



BIOLOGY 3024

CRN 16620

Fall 2009

Tentative Syllabus

PLANT PHYSIOLOGY (LECTURE)*

CRN 16620: M W 5:00 - 7:50 PM

257 Howell Hall

<http://www.metabolism.net/bidlack/>

<http://biology.uco.edu/bidlack/>

Dr. Jim Bidlack

301B Howell Hall

Phone: (405) 974-5927

E-mail: jbidlack@uco.edu

Office Hours: 4:00-4:50 MTWR
or by appointment

*All students must attend PLANT PHYSIOLOGY LAB. It also meets Mondays and Wednesdays from 5:00 to 7:50 PM.

PLANT PHYSIOLOGY: An introductory course in the physiology of vascular plants, with emphasis on photosynthesis, mineral nutrition, and plant growth regulation. The course consists of three hours lecture and three hours laboratory per week. Prerequisite(s): BIO 1304, STAT 2103, and 10 hours of chemistry.

<u>Date</u>	<u>Lecture topic</u>	<u>Chapter</u>	<u>Pages</u>
August			
17,19 MW	Introduction, levels of organization Inorganic and organic chemistry Biological molecules (Part I)	1 1,7,8	1-2 lecture notes 6-8,11,129, 135-136,187-189
24,26 MW	Biological molecules (Part II) Plant cells, anatomy, & physiology	10,11 1	lecture notes 228-230,278-282 1-32
31,2 MW	Overview of metabolism LIGHT RXNS: Photosynth. - light capture LIGHT RXNS: Photosystems I and II	7 7	lecture notes 124-133 133-158
September			
7,9 MW	LABOR DAY DARK RXNS: CO ₂ fixation - Calvin cycle DARK RXNS: C-3, C-4, and CAM plants	8 8	159-173 173-195
14,16 MW	EXAM I Other aspects of photosynthesis Additional exam material	9	197-220
21,23 MW	Structure & function of enzymes Glycolysis Krebs (TCA) cycle	2 11 11	33-34 253-262 262-265
28,30 MW	Electron transport. & oxid. phosphoryl. Pentose phosphate & respiration perspective Nitrogen and sulfur metabolism	11 11 12	265-274 274-278 289-313

<u>Date</u>	<u>Lecture topic</u>	<u>Chapter</u>	<u>Pages</u>
October			
5,7	MW Secondary metabolism Plant molecular biology Additional exam material	13 1,14	315-344 8-14,346-348
12,14	MW EXAM II Thermodynamics, water potential Xylem transport	3 4	36-52 53-71
19,21	MW Plant nutrition Phloem transport and partitioning Photosynthesis-transpiration compromise	5,6 10 4,26	73-93,95-121 221-252 64-71,682-692
26,28	MW Growth and development Plant growth regulation - Part 1 Plant growth regulation - Part 2	16 19,20,21 22,23	377-415 467-570 571-616
November			
2,4	MW EXAM III Additional exam material Additional exam material		lecture notes lecture notes
9,11	MW Photomorphogenesis Photoperiodism Responses to temperature	17 18,25 9,26	417-433 445-465,648-669 209-211,682-692
16,18	MW Circadian rhythms, geotropism Environmental physiology	5,19,25 17	88,490-496,646-648 430-443
23,25	MW Stress physiology THANKSGIVING	26	671-705
30,2	MW Crop production & physiology Crop production & physiology Additional exam material		lecture notes lecture notes lecture notes
December			
9	F FINAL EXAMINATION		

CRN 16620: The Final Exam is scheduled for Wednesday, 9 December 2009 at 5:30 - 7:20 PM. It will be approximately 1/2 comprehensive and 1/2 new material.

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PLANT PHYSIOLOGY AND PLANT PHYSIOLOGY LAB

Fall 2009 - CRN 16620

Instructor: Dr. Jim Bidlack

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Office: 4:00 - 4:50 MTWR, 301B Howell Hall

Avoid Scheduling Office Visits Just Before Class

Lecture Textbook: Taiz, Lincoln, and Eduardo Zeiger. 2006. Plant physiology. 4th edition. Sinauer Associates, Inc., Publishers, Sunderland, MA.

Lab Textbook: Bidlack, J. E. 2009. Plant physiology laboratory manual. Sixth edition. Available in class.

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	300
Attendance and quizzes	100

TOTAL POSSIBLE POINTS	900
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Grading scale	Grade	Minimum points needed
90 - 100% of total possible points	A	810
80 - 89% of total possible points	B	720
70 - 79% of total possible points	C	630
60 - 69% of total possible points	D	540
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.

Exams: Semester exams, quizzes, and the final exam will consist of mostly short answer and essay with some fill-in-the-blank, multiple-choice, matching, and true-false 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.

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

<http://www.uco.edu/academicaffairs/FORMS/StudentInfoSheet.pdf>