



### Plant Physiology

Course Code	Course Num.	Course Name	Credit Hours	Lec	Lab	Tut	Prerequisites
BIO	323	Plant Physiology	4	3	2	0	BIO322

#### Objectives:

By the successful completion of the course the student will be able :

- To demonstrate an introductory level consideration of biological taxonomic systems.
- To compare and contrast vegetative and reproductive anatomy, including leaves, stems, roots, flowers, and fruits.
- To compare and contrast the mechanism of each wind, water and insects pollination.
- To discuss the economic and social importance of local plants.
- To recognize some of the common and unusual families of flowering plants found locally.
- To collect, identify and prepare herbarium mounts of plants.
- To understand the morphology and anatomy of plants at the cell, tissue, and organ level.
- To recognize and be able to describe features of plant anatomy at the cell, tissue and organ level.
- To use microscopy tools to investigate cell and tissue features of plants.
- To critically read literatures in the field of plant anatomy and morphology.
- To apply research skills, both to literatures reviews and in independent investigations.

#### Syllabus:

- Definition of taxonomy and identification of scientific importance and practical use.
- Introduction to the history of taxonomy and comparative study of different classification the systems.
- The study of Keys of scientific and taxonomic and nomenclature directions in modern taxonomy.
- Recognize the concept of good and bad qualities of taxonomic.
- Study apparent taxonomic units, namely, Total Vegetative, total floral: inflorescences, fruits, seeds.
- Biological concept of the type and kind polytypic.
- Different nomenclatures for species.
- Five kingdoms system for classifying living-organisms.
- Anatomy of the root of modern and elder , the cotyledon and dicotyledonous.
- Anatomy of the stem of modern and elder , the cotyledon and dicotyledonous.
- Vascular Contact between the root and stem.
- Recognize the vascular cambium, vascular bundles and their types.
- Anatomical structure of the leaf of modern and elder , the cotyledon and dicotyledonous
- A general revision of what has been studied and responded to queries

#### References:

- Charles B. Beck An Introduction to Plant Structure and Development: Plant Anatomy for the Twenty-First Century 2nd Ed (2010). ISBN-13: 978-0521518055.
- James D. Mauseth Plant Anatomy.(2008). ISBN-13: 978-1932846171.
- Sivarajan Introduction to the Principles of Plant Taxonomy (1991), Cambridge University Press, Second Edition. ISBN-13: 978-0521356794.

