



Plant Anatomy

Course Code	Course Num.	Course Name	Credit Hours	Lec.	Lab	Tut	Prerequisites
BIO	322	Plant Anatomy	3	2	2	0	BIO121

Objectives:

This course provides an introduction to basic principles of plant function, primarily covering physical processes in plants, metabolism, secondary products, cell physiology, and introducing principles of growth and development.

By the end of this course, the student must be able :-

- To describe vital objects in botany.
- To state the background in understanding of plant physiology.
- To define Coordination and Homeostasis in plants.
- To outline the principle of mineral and organic nutrition.
- To compare the obtaining of energy of each photosynthesis and respiration.
- To explain how Cellular Communication and Plant Defense take place

Syllabus :

- What is Plant Physiology? Botany Review, Plant and Cell Architecture.
- Water Potential , Water Balance and Transport in Plants.
- Membrane Potential and Solute Transport ,Mineral Nutrition.
- Mineral Assimilation , Phloem Transport, Biochemistry and Metabolism Respiration and Lipid Metabolism, Photosynthesis: The light reactions, Photosynthesis: Carbon reactions.
- Photosynthesis: Physiological and Ecological considerations.
- Cellular Communication, Plant Defenses: Surface protection and secondary metabolites.
- Growth and Development, Development, and differentiation.
- Hormones Auxins, Gibberellins,Cytokinins, Ethylene, Abscisic Acid, Phytochrome.

References:

- Taiz, L., and E. Zeiger. Plant Physiology. 5th ed. Sinauer Associates, Inc. Publishers, Sunderland, MA (2010)..ISBN: 978-0-87893-866-7 (casebound). Available at bookstore or online.
- William G. Intoduction to plant physiology.4 ed., university of weseren.(2008). ISBN 978-0-470-24766-2.

