



Taxonomy of Botany

Course Code	Course Num.	Course Name	Credit Hours	Lec	Lab	Tut	Prerequisites
BIO	121	Taxonomy of Botany	4	3	2	0	

Objectives:

This course is designed to give the students a broad background in the traditional subject matter of botany. By the end of this course, the students should be able to:

- To describe the relationship general botany with life science.
- To compare between kinds of seeds and method of their germination.
- To illustrate the morphology of flowering plants.
- To differentiate main plant organs and their modification
- To define anatomical, Functional, and systematical of plants.
- To discriminate between reproduction types of plant.

Syllabus:

- Introduction, Molecular Composition of Plant Cells, Membranes
- The Plant Cell, Cellular transport/osmosis, Metabolism, Photosynthesis
- Respiration, Fermentation, C4, and metabolism
- DNA, Gene expression
- Sexual vs. asexual reproduction
- Genetics
- Plant Domestication & Biotechnology, Plant evolution and Speciation
- Plant tissues, Transport of food, water, and ions, Mineral nutrition
- Plant hormones, Seed types and Seedling development
- Phylogenetic trees, Origin of photosynthesis and endosymbiosis
- Eukaryotes: overview of diversity, Fungi, Fungal symbioses/ Protists, algae
- Green algae/ Invasion of land, Bryophytes/ Overview land plants
- Origin of vascular plants, Heterospory/ Fern life cycle
- Seed plants/ Pine life cycle, Angiosperms
- Angiosperm life cycle, Flowers and pollination
- Fruits and seed dispersal, Trophic levels/carbon cycle
- Plants and people intro/ Crop domestication, Crop domestication
- metabolites, plant defense & human uses

References:

- Biology 10th ed. (2013); Campbell, 3. A., Reece, J.B –Pearson international edition
- Plant Biology. Graham, and Wilcox, 2006, Pearson, 2nd edition, ISBN:1-13-146906-1
- Botany: A Lab Manual, 2012. by Stacy Pfluger. ISBN-13: 9781449665685

