BIOLOGY 4354/5354 Fall 2006

CRN 20069/20097 **Tentative Syllabus**

PLANT ANATOMY (LECTURE)*

All Sections: M W 4:00 - 6:50 PM
Howell Hall: Room 302
http://www.metabolism.net/bidlack
http://biology.ucok.edu/bidlack

Dr. Jim Bidlack

301B Howell Hall
(405) 974-5927
Office: MTWR 1:00 - 1:50 PM

PLANT ANATOMY: A study of internal and external structures of vascular plants with the attention to correlating structure with function. Students will be required to complete an individual research project. The course consists of three hours lecture and three hours laboratory per week. *Prerequisite(s)*: BIO 1304, 2203, 2314.

***All students must enroll in PLANT ANATOMY LAB. It meets on Mondays and Wednesdays from 4:00 to 6:50 PM in Room 302 of Howell Hall.**

Lecture Textbook: Esau, Katherine. 1977. *Anatomy of Seed Plants*. Second Edition. John Wiley & Sons, Inc., New York, NY.

Date		Lecture topic	Chapter	Pages
August				
21	M	Introduction, general plant morphology	1,2	1-6,7-16
23	W	Roots and stems	14,16	215-217,257-261
28	M	Leaves and flowers	18,20	321-332,375-389
30	W	Generalized cell structure & organelles	3	17-42
September				
4	M	Labor Day Holiday		
6	W	Cell wall and epidermis	4,7	43-60,83-99
11	M	General cell and tissue types	1	3-5
13	W	**EXAM I**		
18	M	Microscope technology / library day		
20	W	Parenchyma, collenchyma, & sclerenchyma	5,6	61-70,71-82
25	M	Xylem	8	101-124
27	W	Phloem	11	157-181
October				
2	M	Absorption & transport		lecture notes
4	W	Stele types, nodal patterns, and bundles	14,16,18	217-225,233-242, 261-271,323-328
9	M	Stele types, nodal patterns, and bundles	14,16,18	217-225,233-242, 261-271,323-328
11	W	**EXAM II**		

Date		Lecture topic	Chapter	Pages
October (continued)				
16	M	Primary root & root systems	14	215-227
18	W	Root structure, development, & specialization	14	227-242
23	M	Secondary root	15	243-256
25	W	Primary stem structure & development	16	257-294
30	M	Secondary stem development	17	295-319
November				
1	W	Wood anatomy: secondary xylem & phloem	9,11	125-143,172-181
6	M	Other aspects of woody growth		lecture notes
8	W	Leaf venation and development	18	321-349
13	M	Leaf structure	19	351-374
15	W	Variations in leaf structure		lecture notes
20	M	**EXAM III**		
22	W	Happy Thanksgiving!		
27	M	Secretory structures	7,13	94-99,199-214
29	W	Angiosperm life cycle	21	403-427
December				
4	M	Seeds and seedlings	23,24	455-473,475-500
6	W	Fruits	22	429-454
11-15		**FINAL EXAMINATIONS**		

Course Reference Numbers (CRN) 20069 and 20097: Final exam is scheduled for Friday, 15 December 2006 at 3:00 – 4:50 PM. The final exam will be approximately 1/2 comprehensive and 1/2 new material.

Additional course information: Students are encouraged to read the book before coming to class. Review what pages will be discussed in lecture by looking at the pictures, figures, and illustrations. Read the text to acquaint yourself with the learning material. If you prefer computer, Internet, and multimedia presentations, try using the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) at http://www.merlot.org. A new site has also been added at UCO to provide you with MS-WORD and Adobe Acrobat outlines of your class lectures at http://www.metabolism.net/bidlack and at http://biology.ucok.edu/bidlack

BIOLOGY 4354/5354
PLANT ANATOMY AND PLANT ANATOMY LAB
Fall 2006 - CRN 20069/20097

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Office: MTWR 1:00 – 1:50 PM, 301B Howell Hall
Avoid Scheduling Office Visits Just Before Class

Lecture Textbook: Esau, Katherine. 1977. *Anatomy of Seed Plants.* Second Edition. John Wiley & Sons, Inc., New York, NY.

Lab Textbook: Amiet, C. F., and J. E. Bidlack. 2006. *Laboratory Guide to Plant Anatomy*. Seventh Edition. Available in class.

Attendance: Students are expected to attend all classes.

Grading: **An approximate breakdown of points for the course is as follows:**

3 lecture exams @ 100 points each	**300**
1 final exam @ 200 points	**200**
Lab Reports and Article Summaries	**200**
Microscope Technology Project	**100***
TOTAL POSSIBLE POINTS	**800**

Grading scale	Grade	Points needed
90 -100% of total possible points	**A**	**720**
80 - 89% of total possible points	**B**	**640**
70 - 79% of total possible points	**C**	**560**
60 - 69% of total possible points	**D**	**480**
Below 60% of total possible points	**F**	**-**

Exam material: A majority of exam material will come directly from lecture. For best performance, read the assigned text before attending lecture and review lecture notes after each class. Study your notes carefully and review the major topics provided in the text prior to each exam.

Exam: Semester exams, quizzes, and the final exam will consist of multiple choice, matching, true-false, drawing, short answer, and essay questions. All exams count in determining the final grade. Make-up exams will be given only in extenuating circumstances and will usually consist of long essay questions.

Cheating: All work should be that of the student alone. If it is determined by the instructor that a student has cheated on an exam or any assignment, the student will receive no credit for that exam or assignment and the student's name will be reported to the proper authorities.

Graduate students (BIO 5354) will be required to perform a potentially publishable research project in addition to the microscope technology project.

For additional student information that accompanies this syllabus, go to the link on the Internet at:

http://www.busn.ucok.edu/academicaffairs/FORMS/Student%20Information%20SheetFal06.pdf