Botany 500 - Spring 2014

Date	Topic	Reading	Instructor
January			
Wed 21	Introduction		SpaldinGilroy
Fri 23	Gene expression	10-11; 45-50	Spalding
Mon 26	Protein function & enzymology	Appendix A1, 14-21	Gilroy
Wed 28	Plant transformation	57-61	Gilroy
Fri 30	Auxin I	Chapter 19	Gilroy
February			
Mon 2	Auxin II	Chapter 19	Gilroy
Wed 4	Gibberellins	584-588; 596-605; 612-614	Gilroy
Fri 6	Cytokinins	Chapter 21	Gilroy
Mon 9	Abscisic acid	674-688	Gilroy
Wed 11	Ethylene	Chapter 22	Falbel
Fri 13	The "other" hormones	to be assigned	Spalding
Mon 16	Cellular water relations	Chapter 3	Spalding
Wed 18	Cell walls and cell expansion	Chapter 15, especially 445-448	Spalding
Fri 20	Stomatal function	98-102	Gilroy
Mon 23	*-Test 1-*		
Wed 25	Cellular ionic relations	131-145	Spalding
Fri 27	Water transport	85-98	Spalding
March			
Mon 2	Water and salt stress	757-760; 765-774	Spalding
Wed 4	Mineral nutrition	Chapter 5	Spalding
Fri 6	Nitrogen assimilation	343-351	Spalding
Mon 9	Nitrogen fixation	351-358	Spalding
Wed 11	Light and photochemistry	163-167	Spalding
Fri 13	Photosynthetic reaction centers	167-172	Spalding
Mon 16	Photosynthetic elect. transport	172-188	Spalding
Wed 18	Photosynthetic carbon reduction	199-208	Spalding
Fri 20	Photorespiration	208-217	Spalding
Mon 23	Carbon dioxide accumulation	217-223	Spalding
Wed 25	Gas and heat exchange	to be assigned	Spalding
Fri 27	*-Test 2-*		
~Spring Break~ Sat March 28-Sun Apr 5			
April			
Mon 6	Starch and sucrose synthesis	224-237	Spalding
Wed 8	Phloem loading	271-294	Spalding
Fri 10	Phloem transport		Spalding
Mon 13	Assimilate partitioning	294-299	Spalding
Wed 15	Respiration	305-330	Spalding
Fri 17	Sexual reproduction#1	453-460	Gilroy
Mon 20	Sexual reproduction #2	460-468	Gilroy
Wed 22	Embryos and shoots	474-487	Gilroy
Fri 24	Root development	469-474	Gilroy
Mon 27	Photomorphogenesis I	Chapter 17	Gilroy
Wed 29	Photomorphogenesis II		Gilroy
May			
Fri 1	Blue light responses	522-526; 532-539	Gilroy
Mon 4	Rhythms	Chapter 25	Gilroy
Wed 6	Defense mechanisms	370-396	Gilroy
Fri 8	Biotechnology	56-57	Gilroy

A third test will be held during the final exam period.

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Staff

Prof. Simon Gilroy	262-4009	sgilroy@wisc.edu
Prof. Edgar P. Spalding	265-5294	spalding@wisc.edu
Richard Hilleary	262-4008	dickhilleary@gmail.com

Office hours – by appointment

Textbook

Plant Physiology (5th ed.), L. Taiz and E. Zeiger, Benjamin Cummings Publishing 2010. The associated website www.plantphys.net will also be used.

Grading Policy

There will be two in-class tests and a final exam. Each will be worth 100 points for a total of 300. In addition there will be homework assignments totaling 50 points. For graduate students taking only the 3 credit lecture portion, the final grade will be based on a 350 point total. For students enrolled in lecture/lab, the laboratory portion of the course will be worth an addition 100 points. In this case, final grades will be based on a 450 point total. The laboratory grade is based on grading of a laboratory notebook (60%) and a report (written and oral) on the 'mystery mutant' exercise (40%).

Take-home assignments: Assignments will consist of quantitative problems that illustrate some of the principles discussed in lecture, or reading/writing assignments designed to supplement the lecture material and textbook.

Labs will be held in B249 Birge Hall. The first lab will be Wednesday, January 29 and Thursday, January 30. You must bring a lab notebook, preferably hard-covered.