

BIOL 3745 - Plant Physiology

Fall 2026 Syllabus, Section 01, CRN 41070,

Credit hours: 3

Instructor

Xiangjia Min

Email: xmin@ysu.edu

Public Instructor Information

Instructor Title: Professor

Instructor Professional Qualifications: Ph. D., Plant Science, University of Hawaii. Master's, Software Systems, University of British Columbia.

Master's, Plant Science, China Agricultural University. Bachelor's, Plant Science, Qingdao Agricultural University.

Course Description

3745. Plant Physiology. Examination of the physiology of higher plants with emphasis on the whole plant aspects as well as on biochemical, cellular and molecular aspects of how plants function including transport and translocation of water and solutes, photosynthesis and respiration, growth and development. Prereq.: BIOL 2602. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Fundamentals of Plant Physiology	Lincoln Taiz	978160537904

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Chapter 1, 2	Plant and Cell; Water	
8/31	Chapter 3, 4	Water Balance; Mineral Nutrition	
9/7	Chapter 5	Assimilation of Inorganic Nutrients	
9/14	Chapter 6	Solute Transport	
9/21	Test 1 Chapter 7	Chapter 1 - 6 Photosynthesis: Light reactions	
9/28	Chapter 8	Photosynthesis: Carbon reactions	
10/5	Chapter 9	Photosynthesis: Physiol Ecology	
10/12	Chapter 10, 11	Translocation in the Phloem; Respiration	
10/19	Test 2 Chapter 12	Chapter 7 - 11 Signals; Plant Hormones	
10/26	Plant Hormones	Sections from multiple chapters integrated	
11/2	Plant Hormones		
11/9	Chapter 13	Signals from Sunlight	
11/16	Chapter 14	Embryogenesis	
11/23	Chapter 15	Seed Dormancy, Germination	
11/30	Chapter 17; 19	Flowering Physiology; Stress	
12/7	Final Exam (12/9 Wen; 9:00 am)	Final exam only covers contents after test 3	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.