benefits and | The weed | Electronic class | |
| | | their harms | name | Google Classroom. | |
| | | Practical: | | (practical) | |
| | | B6: The | San | A signing tasks and | |
| | | division and | الزمعة الم | Lyorting. | |
| | | classification of | الزراء البوصل الم | | |
| | | jungle plants is | والعليان | | |
| | | counted | | <u> </u> | |

| 2 | OTT | mıı | 771 | (41 | C1 |
|---|--------------|----------------------------|--------------------------|-------------------------|----------------------|
| 2 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | A2: Defines | Localizing | Auditory methods. | assignment of |
| | | the | weed plants | Style of writing on the | homework, |
| | | regionalization | and ways to | blackboard. | discussions, student |
| | | and | spread them | Direct dialogue style. | attendance |
| | | enumerates | | Electronic class | |
| | | the qualities | Practical: | Google Classroom. | |
| | | related to the | The regional | (practical) | |
| | | regionalization | | Assigning tasks and | |
| | | and the means | | reporting. | |
| | | of the spread | | | |
| | | of the weed | | | |
| | | Practical: | | | |
| | | | | | |
| | | B7: Explains | | | |
| | | the | | | |
| | | characteristics | | | |
| | | of the weed | | | |
| | | plants related | | | |
| | | to adaptation | | | |
| | | | | | |
| 3 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | B2a3: Defines | | Auditory methods. | assignment of |
| | | the life | The | Style of writing on the | homework, |
| | | antibodies | competition | blackboard. | discussions, student |
| | | (known the | | Direct dialogue style. | attendance |
| | | life antibodies, | Practical: | Electronic class | |
| | | the number of | | Google Classroom. | |
| | | places where | Reproduction | (practical) | |
| | | the anti-life | The second of the second | A signing tasks and | |
| | | materials are | حامدة الأ | Sporting. | |
| | | present) | الزراء أبعوها التحق | | |
| | | | والغالب ع | 3 1 | |
| | | Practical: | | | |
| | | B8: | | III and | |
| | | Enumerates | 1 33 | المسن | |
| | | the different | الدوهندسة | | |
| | | breeding | | | |
| | | methods of | 4 | | |
| | | weed plants | | | |
| 4 | 2Theoretical | The theoretical | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | A4 b3: | 1 | Auditory methods. | assignment of |
| | | Describes the | biological | Style of writing on the | homework, |
| | | ways of entry | control | blackboard. | discussions, student |
| | | of antibiotic | | Direct dialogue style. | attendance |
| | | substances | Practical: | Electronic class | |
| | | (explain the | | Google Classroom. | |
| | | ways of | Stillness | (practical) | |
| | | entering the | | Assigning tasks and | |
| | | antibiotic | | reporting. | |
| | | substances into | | | |
| | | the | | | |
| | | environment, | | | |
| | | explain the | | | |
| | | methods of | | | |
| | | washing and | | | |
| | | volatilization) | | | |
| | | | | | |
| | | Practical· | | | |
| | | Practical: | | | |
| | | C5: Explains | | | |
| | | C5: Explains the effect of | | | |
| | | C5: Explains | | | |

| 5 | 2Theoretical 3 practical | Theoretical: A3 b2: c1 uses resistance methods (select the best methods used to reduce the spread of weedes) Practical: C6: Explains the preventive means to reduce the spread of the weed | Theoretical: Methods to control the weed Practical: Getting to know the weed | (theoretical) Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |
|---|-----------------------------|---|---|--|--|
| 6 | 2Theoretical 3 practical | Theoretical: C2: Employs means to reduce the spread of weeds (use mechanical and agricultural methods in eliminating weeds scattered in agricultural fields) Practical: B9: Demonstrates the quantitative qualities of the weed | Theoretical: Methods of resistance Practical: The qualities of the weed quantity | (theoretical) Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |
| 7 | 2Theoretical 3 practical | Theoretical: B5: Writes about the history of chemical control and the benefits of control (write a report on chemical control explaining how herbicides were used for the first time, explain the benefits of chemical control) Practical: B10, d4: illustrates the division of weed herbicides | Chemical control Practical: weed herbicides | (theoretical) Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |

| | 2001 | | | | Las |
|----|-----------------------------|---|--|--|--|
| 8 | 2Theoretical 3 practical | Theoretical: C3: Shows the determining factors of the lethal effect (among the determining factors of the killer effect of any chemical compound) Practical: B11: Demonstrates the physical and chemical | Theoretical: Chemical aggregates Practical: The qualities of weed herbicides | (theoretical) Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |
| 9 | 2Theoretical | qualities of weed herbicides Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | C4: herbicide permeability from leaves (try during the Chemical Control Department places of permeability of herbicides) Practical: D5: Determines the volume of the spray | Herbicide absorption and transfer Practical: Spraying solutions | Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and eporting. | assignment of homework, discussions, student attendance |
| 10 | 2Theoretical 2Theoretical | solution Theoretical: B6,c5: Schedules the transport of herbicides (the herbicide transport table from the fall of the herbicide drop to its arrival in the killing areas) Practical: B12: Shows the types of births and their uses | Herbilide absorption and transfer Practical: The sprayers | Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |
| 11 | 2Theoretical 3 practical | Theoretical: D1: Determines the types of optional (Select the type of optionality when spraying herbicides on wheat plants and not | Theoretical: Elective Practical: Elective | (theoretical) Auditory methods. Style of writing on the blackboard. Direct dialogue style. Electronic class Google Classroom. (practical) Assigning tasks and reporting. | Short exams, assignment of homework, discussions, student attendance |

| | | affected, select | | | |
|----|--------------|-----------------------------|----------------------|-------------------------|----------------------|
| | | the type of | | | |
| | | optionality | | | |
| | | when noticing | | | |
| | | the impact of | | | |
| | | broad-leaf bush | | | |
| | | plants and | | | |
| | | served the | | | |
| | | impact of | | | |
| | | narrow-leaf | | | |
| | | plants) | | | |
| | | Practical: | | | |
| | | B13: | | | |
| | | Distinguishes | | | |
| | | the optional | | | |
| | | types of | | | |
| | | herbicides | | | |
| 12 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | D2: explains | | Auditory methods. | assignment of |
| | | the | Elective | Style of writing on the | homework, |
| | | morphological, | | blackboard. | discussions, student |
| | | physiological | Practical: | Direct dialogue style. | attendance |
| | | optional | | Electronic class | |
| | | (explain how | Sustainability | Google Classroom. | |
| | | the herbicide is | | practical) | |
| | | transformed | alian dia | A signing tasks and | |
| | | within the | الزرا المه مست | porting. | |
| | | plant, explain | واعد والما | | |
| | | the optional | الرواية المعتبان الم | | |
| | | morphological | | 1 | |
| | | mechanism in | 1 | Liver III | |
| | | plants) | الدوهندية | and the second | |
| | | Practical: B14: Measures | 3 | | |
| | | the | 4 | | |
| | | sustainability of | | | |
| | | the herbicide | | | |
| | | solution in the | | | |
| | | soil | | | |
| 13 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| 13 | 3 practical | D3: Explains | incorcucar. | Auditory methods. | assignment of |
| | J practical | the relationship | Weed and | Style of writing on the | homework, |
| | | of herbicides | epidemic | blackboard. | discussions, student |
| | | and the | herbicides | Direct dialogue style. | attendance |
| | | environment | -1010101000 | Electronic class | |
| | | (explanation of | Practical: | Google Classroom. | |
| | | the relationship | | (practical) | |
| | | of herbicides to | Transportation | Assigning tasks and | |
| | | the | and | reporting. | |
| | | environment in | preparation of | 1 - 6 | |
| | | terms of the | herbicides | | |
| | | date of addition | | | |
| | | and | | | |
| | | concentration | | | |
| | | of the | | | |
| | | herbicide) | | | |
| | | Practical: | | | |
| | | :C7 tests the | | | |
| | | methods of | | | |
| | | transport of the | | | |
| | | | | | |

| | | herbicide | | | |
|----|--------------|-------------------|--|-------------------------|----------------------|
| | | within the soil | | | |
| 14 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| | 3 practical | E1: Verifies the | | Auditory methods. | assignment of |
| | | existence of | Sustainability | Style of writing on the | homework, |
| | | sustainability | | blackboard. | discussions, student |
| | | (he investigates | Practical: | Direct dialogue style. | attendance |
| | | the cause of | | Electronic class | |
| | | sustainability of | Field visit | Google Classroom. | |
| | | herbicides in | | (practical) | |
| | | soil or on plant | | Assigning tasks and | |
| | | parts) | | reporting. | |
| | | Practical: | | reporting. | |
| | | E3: Documents | | | |
| | | the various | | | |
| | | weed scenes | | | |
| 15 | 2Theoretical | Theoretical: | Theoretical: | (theoretical) | Short exams, |
| 13 | 3 practical | E2: Measures | Theoretical. | Auditory methods. | assignment of |
| | 3 practical | the retention of | Sustainability | Style of writing on the | homework, |
| | | herbicides in | Sustamability | blackboard. | discussions, student |
| | | the soil | Practical: | | attendance |
| | | | Practical: | Direct dialogue style. | attendance |
| | | (measure the | G. Carrier Co. | Electronic class | |
| | | duration of | Scientific visit | Google Classroom. | |
| | | retention of the | | (practical) | |
| | | herbicide in the | The state of the s | A signing tasks and | |
| | | soil and do you | الأمحة الم | orting. | |
| | | think that there | ر اعد المالية | | |
| | | are factors | العالمات العالمات | | |
| | | related to its | | | |
| | | effective | | Lead , Park | |
| | | survival in the | ن وهن | | |
| | | soil) | a wind | | |
| | | Practical: | | | |
| | | E4: measures | 4 | | |
| | | the amount of | | | |
| | | herbicide | | | |
| | | needed to | | | |
| | | | | | |

| No. | Calendar methods | Calendar date (week) | Degree | Relative weight% |
|-----|-------------------------|-------------------------|--------|------------------|
| 1 | 1report | week 4 | 2.5 | 2.5 |
| 2 | 2 report | week 5 | 2.5 | 2.5 |
| 3 | (1) Quiz | week 6 | 2 | 2 |
| 4 | (2) Quiz | week 14 | 2 | 2 |
| 5 | (3) Quiz | week 15 | 1 | 1 |
| 6 | (1) exam | week 6 | 7.5 | 7.5 |
| 7 | (2) exam | week 11 | 7.5 | 7.5 |
| 8 | exam theoretical final | exam theoretical final | 40 | 40 |
| 9 | practical field project | week 15 | 5 | 5 |
| 10 | evaluation field | weeks 3, 5 | 2 | 2 |
| 11 | (1) Quiz practical | week 1 | 1 | 1 |
| 12 | (2) Quiz practical | week 4 | 0.5 | 0.5 |
| 13 | (3) Quiz practical | week 14 | 1 | 1 |
| 14 | question and homework | 6,8,9,10,11,12,13 weeks | 5.5 | 5.5 |
| 15 | exam practical final | exam theoretical final | 20 | 20 |
| | total | 100 | %100 | %100 |

Learning and Teaching Resources

| Required textbooks (curricular books, if any) | the basics of Weeds and methods of control |
|--|--|
| | |
| Main references (sources) | Barbara D. Booth & Clarence J. Swanton |
| , , | AND Stephen D. Murphy.2003.Weed Ecology in |
| | Natural and Agricultural Systems - Robert L. Zimdahl |
| | / 2007.Fundamentals of |
| | Weed Science / |
| | OMAS J. MONACO & STEPHEN C. WELLER AND |
| | FLOYD M. ASHTOM. 2002.WEED SCIENCE |
| | |
| Recommended books and references (scientific journals, | https://www.tjas.org/index.php/tas |
| reports) | |
| Electronic References, Websites | https://magri.mosuljournals.com/ |
| , | - https://www.tjas.org/index.php/tas |

Theoretical subject teacher: Dr. Mohammed Akram Abdulateef

Practical subject teacher: ISLAM ABDULSATTAR ASMAIR

Chairman of the Scientific Comnittee:

Head of the Field Crops Department

Chairman of the Scientific Committee

Head of the department

Prof. Dr. Jassim Mohammed Alwan Prof. Dr. Asmaa Muhammad Adel