

SYLLABUS :-

Pharmacognosy, ethnobotany and drug discovery. Phytomedicines and botanical drugs. Major natural products in plants: Alkaloids, phenolics and terpenes. Complementary medicines, Modern tools of phytochemical analyses. Concepts of metabolic loading and flux control analysis. Metabolic phytochemistry: Basic secondary metabolic pathways, Discovery of new enzymes and genes of plant natural product biosyntheses, Identification and application of transcription factors involved in secondary metabolism. Inhibition and overexpression of genes of natural product biosynthesis. Structural elucidation of enzymes involved in plant secondary metabolism. Combinatorial biosynthesis of plant natural products. Future of natural product biotechnology & molecular pharming. Selected case studies from classic and contemporary research findings.