



**Jordan University of Science and Technology**  
**Faculty of Agriculture**  
**Plant Production Department**

PP371 Agricultural Machinery

First Semester 2020-2021

**Course Catalog**

3 Credit Hours. Functional requirements and basic principles of machines for production and handling of crops. Care, capacity of tillage, planting, spaying, harvesting and materials handling machinery. (Prerequisite: NR 202, PP 205)

**Text Book**

<b>Title</b>	Principles of Farm Machinery
<b>Author(s)</b>	Kepner, Bainer & Barger
<b>Edition</b>	3rd Edition
<b>Short Name</b>	1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
2	Machines for Power Farming	Stone & Gulvin	3rd Edition	
3	Machinery Management	Siemens & Bowers	3rd Edition	
4	Engineering Principles of Agricultural Machines	Srivastava, Goering and Rohrbach	2nd Edition	
5	Farm Machinery and Equipment	Smith and Wilkes	6th Edition	
6	Farm Power and Machinery Management	Hunt, D	9th Edition	
7	ASAE Standards	American Society of Agricultural Engineers	30th Edition	

Instructor	
Name	Dr. Taha Al-Issa
Office Location	M1L2
Office Hours	
Email	taha@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Sun, Tue : 11:00 - 12:00 Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
672020	NR202 Principles Of Soil Science	Prerequisite / Pass
622021	PP202 Principles Of Plant Science	Prerequisite / Pass

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	History & Reasons for Ag. Mechanization	From 1, From 2
Week 2	Soil Tillage	From 4
Week 3	Conservation Tillage	From 4
Week 4	Terminology & Definition for Ag. Tillage Implements	From 7
Week 5	Crop Planting	From 4, From 5
Week 6	Row-Crop Cultivation	From 1
Week 7	Flame weeding and Plant Thinning	From 4
Week 8	Application of Fertilizer	From 1, From 4
Weeks 9, 10	Grain Harvesting	From 4
Week 11	Farm Machinery Management	From 3, From 6
Week 12	Machine Capacity, Field Capacity and Field Efficiency	From 3, From 6
Week 13	Selecting Machine Size	From 3, From 6

Week 14	Estimating Machinery Costs	From 3, From 6
Week 15	Fixed Costs	From 3
Week 16	Operating Costs	From 3

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Discuss the main reasons for the use of, and the history of Agricultural Mechanization. [1PLO6]	20%	
List the types of farm machinery used in the different farming operations (tillage, planting, weeding, fertilization, spraying & harvesting). [1PLO4]	15%	
Classify the types of equipment and application methods of fertilizers and pesticides. [1PLO4]	20%	
Name the machines used for grain harvesting. [1PLO4]	20%	
Explain the meaning of farm machinery management (machinery selection and solving farm machinery ownership costs equations). [1PLO4]	25%	

Relationship to Program Student Outcomes (Out of 100%)						
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7
			80		20	

Evaluation	
Assessment Tool	Weight
First one hour exam	25%
Second one hour exam	25%
Lab reports	10%
Final exam	40%

Policy	
Exams	All exams are closed book and notes. The final exam is comprehensive (covers all the material). Incomplete exams need approval from the dean of the college.
Cheating	Prohibited; and in case of cheating the student will be subjected to punishment according to the university laws.
Attendance	According to the bylaws of school.
Participation	Discussion in the class.
Laboratory	Weekly lab reports.

Withdraw	According to the bylaws of school.
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Date Printed: 2020-12-14