FLORIDA ATLANTIC UNIVERSITY™

Undergraduate Programs—COURSE CHANGE REQUEST[1]

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

DEPARTMENT: BIOLOGICAL SCIENCE	COLLEGE: COLLEGE OF SCIENCE
COURSE PREFIX AND NUMBER: BOT 4503	CURRENT COURSE TITLE: PRINCIPLE OF PLANT PHYSIOLOGY
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 CREDITS[2] FROM: TO:

CHANGE GRADING FROM: TO:

CHANGE WAC/GORDON RULE STATUS[3]
ADD*_____ REMOVE _____

CHANGE GENERAL EDUCATION REQUIREMENTS[4]
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
BCH 3033,BOT 3223L

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*:
EXISTING: BOT 4503L
NEW: NONE

CHANGE REGISTRATION CONTROLS TO:

*Please list existing and new pre/corequisites, specify AND or OR and

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]

Faculty contact, email and complete phone number:
David Binninger; binninge@fau.edu; 561.297-3323

Approved by:	*Date:*
Department Chair:	Feb. 27, 2013
College Curriculum Chair:	3/21/13
College Dean:	3/20/13
UUPC Chair:	3/22/13
Undergraduate Studies Dean:	3/27/13
UFS President:	
Provost:	

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 mjenning@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.

FAUchange---Revised September 2012

BOT 4503 – 001 CRN # 14849 (2 CREDITS)

PRINCIPLES OF PLANT PHYSIOLOGY

Fall, 2013

9:00 – 9:50 am, M, W, Sanson Science 180

Department of Biological Sciences

Charles E. Schmidt College of Science, Florida Atlantic University

Instructor: Dr. Xing-Hai Zhang (pronounced like "shing-hi jong"), Associate Professor of Plant Molecular Biology, SC 262, Phone: 561-297-1011, e-mail: xhzhang@fau.edu

Office Hours: Mondays and Wednesdays 1 to 4 pm, or by appointment. Office: SC 262/258.

Required Textbook: Introduction to Plant Physiology, William G. Hopkins and Norman P.A. Hüner, 4th edition (2009), John Wiley & Sons, Inc. **ISBN 978-0-470-24766-2**

Prerequisites: BSC 1010,BSC 1010L, BSC 1011, BSC 1011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L with a minimum of a C-.

Co-requisite: None

Course Description

This course is a study of plant life involving growth, development, reproduction (flowering), and interaction with the environment. As plant physiology is becoming an integrative science, this course will discuss the related principles in cellular biology, biochemistry, biophysics, molecular biology, evolution biology and ecology, and emphasize the shared knowledge and genetic mechanisms with other life forms (animals and microbes). The research tools, methodology, and biotechnology that are needed to study plant physiological and molecular functions will also be discussed.

Course Objectives

To help you gain basic knowledge of plant physiological and molecular functions

To introduce to you the current advance in plant molecular biology research.

To familiarize you with the current status and thought in plant biotechnology.

To cultivate your interests in pursuing advanced studies in plant biology.

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

Students are expected to complete all assigned readings and homework.

Course Content (The schedule of topics to be discussed is subject to change during the semester, depending on the needs of the class.)

1. The Plant Cell (must read Ch 1)
2. Water, Fountain of Life (must read Ch 1)
3. Water Movement in Plants (must read Ch 2)
4. Nutrient Uptake (must read Ch 3)
5. Plant Nutrients (must read Ch 4)
6. Sun and Photoreceptors (must read Ch 5, 6)

7. Photosynthesis: Harvesting Sunlight (must read Ch 7)
8. Photosynthesis: CO_2 Assimilation (must read Ch 8, 15)
9. Photosynthesis: Where do photosynthetic products go? (must read Ch 9)
10. Respiration: Use of Photosynthesis Products, from Calvin to Krebs (must read Ch 10)
11. Nitrogen, a Constituent of Life (must read Ch 11, 12)
12. Environmental Stress (must read Ch 13, 14)
13. Growth and Development (must read Ch 16, 17)
14. Plant Hormones and Development (must read Ch 18 ~ 21)
15. Photomorphogenesis and Phototropism: Responding to Light (must read Ch 22, 23)
16. Gravitropism and Nastic Movement (must read Ch 23)
17. Plant Biological Clock and Photoperiod (must read Ch 24)
18. Temperature and Development (must read Ch 25, 26)
19. Secondary Metabolism - Plants, a Pharmaceutical Factory (must read Ch 27)
20. Biotechnology: Plants for the Future (in class discussion)

Course Procedure

Dr. Zhang presents lectures. In-class discussion, questions or requests for clarification at any time are encouraged.

Attendance Policy

This is one of the uppermost level undergraduate courses intended for "veteran" students. I have high expectations of maturity, motivation and discipline from my students. I try to incorporate information from most recent research into the lecture. Therefore, attendance and taking notes are necessary to have a complete knowledge of this course, in addition to study of the textbook. Attendance is **MANDATORY**. Absence of any portion (more than 10 minutes) of the class without valid written documents will receive a penalty of 20 points per class. Absence can be excused only under certain circumstances and with written documentations. Valid situations include a reasonable number of participation in jury duty, FAU-approved activities, and religious observance, but students must make up missed work. Please observe the relevant chapters of *FAU Undergraduate Catalog.* Your level of attention, attitude, and attendance will contribute significantly to your success and overall grade. My experience indicates a strong correlation between attendance and final grade.

Quizzes and Exams

There will be a total of three 30-minute quizzes throughout the semester, two of which will be recorded toward your final grade. A one-week notice in advance is given. There are no make-up quizzes and a score of zero is recorded for each missing quiz. This means that if you are absent for any reason (jury duty, personal reasons, car or traffic problems, etc) you use up your one freebie.

There will be two non-cumulative one-hour exams. However, the final exam may unavoidably, although minimally, overlap with the mid-term exam. Each exam consists of a variety of question types including multiple choice, short answer and short essay. There may be one or two "challenging" questions as extra credit (up to 20 points, at instructor's discretion) for each exam. THERE WILL BE NO MAKE-UP EXAMS! If you have an approved written

excuse for missing one exam, your course grade will be calculated on the basis of the remaining points.

There will be several unannounced pop quizzes during the first 5 minutes of the class throughout the semester. In addition, several take-home credit-bearing assignments may be required. Students who arrive late or are absent are not eligible for these credits. These attendance-linked quizzes/assignments are worth of a total of 60 points.

Incomplete Grades

Students should be aware that grades of Incomplete ("I") are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances. A grade of "I" will only be given under certain conditions and in accordance with the academic policies and regulations put forward in FAU's University Catalog. The student must show exceptional circumstances why requirements cannot be met. A request for an incomplete grade has to be made in writing with supporting documentation, where appropriate.

Grading

Your final grade will be based on 600 points.

- Two quizzes: 140 points.
- Exam I: 200 points.
- Exam II: 200 points.
- Pop quizzes and assignments: 60 points.
- Attendance: subtraction applies.

Tentative schedule for Assessment

- Jan. 30, 2013 Quiz I
- Feb. 27 Exam I
- March 25 Quiz II
- April 10 Quiz III
- April 26 Exam II

Assignment of Grades

Point Range	Percentage	Grade
553-600	93-100%	A
535-552	90-92%	A^-
517-534	87-89%	B^+
493-516	83-86%	B
475-492	80-82%	B^-
457-474	77-79%	C^+
433-456	73-76%	C
415-432	70-72%	C^-
397-414	67-69%	D^+
373-396	63-66%	D

355-372	60-62%	D-
354 or less	59% or less	F

Grade Reporting

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

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, 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 at http://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf. For this class, use of internet for learning is very helpful for your study and is strongly encouraged. However, using others' work without proper acknowledgement is wrong and may fall into the category of academic dishonesty. Misconduct during exams will be closely monitored and, once discovered, will be dealt with accordingly.

Classroom Etiquette

You are encouraged to actively participate in discussion and ask questions any time during the lectures. Coming late to class is disruptive and perhaps costly. I personally feel annoyed by late comers. I would appreciate your punctuality, and may express my gratitude in some tangible ways when necessary. All electronic devices must be turned off during class. Laptop computers are allowed under the condition that you do not bother others. Eating, drinking or any other disruptive behaviors are **NOT** allowed during the lecture.

Support Available

If you experience any difficulty in this course for any reason, please do not hesitate to consult with me or TA. We will try our best to help you succeed this course. Time management and effort are often the key factors to your success. Students who really want to learn rarely fail this course.

Students with Disabilities

In compliance with the Americans with Disabilities Act, 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, MOD
1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) ↓— and follow all OSD procedures.