Jordan University of Science and Technology

Faculty of Agriculture

Plant Production Department

PP411 Plant Breeding

First Semester 2020-2021

Course Catalog
3 Credit Hours. The course will concentrate on the studying and understanding of; the principles of plant breeding, applications of genetic principles by means of plant breeding procedures, Methods of selection for self and cross-pollinated and asexually propagated crops, Field techniques for breeding crops and source of germplasm and Problems facing plant breeders and ways to overcome them.

Instructor	
Name	**Prof. Mohammed Alajlouni**
Office Location	M1L2
Office Hours	
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Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 08:30 - 10:00 Room: منصة الكترونية

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	What is plant breeding? & Plant breeder's role	
Weeks 1, 2, 3, 4, 5	The genetic bases of plant breeding.	
Weeks 6, 7, 8	Tools of the plant breeder	
Weeks 9, 10, 11, 12	Methods of plant breeding.	
Weeks 13, 14	Germplasm resources for breeding crop plants.	
Weeks 15, 16	Breeding objectives and techniques	
Weeks 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	Practical techniques in plant breeding (lab. work)	

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Fostering student understanding of genetic principles underlining plant improvement. [1PLO1, 1PLO2]	10%	
Describe sources and types of genetic variation and explain their importance for plant improvement [1PLO2]	10%	
3. Describe and understand methods that are used in plant breeding including self, cross-pollinated and sexually propagated methods. [1PLO1, 1PLO2, 1PLO6, 1PLO7]	30%	
Locate, analyze, evaluate and synthesis information relevant to plant breeding. [1PLO6, 1PLO7]	10%	
Promote critical thinking in relation to improvement strategies and methods. [1PLO1, 1PLO6, 1PLO7]	20%	
Discuss examples of problems facing plant breeders and approaches to overcome them and develop plans for the application of plant breeding methods to achieve a specific objective [1PLO6]	5%	
Carry out specific plant breeding activities (crossing, selection of parental germplasm, phenotypic characterization and selection among progeny [1PLO7]	15%	

Relationship to Program Student Outcomes (Out of 100%)						
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7
19.17	22.50				24.17	34.17

Evaluation	
Assessment Tool	**Weight**
First Exam	20%
Second Exam	20%
Final Exam	40%
Lab. Exam	20%

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