

## Course Description Plant Protection Equipment

<b>1. Course Name:</b>
Plant Protection Equipment
<b>2. Course Code:</b>
PLPE484
<b>3. Semester / Year:</b>
The second semester/4 stage/2023–2024
<b>4. Description Preparation Date:</b>
1/2/2024
<b>5. Available Attendance Forms:</b>
in-person
<b>6. Number of Credit Hours (Total) / Number of Units (Total)</b>
75 hours (2 theoretical + 3 practical / 3.5 units)
<b>7. Course administrator's name (mention all, if more than one name)</b>
Name: Muosab abd alwihid mohammed Email: goldenagr@uomosul.edu.iq Name: Othman Muayad Mohammed Email: Othman.mmt@uomosul.edu.iq
<b>8. Course Objectives</b>
<ul style="list-style-type: none"><li>• Identify the components and parts of plant protection equipment</li><li>• Explaining the basics and principles of control equipment and their applications in various agricultural fields</li><li>• Discussing each type of plant protection equipment for agricultural crop production (in terms of installation and function)</li><li>• Make the necessary adjustments for various protective equipment in order to obtain the optimal use of these machines in order to achieve the goal of efficient use.</li><li>• The ability to maintain, maintain and repair agricultural equipment.</li><li>• The ability to disassemble and install these machines.</li><li>• The ability to manage agricultural equipment in the field.</li><li>• The ability to connect machines to the agricultural puller and carry out organizing and calibrating operations for them in a way that suits the agricultural process required to be performed with the agricultural machine.</li></ul>
<b>9. Teaching and Learning Strategies</b>
<ul style="list-style-type: none"><li>- Interactive lecture</li><li>- Brainstorming</li><li>- Dialogue and discussion</li><li>- Field Training</li><li>- Practical exercises</li><li>- Field project</li><li>- Self-education</li></ul>

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical	d4 Explains the role of protection equipment in the agricultural sector	The importance of using protective equipment and methods of applying it	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Learn about protective equipment	Classification of protective equipment	Reports	quiz homework discussions
2	2 Theoretical	d4 Explains the classification of protective equipment	Classification of protective equipment	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Mechanical control equipment	Mechanical control equipment	Reports	quiz homework discussions
3	2 Theoretical	C3 Shows the sections of chemical control equipment	Types of chemical control equipment	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	C3 Organizing hoeing equipment for work	Mechanical control equipment before and during planting	Reports	quiz homework discussions
4	2 Theoretical	C3 Sections and classification of sprinklers	Classification of sprinklers	Auditory methods Writing style Direct dialogue style	quiz homework discussions

	3 Practical	C3 Methods of attaching hoeing equipment	Mechanical control equipment in the presence of the growing crop	Reports	quiz homework discussions
5	2 Theoretical	C3 Explains the advantages and disadvantages of the chemical control method	Advantages and disadvantages of the spray control method	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	C3 Sustainability and maintenance	Chemical control has its advantages and disadvantages	Reports	quiz homework discussions
6	2 Theoretical	d4 Explaining the requirements that must be met by sprinklers	Requirements that must be met in sprinklers	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Laboratory and field sprinkler regulations	Spraying equipment functions and their most important classifications	Reports	quiz homework discussions
7	2 Theoretical	d4 Shows the most important parts of spray machines	The most important parts of spray machines	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Mathematical applications on performance rate	The most important parts of spray equipment	Reports	quiz homework discussions
8	2 Theoretical	d4 Shows the most important parts of spray machines	Types of pumps used in sprinklers	Auditory methods Writing style Direct dialogue style	final semester exams
	3 Practical	d4 Applications for calculating fountain drainage	Different models of spray machines	Reports	final semester exams
9	2 Theoretical	d4 Identify the types of ground sprinklers and their functions	Types of ground sprinklers and their functions	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Applications for calculating spray rate	Fogging equipment has its advantages and disadvantages	Reports	quiz homework discussions
10	2 Theoretical	C3 Explains the introduction of fogging machine	Classification of fogging machine	Auditory methods Writing style	quiz homework discussions

				Direct dialogue style	
	3 Practical	C3 Basic requirements for making exfoliators	The main parts that make up the filters and their types	Reports	quiz homework discussions
11	2 Theoretical	C3 Identify the types of ground fogging machine	Types of ground fogging machine and their functions	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	C3 Ground clearance organizations	Fog diffusers	Reports	quiz homework discussions
12	2 Theoretical	C3 Identify the types of smokers	Types of smokers and their functions	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	C3 Sustainability and maintenance	Field observations	Reports	quiz homework discussions
13	2 Theoretical	C3 Identify spraying and air blowing equipment	Spraying equipment and air fogging	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	C3 Public safety at work	Maintenance and maintenance for the purpose of storage and safety during work	Reports	quiz homework discussions
14	2 Theoretical	d4 Identify the designs required in spraying aircraft	Necessary considerations for the design and operation of spraying and fogging aircraft	Auditory methods Writing style Direct dialogue style	quiz homework discussions
	3 Practical	d4 Scientific visit	Scientific visit	Reports	quiz homework discussions
15	2 Theoretical	C3 Explains the types of mechanical control equipment	Types of mechanical control equipment (hoeing)	Auditory methods Writing style Direct dialogue style	final semester exams
	3 Practical	C3 Calibrating manual and knapsack sprayers	The use of aircraft in pest control	Reports	final semester exams

### 11. Course Evaluation

	Evaluation methods	Evaluation date (week)	Grade	Relative weight %
1	Report 1	Week Four	2.5	2.5
2	Report 2	Week Five 2.5	2.5	2.5

3	Short test (1) Quiz	Week Six	2	2
4	Short Test (2) Quiz	Week Fourteen	2	2
5	Short Test (3) Quiz	Week Fifteen	1	1
6	Semester test (1)	sixth week	7.5	7.5
7	Semester test (2)	the eleventh week	7.5	7.5
8	final theoretical exam final semester exams 40 40	final semester exams	40	40
9	Practical field project	week fifteen	5	5
10	Field evaluation	weeks three and five	2	2
11	short practical tests (1) Quiz	the first week	1	1
12	short practical tests (2) Quiz	Week Four	0.5	0.5
13	Short practical test (3) Quiz	Week Fourteen	1	1
14	Direct drawings and homework	weeks 6, 8, 9, 10, 11, 12, and 13	5.5	5.5
15	Final practical exams	Final semester exams	20	20
Total	100		100%	100%

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Control equipment / Suhail Barbara
Main references (sources)	Control equipment / Suhail Barbara
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	



مدرس المادة العملي  
م. عثمان مؤيد محمد توفيق



مدرس المادة النظري  
م. د. مصعب عبد الواحد محمد

رئيس قسم المكين والالات الزراعية  
أ.م.نوفل عيسى محميد

رئيس اللجنة العلمية  
أ.د. أركان محمداًمين صديق

