

**COURSE STRUCTURE,
Plant Physiology (LS 465)
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Updated: April 2021

S. No	Topic	No. of lectures
1.	Water relations: Properties of water and solutions, cell water potential, soil plant atmosphere continuum	[2] SC
2.	Transport processes in plant: active and passive transport systems, ion channels, driving forces and flow, transport of photo-assimilates, transport of proteins and nucleic acids through phloem, phloem signaling	[3] SC
3.	Photosynthesis: Light absorption, emission, energy transfer, Z-scheme of photosynthesis, electron transfer, photophosphorylation, CO ₂ fixation, C ₃ , C ₄ , CAM plants, environment and its impact on photosynthesis.	[4] SC
4.	Plant Hormones: Auxin, Cytokinins, Gibberellins, Abscisic acid; biosynthesis, homeostasis, transport, and signaling.	[5] AS
5.	Plant Hormones: Ethylene, Jasmonic acid, Brassinosteroid, Strigolactone; biosynthesis, homeostasis, transport, and signaling.	[4] AN
6.	Phytochromes, photoreceptors and photo-morphogenesis	[2] AN
7.	Mineral nutrition and assimilations of inorganic nutrients: nitrogen and sulfur metabolism, and assimilation of other anions and cations.	[5] AN
8.	Lipid metabolism in plants: fatty acid biosynthesis, membrane lipid biosynthesis, lipid desaturation, triacylglycerols, complex lipids, cell wall lipids, alkaloids, ceramides	[2] AN
9.	Stress physiology and Program cell death	[3] AN

Total: Lectures-30, Quiz-2, Midsem-1, Endsem-1