Course Description and Other Business

Instructor: Dr. Lisa Dorn, 424-3064, Room HS 45, dorn@uwosh.edu

LECTURE:MWF from 1:50-2:50, Room HS202 LABORATORY: Thurs 11:30-3:30, Room HS56

OFFICE HOURS: Posted to D2L

TEXTBOOK: Hopkins, W.G. and N.P.A. Huner. 2004. *Introduction to Plant Physiology*, 3rd ed., John Wiley and Sons, New York, 560 pp. **Required**.

EXAMS: There will be **three, 100-point,** short-essay-style exams on the lecture material during the semester (see syllabus for dates).

QUIZZES: 1 review quiz at end of 1st 2 weeks = 20 pts

LABORATORY: Most labs will probably finish early, others will run late, and still others will take two to thirteen weeks from beginning to end and may require someone to come in at non-lab times to water plants or record data.

LABORATORY ASSIGNMENTS: We will conduct ~TBD different laboratory exercises in the 13 weeks of lab. Students will be required to turn in (on the due dates shown in the laboratory syllabus) an abstract (and possible data sheets, etc.) for 5 of the laboratory exercises. They will be graded (maximum = 10 points) and returned within a week (maybe). In addition, there will be a long-running experiment designed to explore the interaction of genes with environment in plants. I will provide you with a list of projects that you may choose from.

GRADING:

Lecture Exams (3 x 100 pts)	300 points
Review Quiz (1 x 20 pts)	20 points
Laboratory Long Term project	30 points
Laboratory Abstracts (5 x 10 pts)	50 points
Total	400 points

GRADING SCALE:

A = 93 - 100%,
A- = 90 - 92.9%
B+ = 88 - 89.9%
B = 83 – 87.9%
B- = 80 - 82.9%
C+ = 78 - 79.9%
C = 73 - 77.9%
C- = 70 – 72.9%
D+ = 68 – 69.9%
D = 63 - 67.9%
D- = 60 - 62.9%
F (Failure) < 60%
Grades may be "curved" at the end, if necessary.

ATTENDANCE: Attendance in Lecture and Laboratory is required. Making up missed labs is not possible. An unexcused absence from lab will result in an automatic 10-point deduction from the lab grade.

STATEMENT ON USAGE OF ELECTRONIC DEVICES IN CLASS:

In order to protect and foster the proper learning environment, the use of cell phones is not allowed in either lecture or lab. That includes sending or receiving voice or text messages, or even checking to see if new calls have come in. Please turn your phone off at the start of class to prevent interruptions from incoming calls. Wireless laptop computers are allowed, but only if their use is limited to activities directly related to course performance such as taking notes or looking up plant physiology content on the web. Use of portable music devices is not allowed in either lecture or lab. Use of any electronic device during an exam will result in an automatic zero for that exam.

STATEMENT ON ACADEMIC MISCONDUCT:

Students are referred to the University of Wisconsin Oshkosh Student Discipline Code as detailed in Specific provisions of Chapter 14 of the State of Wisconsin Administrative Code. Any student(s) found in violation of any aspect of the above Code (as defined in sections UWS 14.02 and 14.03) will receive a sanction as detailed in UWS 14.05 and 14.06. Sanctions range from an oral reprimand to expulsion from the University of Wisconsin-Oshkosh. Students have the right to request a hearing and to appeal sanctions (as defined in UWS 14.08-14.10).

Students with disabilities should contact their lecture and lab instructors in the first week of class in order to arrange all possible accommodations.

Lecture Syllabus and Exam Schedule -- Spring 2017

Lec #	Day	Date	Topics	Week	Readings
1	Mon	**30-Jan**	Intro, Water, pH, & Chemistry; Cells & Organelles	**1**	Ch1: 1.1 to 1.4
2	Wed	**1-Feb**	Cells, Organelles & organs; plastids	**1**	Ch 5, Box 5.1 (plastids)
3	Fri	**3-Feb**	Proteins & Membranes; Cytoskeleton;	1	Appendix Fig. 3.10I.1, I.2, 3.2, 3.5.1
4	Mon	**6-Feb**	Enzymes Heat & Kinetics	**2**	Ch. 8 Box 8.1 pgs. 146-147
5	Wed	**8-Feb**	Enzymes: Kinetics **Quiz on Review material (lectures 1-3)**	**2**	Ch. 8 Box 8.1 pgs. 146-148
6	Fri	**10-Feb**	Respiration: Glycolysis and Krebs Cycle	**2**	Ch. 10.4 to 10.7
7	Mon	**13-Feb**	Respiration: Mitochondrial e- transport, ATP synthase	3	Ch 10.7.2-10.9, Ch 5.3.2
8	Wed	**15-Feb**	Photosynthesis: Chloroplasts	3	Box 5.1
9	Fri	**17-Feb**	Photosynthesis: Pigments, light absorption and Z scheme	3	Ch. 6.3, 6.1 and Ch 7.3
10	Mon	**20-Feb**	Photosynthesis: Thylakoids and protein complexes	4	Ch. 7.2-7.3, 5.9

11	Wed	**22-Feb**	Photosynthesis: The Calvin-Benson cycle, Cyclic e-transport	4	Ch. 8.5, 8.6; Ch 7.4
12	Fri	**24-Feb**	Photosynthesis: photophosphorylation, & ratios	4	Ch. 5.3; Ch 7.5
13	Mon	**27-Feb**	Photosynthesis: photophosphorylation, & ratios	5	Ch 5.3; Ch 7.5
	Wed	**1-Mar**	Review etc.	5	
	Fri	**3-Mar**	**Exam I** (lectures 4-13)	5	
14	Mon	**6-Mar**	Seed germination, water potential and food reserves	6	Ch 1.7 - 1.8, Ch 21.1, Ch 16.3.3,
15	Wed	**8-Mar**	Seed germination, water potential and food reserves	6	Ch 19.1-19.2, 19.5. 19.8-19.9; Box 19.2
16	Fri	**10-Mar**	Gravitropism	6	Ch 16.4, 20.1-20.4, Box 20.2, 23.2
17	Mon	**13-Mar**	Gravitropism	7	Ch 18.2-18.7, 18.8.3, 18.9-18.11
18	Wed	**15-Mar**	Seedling growth and phototropism	7	Ch 22.4.2, 21.2, Ch 23.1
19	Fri	**17-Mar**	Photomorphogenesis and phytochrome	7	Ch 22
	Mon	**20-Mar**	**SPRING BREAK**		
	Wed	**22-Mar**	**SPRING BREAK**		
	Fri	**24-Mar**	**SPRING BREAK**		
20	Mon	**27-Mar**	Cell Wall	8	Ch 17.1-17.2, Box 17.1
21	Wed	**29-Mar**	Cell Expansion and IAA	8	Ch 18.2-18.4,18.6,17.3, Box 18.3
22	Fri	**31-Mar**	Phloem: structure, function & Münch pressure flow hypothesis	8	Ch 9.4- 9.10
23	Mon	**3-Apr**	Soils & Mineral nutrition	9	Ch 2.6, Ch 3.1, 3.9, Ch 4.2-4.4
24	Wed	**5-Apr**	Mechanism of ion absorption	9	Ch 2.7, Ch 3.2-3.8
	Fri	**7-Apr**	Review etc.	9	
	Mon	**10-Apr**	**Exam II** (lectures 14-24)	10	
25	Wed	**12-Apr**	Photosynthesis: Excess Energy	10	Ch 14.2.1, 14.2.2, 14.6
26	Fri	**14-Apr**	Photosynthesis: C3, C4 and CAM	10	Ch15.2-15.4
27	Mon	**17-Apr**	Photosynthesis: Morphological and physiological adaptations	11	Ch7.1, Ch15.1
28	Wed	**19-Apr**	Photosynthesis: Stomatal physiology	11	Ch7.1, Ch15.1
29	Fri	**21-Apr**	Photosynthesis: Transpiration and anatomy of xylem	11	Ch 1.5.2, Ch 2.1-2.5, Box 2.1

30	Mon	**24-Apr**	Biological clocks and floral induction	12	Ch 24
31	Wed	**26-Apr**	Fertilization and floral development	12	Ch 25.1-25.2, Ch 16.31, Ch21.1.4
32	Fri	**28-Apr**	Seed maturation and dormancy	12	Ch 16.3.2, 16.3.4, Ch 21.1.4, Ch26.3, Ch 25.3
33	Mon	**1-May**	Stress physiology: Abiotic (environmental)	13	Ch 13.3, box 13.1, Ch 14.2.2
34	Wed	**3-May**	Stress physiology: Biotic (weeds and plant pathology)	13	Ch 13.6, Ch 27 (some)
35	Fri	**5-May**	Bud dormancy and tissue hardening	13	Ch 14.4, Ch 26.2
	Mon	**8-May**	Review etc.	14	
	Wed	**10-May**	**Exam III** (lectures 25-35)	14	
	Fri	**12-May**	Alternative exam date	14	