

PLANT BIOCHEMISTRY

COURSE OUTLINES

Structure and functions of plant cell. Plant cell wall.

Photosynthesis; structure of chlorophyll, absorption of light energy, photosynthetic pigments, photosystem-1, photosystem-II. Hill's reaction, electron transport chain, ATP-C3, C4 and CAM photosynthetic pathways, CO₂ fixation (Calvin Benson Cycle). Hatch Slack pathways and photorespiration.

Conversion of nitrogen into ammonia and other nitrogenous compounds. Biosynthesis of Alkaloids and their biological functions. Terpenes and terpenoids. Phenolics and related compound. Phyto-hormones and related compounds.

BOOKS

1. Lehninger, A.L., Nelson, D.L. and Co. N.M., (2008). Principles of Biochemistry. W. H. Freeman; 5th edition
2. Heldt, H. W., & Piechulla, B. (2010). *Plant biochemistry*. Academic Press; 4th edition