Core Course

LS465—PLANT PHYSIOLOGY [2credits]

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S No	Topic	Faculty	Contact Hours
1.	Water relations: Properties of water, Properties of solutions,Cellwaterpotential,Soil-plant-atmospherecontinuum	SC	2
2.	Transportprocessesinplant:activeandpassivetransport systems,ionchannels,drivingforcesandflow,transportof photo-assimilates,transportofproteins and nucleic acids through phloem, phloemsignaling	SC	3
3.	Photosynthesis:Lightabsorption,emission,energytransfer,Z-schemeofphotosynthesis,electrontransfer,photophosphorylation,CO2fixation,C3,C4,CAMplants,environmentanditsimpacton photosynthesis	SC	4
4.	PlantHormones: Auxin, Cytokinins, Gibberellins, Abscisicacid;biosynthesis,homeostasis,transport,andsignaling.	AS	5
5.	Plant Hormones: Ethylene, Jasmonic acid,Brassinosteroid, Strigolactone; biosynthesis, homeostasis,transport, and signaling	AN	4
6.	Phytochromes, photoreceptors and photo-morphogenesis	AN	2
7.	Mineral nutrition and assimilations of inorganicnutrients: nitrogen and sulfur metabolism, and assimilationofother anions and cations.	AN	5
8.	Lipidmetabolisminplants:Fattyacidbiosynthesis,membrane lipidbiosynthesis,lipiddesaturation,triacylglycerols, complexlipids,cellwalllipids,alkaloids, ceramides	AN	2
9.	Stress physiology and Programcell death	AN	3

Suggestedreading:

Concernedliteraturewillbegivenbyindividualfacultymember.