LS426A	Plant Physiology	2Credits
Name of the Faculty: Prof. A.K. Nandi*; Prof. S. Chakraborty		

S.No.	Topic	Faculty Name/ Contact Hours
1.	Basic life process of plants, cell structure, membrane, organelles, cytoskeleton, cell cycle regulation, totipotency, regeneration	SC/2
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.	SC/2
3.	Photosynthesis: Light absorption, emission, energy transfer, Z-scheme of photosynthesis, electron transfer, photophosphorylation, CO_2fixation, C3, C4, CAM plants, environment and its impact on photosynthesis.	AN/4
4.	Mineralnutritionandassimilationsofinorganicnutrients:nitrogenand sulfur metabolism, and assimilation of other anions and cations.	AN/4
5.	Plant Hormones: Biosynthesis, homeostasis, transport, and Signaling of Auxin, Cytokinins, Gibberellins, Abscisicacid, Ethylene and Jasmonic acid	AN/8
6.	Phytochromes, photoreceptorsand photo-morphogenesis.	AN/2
7.	Lipid metabolism in plants: Fatty acid biosynthesis, membrane elipid biosynthesis, lipiddesaturation, triacylglycerols, complexlipids, cell wall lipids, alkaloids, ceramides.	AN/2
8.	Senescence	AN/2
9.	Stress physiology and Programmed cell death.	AN/3

Suggested reading:

1. Plant Physiology by L.Taizand E.Zeiger
2. BiochemistryandMolecularBiologyofPlantsbyB.Buchanan,W.Gruissem,andR.L.Jones
3. TheMolecularLifeofPlantsbyR.Jones,H.Ougham,H.Thomas,andS.Waaland