

## Module (Course Syllabus) Catalogue 2022-2023

College /Institute	Khabat Technical Institute	
Department	Plant Protection-Evening	
Module Name	Plant Production	
Module Code	PLP105	
Semester	1 <sup>st</sup>	
Credits	8	
Module Type	Prerequisite <input type="checkbox"/> Core <input type="checkbox"/> Assist. <input checked="" type="checkbox"/>	
Weekly hours	5	
Weekly hours (Theory)	( 2 ) hr class	(7.3) hr workload
Weekly hours (Practical)	( 3 ) hr class	(9.3) hr workload
Lecturer (Theory)	Bilal Ibrahim Muhammed	
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## Course Book

<p>Course Description</p>	<p>This course is very important for student plant protection department by following points:</p> <ul style="list-style-type: none"> <li>• Knowledge of the principles of gardening foundations and service operations of various horticultural crops.</li> <li>• Develop and create the ground and shrines appropriate for various horticultural crops and roads suitable for cultivation.</li> <li>• Service operations and its morphological description. <ul style="list-style-type: none"> <li>• Students learning the principle of field crop such as Seed, Seed germination, soil preparation, cultivation, irrigation and fertilization. .. etc</li> <li>• Field crop production also consist of winter crops such as wheat and barley, and summer crops such as rice, corn, sunflower. .. etc</li> </ul> </li> </ul>
<p>Course Objectives</p>	<ol style="list-style-type: none"> <li>1-Prepare the ground and create the shrines of various horticultural crops.</li> <li>2-establishment of orchids and ways to serve.</li> <li>3-production of vegetable crops and ornamental.</li> <li>4-insect relationship with vegetables and fruit trees and ornamental plants.</li> <li>5. knowledge winter and summer crops cultivated students in Iraq and Kurdistan</li> <li>6-A student knows the crops grown in Kurdistan and Iraq.</li> <li>7-Learning the importance of economic and appropriate environment for each crop.</li> <li>8-Learning the winter and summer crops through description plant and seeds.</li> </ol>
<p>Student's Obligation</p>	<ul style="list-style-type: none"> <li>• The student learns cultivation methods crops in broadcast or lines and furrows.</li> <li>• A student knows the crops grown in Kurdistan, Iraq and learning the importance of economic and appropriate environment for each crop.</li> <li>• Learning the winter and summer crops through description plant and seeds.</li> </ul>

	<ul style="list-style-type: none"> <li>• By knowing that article by the students plant protection department they can know most of the agricultural operations in terms of horticultural and field crops.</li> <li>• And easy to find insects and diseases in those plants at all stages of plant growth because of their understanding of the characteristics of plants in obtained Article.</li> </ul>
Required Learning Materials	Computer, PowerPoint, Data show, white board, field and laboratory
Assessment scheme	16% Mid Term (Practical) 4% Quiz 40% Assignment (report, paper, homework, seminar...) 40% Final Practical
Specific Learning Outcome:	1- Knowledge of the principles of gardening foundations and service operations of various horticultural crops. 2- Develop and create the ground and shrines appropriate for various horticultural crops and roads suitable for cultivation. 3- Service operations and its morphological description. 4-Preparation and various agricultural circles and sterilized. 5- Planting seeds in seed beds and methods of education and pruning. 6-Relationship scientific information from the article and how it is applied by farmers from both standpoints; horticultural and field crops, establishment of nurseries, as well as the production of ornamental plants. 7-When applying those scientific information by local farmers will increase our production and the rise in the state's economy

Course References:	<ul style="list-style-type: none"> <li>• <b>Anderson</b>, W.K. and J.R. Garlinge. (2000). The Wheat Book Principles and Practice. Agriculture Western Australia, PP: 258-263</li> <li>• <b>Martin</b>, J.H.; R.P. Waldren and D.L. Stamp. 2006. Principles of Field Crop Production. Fourth Edition. Upper Saddle River, New Jersey Columbus. PP: 954.</li> <li>• <b>Meakin</b>, S. 2007. Crops for Industry. First published, North America USA. PP: 370.</li> <li>• <b>Arnon</b>, I. (1972). Crop production in Dry Regions, Leonard Hill Book, London.</li> <li>• <b>Connor</b>, D. J., R. S. Loomis and K. G. Cassman (2011). Crop Ecology. Productivity and Management in Agricultural Systems. University Press, Cambridge, UK., PP: 48.</li> </ul>
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Theory Cal Topics	Week	Learning Outcome
Definition of field crops, evolution, origin and the importance of field crops	1	
Divisions field crops: Division of crops by growing season, Division of field crops according to life cycles and Division of field crops according to their productivity.	2	
Production of wheat crop, economic importance, origin and environmental conditions, planting date, seeding rate, fertilizer and cultivation method.	3	
Production of barley crop, economic importance, origin and environmental conditions, planting date, seeding rate, fertilizer and cultivation method.	4	
Production of faba bean crop, economic importance, origin and environmental conditions, planting date, seeding rate, fertilizer and cultivation method.	5	
Production of rice crop, economic importance, origin, environmental conditions, planting date, seeding rate, fertilizer and cultivation method.	6	
Horticulture - economic and nutritional importance - Horticulture in Kurdistan, Iraq and the world - problems of horticultural production and proposed solutions.	7	
The impact of environmental factors on the growth and development of horticultural crops - insects, diseases and weeds.	8	
The propagation of horticultural crops, sexual and asexual, qualities of good seeds, germination and dormancy and seeds treatments.	9	

Pruning - Types and methods of pruning and objectives of pruning.	10	
The nursery, types of nurseries, factors that determine location of nursery and preparation of soil.	11	
Vegetables, dates of cultivation, production of vegetable seedlings for the kinds of winter and summer season.	12	

Practical Topics	Week	Learning Outcome
Seed, seed structure, seed germination and type of germination.	1	
Tillage, harrowing and levelling. Planting methods; broadcast, row and furrow methods.	2	
Wheat crop: plant description, growth stages, maturity and harvest stage,	3	
Barley crop: plant description, growth stages, maturity and harvest stages, varieties, prepare the seeds and Marketing.	4	
Faba bean crop: plant description, growth stages, maturity and harvest stages, varieties, prepare the seeds and Marketing.	5	
Rice crop: plant description, growth stages, maturity and harvest stages, varieties, prepare the seeds and Marketing.	6	
Identify the horticultural tools and propagation installations	7	
Cultivation various types of vegetables seeds and fruit in propagation installations and preparing the land (division to the plot, layering and furrows) to identify the different of vegetable seeds.	8	
Practical training on methods of propagating on various seed and vegetative.	9	
Identify the morphology of fruit trees, nature of growth, leaves, flowers, fruit and nature of pregnancy.	10	
Practical training on methods of pouring.	11	
Practical training on methods of grafting.	12	

## Questions Example Design

**Ministry of High Education  
and  
Scientific Research  
Erbil Polytechnic University  
Khabat Technical Institute  
Department: Plant Protection-  
Evening**



**S1-Midterm Examination  
(2022-2023)**

**Subject: Plant  
Production  
Class: 1<sup>st</sup> S  
Time: 60 Minutes  
Date: 01/12/2023**

### 1. **Compositional:**

Q/: Define the following terms:

- 1-Seed: It is a structure that contains the embryo of a plant.
- 2- Fertilization: Fertilization is organic or inorganic metal contains some nutrients that plants need
- 3- Horticulture: Horticulture may be described as the practice of growing plants in a relatively intensive manner.

Q/:Write the scientific and family name of the following plants:

- 1- Rice: Oryza sativa , Poaceae
- 2- Faba bean: Vicia faba , Fabaceae
- 3- Cucumber: Cucumis sativus , Cucurbitaceae

### 2. **True or false type of exams:**

Q/: Write **True or false** for the following terms:

- 1- Embryo consists of seed coat and embryo. False
- 2- The flowers of sunflower contain one type of flowers. False
- 3- The depth of tillage might depend on type of crops. True
- 4- Types of organic fertilizer are green manure and animal residue. True
- 5- Endosperm functions are elongation of stem.. False

### 3. **Multiple choices:**

Q/: Choose the correct answer from the following terms:

- 1- The crops that need to cool temperature during the period of growth.  
a- Summer crop. b- Sugar crop. /c- Winter crop.
- 2- They don't die after reproduction but continue to grow from year to year.  
/ a- Perennial crop. b- Annual crop. c- Fiber crop.
- 3- Forage crop is one of the parts of field crops divided according to.

<p>a- Life cycles. b- Growth seasons. /c- Their productivity.</p> <p>4- Is an important factor in limiting the growing of crops needs a warm and cool season.</p> <p>a- Oxygen. / b- Temperature. c- Light.</p> <p>5- It is annual, annual, tap root and summer crop.</p> <p>Rice crop. b- Wheat crop. /c- Tomato</p>
<p>Extra Notes:</p>
<p>External Evaluator</p>