BIOLOGY 3024 Spring 2012

CRN 23959 **Tentative Syllabus**

PLANT PHYSIOLOGY (LECTURE)*

CRN 23959: M W 4:00 - 7:20 PM
257 Howell Hall
http://www.metabolism.net/bidlack/
http://biology.uco.edu/bidlack/

Dr. Jim Bidlack

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Office Hours: M W 3:00 - 3:50 PM
T R 4:00 - 4:50 PM

***All students must attend PLANT PHYSIOLOGY LAB. It also meets Mondays and Wednesdays from 4:00 to 7:20 PM.**

PLANT PHYSIOLOGY: This course provides an introductory investigation of vascular plant physiology. Topics include photosynthesis and respiration, secondary metabolism, mineral nutrition, and plant growth regulation. The course consists of three hours lecture and three hours laboratory per week. Prerequisite(s): BIO 1225, 2203, one of the following (3054, 3543, 3703, 3303) and STAT 2103 all with a minimum grade of "C."

Date		Lecture topic	Chapter	Pages
January				
9,11	MW	Introduction, levels of organization	1	1-5
		Inorganic and organic chemistry		lecture notes
		Biological molecules (Part I)	1,7,8	6-8,10-13,167, 172-178,232-233
16,18	MW	MARTIN LUTHER KING HOLIDAY		
		Biological molecules (Part II)	10,11	277-280,330-335
				lecture notes
23,25	MW	Plant cells, anatomy, & physiology	1,15	1-34,425-452
		Overview of metabolism		lecture notes
30	M	LIGHT RXNS: Photosynth. - light capture	7	163-178
		LIGHT RXNS: Photosystems I and II	7	178-197
February				
1	W	LIGHT RXNS: Photosynth. - light capture	7	163-178
		LIGHT RXNS: Photosystems I and II	7	178-197
6,8	MW	DARK RXNS: CO_2 fixation - Calvin cycle	8	199-216
		DARK RXNS: C-3, C-4, and CAM plants	8	216-242
13,15	MW	EXAM I		
		Other aspects of photosynthesis	9	243-269
		Additional exam material		
20,22	MW	Structure & function of enzymes	Appendix	A1:1-22
		Glycolysis	11	305-315
		Krebs (TCA) cycle	11	315-317

Date		Lecture topic	Chapter	Pages
February (continued)				
27,29	MW	Electron transport. & oxid. phosphoryl.	11	317-327
March				
5,7	MW	Pentose phosphate & respiration perspective	11	312-314,327-330
		Nitrogen and sulfur metabolism	12	341-368
12,14	MW	Secondary metabolism	13	369-400
		Plant molecular biology	1,2,14	8-17,35-63, 403-423
		Additional exam material		lecture notes
19,21	MW	SPRING BREAK		
26,28	MW	EXAM II		
		Thermodynamics, water potential	3	67-84
		Xylem transport	4	85-105
April				
2,4	MW	Plant nutrition	5,6	107-130,131-159
		Phloem transport and partitioning	10	271-303
		Photosynthesis-transpiration compromise	4,26	96-105,762-764
9,11	MW	Growth and development	16	451-492
		Plant growth regulation - Part 1	19,20,21	545-648
		Plant growth regulation - Part 2	22,23	649-698
16,18	MW	EXAM III		
		Photomorphogenesis	17	493-520
		Photoperiodism	18,25	521-543,732-753
		Responses to temperature	9,26	254-256,762-782
23,25	MW	Circadian rhythms, geotropism	5,17,19,25	121-123,509-512, 566-573,730-732
		Environmental physiology	Appendix	A2:1-5
		Stress physiology	26	755-782
May				
4	F	FINAL EXAMINATION		

CRN 23959: The Final Exam is scheduled for Friday, 4 May 2012 at 3:00 - 4:50 PM. It will be approximately 1/2 comprehensive and 1/2 new material. ***Note that the final exam is scheduled for the last day during finals week. What a great opportunity to study!***

BIOLOGY 3024

PLANT PHYSIOLOGY AND PLANT PHYSIOLOGY LAB

Spring 2012 - CRN 23959

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Avoid Scheduling Office Visits Just Before Class

Lecture Textbook: **Taiz, Lincoln, and Eduardo Zeiger. 2010. Plant physiology. 5th edition. Sinauer Associates, Inc., Publishers, Sunderland, MA.**

Lab Textbook: **Bidlack, J. E. 2012. Plant physiology laboratory manual. Eighth 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**

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. No communication, notes, or wireless devices are permitted during any exam. If the instructor determines 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/academic-affairs/files/aa-forms/StudentInfoSheet.pdf