



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

PP711 Crop Physiology

Second Semester 2020-2021

Course Catalog

3 Credit Hours. The course will cover the following topics: Growth and productivity of major vegetable and agronomic crops as related to plant physiological processes and environmental parameters, through manipulation of crop growth for enhanced production. Physiological responses of plants to environmental stresses (water, temperature, nutrient, salt). Critical reviews of related literature.

Text Book

Title	Plant physiology and Development.
Author(s)	Taiz, L, Zeiger E, Moller, I.M and Murphy A.
Edition	2nd Edition
Short Name	REF#1
Other Information	2015. Sinauer Associates, Inc.

Course References

Short name	Book name	Author(s)	Edition	Other Information
REF#2	Plant Physiological Ecology.	Lambers, H., Chapin III, F.S, and Pons, T.L.	2nd Edition	2008, Springer-Verlag New York, p605
REF#3	The Physiology of Flowering Plants	Pik, H. O. and Rolfe, S. A	4th Edition	Published in the United States of America by Cambridge University Press, New York
REF#4	Plant physiology	Taiz, L, Zeiger E	5th Edition	Sinaure Association publisher, MA, USA
REF#5	Advances in Selected Plant Physiology Aspects	Montanaro. G and Dichio B	4th Edition	Published by InTech Janeza Trdine 9, 51000 Rijeka, Croatia

Instructor

Name	Prof. Maher Tadros
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Office Location	C4L2
Office Hours	
Email	mtadros@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 10:00 - 11:30 Room: LAB

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to plant physiology and aspects related	
Week 2	Physiological Processes Review :1- Photosynthesis	From REF#1 , From REF#2 , From REF#3 , From REF#4 , From REF#5
Week 3	Physiological Processes Review : 2- Transpiration	From REF#1 , From REF#2 , From REF#4
Week 4	Physiological Aspects in Plant Water Relations 1- Absorption	From REF#1 , From REF#4
Week 5	Physiological Aspects in Plant Water Relations 1- Drought	From REF#1 , From REF#2 , From REF#4 , From REF#5
Week 6	Physiological Aspects in Plant Water Relations: 3- Salinity	From REF#1 , From REF#2 , From REF#5
Week 7	Plant Soil Microorganisms Interactions 1- Fungi	From REF#1 , From REF#2 , From REF#4 , From REF#5
Week 8	Plant Soil Microorganisms Interactions 2- 2- Rhizobium	From REF#1 , From REF#4 , From REF#5
Weeks 9, 10	Growth Regulators (Hormones): Auxins, Gibberellins	From REF#1 , From REF#2 , From REF#4

Weeks 10, 11	Growth Regulators (Hormones): cytokinin , ethylene	From REF#1 , From REF#3 , From REF#4 , From REF#5
Weeks 11, 12	Growth Regulators (Hormones): artificial and synthetic hormones	From REF#1 , From REF#3 , From REF#4 , From REF#5
Weeks 13, 14	Physiological Aspects in Seed Germination and Development	From REF#1 , From REF#2 , From REF#3 , From REF#4 , From REF#5
Week 15	Physiological Responses in Flowering plants	From REF#1 , From REF#3
Week 16	Seminars Presentations	

Relationship to Program Student Outcomes (Out of 100%)

PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7

Policy

Exams	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	Prohibited; and in case of cheating the student will be subject to punishment in according with the university 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 and unexcused absences.
Participation	Participation is highly encouraged
Withdraw	The student can withdraw from the course in accordance with the timeline defined by the university regulations

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