

**Fayetteville State University
College of Arts and Sciences
Department of Natural Sciences
BOTN 210 General Botany
Fall 2009**

I. Locator Information:

Instructor: Dr. Abdelmajid Kassem
Website: <http://faculty.uncfsu.edu/mkassem>
Semester/year: Fall 2009
Course: BOTN 210 General Botany. Sections 01 & 02
Semester hours: 3
Day/Time Class Meets: Lectures: Mondays 8-9:50 AM (Section 01); Tuesdays 10-11:50 AM (Section 02) in LS 114
Room/Building: Labs: Thursdays 12-1:50 PM (Section 01); Fridays 8-9:50 AM (Section 02) in LS 114
Office Location: LS 122
Office Telephone: 672- 1114
FSU e-mail: mkassem@uncfsu.edu
Office Hours: Mondays 11 AM–2 PM & Wednesdays 1–4 PM*
*Available at other times by appointment

FSU Policy on Electronic mail: Fayetteville State University provides to each student, free of charge, an electronic mail account that is easily accessible via the Internet. The university has established email as the primary mode of communicating with enrolled students about impending deadlines, upcoming events, and other information important to student progression at the university. Students are responsible for reading their email on a regular basis to remain aware of important information disseminated by the university. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Students making inquiries via email to FSU faculty and staff about academic records, grades, bills, financial aid, and other matters of a confidential nature are required to use their FSU email account.

Rules and regulations governing the use of FSU email may be found at: <http://uncfsu.edu/PDFs/EmailPolicyFinal.pdf>

II. Course Description:

Botany 210, General Botany, is a course designed for students majoring in Biology or interested in plant science. Information and concepts concerning the identification, evolutionary relationships, anatomy, and physiology of seed plants will be presented. Emphasis on structural, ecological, and reproductive differences between major groups will be stressed.

III. Disabled Student Services: In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

IV. Textbook:

Text: Raven, Peter H., Ray F. Evert and Susan E. Eichhorn 2005. Biology of Plants. 7th ed. W.H. Freeman and Company, New York.

Companion website: <http://www.whfreeman.com/raven/>.

Lab Manual: Abdelmajid Kassem and Reid Bruce. 2005. Botany Laboratory Manual. The text and the lab manual are required for this class.

V. Student Learning Outcomes:

Upon completion of this course, students will be able to:

1. Identify the various tissues found in plant organs.
2. Demonstrates an understanding of vascular plant structure, function, and development.
3. Contrast herbaceous dicot stem structure with monocot stem structure.
4. Observe and define characteristics of plants in class and in the greenhouse.
5. Contrast herbaceous stem development with woody stem development.
6. Evaluate leaf morphology and structure in terms of its role in photosynthesis.
7. Show the involvement of energy and matter in the process of photosynthesis.
8. Evaluate the role of chlorophyll, ATP, NADPH, and light in the photosynthetic process.
9. Compare and contrast the light dependent reaction of photosynthesis with the light independent reaction.

10. Demonstrate understanding of the processes responsible for the movement of water and solutes in plants.
11. Understand structures and reproduction for bryophytes, lower vascular plants, ferns and seed plants.
12. Compare and contrasts seed structure in gymnosperms and angiosperms.
13. Arrange the floral parts of a flower in their correct order relating their function in the reproduction.
14. Relate the structure of the flower to the structure of the fruit and seed.
15. Understand and apply the fundamentals of Mendelian genetics.
16. Understand and apply the technique of DNA electrophoresis.
17. Identify the major groups of plant hormones found in angiosperms and evaluate their effects on growth, morphology, development, and germination.
18. Understand and apply the techniques of plant tissue culture using various plant hormones.

VI. Course Requirements and Evaluation Criteria:

You are required to:

1. Attend all classes and labs regularly and to keep scheduled appointments.
2. Be informed of the academic requirements of the instructor. An absence, excused or unexcused, does not relieve you of any course requirement.
3. Take all exams on the scheduled date. Make-up exams will not be given unless the student presents a doctor's note. Exceptions to these rules will be made only in exceptional cases.
4. Complete all your assignments and work on time.
5. Notify me in advance if you will be absent.
6. Send your paper via a friend and ask him/her to get your assignment, if any, and pick up any handouts.
7. Demonstrate an understanding of content covered in class on the day of the absence.

a. Grading Scale:

I will assign you the grade that I feel best expresses your learning and performance in the course using the following as my guide:

Percent of Points	Grade
90 – 100	A
80 – 89.9	B
70 – 79.9	C
60 – 69.9	D
<60	F

b. Attendance Requirements:

Attendance is required. I will evaluate the quality of your laboratory work and your contributions to class. Students are required to read the University attendance policy very carefully. It will be enforced in all classes as follows.

There is a good chance that the instructor may not drop you as we approach the deadline for withdrawal; therefore, it is the students' responsibility to obtain a withdrawal slip and withdraw if he/she does not want an earned grade! **Deadline for withdrawal is Wednesday, November 26th, 2008** for any absence exceeding the above limit. Three tardinesses or early departures will count as one absence. There are **no excused** absences. If a student is dropped from the class he/she must appeal the action in order to be allowed to complete the course. He/she should continue to attend the class until the appeal is accepted.

c. Graded Assignments:

The exams, presentations, quizzes and other graded assignments will be grades as follow:

Item	Number of Items*	Points/Item	Total points*
Hourly Exams	3	200	600
Final Exam (+ Lab Final Exam)	2	200	400
Lab work (+ Quizzes)	18	20	360
Soybean Paper	1	40	40
Total points:			1,400

* Number of items/total points may vary slightly from above.

d. Value of Each Assignment:

The value of each graded assignment is shown above (graded assignments). Record observations from all laboratory exercises in your laboratory manual or notebook. I may ask to examine your records at various times. Additional records of lab observations will be announced at the start of each laboratory meeting. Be sure to save all graded reports, all quizzes and all exams in an organized manner and be prepared to show them to me when requested.

e. Policy on Missed or Late Assignments:

As stated above, there will be no excused absences; however, if you have **only** a medical emergency and missed an exam, I will accept a doctor's and let you make up the exam after calling your doctor. No late assignments will be accepted for any reason.

FSU Policy on Disruptive Behavior in the Classroom

The *Code of the University of North Carolina* (of which FSU is a constituent institution) and the *FSU Code of Student Conduct* affirm that all students have the right to receive instruction without interference from other students who disrupt classes.

FSU Core Curriculum Learning Outcome under Ethics and Civic Engagement (6.03): All students will “prepare themselves for responsible citizenship by fulfilling roles and responsibilities associated with membership in various organizations.” Each classroom is a mini-community. Students learn and demonstrate responsible citizenship by abiding by the rules of classroom behavior and respecting the rights all members of the class.

The FSU Policy on Disruptive Behavior (see FSU website for complete policy) identifies the following behaviors as disruptive:

1. Failure to respect the rights of other students to express their viewpoints by behaviors such as repeatedly interrupting others while they speak, using profanity and/or disrespectful names or labels for others, ridiculing others for their viewpoints, and other similar behaviors;
2. Excessive talking to other students while the faculty member or other students are presenting information or expressing their viewpoints.
3. Use of cell phones and other electronic devices
4. Overt inattentiveness (sleeping, reading newspapers)
5. Eating in class (except as permitted by the faculty member)
6. Threats or statements that jeopardize the safety of the student and others
7. Failure to follow reasonable requests of faculty members
8. Entering class late or leaving class early on regular basis
9. Others as specified by the instructor.

The instructor may take the following actions in response to disruptive behavior. Students should recognize that refusing to comply with reasonable requests from the faculty member is another incidence of disruptive behavior.

1. Direct student to cease disruptive behavior.
2. Direct student to change seating locations.
3. Require student to have individual conference with faculty member. At his meeting the faculty member will explain the consequences of continued disruptive behavior.
4. Dismiss class for the remainder of the period. (Must be reported to department chair.)
5. Lower the student's final exam by a maximum of one-letter grade.
6. File a complaint with the Dean of Students for more severe disciplinary action.

Students who believe the faculty member has unfairly applied the policy to them may make an appeal with the faculty member's department chair.

VII. Academic Support Resources

During this class, especially in labs, we will use the following resources:

1. Different plant specimens.
2. Several Internet Websites.
3. The Department/College Computer Lab.

VIII. Course Outline and Assignment Schedule: This is a tentative lecture and laboratories schedule:

Lec.	Week of	Lecture Topics	Chap.	Labs Exercises	Date
1	Aug. 20-21	Introduction	1		
2		Molecular Composition of Cells	2	1. External structure	Aug. 27-28
3	24-25	The Plant Cell	3		
4		The Reproduction of Cells	3	2. Plant Cells	Sept. 3-4
5	31-Sept. 1	Cells and Tissues of the Plant Body	23		
6		The Shoot: Primary Structure & Development	25	3. Roots	10-11
Ex I	14-15	Exam I (September 14-15)			
7	21-22	Leaf: Structure and Function	25	4. Stems: I & II Growth	17-18
8		Secondary Growth in Stems	26		
9	28-29	Photosynthesis I	7	5. Leaves	24-25
10		Photosynthesis II	7		
11	Oct. 5-6	Plant Mineral Nutrition	29	6. Photosynthesis	Oct. 1-2
12		Xylem and Phloem Translocation	30		
Ex III	12-13	Exam III (October 12-13)		7. Water Relations	8-9
		Soybean Project Report Due Oct. 22-23	-		
13	19-20	Plant hormones I	27	8. Plant Hormones	22-23
14		Plant hormones II	27		
15	26-27	Genetics I	8	9. Genetics	29-30
16		Genetics II	8		
17	Nov. 2-3	Plant Biotechnology & Genomics I	10	10. Algae	Nov. 5-6
18		Plant Biotechnology & Genomics II	10		
Ex IV	9-10	Exam IV (November 9-10)		11. Bryophytes	12-13
19	16-17	Systematics	12		
20		Protista: Algae & Heterotrophic Protists I	15		
21	23-24	Bryophytes	16	12. Lower Vasc. Plants	19-20
22		Lower Vascular Plants	17		
23	30-Dec.1	Gymnosperms	18		
24		Angiosperms	19-20		
		Final Exam IV (Sec. 1; Dec. _____)		Lab Exam (December 3-4)	
		Final Exam IV (Sec. 2; Dec. _____)			

IX. Teaching Strategies

Lectures: the instructor will use a variety of lecture settings: chalk board, overhead projector showing transparencies, power point presentations, small group activities and discussions, etc. Student input by comments, discussions, and questions is encouraged. Students are given prompt feed back on assignments and exams as well as their accumulative point totals so they are aware of their progress in achieving a grade. Grades must be earned not given!

Labs: the instructor will give students hands on experience with the subject matter. Students will perform lab experiments, use the greenhouse, and computers to gain an understanding of modern plant development, genetics, and genomics techniques.

X. Bibliography

Students are encouraged to (1) use the library, (2) do supplemental reading in the plant sciences, and (3) read journal articles in various plant sciences journals. A complete set of plant sciences journals can be found online at: <http://www.e-journals.org/botany>. Examples: Am J Botany, Annu. Rev. Plant Physiology, J Plant Physiology, Crop Science, Canadian Journal of Botany, Annual Review of Plant Physiology, Annual Review of Biochemistry, Cell, Nature, Science, Australian Journal of Botany, etc.