



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

PP721 Advanced Vegetable Crops

First Semester 2024-2025

**Course Catalog**

3 Credit Hours. Study of various physiological aspects of growth and production of vegetable crops which include: plant-water relationships, plant nutrition, seed dormancy and germination, production of transplants, flowering, fruiting, harvesting, handling and storage (Faculty of Agriculture,

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	scientific paper published in refereed scientific journals
<b>Author(s)</b>	NA
<b>Edition</b>	1st Edition
<b>Short Name</b>	1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
2	Recent Trends and Development in Vegetable Science (volume 1)	Ramakka Adaveppa Whankate, Taru Dumi, Dipakkumar Bakaram Ahire and Sandeep Kummar Singh	1st Edition	stella international publication 2023
5	Vegetable Production and Practices, Virginia Tech University, USA	1. Welbaum G E 2015	1st Edition	
4	World Vegetables. Principles, Production, and nutritive value	Rubatzky V. E. and M. Yamaguchi 1997	2nd Edition	
3	selected chapters from different book	multiple	1st Edition	

<b>Instructor</b>	
Name	<b>Prof. Ibrahim Makhadmeh</b>
Office Location	C4L2
Office Hours	Sun : 10:30 - 12:30 Mon : 11:00 - 12:45 Wed : 12:45 - 14:00 Thu : 10:00 - 12:00
Email	ibrahimm@just.edu.jo

<b>Class Schedule &amp; Room</b>
Section 1: Lecture Time: Mon, Wed : 09:30 - 11:00 Room: C5020

<b>Tentative List of Topics Covered</b>		
<b>Weeks</b>	<b>Topic</b>	<b>References</b>
Week 1	Introduction (the reality of the situation)	
Week 2	Seed germination, Seed treatments, Seed priming, Osmo-conditioning	From 1, From 3
Week 3	- Transplant production, hardening, control of transplant height	From 1, From 2
Week 4	Climatic conditions affecting vegetable production	From 1, From 4, From 3
Week 5	Cultural practices, plant population, cropping system	From 1, From 2, From 3
Week 6	Fertilization, Irrigation, and Mulching	From 1, From 3
Week 7	Cultural management of greenhouse vegetables, CO <sub>2</sub> enrichment	From 1, From 5, From 4, From 3
Week 8	Organic vegetable production	From 2, From 4
Week 9	Flowering & sex-expression	From 1, From 5, From 3
Week 10	Bulbs, tuber formation	From 1, From 4

Week 11	Physiological disorders	From 1, From 4
Week 12	Plant growth regulator application	From 1
Week 13	Vegetable seed production	From 3
Weeks 14, 15, 16	implementation of recent trends vegetable production (nanotechnology, smart application remote sensing.....	From 1

<b>Mapping of Course Outcomes to Program Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Students are expected to know how to deal with recent trends and development in vegetable science	30%	
Able to apply all emerging technique on vegetable seed germination and transplant production, optimize soil health, cropping systems and plant steering	25%	
Trends to enhance crop yield potential by focusing on basic needful practices in water managements and breeding strategies for nutrient management and disease resistant in vegetables	25%	
Encompassing a wide spectrum of subjects, which explore various aspects of recent trends and development in vegetable science. Formulate strategies for implementing sustainable practices in vegetable production that promote environmental	20%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>						
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7

<b>Policy</b>	
Exam	All exams are closed book and notes. The final exam is comprehensive (covering all teaching materials). Incomplete exams need approval from the department chair and the faculty dean
cheating	Cheating is prohibited, and if so, the student will be subjected to punishment according to the school rules and regulations
Attendance	Students are expected to attend all class meetings regularly. If the student is absent for more than 20% of the course, the student will be prevented from taking all subsequent exams and assigned an F (Failure) grade in the course (deprived by absence). This maximum includes both excused (medical reports) and unexcused absences.
Participation	Participation and preparation is highly encouraged specially during discussion section's
withdrawing	The student can withdraw from the course in accordance with the timeline defined by the university academic calendar
general	Students with disabilities: if you have a disability which requires some special accommodation, please make an appointment within the first week of the semester for a visit to my office to discuss the appropriateness of the instructional methods in the class or any academic adjustments that you may need.

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