

FLORIDA ATLANTIC UNIVERSITY™

Undergraduate Programs—COURSE CHANGE REQUEST¹

UUPC APPROVAL _____
 UFS APPROVAL _____
 SCNS SUBMITTAL _____
 CONFIRMED _____
 BANNER POSTED _____
 CATALOG _____

DEPARTMENT: BIOLOGICAL SCIENCE	COLLEGE: COLLEGE OF SCIENCE
COURSE PREFIX AND NUMBER: BOT 4503L	CURRENT COURSE TITLE: PRINCIPLE OF PLANT PHYSIOLOGY LAB
CHANGE(S) ARE TO BE EFFECTIVE (LIST TERM): FALL 2013	_____ TERMINATE COURSE (LIST FINAL ACTIVE TERM):

CHANGE TITLE TO:

CHANGE PREFIX FROM: TO:

CHANGE COURSE NO. FROM: TO:

CHANGE CREDITS² FROM: TO:

CHANGE GRADING FROM: TO:

CHANGE WAC/GORDON RULE STATUS³
 ADD* _____ REMOVE _____

CHANGE GENERAL EDUCATION REQUIREMENTS⁴
 ADD* _____ REMOVE _____

*WAC and General Education criteria must be clearly indicated in attached syllabus. For WAC Guidelines: www.fau.edu/WAC. Please attach General Education Course Approval Request: www.fau.edu/deanugstudies/GeneralEdCourseApprovalRequests.php

CHANGE DESCRIPTION TO:

CHANGE PREREQUISITES/MINIMUM GRADES TO*:

EXISTING : (NONE)

NEW PRE/REQ.
 BSC 1010, BSC 1010L, BSC 1011, BSC 1011L
 CHM 2045, CHM 2045L, CHM 2046, CHM 2046L

MINIMUM PASSING GRADE C-

CHANGE COREQUISITES TO*:

CHANGE REGISTRATION CONTROLS TO:

*Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).

Attach syllabus for ANY changes to current course information.

Should the requested change(s) cause this course to overlap any other FAU courses, please list them here.	Please consult and list departments that might be affected by the change(s) and attach comments. ⁵
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Faculty contact, email and complete phone number:
 David Binninger; binninger@fau.edu; 561.297-3323

Approved by:

Department Chair: *David Binninger*

College Curriculum Chair: *J E H*

College Dean: *Phyllis*

UUPC Chair: *J R*

Undergraduate Studies Dean: *Myra El-Sherpieny*

UFS President: _____

Provost: _____

Date:
 Feb. 27, 2013

_____ *3/21/13*

_____ *3/20/13*

_____ *3/22/13*

_____ *3/22/3/27/13*

1. Syllabus must be attached; syllabus checklist recommended; see guidelines and checklist: www.fau.edu/academic/registrar/UUPCinfo
2. Review Provost Memorandum: Definition of a Credit Hour www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf
3. WAC approval (attach if necessary)
4. Gen. Ed. approval (attach if necessary)
5. Consent from affected departments (attach if necessary)

Email this form and syllabus to mianning@fau.edu seven business days before the University Undergraduate Programs Committee meeting so that materials may be viewed on the UUPC website prior to the meeting.

BOT 4503L - 001 CRN 12446 (2 CREDITS)**PLANT PHYSIOLOGY LABORATORY****FALL, 2013****10:00 – 11:50 am, M, W, Sanson Science 143****Department of Biological Sciences****Charles E. Schmidt College of Science, Florida Atlantic University****Teaching Assistant:** Kate Peach, SC 250, Phone: 561-297-4221, e-mail: kpeach1@fau.edu:**Office Hours:** Mondays and Wednesdays 12 to 1 pm, or by appointment.**Instructor:** Dr. Xing-Hai Zhang, SC 262, Phone: 561-297-1011, e-mail: xhzhang@fau.edu**Required Textbook:** Lab manual online via Blackboard. You print it out and bring to the lab.**Prerequisites:** BSC 1010, BSC 1010L, BSC 1011, BSC 1011L, CHM 2045, CHM 2045I, CHM 2046, CHM 2046L with a minimum of a C-**Co-requisite:** BOT 4503**Course Description**

This course is a complementary class to the lectures that uses a series of lab exercises to help students to better understand the principles of plant physiology. Its main focus is hands-on training in experimental skills and learning of experiment design, research tools and methodology.

Course Objectives

To help you understand more about the lectures (BOT 4503) with hands-on experiments.

To introduce to you some of the research methods and techniques used in plant biology.

To provide an opportunity to improve your scientific writing skills.

To create a lab environment for you to experience scientific research and culture.

Students are expected to study for a minimum of two hours for every hour of class time.

Course Content (Changes/rearrangements are possible.)

Laboratory Safety

Scientific Research

Ethics in Science

Microscope

Cell Structure

The Organelles

The Cell Boundary

Cell Membrane and Water Movement

Water Movement ↓— Diffusion

Photosynthesis

Plant Respiration

Mineral Nutrition

Plant Growth, Light and Gravity
 Seed Germination, Hormones and Phytochrome
 Leaf Senescence and Hormones
 Enzymes ↓— Biological Catalysts (Polyphenoloxidase)
 Plant Biochemistry ↓— Isolation and Measurement of Proteins from Plant Tissues
 Visualization of Transgene Action
 Segregation of Transgenes and Homozygosity
 Isolation and PCR Analysis of DNA from Plant Cells

Lab Exercise

Lab sections are administrated and graded by the TAs, supervised by Dr. Zhang. This is a very important part of learning not only to help you better understand some of the concepts conveyed in the lectures, but also to provide a basic training of research skills and give you a “feel” of working in a research lab. Each student must bring the lab manual (protocols) and a notebook to each class. Lab report and notebook are important components of the final grade.

You will work together with your partner to do each project throughout the semester. You are required to write a full length, formal lab report. The topic, due date and requirements will be announced in advance. Late papers will receive a penalty of 10 points per day late. After a graded report is returned to class, you will have one week to discuss with the TA and, if necessary, the instructor.

There will be three tests throughout the course. These tests will cover lab-related contents. Your understanding of the knowledge, procedures and observations involved in the lab experiments will be tested. At least one-week notice will be announced in advance. There are no make-up tests and a score of zero will be recorded to each missing test.

All tests may be cumulative. **THERE WILL BE NO MAKE-UP TESTS!**

Lab worksheets will be handed in at the end of the lab and will be returned to you promptly. Missing, unfinished, altered or grossly erroneous record of lab exercises will receive a penalty of 5 points per experiment.

Attendance Policy

Please observe the relevant chapters of *FAU Undergraduate Catalog*. Since each lab exercise requires your participation and cannot be made up, attendance is **MANDATORY**. Absence can be excused only with valid written documentation and by following proper procedure. Absence of the lab class without valid documents will receive a penalty of 20 points per class.

Grading

Your final grade will be based on 500 points.

- Three tests: 300 points.
- Lab report written as a scientific research paper: 100 points.
- Quizzes and Lab notebook: 100 points.
- Attendance: 20 points will be deducted for every lab class missed

Tentative schedule for Assessment

Test 1 – Feb. 4

Test 2 – Feb. 25

Test 3 – April 15

Assignment of Grades

Point Range	Percentage	Grade
455-500	93-100%	A
450-454	90-92%	A ⁻
445-449	87-89%	B ⁺
405-444	83-86%	B
400-404	80-82%	B ⁻
395-399	77-79%	C ⁺
355-394	73-76%	C
350-354	70-72%	C ⁻
345-349	67-69%	D ⁺
305-344	63-66%	D
300-304	60-62%	D ⁻
299 or less	59% or less	F

Incomplete Grades

Students should be aware that a grade of I (incomplete) will be given only under specific circumstances and through certain procedures. For the FAU policy on “I” grade, please consult with *FAU Undergraduate Catalog*.

Grade Reporting

Graded quizzes and report will be returned to the class as soon as possible. The final grades may be posted online. Instructors are not allowed to discuss grades over the telephone or e-mail with anyone, please meet in person to inquire about a grade.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001. For this class, use of internet for learning is very helpful for your study and is strongly encouraged. But copying/plagiarizing in any way is wrong and is not permitted. In lab exercises you will work with a partner and will share the data obtained. However, your lab note and report must be the work of your own.

Classroom Etiquette

Coming late to class is disruptive and rude, particularly to your partner and perhaps costly. No eating, drinking or any other disruptive behaviors are allowed in the lab. Lab safety and clean up will be strictly observed. Close attentions to the instructions of TA are required. Being considerate and respectful is always appreciated.

Support Available

Lab course often brings a relaxed and informal environment. You should apply your motor skills as well as your intelligent judgment to each experiment. Enjoy it while you learn something important from each experiment. However, if you experience any difficulty in this course for any reason, please do not hesitate to consult with TA or Dr. Zhang. We will try our best to help you.

Students with Disabilities

In compliance with the Americans with Disabilities Act (ADA), students who require reasonable accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) ↓— in Boca Raton, SU 133 (561-297-3880); in Davie, LA 240 (954-236-1222); in Jupiter, SR 110 (561-799-8010); or at the Treasure Coast, CO 117 (772-873-3441) ↓— and follow all OSD procedures.